

School of Psychology

**The Prevention of Eating Disturbances: The Impact of a Self-esteem
Enhancement Programme**

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**This thesis is presented for the Degree of
Doctor of Philosophy
of
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DECLARATION

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Marianne Poller

November 2008

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ABSTRACT

Eating disorders are complex, multidimensional disorders characterised by clinically significant disturbances in body image and eating behaviours. There is a small but growing body of literature establishing efficacious interventions, however, there is much progress yet to be made. The present study developed and evaluated the effectiveness of a school based eating disturbance prevention programme designed to enhance self-esteem. Self-esteem has been identified as both a risk and protective factor, able to address a number of risk factor domains and attaining some success in the prevention literature. The Straight Talking About Self-esteem and Resilience (STARS) programme was developed for this study using Harter's (1986, 1987) model of the determinants of self-worth. This model has been theoretically, empirically and phenomenologically validated and provides a framework in which strategies can be developed to enhance self-esteem. Two hundred and thirty-seven Year seven students ($M = 12.7$ years, $SD = 0.42$) from five independent schools in Perth, Western Australia, were randomised into control and intervention groups. Comprehensive self-report impact and process data was collected from the student, teacher and parent cohort at baseline, post-test and 8-month follow-up. The thesis is comprised of four studies. Study 1 examined the psychometric properties of the Self-Perception Profile for Children (S-PPC, Harter, 1985), the self-esteem measure used in this study and derived from Harter's (1986, 1987) model. Study 2 evaluated the STARS programme comparing intervention and control groups on a number of outcome variables including measures of self-esteem, body image and eating disturbance. Study 3 assessed the social validity of the STARS programme. Study 4 examined the relationship between risk factors and eating disturbances over a 12-month period. The S-PPC was established as reliable and valid to use for research purposes with Australian children aged 11 to 14 years. There were no significant intervention effects with the STARS programme for either the whole sample or an at-risk sample. However, participants reported finding the programme both enjoyable and useful. Regression analysis indicated that focussing prevention efforts on teasing about body size/shape in the home environment would be an important addition to a prevention programme. Furthermore, prevention programmes may benefit from reflecting risk factors as they become developmentally more salient and therefore be ongoing throughout the period of risk. An explanation for the lack of

intervention effects for the STARS programme is explored and further refinement of the programme is discussed. The implications of these data for preventing eating disturbances using a self-esteem universal school-based intervention are examined.

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INTRODUCTION

Eating disorders are complex, multidimensional disorders characterised by clinically significant disturbances in body image and eating behaviours (Striegel-Moore & Smolak, 2001). As Stice and Shaw (2004, p. 206) state “Eating pathology...is one of the most prevalent psychiatric problems for women and girls and is marked by chronicity and relapse”. Chamay-Weber, Narring and Michaud (2005) go so far as to claim these problems have reached epidemic proportions in the Western world. Thus, the prevention of these disorders is considered an important public health objective (Herzog & Copeland, 1985; Paxton, 2002; Taylor et al., 1998). However, this objective has long been an elusive goal. Neumark-Sztainer and colleagues (2006) maintain that the prevention of eating disorders is a “young field” but one that has made “substantial progress during the past decade” (p. 266).

There is a small but growing body of literature establishing efficacious interventions (Stice, Shaw, & Marti, 2007). However, there is much progress yet to be made (Levine, 2001). Although there are “promising themes that have emerged from the growing empirical literature” (Neumark-Sztainer et al., 2006, p. 266), there is no agreed upon approach to this endeavour in terms of the contents and process in programmes, appropriate target age (range from grade 4 to early adulthood), universal versus selective populations and whether to focus primarily on females or to incorporate both genders. Much of the research in this area is afflicted with methodological limitations that make it difficult to draw firm conclusions about their efficacy and implications for future research. Furthermore, many researchers have signalled a lack of theoretical basis inherent in many studies (see Austin, 2000; Wilksch, Tiggemann, & Wade, 2006). There is, therefore, a strong rationale to develop a new prevention programme, built upon the findings from existing research together with theoretical underpinnings, which improves upon many of the methodological limitations inherent in much of the existing studies. This study will begin by defining eating disorders and argue for the much broader conceptualisation of eating disturbances.

Definitions

Using a strict definition, eating disorders include only anorexia nervosa, bulimia nervosa, eating disorders not otherwise specified and binge eating disorder (American Psychiatric Association [APA]2000). The defining features of anorexia nervosa are the cognitive and affective disturbances in body image (e.g., morbid fear of fat gain and feeling fat even when emaciated) and the physical consequences of a relentless pursuit of thinness (e.g., weight loss leading to less than 85% of expected weight and amenorrhea) (Striegel-Moore & Smolak, 2001). Bulimia nervosa is characterised by "...an overvaluation of weight and shape for one's sense of self-worth and the behavioural symptoms of recurrent binge eating, accompanied by inappropriate compensatory behaviours (e.g., fasting, excessive exercise and use of drugs to compensate for eating binges)." (Striegel-Moore & Smolak, p. 3). Individuals with eating disorders not otherwise specified do not meet full diagnostic criteria for anorexia nervosa or bulimia nervosa but have clinically significant disordered eating, attitudes and behaviours (Herzog & Delinsky, 2001). Neumark-Sztainer (1996) maintains that prevention programmes need to focus on a more encompassing spectrum of eating disturbances than those outlined in the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition – Text Revision (DSM-IV-TR, APA, 2000). She argues that the engagement in anorexic/bulimic behaviours such as self-induced vomiting, or extreme caloric restriction may not in themselves constitute a diagnosis of an eating disorder. However, they may result in short-term harmful consequences and or lead to the development of an eating disorder. Therefore, in this study eating disturbances will be defined to include eating disorders such as anorexia nervosa and bulimia nervosa, the employment of anorexic and bulimic behaviours such as self-induced vomiting, laxative and diet pill use, and cycles of binge eating and dieting, unhealthy dieting such as extreme caloric restriction and unhealthy eating behaviours such as skipping meals.

Incidence and Prevalence

Eating disorders are the third most common chronic illness in adolescent females (Touyz, Russell, & Beumont, 1996). Although these disorders are predominantly found in females there is evidence of a growing number of males who are experiencing severe weight and body weight concerns and pathological eating

habits (Cohane & Pope, 2000; le Grange, Tibbs, & Selibowitz, 1995). Epidemiological studies report that 90% of the clinical population of eating disorders are female (Fairburn & Beglin, 1990). Full syndrome eating disorder cases occur in approximately 1-3% of the adolescent population (APA1994). Specifically, epidemiological studies estimate the prevalence rates of anorexia nervosa to be 0.4 - 2.0% (Ackard, Fulkerson, & Neumark-Sztainer, 2007; Favaro, Ferrara, & Santonastaso, 2003; Hoek & van Hoeken, 2003; Rastam, Gillberg, & Garton, 1989; Rathner & Messner, 1993; Whitaker et al., 1989) and for bulimia nervosa 0.3 - 4.6% (Ackard et al., 2007; Favaro et al., 2003; Flament, Ledoux, Jeammet, Choquet, & Simon, 1995; Garfinkel et al., 1995; Hoek & van Hoeken, 2003; Santonastaso, Zanetti, Sala, & Favaretto, 1996).

The prevalence of eating disorders in Australia does not appear to differ from other epidemiological studies (Hay, 1998). For example, Wade, Bergin, Tiggemann Bulik and Fairburn (2006) conducted semi-structured assessment telephone interviews with 1002 female twins aged 28-39 years sampled from the Australian Twin Registry. The interviews yielded a lifetime prevalence of 1.9% for anorexia nervosa and 2.9% for bulimia nervosa.

There is evidence from epidemiological data that the prevalence rates of eating disorders and disordered eating have increased during the past few decades (Russell & Beumont, 1995; Shisslak, Crago, & Neal, 1990) and eating symptomatology has become more severe (Mazzeo, Espelage, Sherman, & Thompson, 2003). Mazzeo and colleagues conducted a study examining the difference in eating disorder symptomatology with women presenting to an outpatient clinic between 1988 and 1998. They found that the second cohort (1993 to 1998) were more severely malnourished with lower body mass indices (BMI) and higher scores on a number of the Eating Disorder Inventory subscales than the first cohort (1988 to 1992). Furthermore, Franko and Orosan-Weine (1998, p. 460) maintain that precursors to the development of eating disorders, such as a focus on thinness and dieting have “moved downward from adolescence to prepubescence”. Even higher rates of eating disorders have been found in subgroups such as dancers, models, actresses, and athletes (Striegel-Moore, Silberstein, & Rodin, 1986).

Many more people evidencing a partial syndrome or subclinical eating disorder (approximately 1.3% to 15%) engage in some disturbed eating behaviour albeit at a lower level of frequency or severity (Buddeburg-Fischer, Bernet, Sieber, Schmid, & Buddeberg, 1996; Heatherton, Nichols, Mahamedi, & Keel, 1995; Levine & Smolak, 2006; Monck, Graham, Richman, & Dobbs, 1990; Patton, Johnson-Sabine, Wood, Mann, & Wakeling, 1990; Rathner & Messner, 1993; Shisslak, Crago, & Estes, 1995). Research has shown that this group experiences considerable physical and psychological distress (Chamay-Weber et al., 2005; Kishchuk, Gagnon, Belisle, & Laurendeau, 1992) that may include depression and suicide attempts (Shisslak et al., 1995). Subclinical eating disorders are not just of concern with regard to the psychological consequences. A review of longitudinal eating disturbances studies revealed that some individuals progress from a less severe disturbance to more severely disturbed eating behaviour over time (Shisslak et al.). For example, in several 1 to 2 year longitudinal studies, 35% of normal dieters had progressed to pathological dieting, 20-30% of pathological dieters had progressed to partial or full syndrome eating disorders and approximately 15% of those with partial syndromes had progressed to full syndrome (Shisslak et al.).

Unhealthy weight regulation methods and body dissatisfaction are even more prevalent. In a United States (U.S.) Caucasian sample of 9 to 11 year olds, 33% of girls and 17% of boys reported they were ‘very often’ worried about being fat (Gustafson-Larson & Terry, 1992). A large U.S sample of over 16,000 9 to 14 year olds found 20% and 17% of 9-year-old girls and boys, respectively, were trying to lose weight (Field, Camargo, Taylor, Berkey, Frazier et al., 1999). An Australian sample found 39% of girls and 26% of boys aged 8 to 12 years wanted to be thinner (Rolland, Farnill, & Griffiths, 1996). Furthermore, 40% of girls and 24% of boys of this sample had attempted to lose weight.

Prevention Definition

Prevention can be defined as “interventions that occur before the initial onset of a disorder” to prevent its development (Mrazek & Haggerty, 1994, p. 23). In the context of eating disorders Levine and Piran (2004, p. 58) state that prevention “refers to policies and programs designed to evade or forestall the development of disordered eating by protecting current states of health and effective functioning.”.

Thus, they work by focussing on both decreasing risk factors and increasing protective factors for disorders (World Health Organization [WHO]2004). In Mrazek and Haggerty's mental health intervention spectrum, three types of prevention are identified: universal, selective and indicated. Universal prevention interventions are aimed at enhancing the overall mental health of a whole population, for example, programmes to prevent eating disorders in schools. Selective prevention interventions focus on those who, although non-symptomatic, are at a heightened risk of developing a disorder. For example, eating disorder prevention programmes aimed at early adolescent girls, since eating disorders predominantly occur in adolescent females. Indicated prevention interventions are directed at those who are showing early signs and symptoms of a mental health disorder but would not meet full criteria. For example, programmes for individuals who are showing signs of eating pathology as measured by a screening instrument for eating disorders.

Why the Need for Prevention

The prevention of mental health disorders is heralded as an important public health priority at both a national (Council of Australian Governments, 2006) and international level (WHO, 2004). Indeed, the World Health Organisation argues that countries should be paying greater attention to prevention and promotion in mental health in order that the health, social and economic burden of mental disorders is reduced. Furthermore, the Council of Australian Governments (, p. 2) maintains that prevention is a worthy pursuit as it "suggests that when identified and treated early, mental illnesses are less severe and of shorter duration, and are less likely to recur". Thus, there is a strong rationale for allocating resources to the prevention area. Moreover, there are a number of compelling reasons specific to the prevention of eating disorders which are listed as follows:

1. Irrespective of how successful treatment is, it does not reduce the incidence of eating disorders (Striegel-Moore & Steiner-Adair, 1998). Furthermore, the majority of individuals with eating disorders never seek treatment (Becker, Franko, Nussbaum, & Herzog, 2004; Striegel-Moore, Leslie, Petril, & Rosenheck, 2000; Welch & Fairburn, 1994). Prevention would reduce the need for treatment and the associated considerable financial burden to the health care system (Striegel-Moore et al., 2000).

2. Eating disturbances are associated with many medical complications such as cardiac and gastrointestinal abnormalities, dental erosions, decrease in bone density and renal difficulties to name but a few (Hill & Pomeroy, 2001).
3. The mortality rate is over 10% in hospitalised cases and the disorders are associated with comorbid psychopathology such as mood disorders (American Psychiatric Association, 1994). Fichter, Quadflieg and Hedlund (2006) report in their 12-year follow-up of anorexic inpatients, a standard mortality rate of 8.8%. These statistics put this group at a ninefold risk of mortality when compared to similarly aged women in the general population.
4. Calorie restriction for weight loss can result in counterproductive health effects such as "...obsession with food, anxiety about eating, interference with natural hunger regulation, binge eating, hoarding, hiding and avoiding food and malnourishment, along with more acute effects such as irritability, social withdrawal, inability to concentrate and fatigue." (Kater, Rohwer, & Levine, 2000, p. 5).
5. Early detection and prevention reduces the likelihood of partial syndrome eating disorders developing into a full-syndrome disorder (Ackard et al., 2007).
6. Steiner-Adair (1994) argues that "weightism", a form of prejudice rejecting fat people, interferes with the normal development of teenage identity and "...directs girls to develop their self-image in terms of their body image." (p. 385). Instead of allowing both physical and psychological energy for life enhancing personal, social and political concerns, girls are engaged in self-objectification derived from chronic weight and shape concerns.

Structure of Thesis

This thesis contains eight chapters. Chapter 1 reviews the prevention of eating disorders literature beginning with an outline of the risk factors, proposed protective factors and theories concerning the aetiology of eating disorders to inform features necessary for prevention endeavours. A review of existing prevention interventions provides further evidence for the strengths of certain risk and protective factors. Through these reviews a rationale is developed to investigate the effectiveness of a universal intervention designed to prevent eating disturbances by enhancing self-esteem.

Chapter 2 reviews the self-esteem literature. This chapter synthesises this contentious literature and derives a theoretical model of self-esteem upon which to base the prevention intervention. Review of the literature highlights that despite the number of self-esteem programmes, few have provided evidence to substantiate their claims of efficacy. It also underscores the need for a programme to be based upon sound theoretical, empirical and phenomenological principles. The chapter concludes with the selection and review of such a self-worth model proposed by Harter (1986, 1987).

Chapter 3 outlines the methodological approach undertaken in this study, encompassing sampling, instrumentation, procedure and research design. This chapter further includes detail of the “Straight Talking about Resilience and Self-esteem” (STARS) intervention programme – its development, objectives and how the strategies employed in the programme are in keeping with Harter’s (1986, 1987) model.

Chapter 4 assesses the psychometric properties of the self-esteem measure that is connected to Harter’s (1986, 1987) model and used in this study – Self-perception Profile for Children (S-PPC, Harter, 1985). The aim is to confirm that these properties derived from an Australian sample are equivalent to those described in Harter’s (1985) norms.

Chapter 5 assesses the effectiveness of the intervention. It reports on both the prevalence of eating disturbances in an Australian sample of 11 to 14 year old girls and boys and the effectiveness of the STARS programme at post-intervention and 8-month follow-up. This chapter also examines indicated prevention by investigating the effectiveness of the intervention on an at-risk sub-group of the sample.

Chapter 6 reports on the social validity of the STARS programme from the perspective of students, teachers and parents. This chapter examines an important aspect in the evaluation of the programme and offers suggestions for future modifications.

Chapter 7 presents a longitudinal prospective study investigating the development of eating disturbances. In particular, it examines the emergence of these disturbances in an Australian sample of 11 to 14 year olds as a function of gender,

self-worth variables related to global self-worth and physical appearance, body dissatisfaction, teasing and body perception. The findings from this study contribute to increased understanding of the relationship between risk factors and eating disturbances.

Finally, Chapter 8 draws together the conclusions that can be made on the prevention of eating disturbances in young adolescents. Issues relating to limitations and implications for further research are addressed.

CHAPTER 1: THE PREVENTION OF EATING DISTURBANCES

The past few decades have seen increased attention to the primary prevention of eating disorders. Stice and Shaw (2004) maintain that one of the major failings of many prevention of eating disturbances studies is the lack of aetiological models that underpin and guide the design of these programmes. They argue that the design of interventions should aim to “reduce established risk factors for eating pathology and increase protective factors” (p. 221). Thus, this chapter will outline the risk factors derived from longitudinal studies and proposed protective factors. Aetiological theories of eating disorders will be summarised to provide further information in guiding the development of prevention interventions. An exploration of existing prevention studies will build additional evidence for the strength of certain risk and protective factors. These factors together with the intervention studies will shape and draw out the themes that were used to develop the current study’s prevention programme.

1.1 Risk Factors

To design a preventive intervention, knowledge of the processes involved in the development of, and protection from, eating disorders is required. A prevention intervention that can reduce risk factors and enhance protective factors should, therefore, lead to a reduction in eating pathology. A risk factor can be defined as “a characteristic, experience, or event that, if present, is associated with an increase in the probability (risk) of a particular outcome over the base rate of the outcome in the general (unexposed) population” (Kazdin, Kraemer, Kessler, Kupfer, & Offord, 1997, p. 377). While risk factors increase the probability of developing problems, protective factors reduce the likelihood of this development, despite the presence of risk (Spence, 1996). Thus, a protective factor is a “variable that mitigates the adverse effects of a risk factor” (Stice, 2002, p. 826)

What emerges from the prospective longitudinal literature is that risk factors are multi-factorial and appear to differ from one developmental period to another (Smolak & Levine, 1994b; Taylor et al., 1998). Gralen and her colleagues (1990) found that dieting and disordered eating in early and middle adolescence demonstrate the developmental nature of risk factors. These authors found for sixth and eighth graders, menarche and dating were significant predictors of dieting and

eating problems. However, by the ninth grade these predictors were no longer significant and more abstract concepts such as body image, body ideal and current shape became significant predictors. More recently, Taylor and colleagues found a developmental effect in their cross-sectional sample. Being teased about weight did not influence weight concern in an elementary school sample but did for the middle school sample.

Risk factors can be divided into specific risk factors for eating disorders and general factors that are not only related to eating disorders but to other psychiatric disorders (Shisslak & Crago, 2001). Little is known about risk factors specific to each of the different eating disorders (Stice, Shaw et al., 2007). Only those risk factors that have been identified in more than one longitudinal study will be included in this review, as this would suggest these are the more compelling risk factors for eating disorders. Specific risk factors include *weight concerns* (Killen et al., 1996; Killen et al., 1994), *dietary restraint* (Patton, Selzer, Coffey, Carlin, & Wolfe, 1999; Schleimer, 1983; Smolak, Levine, & Gralen, 1993; Stice & Agras, 1998; Stice, Agras, & Hammer, 1999; Stice, Akutagawa, Gaggar, & Agras, 2000; Stice, Killen, Hayward, & Taylor, 1998), *body dissatisfaction* (Attie & Brooks Gunn, 1989; Cattarin & Thompson, 1994; Gardner, Friedman, & Jackson, 1999; Garner, Garfinkel, Rockert, & Olmsted, 1987; Keel, Fulkerson, & Leon, 1997; Leon, Fulkerson, Perry, & Early Zald, 1995; Stice & Agras, 1998; van den Berg, Wertheim, Thompson, & Paxton, 2002) and *being overweight* (Graber, Brooks Gunn, Paikoff, & Warren, 1994; Keel, Fulkerson et al., 1997; Stice et al., 1999). General factors include *low self-esteem* (Button, 1990; Button, Loan, Davies, & Sonuga-Barke, 1997; Button, Sonuga-Barke, Davies, & Thompson, 1996; Schleimer, 1983; Wade & Lowes, 2002; Wichstrom, 2000), *depression* (Graber et al., 1994; Leon et al., 1995; Wichstrom, 2000), *negative emotionality* (Leon et al., 1995; Martin et al., 2000; Stice & Agras, 1998), *being teased* (Cattarin & Thompson, 1994; Thompson, Covert, Richards, Johnson, & et al., 1995; van den Berg et al., 2002) and *early maturation* (Graber et al., 1994; Keel, Fulkerson et al., 1997; Smolak et al., 1993; Swarr & Richards, 1996).

There are some likely social/environmental risk factors. However, these studies do not have the same degree of evidence. Such risk factors include: *parental concern about their child's body size* (Gardner, Stark, Friedman, & Jackson, 2000;

Keel, Heatherton, Harnden, & Hornig, 1997) *maternal concerns with weight and shape* (Levine, Smolak, Moodey, Shuman, & Hessen, 1994; Pike & Rodin, 1991; Stice et al., 1999), *belonging to certain professional groups such as dancers, gymnasts and other athletes* (Ravaldi et al., 2003) and *high exposure to unrealistic standards of beauty* (Groesz, Levine, & Murnen, 2002)

1.2 Protective Factors

Protective factors related to developing an eating disorder have received far less attention than risk factors (Crago, Shisslak, & Ruble, 2001; Smolak, Levine, & Schermer, 1998b). One of the few protective factors studies revealed, through interviews with 30 high school girls, that *self-acceptance, family acceptance, positive peer influences* and *knowledge about the dangers of dieting* appeared to protect girls from excessive weight concerns (Wertheim, Paxton, Schutz, & Muir, 1997).

Individual protective factors that have been proposed include *high self-esteem* (Shisslak, Crago, Renger, & Clark-Wagner, 1998; Striegel-Moore & Cachelin, 1999), *being assertive and self-directed* (Rodin, Striegel-Moore, & Silberstein, 1990), *ability to manage stressful situations* (Rodin et al.; Striegel-Moore & Steiner-Adair, 1998), *performing well in many roles* (Rodin et al.), *a slender genetic predisposition* (Rodin et al.) and the *possession of life skills* such as problem-solving abilities, social skills and optimistic attitude (Crago et al.). In particular, Levine & Piran (as cited in Crago et al.) reported in their unpublished manuscript on health promotion and the prevention of eating disorders, that 85% of prevention programmes with a life skills component were effective as compared to 56% of effective programmes without such a component.

Social and environmental protective factors include: *low level of teasing concerning weight and shape by peers and family* (Taylor et al., 1998) (Cash, 1995; Paxton, Schutz, Wertheim, & Muir, 1999; Thompson, Coover et al., 1995; Wertheim, Koerner, & Paxton, 2001), *low peer concern with weight and shape* (Paxton et al., 1999; Taylor et al., 1998) and *low parent concern about weight and shape* (their child's and their own) (Wertheim, Martin, Prior, Sanson, & Smart, 2002).

1.3 Theories of Eating Disorders that have Guided Prevention Work

Like risk factors, the aetiology of eating disorders is generally considered to be multifactorial. Cooper (1995) maintains that “No potential aetiological factor, considered in isolation, is sufficient to account for the development of disorder, nor indeed will it contribute substantially to the explanation of the variation among individuals.” (p. 199). As outlined previously, there are many longitudinal studies that identify risk factors for eating disorders. However, very few studies have proposed multivariate aetiological models regarding how these risk and protective factors work together. Furthermore, few have been tested in prospective designs to show temporal precedence for each of the relations in the models (Stice, 2001b).

There are four theories to date that have guided prevention work: 1) developmental psychopathology theory, 2) social cognitive theory, 3) the non-specific vulnerability-stressor theory and 4) the feminist-empowerment-relational theory (Levine & Smolak, 2006).

1.3.1 Developmental Psychopathology

According to Levine and Smolak (2006) the developmental psychopathology approach has multiple pathways to disordered eating. It is the dynamic interplay between individual characteristics (e.g., genetic vulnerability, poor coping skills and negative temperament) and contextual factors (e.g., family, peers, school environment, environmental influences and values/beliefs of society) across time that create the variety of trajectories. As an individual matures, the developmental contexts and risk and protective factors are changing. Levine and Smolak maintain that this approach highlights the importance of transitional periods, in particular, during adolescence when gender role demands intensify, as periods of high risk. The confluence of pubertal development, the desire to be attractive to secure dating attention and a culture that endorses the thin ideal leads girls to engage in eating disorder behaviours in order to succeed. Thus, the developmental psychopathology approach suggests that prevention efforts need to incorporate multiple pathways, address both individual and contextual factors, and be ongoing where programme messages are reiterated at developmentally appropriate stages.

One example of a developmental model was conceived by Levine and Smolak (1992). Their model emphasised the synchrony of normative developmental

events (i.e., weight gain resulting from puberty, beginning to date and intensified academic demands in adolescence) interacting with the thin ideal in the onset of eating disturbances. Smolak, Levine and Gralen (1993) using a prospective design with sixth to ninth grade girls tested an aspect of this model and found that girls who experienced both onset of puberty and dating in the same year reported significantly more body dissatisfaction and eating pathology than girls who did not.

1.3.2 Social Cognitive Theory

According to the Social Cognitive Theory (SCT), emotions, beliefs, motives and behaviours inherent in disordered eating are created, shaped and maintained by socio-cultural factors (Levine & Piran, 2004). It is the reciprocal interaction between 1) personal factors such as cognitive and emotional processes, 2) behaviour and 3) the environment that results in adaptive or maladaptive behaviour (i.e., eating disturbances). It incorporates principles of reinforcement and punishment from behaviourism, social learning either through direct experience (e.g., reinforcement of dieting when weight loss results in compliments), observational learning (e.g., cultural values of female thin ideal represented in mass media) or symbolic communication (negative verbal commentary about body image) and cognitive processes that mediate the social learning, such as schemas (e.g., negative body image that affects thinking and feeling) and paralogical errors (e.g., perfectionism such as “I must always be in control of my eating”) (Levine & Smolak, 2006). According to the SCT perspective in order “to change behavior, it is necessary to initially change predisposing factors such as environmental influences (e.g., media), personal factors, and self-perceptions.” (McVey & Davis, 2002, p. 104).

Stice (2001a) proposed a dual pathway model of bulimic pathology that fits with some of the principles of SCT. He proposed that body dissatisfaction was a result of the internalisation of a virtually unattainable thin ideal and pressure from media, family and peers to meet this standard (see Figure 1). This dissatisfaction promotes dieting and negative affect which in turn increase the risk of bulimic pathology. Using a prospective design, 231 female U.S. high school students completed a battery of measures consistent with Stice’s model at baseline and then follow-up at 10-months and 20-months after baseline. All initial measures of the variables in the dual pathway model and most of the hypothesised medial relations

were supported. The dual-pathway model accounted for 23% of the variance in growth of bulimic symptoms, suggesting that additional risk factors were involved in the development of bulimic symptoms.

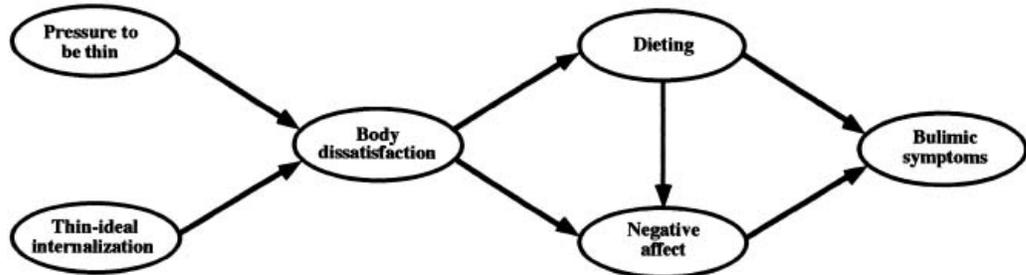


Figure 1: Stice's (2001a) dual-pathway model of bulimic pathology (Source: Stice, 2001, p. 125)

1.3.3 The Non-Specific Vulnerability-Stressor Theory

According to the Non-Specific Vulnerability-Stressor (NSVS) theory, many forms of psychopathology, including eating disorders, derive from generic sources of stress and vulnerability with multiple pathways (Levine & Smolak, 2006). Mental health issues “flourish where people have too much stress, too little respect for themselves and for others, too few meaningful relationships and too little perceived social support, and too few personal, social and physical resources for meeting their needs” (Levine & Smolak, p. 135). This theory emphasises the importance of generic risk factors (e.g., low self-worth, stress, prejudice, reduced coping skills, and minimal meaningful interactions) and non-specific sources of resilience (e.g., healthy social norms, effective social policies, good parent-child relationships, personal and social competence and direct social support).

Prototypical elements of the non-specific vulnerability-stressor model for preventing eating disorders are 1) strengthening self-esteem, internal locus of control and/or individual identity, 2) increasing life skills (e.g., stress management, assertion and decision making) 3) including input from participants in terms of understanding the issues and creating the changes and 4) changing attitudes/behaviours of peers, parents, teachers to create more supportive environments (e.g., healthier norms and cease weight-related teasing).

Vohs and colleagues (2001) proposed a vulnerability-stress model with a three-way interaction between perfectionism, perceived weight status and self-esteem. In their longitudinal study the bulimic symptoms of female college students were predicted by perfectionism and self-perceptions of being overweight, only when self-esteem was low. A similar model using self-efficacy instead of self-esteem was also supported with a similarly aged sample (see Bardone-Cone, Abramson, Vohs, Heatherton, & Joiner, 2006). However, the model was not predictive with an adolescent population (Shaw, Stice, & Springer, 2004).

1.3.4 The Feminist-Empowerment-Relational Theory

According to the feminist-empowerment-relational (FER) theory, the established gender difference in eating disorders (i.e., for every male with an eating disorder there are 9 to 10 women [APA, 2000]) suggests that an aetiological theory needs to incorporate gender (Levine & Smolak, 2006). Accordingly, from the FER perspective, eating disorders and body dissatisfaction are “rooted in the societal conceptualisation and treatment of women’s bodies” (Levine & Smolak, , p. 159). FER draws from objectification theory where women and men’s bodies are treated differently by society (Levine & Smolak). That is, women’s bodies are seen as passive and for the viewing pleasure of others while men’s bodies are seen as active and designed for accomplishment. Sexual harassment, sexual violence and the exploitation of women’s bodies in the media all serve to reinforce this message. Girls learn to internalise this objectification and begin to self-consciously monitor their bodies from the perspective of others. For women, power comes through beauty and the thin ideal. This self-objectification leads many women to experience body shame, anxiety and have poor interoceptive awareness due to the majority of their energy being focussed on self-conscious surveillance of external appearance. The relationship between self-objectification, self-surveillance and eating disturbances has been supported by research (e.g., see McKinley, 1998; Tiggemann & Lynch, 2001).

One example of this support was a study designed by Tiggemann and Lynch (2001) to explore the influence of self-objectification on the development of eating disturbances in 322 Australian women aged between 20 and 84 years (see Figure 2). They found a very strong fit for the proposed model ($R^2 = .586$, $F(4, 236) = 83.48$, p

< .001) whereby self-objectification led to habitual body monitoring. This led to increased appearance anxiety and to a lesser extent body shame if cultural expectations of the body were not fulfilled. In turn, this resulted in greater disordered eating.

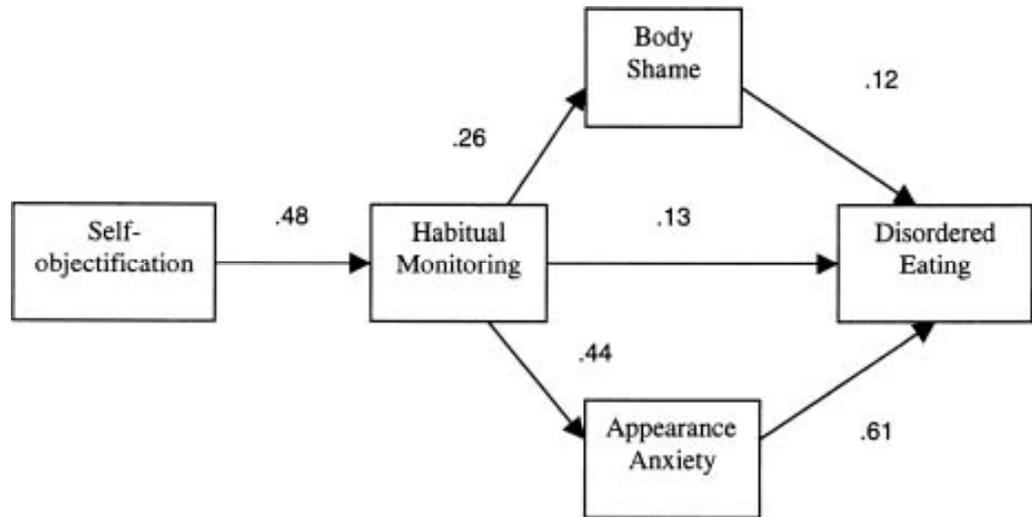


Figure 2: Tiggemann and Lynch's (2001) path diagram of objectification model (Source: Tiggemann and Lynch (2001, p. 249)

Thus, FER theory maintains that prevention work needs to critique and transform the environments by giving female participants a pivotal role in generating prevention interventions, encouraging group work where girls can express and validate their experience related to the relevant issues and devise action to change their environment (e.g., activism, advocacy and sexual harassment policies in schools). As such, a FER programme may not have a pre-developed programme and is constructed through the "relational dialogue" (Levine & Smolak, 2006, p. 163) between students and also with specialist expertise in the prevention of eating disorders.

To summarise, there are four major etiological theories of eating disorders that have guided prevention work thus far: 1) developmental psychopathology, 2) social cognitive theory, 3) non-specific vulnerability-stressor theory and 4) the feminist-empowerment-relational theory (Levine & Smolak, 2006). The aetiological research is still in its infancy as no model drawn from these theories has been

“sufficiently evaluated and replicated” (Ghaderi, Martensson, & Schwan, 2005, p. 246) using prospective designs. However, as Stice (2001b, p. 59) states, the models are nevertheless “thoughtful integrations of the literature and theory”. The findings from the risk and protective factor literature along with etiological theories, suggest that the development of eating disturbances is multifactorial and highlights the confluence of *social* (e.g., peer and familial influences), *cultural* (e.g., gender roles and cultural expectations of attractiveness) and *individual* (e.g., self-esteem and body dissatisfaction) factors.

1.4 Review of Prevention Interventions

A review of existing prevention interventions can further elucidate the efficacy of risk and protective factors that have been identified as useful targets. Risk factors identified in longitudinal studies that when targeted in prevention programmes result in a reduction in eating disturbances, provide empirical support for the robustness of these risk factors. This review will summarise the findings from two recent meta-analytic reviews of programmes aimed at preventing eating disorders. This will provide an overview of effective strategies and targets. Following this, specific interventions will be reviewed in terms of those that are deemed effective, efficacious, those that may work and those that do not work.

Stice, Shaw and Marti (2007) reviewed 66 published and unpublished studies that were evaluated in controlled trials to determine the success of these studies by calculating weighted average effect sizes. The average effect sizes were calculated on measures for eating pathology and their established risk factors, including body mass, thin-ideal internalization, body dissatisfaction dieting, negative affect and eating pathology. The average effect size (r) for pre to post analyses ranged from .10 to .18, with eating pathology attaining .13. Stice and colleagues found that 51% ($n = 26$) of interventions reviewed produced at least one significant reduction in an eating pathology risk factor. Twenty-nine percent ($n = 15$) resulted in a reduction in eating pathology itself. In general, they found programmes with larger intervention effects were more likely to: target high-risk individuals rather than universal programmes, be interactive rather than didactic, target participants over 15 years of age rather than younger adolescents, comprise female-only samples rather than mixed gender, conduct multiple sessions rather than brief single session programmes and use

outcome measures with established reliability and validity rather than those created for the study. Furthermore, their results suggested that features of the participants and research design (as detailed above) were far more important in predicting intervention effects than the content of the programme. However, they did find in general, that psycho-educational programmes were far less effective than those without this focus. The content of those programmes that were effective varied considerably (ranging from a focus on self esteem to self management skills, healthy weight-control behaviours, and critical analysis of the thin ideal), suggesting that multiple methods can lead to successfully preventing eating disturbances.

Fingeret, Warren, Cepeda-Benito and Gleaves (2006) reviewed 39 published and 18 unpublished reports using only female participants where effect sizes could be calculated. They concluded that, “prevention interventions have a positive effect on problematic eating attitudes and behaviours related to the development of eating disorders” (p. 201). The average effect sizes were calculated on measures for knowledge, general eating pathology, dieting, thin-ideal internalization and body dissatisfaction. The average weighted effect size (d) for pre to post analyses ranged from .13 to 1.27, with eating pathology attaining .17. The average weight effect size (d) weakened by follow-up for all outcome variables with a range from .07 to .75 and eating pathology attaining .13. Prevention programmes had the largest positive effect on acquisition of eating disorder related knowledge but also showed small net effects on general eating pathology and dieting. Fingeret and colleagues found no support for potential iatrogenic effects by incorporating eating disorders information in the interventions. They also found there was no difference found between intervention strategies as differentiated by purely psycho-educational, enhanced psycho-educational/CBT psycho-educational or purely interactive/non-psycho-educational. An important difference was found in the type of participants whereby the universal participants did not gain the same degree of benefits from programmes as those with relatively higher risk for developing an eating disorder. For example, a significantly higher mean effect size was found at post-test for the selective group ($d = 2.8$) when compared to indicated ($d = .07$) and universal groups ($d = -.01$). However, they acknowledge that this may be explained by the need for alternate indicators of outcomes when using universal interventions.

Stice and colleague's (2007) meta-analytic review suggests that prevention efforts are strongest with participants aged 15 years and older rather than with younger participants. The following review of individual prevention interventions will, however, primarily focus on interventions that target pre to early adolescent aged children. There are a number of strong reasons why this age group was deemed appropriate for a prevention intervention. Firstly, the early adolescent transition period has been identified as a high-risk period for the development of eating problems and body dissatisfaction (Smolak et al., 1998b; Wertheim et al., 2001). Smolak and colleagues suggest that the growing need for social approval in adolescence makes this age group vulnerable when combined with the pubertal changes that occur in adolescence. Secondly, it is generally agreed that programmes aimed at high school students are too late to prevent eating disorders as these attitudes and behaviours are already evident by this age (Bruning Brown, Winzelberg, Abascal, & Taylor, 2004; Huon, Roncolato, Ritchie, & Braganza, 1997; Paxton, 1993; Smolak & Levine, 1994b). This is despite the meta-analytic findings of Stice and colleagues (2007) that found interventions with adolescents over 15 years are more effective than those which target younger ages.

Paxton (1993) argues that by Year 9 weight loss behaviours are already well established and therefore intervention needs to be aimed at younger students. This notion was further supported by the prevention work of Neumark-Sztainer and colleagues (1995). In their study of tenth grade girls ($n = 341$; mean age 15.3 years), the intervention was effective in preventing unhealthy eating behaviours but had a minimal effect in stopping existing maladaptive eating behaviours. Therefore, prevention efforts should begin prior to the transition to high school. Finally, as will be discussed in the following review of prevention studies, many of the effective prevention activities require personal evaluation, abstract reasoning, empathy and sensitivity for others, characteristics that are not developmentally appropriate for younger children (Phelps, Sapia, Nathanson, & Nelson, 2000).

1.4.1 Standards of Evidence: Criteria for Measuring the Effectiveness of Preventive Interventions

The Society for Prevention Research has established clear guidelines for identifying the most effective prevention strategies (Flay et al., 2005). These guidelines distinguish between *efficacious* and *effective* interventions. The former are

interventions conducted under optimal conditions (e.g., using research staff to implement an intervention) and the latter are those conducted under real-world conditions (e.g., using teachers or counsellors to implement an intervention). Before an intervention can be considered *effective* it must first meet the *efficacy* criteria. Flay et al. (p. 151) define *efficacious* interventions as having been evaluated in at least two different high-quality rigorous studies that “1) involved defined samples from defined populations; 2) used psychometrically sound measures and data collection procedures; 3) analysed their data with rigorous statistical approaches; 4) showed consistent positive effects (without serious iatrogenic effects) and 5) reported at least one significant long-term follow-up.”

In addition to meeting the criteria for *efficacy*, an intervention is deemed *effective* if it has “1) manuals, appropriate training, and technical support available to allow third parties to adopt and implement the intervention; 2) been evaluated under real-world conditions in studies that included sound measurement of the level of implementation and engagement of the target audience (in both the intervention and control conditions); 3) indicated the practical importance of intervention outcome effects; and 4) clearly demonstrated to whom intervention findings can be generalized.” (Flay et al., 2005, p. 151). This review divides the prevention studies into effective interventions, efficacious interventions, interventions that might work (studies that don’t meet the rigours of efficacious interventions but still demonstrate significant results) and interventions that don’t work.

1.4.2 *Effective Interventions*

There is a dearth of eating disorder prevention programmes that meet the *effective interventions* criteria. Programmes designed for the pre to early adolescent age group are yet to achieve this standard. To date, only the dissonance-based eating disturbance prevention intervention (Stice, Mazotti, Weibel, & Agras, 2000) aimed at predominantly college aged women with elevated body image concerns (*indicated intervention*) could be considered an *effective intervention*. According to dissonance-based interventions, if an individual has to argue against a belief they hold, such as the thin-ideal internalisation, they will reduce the initial belief in order to resolve the psychological discomfort (i.e., dissonance) created by the competing beliefs (Stice, Shaw, Black Becker, & Rohde, 2008). Thus, these interventions involve verbal,

written and behavioural exercises that require participants to take a stand against the endorsement of the thin-ideal internalisation. The modification of the thin-ideal internalisation for a prevention intervention is derived from Stice's (2001a) dual pathway model of bulimic pathology discussed earlier.

There have been nine randomised controlled studies based upon Stice's (2000) dissonance-based interventions (DBI) (Matusek, Wendt, & Wiseman, 2004; Mitchell, Mazzeo, Rausch, & Cooke, 2007; Stice, Chase, Stormer, & Appel, 2001; Stice, Marti, Spoor, Presnell, & Shaw, 2008; Stice, Presnell, Gau, & Shaw, 2007; Stice, Shaw, Burton, & Wade, 2006; Stice, Trost, & Chase, 2003). DBI participants demonstrate significantly greater reductions in thin-ideal internalization and other eating disorder risk factors such as body dissatisfaction and dieting than control conditions. These effects have been sustained in a 6-month and 1-year follow-up study (Stice et al., 2006) and further with a 2- and 3-year follow-up study (Stice, Marti et al., 2008). Furthermore, there have been six independent research groups exploring the effectiveness of the dissonance-based intervention (Becker, Smith, & Ciao, 2005; Green, Scott, Diyankova, & Gasser, 2005; Matusek et al., 2004; Mitchell et al., 2007; Roehrig, Thompson, Brannick, & van den Berg, 2006; Stice et al., 2001) with results supporting this approach. Some of these studies have been conducted in real-world conditions with college health educators (e.g., Matusek et al., 2004) and thus can be considered *effective interventions*.

1.4.3 *Efficacious Interventions*

Almost all eating disorder prevention programmes are yet to meet the *efficacious criteria*. Again, pre to early adolescent interventions do not yet meet this standard. The *Student Bodies* programme (Winzelberg et al., 1998) is the only prevention programme to achieve the *efficacious intervention* criteria (other than the dissonance-based interventions).

The *Student Bodies* programme (Winzelberg et al., 1998) is an 8-week Internet-based cognitive behaviour intervention that includes an asynchronous discussion group for participants to discuss their reaction to the programme content and provide support. The programme has been designed to be delivered to college-aged women but has been utilised by 10th grade (14 to 16 years) participants (Bruning Brown et al., 2004). Topics included "cultural determinants of beauty, the

role of the media, and cognitive-behavioral strategies for improving body satisfaction.” (Winzelberg et al., 2000). The programme has primarily been an indicated intervention with one exception that used non symptomatic participants (i.e., Low et al., 2006). There have been six randomised controlled trials of *Student Bodies* with follow-up periods up to 3 years post-intervention (Celio et al., 2000; Low et al., 2006; Taylor, Bryson, Luce et al., 2006; Winzelberg et al., 2000; Winzelberg et al., 1998; Zabinski et al., 2001). Results from the six trials found that the intervention groups demonstrated significant reductions in eating pathology and shape/weight concerns when compared to the wait-list control groups. Results have also shown that the effects of the intervention can be higher for those women who are at elevated risk of an eating disorder (Celio et al., 2000; Jacobi et al., 2005). To date, the same laboratory has conducted the *Student Bodies* programme and future studies should endeavour to use independent investigators as considered desirable by The Society for Prevention Research (Flay et al., 2005) and be conducted in real-world environments. Nevertheless, the *Student Bodies* programme has demonstrated positive effects in reducing eating disorder risk factors with primarily college-aged women.

1.4.4 Strategies That May Work

For a prevention programme to have “worked” the incidence, or number, of new cases of eating disturbances would need to have decreased when compared to a similar group of healthy people who have not received the programme (Levine & Piran, 2004). Most prevention studies have insufficient follow-up periods to demonstrate this benchmark, so significant reductions in eating disorder associated behaviours (e.g., levels of dieting, less internalisation of the thin ideal body dissatisfaction and drive for thinness) are used to measure effectiveness. Success has been reported in programmes with a focus on media literacy, enhancing self-esteem, ecological-empowerment and combination of approaches.

1.4.4.1 Media Literacy Focus

Studies that have shown some promise in the prevention of eating disturbances have included a strong media literacy component (Levine & Smolak, 2001). Kusel (1999, as cited in Levine & Smolak) implemented a 2-day programme that demonstrated to fifth and sixth graders how to recognize deceptive media

techniques, critically analyze media messages and evaluate people in ways other than by appearance. Using a randomised controlled design, levels of dieting, body dissatisfaction, and internalization of body stereotypes were significantly reduced and self-esteem was increased in the intervention group when compared to the control group, who either remained the same or increased their negative perceptions at post-test.

Neumark-Sztainer and colleagues (2000) implemented a six session “Free to be Me” programme to girl scouts in fifth and sixth grade. The programme was evaluated in a randomised controlled trial that included 226 girls. The programme included stages of body development, the media’s effect on body image and self-esteem and activism and advocacy as strategies to resist media influences. Media related knowledge and habits were positively impacted by the intervention. Girls’ belief that they could impact on weight-related social norms among peers and in the media significantly increased. However, the improvement in media literacy and advocacy skills were not matched by a modification of body image attitudes and dieting behaviours. Changes in dieting behaviours were in the hypothesized direction, but not significant. Participants, parents and leaders all reported high satisfaction with the programme.

Irving, DuPen and Berel (1998) utilised a peer-administered media literacy, critiquing and activism focus in their prevention programme with 24 female high school sophomores. Compared to the control group ($n = 17$) the intervention participants reported less internalization of the thin beauty standard and lower perceived realism of media images. However, the groups did not differ in body satisfaction. There was no measure for eating disturbances and the sample size was small.

Media literacy was also the focus of a six session prevention programme developed by Wilksch, Tiggemann and Wade (2006) focussing on stereotypes, media advertising, pressure, consumer activism and harmful effects of advertising. The programme aimed at Grade 8 students (237 Australian girls and boys, mean age 13.79 years) and was effective in reducing internalization of culturally ideal body types presented in the media, particularly in male participants. However, they did not

have a control group or measure disordered eating and body dissatisfaction at post-test.

1.4.4.2 Self-esteem focus

A prevention programme that specifically focussed on enhancing self-esteem, aimed at secondary students aged 11 to 14 years was developed by O’Dea and Abraham (2000). The “Everybody’s Different” programme included dealing with stress, building a positive sense of self, stereotypes in society, positive self-evaluation, and relationship and communication skills. The nine session programme utilised a group-oriented, cooperative, “student-centred learning” approach. Furthermore, students were encouraged to discuss the content of the sessions with significant others, such as parents and family. For the experimental group at post intervention there were significant improvements in body satisfaction, physical appearance ratings and current weight loss behaviours. In terms of self-concept, physical appearance became more important for the control group and less important to the intervention group. Similarly, social acceptance became less important to the intervention group and more so to the control group at post-test. There was no significant improvement in the drive for thinness subscale of the Eating Disorder Inventory, and at 12-months follow-up the gains in body satisfaction and weight losing behaviours had dissipated.

O’Dea and Abraham (2000) suggest the loss of the post-test gains at follow-up may be attenuated by an ongoing education programme rather than a once off intervention. The idea of booster sessions subsequent to the intervention has been endorsed by other authors (Moreno & Thelen, 1993; Neumark-Sztainer et al., 1995; Paxton, 1993; Withers, Twigg, Wertheim, & Paxton, 2002). O’Dea and Abraham also argue that their results show that the involvement of parents, in particular, by encouraging participants to seek positive feedback from family members, is an important development in the prevention of eating problems. The involvement of family members has been identified as important by many researchers for a number of reasons. Firstly, the literature demonstrates a strong link between maternal attitudes and behaviours and a daughter’s eating behaviour (Hill, Weaver, & Blundell, 1990; Levine, Smolak, Moodey et al., 1994; Paxton et al., 1991; Pike & Rodin, 1991). Secondly, adolescent eating attitudes are partly related to teasing by

family members (Cattarin & Thompson, 1994; Fabian & Thompson, 1989; Levine, Smolak, & Hayden, 1994). Thirdly, parents are ultimately responsible for what children eat, therefore their involvement is imperative if the message at school is to be reinforced at home (Smolak & Levine, 1994b). Finally, the involvement of parents, fits with theorists and researchers who advocate an ecological intervention approach that encompasses the involvement of students, teachers, parents and the community (Levine & Piran, 2001; Neumark-Sztainer, 1996; Smolak & Levine, 1994b, 1996).

O’Dea and Abraham (2000) also conducted their research on an at-risk sample defined by low self-worth and high trait anxiety. This definition is somewhat unusual in the literature that usually defines at-risk status using a cut-off score on an eating disorder measure such as the ChEAT-26. O’Dea and Abraham’s criteria resulted in 24.7% of the sample identified as at-risk, somewhat larger than other studies that report percentages of 1.8% - 17% (Edlund, Halvarsson, Gebre-Medhin, & Sjoden, 1999; Erickson & Gerstle, 2007). However, the intervention demonstrated positive effects on this sub-sample with significant improvements in body satisfaction and decrease in drive for thinness for the intervention but not control group.

Subsequent efforts to replicate O’Dea and Abraham’s (2000) findings using the “Everybody’s Different” programme have not been as successful. Wade, Davidson and O’Dea (2003) compared the “Everybody’s Different” programme with a media literacy programme (GO GIRLS!, 1999) and a control group. Australian Year 8 students (mean age 13.42 years) were randomly allocated to the three conditions and were examined on four specific risk factors – weight concern, shape concern, dietary restriction and body dissatisfaction. Only weight concern significantly improved with the media literacy programme when compared to the control group. Wade and colleagues suggest that apart from the content difference, the teacher variables may explain the ineffectiveness of the “Everybody’s Different” programme. They note that the teacher in this condition delivered the intervention in a more autocratic teaching style while the GO GIRLS presenter was more comfortable with a collaborative teaching style. They conclude that combining the self-esteem programme with the media literacy programme could increase the power of the latter.

Ghaderi, Martensson and Schwan (2005) translated the “Everybody’s Different” programme into Swedish and evaluated it on fifth grade school children in Sweden. In this study the programme did not produce any significant changes with eating attitudes, body image or self-esteem. They argue that the lack of significant differences between the intervention and control groups was likely due to spillover effects where intervention children enthusiastically discussed the programme sessions with children in the control group. They also suggest that the programme may need to be modified for younger age groups by allowing longer session times for children to understand the content and discuss with peers.

Further support for interventions that incorporate a self-esteem building component, albeit not as robust, has been provided by Baranowski and Hetherington (2001) and Stewart and colleagues (2001). Baranowski and Hetherington’s results demonstrated a significant decrease in dietary restraint and a marginal increase in self-esteem post intervention. However, a healthy eating control group also showed a decrease in dietary restraint post intervention. There was no intervention effect on body dissatisfaction, negative affect or eating pathology. Furthermore, the study had some methodological shortcomings such as small sample size ($n = 16$) and no random allocation of groups.

Stewart and colleagues (2001) conducted a six week intensive cognitive social learning programme targeted at Year 9 girls aged 13 to 14 years ($n = 459$). The lessons implemented by the authors included socio-cultural pressures to be thin; dieting and body weight regulation; the nature, signs and consequences of eating disorders; building self-esteem and managing stress. Knowledge was enhanced by the programme and maintained at 6-month follow-up. However, although there were significant small pre to post programme decreases in dietary restraint, shape concerns, and eating concerns in the intervention group, these gains were not maintained at follow-up. Limitations included a lack of random allocation of groups.

1.4.4.3 Combination Focus

McVey and colleagues (McVey & Davis, 2002; McVey, Davis, Tweed, & Shaw, 2004; McVey, Lieberman, Voorberg, Wardrope, & Blackmore, 2003; McVey, Lieberman, Voorberg, Wardrope, Blackmore et al., 2003; McVey, Tweed, & Blackmore, 2007) have used the *Every BODY is a Somebody* programme (Seaver,

McVey, Fullerton, & Stratton, 1998), a universal eating disorder prevention programme, with pre-adolescents. Although this body of work meets many of the criteria for an efficacious intervention, the standard of replication requires that the same intervention be used with a new sample of the same population (Flay et al., 2005). As will become apparent in the following summary of these studies, either adding a peer support component or a whole school approach has changed the programme in different studies. Thus, there have not been sufficient replications with the one approach.

The *Every BODY is a Somebody* programme (Seaver et al., 1998) focusses on enhancing life-skills to cope with the normative stressors associated with the onset of body image concerns and dieting. The six 50-minute sessions included media literacy, promotion of self-worth, education regarding body shape and non-dieting approaches to healthy eating and stress management techniques. McVey and Davis (2002) implemented the programme with 263 Year 6 ($M = 10.88$ years) Canadian girls. Initial evaluations showed no programme effect. However, a replication study (McVey et al., 2004, p. 2) utilising “outcome measures that track, more closely, improvements in resiliency factors” resulted in significant improvement in body satisfaction and global self-esteem and reductions in dieting attitude scores at post-intervention. These gains were not maintained at 12-month follow-up. Apart from demonstrating the efficacy of the programme these two studies highlight the importance of choosing appropriately sensitive outcome measures.

McVey, Lieberman, Voorberg, Wardrope and Blackmore (2003) added a 10-session *Girl Talk* peer support group facilitated by local public health nurses to “process peer relationship issues” as well as issues related to the *Every BODY is a Somebody* curriculum. Again, the intervention group of Canadian Grades 7 and 8 girls ($n = 214$; $M = 12.5$ years) showed a significant increase in weight related esteem and a decrease in dieting at post-intervention and 3-month follow-up. The control group reported no change during this period. Although the study design was not able to tease apart the separate impacts of the curriculum and the peer support group, feedback from the latter suggested that groups empowered participants to stand up to body weight teasing. In a replication study conducted one year later using the same programme, peer support group and age group McVey, Lieberman, Voorberg, Wardrope, Blackmore and Tweed (2003) were unable to find intervention

effects. However, they suggest this may be in part due to the peer group reporting significantly higher eating disorder symptoms at baseline than the original group, thereby making prevention more difficult to bring about.

The most recent application of the *Every BODY is a Somebody* programme extended the intervention to include the *Girl Talk* peer support programme plus a whole school approach whereby the school environment/climate and the school-community relationships were addressed (McVey et al., 2007). This ecological approach is detailed in the Ecological-Empowerment focus section. McVey and colleagues have made a considerable contribution to the understanding of eating disorder prevention. Although their results are mixed and have not “produced significant intervention effect for eating pathology in multiple trials” (Stice, Shaw et al., 2008, p. 115), they show that a life skills approach in addition to a peer support and whole school approach can successfully reduce some of the associated risk factors to disordered eating.

Kater and colleagues (2000) developed a prevention programme with an emphasis on the development of multifaceted identity, utilising active, experiential learning. The content of the programme included three categories. The first category instructed students in what *cannot be controlled* (developmental changes in the body, the influence of genetics on body shape and size and the consequences of calorie-restrictive dieting). The second category addressed what *can be controlled* (developing multifaceted identity, a healthy varied nutrition and exercise and realistic role models). Finally, the third category focussed on the development of social and cultural resiliency (historical context for physical attractiveness and developing critical thinking, especially in the media domain). Despite the limitations of this study (i.e., failure to use a randomised, controlled design with standardised assessment) Kater and her colleagues did find promising results. Changes in knowledge of curriculum material, acceptance of body diversity, rejection of the glorification of thinness and positive body esteem were evident from pre to posttest.

Withers, Twigg, Wertheim and Paxton (2002) replicated and extended (by including a control group and 1-month follow-up and applying the Elaboration Likelihood Model of Persuasion) a prevention programme designed by Heinze, Wertheim and Kashima (2000). Heinze and colleagues developed a 22-minute

prevention of eating disorders videotape with content including body size/shape information, socio-cultural and media influences on female appearance, negative effects of unhealthy weight control practices and promoting healthy eating habits, body image and self-image. Australian Grade 7 private school girls (12 to 13 years old) who participated in the intervention ($n = 104$) reported “small but significant positive changes in drive for thinness and intention to diet and had improved scores on knowledge items” (p. 1025) while the control ($n = 112$) counterparts remained unchanged. The intervention had no impact on body dissatisfaction and only knowledge items remained significant at 1-month follow-up. Withers and colleague’s study demonstrates the effectiveness, albeit short lived, of a very different mode of delivery of a prevention intervention (i.e., a brief videotape) than existing studies.

Withers and Wertheim (2004) continued the 2002 research by examining the impact of an additional post-video activity using principles from the Elaboration Likelihood Model of Persuasion (ELM). This model proposes, “that active information processing, or high elaboration is the “central route” to attitude change” (Withers et al., 2002, p. 1022). They postulated that the ELM measures in the previous research were not predictive of attitude/behaviour change because these measures were administered straight after the video, thereby not giving participants time to elaborate. In the 2004 study participants were given the opportunity to elaborate via a discussion group or in a written format. Again, the intervention group reported more knowledge and less drive for thinness and intentions to diet than the control group at post-intervention but also at 1-month follow-up. At 3-month follow-up intention to diet had lost significance. Although this demonstrated longer maintenance of changes than their earlier study, there was no significant difference between the videotape intervention alone and the video plus activity group.

Phelps and colleagues (2000) conducted a prevention programme with three samples – middle school, high school and college students. Their programme consisted of six sessions including internalisation of socio-cultural pressures, physical self-esteem, building personal competence, reducing body dissatisfaction and appropriate methods of weight control. For middle school students, they observed at post intervention a lowered current and future intentional use of fasting, excessive exercise, purging, diet aids, water pills, and/or laxatives as methods of

weight control for programme participants. However, the results of this study were not significant. Similarly ‘Body Dissatisfaction’ and ‘Drive for Thinness’ decreased while ‘Physical Self Concept’ and ‘Competence’ increased but without significance. Phelps and colleagues argue that this is to be expected, as very few participants were engaging in disturbed eating behaviours. However, methodological limitations such as an absence of random allocation of groups and low power may have impacted on the non-significant results.

Dalle Grave, De Luca and Campello (2001) developed a programme consisting of six two-hour sessions using a cognitive restructuring approach concerning the importance of weight and shape in self-evaluations. The aim was to create a “counter-culture in which pupils helped each other to discourage dieting and to challenge medial messages about thinness and beauty” (Dalle Grave et al., p. 334). One hundred and six Italian middle school girls and boys (11 to 12 year olds) participated in the randomised controlled design study that included two booster sessions during the 12-month follow-up. Results demonstrated that the intervention group reported greater improvements in the knowledge and reductions in eating concerns than the control group. However, Dalle Grave and colleagues suggest that a more intensive programme would be required to positively impact on eating pathology, dietary restraint, shape and weight concerns and self-esteem.

Steiner-Adair and colleagues (2002, p. 402) integrated characteristics of existing effective programmes (e.g., esteem-building) and added “1) a strong feminist, sociopolitical perspective, 2) an emphasis on translating knowledge and awareness into personal and public action, and 3) a mentoring component” for the *Full of Ourselves: Advancing Girl Power, Health and Leadership* programme. A total of 411 public and private Grade 7 U.S. girls (12 to 14 years) were assigned (some randomly) to participant or control groups. Results showed that participants in the programme had significant increases in knowledge of health, appearance and weightism and staved off a decline in weight-related body esteem relative to controls. The body esteem was maintained at 6-month follow-up. The intervention had no effect on eating-related behaviours (e.g., dieting), self-esteem or other body image variables.

1.4.4.4 *Ecological-empowerment Focus*

Piran (1999) conducted an uncontrolled prevention intervention in an “...environment of harsh pressures regarding body shape and weight...” (p. 88), at a residential ballet school. A cross-sectional design was used with three different waves of students at three different time periods (1987, 1991 and 1996), for both female and male students aged 10 to 18 years. Results demonstrated significant reductions in restrained eating and disturbed attitudes about eating and weight. Piran’s study was markedly different from other school programmes in several ways. Firstly, the programme addressed ways in which the school environment contributed to the pressures of the thin ideal. Using the World Health Organisation’s collaborative model of the Health Promoting Schools, student focus groups consisting of school administration, teachers and students were used to inform and guide the prevention programme. Peers were encouraged to become active in identifying, analysing and changing their school environment. Topics not typically found in eating disorder prevention programmes were addressed. For example, sexual harassment, body shape teasing, gender inequity and other body image prejudices. Secondly, annual meetings with students provided an ongoing monitoring of the school environment. Thirdly, teachers were prohibited from making body shape evaluative comments to their students. Fourthly, a staff member was made available to the students who had body shape concerns.

McVey, Tweed and Blackmore (2007) furthered the prevention work detailed previously, by including an ecological approach to the *Every BODY is a Somebody* programme and calling it *Healthy Schools-Healthy Kids*. The former programme was enhanced by drawing on the Health-Promoting School Framework which goes beyond developing school curriculum for the prevention of eating disorders and incorporates elements such as the school environment/climate and school-community relationships. Thus, as well as the six module *Every BODY is a Somebody* programme McVey and colleagues intervention: invited teachers and parents to participate in workshops designed to raise awareness of weight based biases and develop an understanding of the influences on body image, involved teachers and members of the community in the development and implementation of the intervention, included 12-week *Girl Talk* peer support groups with an empowerment focus, included a one-session focus group for males regarding

negative effects of bullying and school-wide activities such as play performance, daily public service announcements, video presentations and posters promoting messages consistent with the programme. The programme ran for 8-months with Grades 6 and 7 middle school students ($n = 687$, $M = 11.27$ years) and was far more comprehensive, ran for longer and was more ecologically consistent than other programmes outlined in this review. The programme resulted in reduced disordered eating among the female students and less internalisation of media ideals for both females and males at post-intervention for the intervention and not the control group. These results were not maintained at 6-month follow-up. The high-risk intervention group (those who reported currently dieting or currently trying to gain muscle) had similar results plus an increase in body satisfaction that was not reported by the high-risk control group. Teachers also completed measures of body satisfaction, internalization of media stereotypes and disordered eating. There was no intervention effect for their measures.

Varnado-Sullivan, Zucker, Williamson, Reas and Thaw (2001) developed a multifaceted two-staged prevention programme for eating disorders called the *Body Logic Program*. The programme was developed targeting the risk factors body dysphoria (overconcern with body size and body dissatisfaction) and negative affect. The development was aided by a focus group of educators, parents, graduate students and psychologists assessing the relevance of programme topics. Part one of the programme, a universal school-based intervention that focussed on promoting healthy body image, self-esteem and communication was implemented by two research team members. The researchers used a combination of didactic and experiential/interactive learning approaches such as the use of skits, discussion groups, debates and homework with parents over three sessions. Part two of the programme consisted of intensive family-based interventions for those girls identified as at-risk of developing an eating disorder and their parents. This component was a more in-depth look at the universal programme over four sessions. Teachers also attended a workshop led by a clinical psychologist covering “normative discontent with body image, risk factors for the development of an eating disorder, basic information about eating disorders and referral resources” (Varnado-Sullivan et al., 2001, p. 251). Participants were recruited from two private schools

and consisted of sixth and seventh grade students ($n = 287$, 10 to 13 years). School one was administered *Body Logic Part I* while school two served as wait-list control.

Analysis demonstrated that the *Body Logic Program* was associated with a significant pre to post intervention decrease in fear of fatness and avoidance of forbidden foods for school one females in both the universal and indicated group. One-year follow-up was not collected because one school refused to participate. The initial design intended to collect outcome measures from teachers but due to the poor attendance at the workshop this was not conducted. Part two of the programme was also not conducted as the at-risk students and their parents failed to enrol in the more intensive family based intervention. Varnado-Sullivan and colleagues (2001) postulate that the lack of participation may be due to the perception that the at-risk status was undesirable and stigmatising or that symptoms were not severe enough to warrant symptom relief. Although the *Body Logic Program* showed some promise it highlights the challenges in the process of implementation – poor attendance, refusals to participate in part two of the programme and schools loss of enthusiasm to participate in booster sessions. Levine (2001, p. 273) suggests that “intensive background work in the community may be necessary to ensure that the needs and concerns of the participants lead to customized prevention programmes that help them understand and transform their ‘lived experience’”. Varnado-Sullivan and colleagues (2001) did involve parents and educators in the focus group during the development of the programme but perhaps providing more of a rationale for parents may have increased participation.

Not all ecological-empowerment perspective interventions have been effective in reducing eating pathology. Students, school staff and parents were involved in developing the “Very Important Kids” (VIK) multi-component intervention designed by Haines, Neumark-Sztainer, Perry, Hannan and Levine (2006). The insight drawn from the stakeholders suggested that teasing, poor body image and media’s promotion of the thin ideal were key areas affecting school students. Strategies were implemented at an individual level (e.g., theatre programme with teasing and its impact as the major theme), environmental level – school (e.g., no-teasing campaign) and family (e.g., a family night interactive session on body image). In terms of the primary outcome measure, teasing, the intervention school (fourth through to sixth grade U.S. students) had a significantly reduced percentage

of students being teased as compared to the control school. This is a noteworthy improvement on other studies that have included teasing strategies and have failed to reduce teasing (e.g., see McVey et al., 2007; Smolak, Levine, & Schermer, 1998a). However, in relation to the secondary outcome measures (media internalisation, body satisfaction and unhealthy weight-control behaviours) the intervention had no effect. Haines and colleagues suggest that a more intensive intervention with specific classroom-based components addressing the secondary outcomes added to VIK programme may improve the efficacy.

1.4.5 Strategies That Do Not Work

1.4.5.1 Eating Attitudes and Behaviours Focus

Interventions that involve information-giving strategies on the signs, prevalence and physical and psychological consequences of eating disorder typically have an increase in knowledge but no corresponding decrease in eating pathology and body image dissatisfaction post intervention (Buddeberg-Fischer, Klaghofer, & Buddeberg, 1998; Carter, Stewart, Dunn, & Fairburn, 1997; Killen et al., 1993; Mann et al., 1997; Moreno & Thelen, 1993; Moriarty, Shore, & Maxim, 1990; Paxton, 1993; Shisslak et al., 1990) with the exception of Santonastaso, Zanetti, Ferrara and Olivotto (1999). Some of these programmes have reported iatrogenic effects such that participants had slightly more symptoms of eating disorders at post-intervention (Carter et al.; Mann et al.). However, Stice and Shaw (2004, p. 223) maintain, “there is currently no statistically reliable evidence of iatrogenic effects from eating disorder prevention programmes.” They suggest that statistical limitations, such as no control group for comparison and lack of control for pre-test differences, could explain the reported iatrogenic effects.

A typical study with this positive knowledge and lack of behaviour change intervention effect is one conducted by Killen and colleagues (1993). They developed an 18 lesson programme that involved instructional techniques for improving and reinforcing knowledge on harmful effects of unhealthy weight regulation, promotion of healthful weight regulation (nutrition & exercise), cultural literacy and resistance skills and health behaviour. Targeting sixth and seventh grade girls (11 to 13 years), it was the first controlled long-term evaluated prevention study

of its type. The results demonstrated that an improvement in knowledge did not correspond with a short or long-term change in attitudes or behaviours.

Similarly, Smolak, Levine & Schermer (1998a, 1998b) developed a 10-lesson health promotion programme for fifth grade girls and boys. The programme involved healthy eating and exercising, diversity and tolerance of body shape and media literacy. Parents were also involved by receiving nine newsletters that corresponded to the children's lessons. The programme produced some improvements in knowledge of nutrition, effects of dieting and causes of body fat. However, behaviour change in terms of eating and exercise patterns, weight reduction attempts and teasing fat children were not evident at post-test. Methodological limitations such as potential cross-fertilisation effects with some experiment and control classrooms being in the same school and teachers not completing all parts of the lessons may have impacted on these results. Despite the disappointing results Smolak and colleagues report some valuable information for future prevention efforts. Their study found lower rates of dieting in their participants when compared to samples in other elementary school studies. They suggest this may indicate an influence of contextual differences in the school environment on children's dieting. Therefore, future prevention programmes may find including protective factors within the school environment beneficial.

1.4.6 Summary of Prevention of Eating Disturbance Review

Together, these results demonstrate that the sustainable prevention of eating disturbances with pre to early adolescence is currently an elusive goal according to The Society for Prevention Research standards of evidence. Certainly, those studies aimed at an older age group using *indicated interventions* were found to be more *efficacious* (i.e., *Student Bodies* Programme) and *effective* (i.e., Dissonance-based interventions). Results of earlier studies with the younger age group, primarily focussed on information-giving strategies of the signs, prevalence and consequences of eating disorders, and were discouraging. However, the more recent studies show some promising results with eating/body image attitude and behaviour changes, albeit, mostly shortlived. Withers (2004, p. 104) maintains that, "Despite over 30 prevention programmes now reported in the literature, researchers have made little progress in determining which presenters, what styles of presentation, which types of

media, and which content topics are more effective for adolescent girls”. However, this review shows that prevention efforts that have a focus of self-esteem, media literacy, life skills and ecological-empowerment are successful in varying degrees in decreasing body image and eating pathology behaviours.

1.5 General Conclusion and Research Direction

The purpose of the current study was to design and evaluate a programme to prevent the development of eating disturbances. This chapter has reviewed the risk and protective factors, aetiological theories of eating disorders and existing prevention studies in order to develop a rationale for the development of a new prevention programme. Drawing from this review, the following factors are deemed important in designing this programme.

1.5.1 Methodological Limitations

Many of the prevention interventions discussed in this review have been plagued with methodological limitations such as *small sample size* (Baranowski & Hetherington, 2001; Carter et al., 1997; Dalle Grave et al., 2001; Irving et al., 1998; Kater et al., 2000; Stice, Mazotti et al., 2000), *lack of random allocation of subjects or schools* (Baranowski & Hetherington; Irving et al., 1998; Kater et al.; Phelps et al., 2000; Shisslak et al., 1990; Smolak et al., 1998b; Stewart et al., 2001; Stice, Mazotti et al.), *lack of a control group* (Carter et al.; Huon et al., 1997; Kater et al.; Piran, 1999) and *no or limited follow-up testing* (Buddeberg-Fischer et al., 1998; Ghaderi et al., 2005; Irving et al., 1998; Kater et al.; Smolak et al., 1998a; Stice, Mazotti et al.). It is of note that follow-ups are particularly important to include in the design of an intervention as many studies have shown improvements post intervention but then a reversion to pretest at follow-up (Carter et al.). Some prevention programmes also do not measure eating pathology or behaviour of the subjects (Irving et al., 1998; Moreno & Thelen, 1993; Moriarty et al., 1990; Shisslak et al., 1990). Another important methodological shortcoming is the lack of control for pre-intervention differences when conducting the post and follow-up analyses. Most of the studies in this review fail to incorporate this statistical procedure in their analysis. Furthermore, many of these studies did not conduct sub-analyses on at-risk groups. Therefore, it is important that the current study improves upon these methodological limitations in the design.

1.5.2 Universal

Some authors have argued that the low prevalence rate (using the strict definition of eating disorders) and/or the disappointing results of many prevention programmes question the pursuit of prevention programmes (Carter et al., 1997). Or at the very least prevention programmes should be targeted at those at high risk for developing eating disorders (Baranowski & Hetherington, 2001; Killen et al., 1993; Mann et al., 1997; Stice et al., 2001; Stice, Mazotti et al., 2000). Indeed, both meta-analytic studies reviewed previously (Cororve Fingeret et al., 2006; Stice, Shaw et al., 2007) demonstrate the increased efficacy of programmes that target a selected at-risk population. However, it is the position of this thesis that a universal approach is appropriate for a number of reasons. Equating female desirability with appearance and the thinness schema is supported by all of society including the media, family, peers and various significant adults (e.g., coaches and teachers), not simply those at risk (Kater et al., 2000; Levine, Smolak, & Hayden, 1994). Therefore, it makes theoretical sense to implement a universal prevention programme that aims at manipulating this socio-cultural context to attenuate eating disturbances. Indeed, Desmond, Price, Gray and O'Connell (1986) found that peers were one of the leading sources of weight control information and dieting. Also, as peer pressure and teasing risk factors come from both males and females, it is important to include all students, teachers and parents in a prevention programme (Taylor et al., 1998). Despite Stice and Shaw's (2004) finding that successful prevention studies are more commonly aimed at females rather than mixed gender populations, the emerging literature (see, Cohane & Pope, 2000 for review) suggests that boys of all ages are increasingly expressing body dissatisfaction. Also, Dalle Grave and colleagues (2001, p. 332) maintain that educating males about societal body image pressures can give them the understanding "to help a friend or another person affected by these disorders". Furthermore, the methodological problems inherent in many of the interventions do not allow conclusive claims to be made about the efficacy of universal programmes. In addition, the ethical problems with selecting out children with elevated risk factors may have an iatrogenic effect related to stigmatisation and labelling.

1.5.3 Participatory Ecological Interactive Strategies

It is quite clear that information-giving strategies in eating disorders prevention programmes are not effective in positive behaviour change. These findings are consistent with the non intervention effects in behaviour change with early substance abuse prevention work that utilised psycho-educational interventions (Moskowitz, 1989). There is not only growing empirical support for more group-oriented, cooperative, “student-centred learning” strategies but also a participatory ecological approach (Levine & Piran, 2001; O’Dea & Abraham, 2000; Piran, 1999). The participatory ecological approach places emphasis on “dialogical processes, context-specific understanding and solutions, systemic interventions and social transformations, empowerment and activism, and the reliance on a matrix of relationships for change” (Levine & Piran, 2001, p. 243). Rather than implement traditional classroom instruction curriculum, this approach incorporates participants’ experienced-based knowledge and advocates involvement and behaviour change of teachers, parents, and other adults and also addresses the participant’s environment (school policies, values and norms, larger communities and cultures).

1.5.4 Self-Esteem

The current study will use the strengths of previous programmes, improve upon existing methodological limitations and develop a focus on enhancing self-esteem as its primary prevention strategy. The decision to focus on self-esteem was made for a number of reasons. Firstly, given the number of possible risk factors it would be impossible to include all risk factors in an eating disorder prevention programme (Shisslak & Crago, 2001). However, this fact suggests that it is important to develop broad-based prevention programmes, as advocated by the non-specific vulnerability-stressor theory, that address a number of risk factor domains. Secondly, one factor that has been identified as both a risk and protective factor and received some success in the prevention area is self-esteem (see, Baranowski & Hetherington, 2001; O’Dea & Abraham, 2000; Stewart et al., 2001). The existing prevention studies can be improved upon by using a self-esteem theory to underpin the programme. Indeed, most prevention interventions with a self-esteem component fail to discuss the theoretical basis of the self-esteem enhancement used in the intervention. Stein and Corte (2003, p. 61) argue that without a theoretical model of self-esteem to underpin prevention approaches, “no clear focus for intervention

exists”. Therefore, the current study will review the self-esteem literature to derive an empirically validated theory on which to base the development of a prevention programme.

Thirdly, utilising a strong theoretical basis, enhancing self-esteem can incorporate many of the risk factors to produce a broad-based prevention programme, as will be detailed in Chapter 2. Finally, a self-esteem focus may produce positive effects for emotional and behavioural problems other than eating disorders (DuBois, Bull, Sherman, & Roberts, 1998). Indeed, Stice’s (2002, p. 844) meta-analytic review of risk and protective factors for eating pathology, argues that prevention intervention would benefit from “targeting general risk factors that have been shown to predict multiple adverse outcomes...because such interventions should produce greater overall improvements in mental health”.

The prevention of eating disturbances in pre- and early adolescence is an important aim given the prevalence and consequence of these conditions. As demonstrated in this review, studies with this aim have had limited success and are plagued with methodological limitations. This study will develop and evaluate a universal intervention programme based upon the risk and protective factor, self-esteem. The programme will combine features of the developmental and SCT models with a main focus derived from the NSVS model of enhancing self-esteem. These features will be detailed in Chapter 2’s exploration of self-esteem.

CHAPTER 2: ENHANCING SELF-ESTEEM IN CHILDREN

2.1 Introduction

The enhancement of self-esteem has long been an important goal of psychotherapy and education programmes. Despite the enormity of self-esteem literature, there is little consensus on how to change self-esteem. The aim of this review is to determine the most effective means by which to enhance self-esteem in children. The review will begin by defining self-esteem and discussing the problems that the literature has evidenced in gaining consensus on a definition. This will be followed by a discussion on why the enhancement of self-esteem is important. The associations this construct has had with a wide variety of psychological and sociological variables will attest to this importance. To further understand self-esteem an exploration of how the concept has been conceptualised by various theorists and researchers will be conducted. In particular, the work of Herbert Marsh and Susan Harter will be examined to arrive at the rationale for choosing Harter's (1986, 1987) model of self-esteem for an enhancement intervention. And finally, an exploration of meta-analytic studies on self-esteem enhancement and an examination of individual programmes will elicit the important factors that are required for an intervention to be successful. This review will conclude with details of Harter's strategies involved in improving self-worth and a rationale for the current study. However, to begin, how is self-esteem defined?

2.2 What is Self-esteem?

Self-esteem is one of the oldest themes in the discipline of psychology (Mruk, 1999) and has had a profound influence in psychology together with other disciplines such as counselling and education (Chan, 2000). It is a theme dating back to at least 1890, when William James (1890) was the first to define self-esteem. There is a plethora of terminology regarding the self and many contradictory definitions. Some have argued that this has made the literature incomparable and difficult to interpret (Mruk, 1999; Wylie, 1989). For example, self-esteem has been referred to as "global self-worth" (Harter, 1982), "general or global self-concept" (Marsh, 1986) and self-evaluative judgements (Harter, 1999). Furthermore, Marsh &

Hattie (1996, p. 56) comment “self-concept, like many other psychological constructs, suffers in that ‘everybody knows what it is’ so that many researchers do not feel compelled to provide any theoretical definition of what they are measuring.” Indeed this is reflected in the lack of self-esteem theoretical underpinnings in the prevention interventions with a self-esteem focus outlined in the previous chapter. Marsh and Yeung (1999) comment that some researchers divide self-descriptions into two components, an evaluative component (self-esteem) and a descriptive component (self-concept) whereas others (see Marsh, 1993; Shavelson & Marsh, 1986) argue that self-concept is both evaluative and descriptive.

Mruk (1999) maintains that a solution can be found to what Smelser (1989) calls this “definitional maze” of self-esteem. Mruk uses phenomenological analysis to find “Definitions that underlies the other definitions” (p. 12). Mruk’s phenomenological approach searches for persistence, significance and a lived validity. A persistent definition is one that has been made by researchers that others regard as having made notable contributions to the field. A significant definition is one that has stood the test of time. Other researchers continue to use the definition and this may include empirical support for this definition. Each of these derived definitions is then subjected to analysis that uncovers the regularities or consensus in what they express about self-esteem. This information is then used to develop a more comprehensive definition. And finally, Mruk’s approach ensures that this definition reflects how self-esteem is “lived by real people in real settings” (p. 14). Mruk’s analysis explores the contributions made by James (1890), Adler (1927), White (1963), Rosenberg (1965), Coopersmith (1967) and Branden (1969, 1994). This data gathering activity found that if a definition is to be comprehensive it must account for “competence, worthiness, attitudes, feelings, and the possibility of maintaining or losing self-esteem” (Mruk, p. 22).

Mruk (1999, p. 26) defines self-esteem as “the lived status of one’s competence in dealing with the challenges of living in a worthy way over time”. His definition has three key features that encapsulate the fundamental structure of self-esteem. Firstly, the basic components of self-esteem comprise both competence and worthiness. Competence is the level of ability to meet the demands of a particular situation or event and is the more behavioural and observable component. Worthiness is judgements regarding the individual as well as or instead of the

behaviour. Secondly, self-esteem's lived status is experienced in terms of both cognition and affect. Cognitively, individuals make a mental evaluation and this perception or attitude is expressed as either positive or negative. Self-esteem can also be lived as an emotional state. And finally, self-esteem is a dynamic phenomenon. It is developmental and remains open to change, although by adulthood there is a certain degree of stability.

2.3 Why is Self-esteem Important (Self-esteem Correlates)?

Studying self-esteem is important for two compelling reasons. Firstly, self-esteem is related to many aspects of human behaviour. It has been argued to be “a central aspect of the subjective experience and quality of life” (Crocker & Wolfe, 2001, p. 593). Indeed, it is often used as an index of emotional adjustment (Baumeister, 1993) and is considered to be a critical indicator of mental health (National Advisory Mental Health Council, 1996). People with high self-esteem report *greater life satisfaction* (Myers & Diener, 1995) *greater positive adjustment* (Pope, McHale, & Craighead, 1988), *higher school achievement* (Covington, 1989; Marsh, 1990a), *less anxiety* (Pyszczynski & Greenberg, 1987), *less hopelessness* (Crocker, Luhtanen, Blaine, & Broadnax, 1994), *fewer depressive symptoms* (Tennen & Herzberger, 1987), *fewer emotional and behavioural problems* (DuBois et al., 1998) and *being more independent and less sensitive to criticism* (Coopersmith, 1967) than people with low self-esteem. On the other hand, low levels of self-esteem have been related to *more severe signs of eating disorders and other psychological problems* (Button et al., 1996), *thinking about or attempting suicide in young people* (Roberts, Roberts, & Chen, 1998), *feelings of hopelessness or negative expectations about the future* (Hewitt, Newton, Flett, & Callander, 1997), *child maltreatment* (Bhatti, Derezotes, Kim, & Specht, 1989), *risk of adolescent pregnancy* (Crockenberg & Soby, 1989) and *problematic use of alcohol and drugs* (Skager & Kerst, 1989). The DSM-IV-TR (APA, 2000) contains criteria to assist practitioners in making psychiatric diagnoses. Within this manual, low self-esteem is noted as an associated feature of many of the disorders, including childhood disorders. In Diener's (1984) review of the subjective well-being literature, he reached the conclusion that self-esteem was the strongest predictor of life satisfaction when compared with demographic indicators and psychological variables.

Most empirical studies in this area are correlational by design, and therefore cannot prove causality. For example, numerous researchers have shown that high self-esteem is related to high academic achievement. However, the correlation can not indicate whether high self-esteem causes good academic achievement or vice versa. Pope and colleagues (1988) argue that it is probable that causality operates both ways. That is, high self-esteem contributes to good academic achievement and a good academic achievement contributes to high self-esteem.

Secondly, self-esteem is “a foundational topic for much psychological research, theory and practice” (Mruk, 1999, p. 2). Every major theoretical perspective in psychology has contributed to the self-esteem literature. Wells and Marwell (1976, p. 250) from their literature review on self-esteem concluded,

First of all, self-esteem seems to us to be a vital and broadly relevant conceptual tool for both psychological and sociological perspectives...[H]ow people think of and evaluate themselves, both as a consequence of basic social conditions and as predisposition for subsequent behaviours, is an essential behavioral construct for interpreting human conduct. Its interpretive importance is revealed not only by its frequency of occurrence in academic literature, but by the strength and variety of its application in popular debates as well. Self-esteem seems to be emerging as one of the key “social indicators” in current analysis of social growth and process.

Given this social significance of self-esteem and the role it plays in mental health it is not surprising that the enhancement of self-esteem is considered a worthy pursuit. Wylie (1979) states that self-esteem enhancement is among the primary goals of psychotherapy. In order to explore ways of enhancing self-esteem, a more thorough understanding of what it is and how it develops is required.

2.4 Global versus Domain Specific Self Evaluations

Up until the 1970s, self-esteem had been conceptualised and researched as a unidimensional construct. Theorist and researchers such as Coopersmith (1967) and Piers and Harris (1964) strongly argued that self-esteem was global and that people do not differentiate between the domains in their life (Harter, 1996). Instruments

born from this conceptual framework sum up a number of items tapping the self in a range of contexts, thereby giving each context equal weight (Harter, 1990b).

However, the assumption that this aggregated score provides an adequate sense of self across a range of contexts has been challenged (see Harter, 1985; Marsh, 1984; Shavelson, Hubner, & Stanton, 1976). Harter (1990b, p. 294) argues that this approach “mask[s] important evaluative distinctions that individuals, including children, make about their adequacy in different domains of their lives”. Indeed, Piers & Harris’s own empirical work challenged their unidimensional construction by revealing exactly this difference, which Harter argued for (Harter, 1999). That is, across different domains children made different evaluative judgements regarding themselves.

During the late 1970s and early 1980s, research interest in the self-system saw a resurgence (Hymel, LeMare, Ditner, & Woody, 1999). Much of this interest took up the challenge of shifting from conceptualising the self as a global, unidimensional construct to a domain specific one. Support for this conviction was gained largely from the self-reporting instruments assessing the self that grew out of a multidimensional view of the self. Two of the most widely used and researched multidimensional self-concept instruments are the Self-Description Questionnaire (SDQ-I) developed by Marsh, Smith & Barnes (Marsh, Smith, & Barnes, 1983) and the Self-Perception Profile for Children (S-PPC) developed by Harter (1982, 1985). The SDQ-I identifies seven separate domains: scholastic, math, reading, physical, peer, parent dimensions of self-evaluations and an overall self-worth. The S-PPC contains five domain-specific subscales: *scholastic competence*, *athletic competence*, *peer likability*, *physical appearance*, *behavioural conduct* and a separate subscale that assesses *global self-worth*. These instruments are “highly correlated and comparable in reliability, stability, subscale interrelations and associations with others’ evaluations” (Hymel et al., 1999, p. 602).

The past 20 years of research have provided little doubt in how the self-concept construct should be conceptualised. Overwhelmingly a multidimensional conceptualisation is favoured (Bracken, Bunch, Keith, & Keith, 2000). However, contemporary theorists do not pit the two models against each other, as is evident by self-esteem measures that have both a global self-esteem and domain specific self-esteem (see Harter, 1985; Marsh et al., 1983). Phenomenologically both global and

domain self-esteem exists in the repertoire of how individuals think of themselves. By middle childhood, children are cognitively able to both make global self-evaluations and more specific judgements in a variety of domains (Harter, 1999).

2.5 Hierarchical Models

With the conceptual development of global and domain-specific self-evaluations, theorists were naturally led to speculate about their structure and relationship (Harter, 1999). That is, how are these two types of self-evaluations linked? Hierarchical models, where global self-esteem is at the apex and domain specific self-evaluations at the base, were developed first through theory and then later by experimental testing. Many hierarchical models have been produced (see Epstein, 1973; L'Ecuyer, 1992; Marsh, 1990b, 1993; Shavelson et al., 1976; Shavelson & Marsh, 1986; Song & Hattie, 1984) and they vary in complexity and number of second- third- and fourth- level domains.

One of the most well researched models, utilising hierarchical confirmatory factor analytic and multitrait, multimethod statistical procedures, is the one produced by Marsh and colleagues (Marsh, 1993; Shavelson & Marsh, 1986) (see Figure 3). This model was based upon Shavelson, Hubner, and Stanton (Shavelson et al., 1976) theory of self-concept. General self-concept is theorised to be made up of two broad classes, non-academic and academic self-concepts. Non-academic is made up of third-order domains of social, emotional and physical. The physical domain is further differentiated into physical ability and physical appearance. The second broad class of academic self-concept is subdivided into verbal and math domains. The verbal domain is further separated into foreign language and history while the math domain has a fourth-order domain of science. The lower level self-perceptions are hypothesised to have a causal impact on the next level up (Byrne, 1996). For example, physical appearance, together with physical ability, “cause” physical perception, which in turn causally contributes to non-academic perception, which finally impacts on general self-concept.

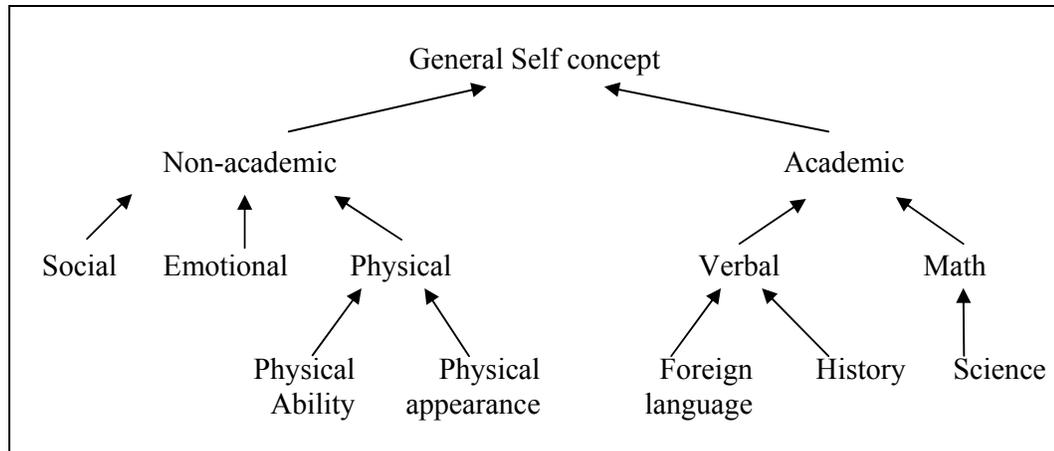


Figure 3: Marsh & colleagues (1986, 1992, 1993) hierarchical multidimensional model of self-concept

There has been some empirical support for this model (see Byrne, 1996; Hattie, 1992b; Marsh, 1990b, 1993) and other hierarchical models (Harter, 1998). However, their popularity during the past few decades has not gone without some criticism. Primarily the criticism has focused on questioning the assumptions on which they are based (Harter). Firstly, it is assumed that the greater number of specific domains a model has, the better the model. Harter questions the value of such an assumption as it is not clear how an increasing number of domains assists in the understanding of self processes, in particular, correlates and outcomes as outlined in the section on the importance of self-esteem. Furthermore, these models have not considered the developmental, individual and cultural differences in their development. Secondly, it is assumed that statistically derived structures mirror psychological structures. That is, do people organise their self-constructs in the same way as this statistical derivation? Harter (p. 579) and Mruk (1999) argued that “statistical procedures employed do *not* directly tap the manner in which *people* themselves organize self-constructs.”

A growing body of research that incorporates how individuals process self-relevant and irrelevant attribute information is providing alternate theories (Harter, 1999). One multidimensional model that has undergone considerable research and phenomenological validation and as such incorporates idiosyncratic pathways to global self-worth based upon a combination of domain-specific self-evaluations and related perceptions of support, has been developed by Harter (1986, 1987, 1990a; 1992). Her model of self-esteem is guided by “self” theorists James (1890, 1892) and

Cooley (1902). Both James & Cooley support the notion of a global self-esteem that is fed by more specific self-evaluations (Harter, 1993). However, each theorist formulates the determinants of an individual's global self-worth very differently.

James formulated self-esteem as a ratio based upon an individual's successes and pretensions or in other words, a cognitive evaluation of his or her adequacies (Harter, 1993). Successes in this context refer to the perceived competencies an individual holds in various domains. Pretensions relate to the personal importance attributed to each of the various domains. According to this conceptualisation, if a person's successes are equal to or greater than their pretensions then their global self-esteem should be high. A person characterised by low self-esteem will have successes less than their pretensions. For example, if individuals deem themselves to be unathletic, this will only decrease their self-esteem if they consider being successful in the domain of athletics as important.

Cooley, on the other hand, proposed that self-esteem was a social construction whereby an individual's own esteem develops from the perceived approval or disapproval of others (Harter, 1993). Therefore, according to Cooley's formulation individuals who perceive they secure little positive regard from significant others will have lower self-esteem as compared to those who perceive they gain more positive regard. He contended that what becomes known as the self is comprised of three components: "a) the imagination of our appearance to the other person, b) the imagination of that person's judgement of that appearance and c) an associated self-affect" (Harter, 1998, p. 555). This is a developmental process, and by adulthood this socially derived notion of the self becomes internalised, whereby it is no longer entirely dependent upon what others think.

Harter (1986) found strong empirical support for both of these formulations and incorporated her findings into the model in Figure 4. Support for this model has also been found in adolescents with mental health problems (Willoughby, Polatajko, Currado, Harris, & King, 2000). In testing these two models Harter also measured the extent to which self-worth influences other self-systems, specifically, affect (happy versus sad) (Harter, 1999). Within the normative samples used, self-worth and the cheerful/depressed continuum correlated highly, with correlations ranging

between .72 to .80. Consistently, children who measured low on self-worth also reported a depressed affect.

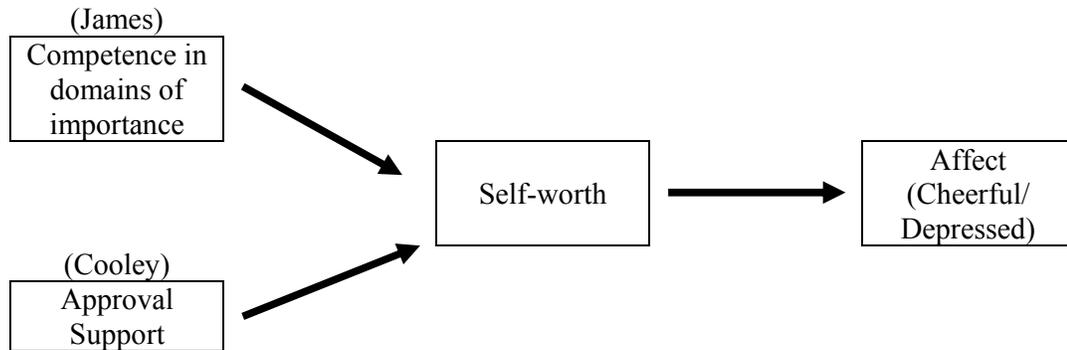


Figure 4: Harter's original model of the determinants and consequences of self-worth (Source: Harter, 1999, p. 198)

In more recent times, Harter has elaborated upon her original model in 5 enhancing ways. In the original model 'competence in domains of importance' and 'approval support' were regarded as independent contributors to self-worth. However, in her subsequent model (Harter et al., 1992, see Figure 5) the amount of support an individual receives is dependent upon the level of competence an individual possesses. This research utilised a sample of 346 U.S. middle school students in Grades 6 to 8. Conducting higher-order factoring of the 5 specific domains of Harter's *Self-perception Profile for Children* instrument revealed two distinct clusters. Physical appearance, peer likability and athletic competence formed one cluster and the importance attributed to each of these domains was considered more important to the self than to parents. The second cluster was comprised of scholastic competence and behavior conduct and these two domains were considered more important to parents than to the self. Furthermore, these two clusters impacted differently on the type of support received. The first cluster showed a stronger relationship to peer support than parent support. Therefore, the more individuals perceive themselves to be good-looking, likeable and possess athletic competence the more likely they were to attract peer support. Conversely, the second cluster bore a stronger relationship to parent support than peer support. Therefore, parental support was far more likely to be forthcoming if the individual perceived their scholastic competence and behavioural conduct positively.

Although the causal modelling in the original model revealed the inferred causal path from self-worth to affect as an excellent fit, subsequent testing of alternative models found that the reversed direction was just as fitting. Therefore, Harter and colleagues removed the self-worth to affect pathway and created a depression/adjustment composite, comprised of self-worth, affect, and general hopelessness. Hopelessness, “the perception that one is unable to control or alter painful life circumstances” (Harter, 1999, p. 200) was included due to its high correlation with global self-worth and depressed affect (correlations in the .70’s). The model was then extended to cover the outcome of suicidal ideation, as the development of theory-based models is limited in this area.

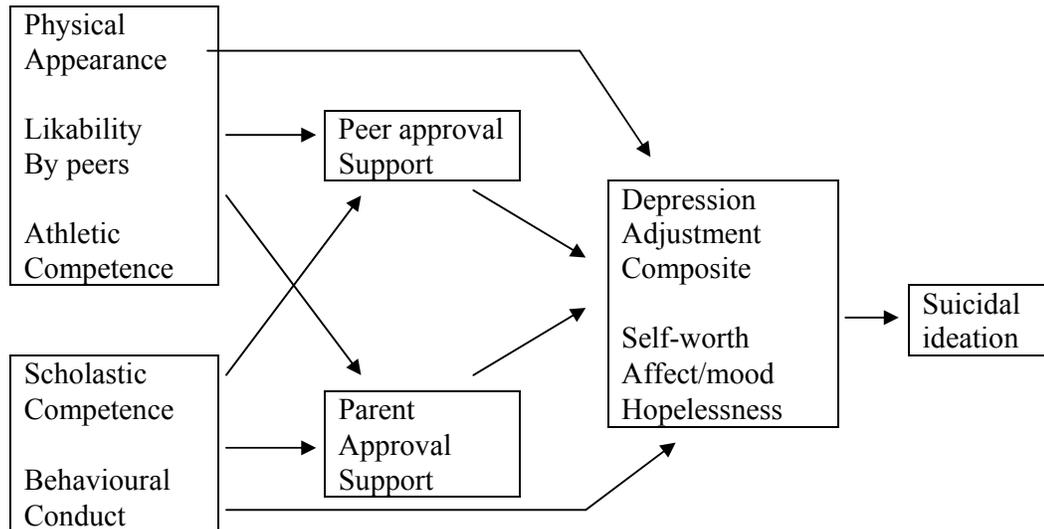


Figure 5: Harter's model of the determinants and consequences of self-worth (Source: Harter, 1999, p. 199)

Harter and her colleagues' work has made a strong contribution to the area of self-esteem because it is theoretically, empirically and also phenomenologically driven. In particular the phenomenological validity is important because as Harter (1999, p. 196) notes, “unless we can demonstrate that it [self-esteem] plays a vital role in individuals' lives, unless we can document the fact that it performs some critical function” then “the efforts of numerous self-worth researchers may well be misguided”.

2.6 Are Some Domains More Predictive of Global Self-esteem Than Others?

With the development of multidimensional hierarchical models an interest in the predictive value of specific domains of global self-esteem was ensuing. Cross-culturally [*Australia*: Trent, Russell, & Cooney (1994); *U.S.*: 13 samples collected by Harter & colleagues (1999) Hagborg (1994), *Canada*: Crocker & Ellsworth, (1990); *England*: Fox, Page, Armstrong, & Kirby, (1994); *Ireland*: Granleese & Joseph, (1993); to name but a few] study after study demonstrated that physical appearance had the strongest correlation to global self-worth (see Table 1). This relationship has been found to be extremely robust across the entire age range of Harter's normative samples from age 8 to 50 with all the average correlations being between .62 and .65 (Harter, 1990a). Furthermore, the relationship between physical appearance and global self-worth has been found in special populations such as the intellectually gifted and learning disabled (Harter, 1999). One study that particularly punctuates this relationship is a study conducted by Lee (1993, cited by Harter, 1999). The study used a sample of children in the Special Olympics and it was hypothesised that athletic competence would be the most predictive domain of global self-worth due to the sample's focus on sport. However, as many other studies have previously revealed, physical appearance was the domain most highly correlated with global self-worth.

Table 1: Correlations of domain competence/adequacy scores and global self-worth across samples in the United States and abroad.

Domain	Range of correlations		Average correlation	
	Harter's U.S. samples	Other countries	Harter's U.S. samples	Other countries
Physical appearance	.52 -.80	.54 -.65	.65	.62
Scholastic competence	.34 -.54	.33 -.48	.48	.41
Social acceptance	.34 -.58	.32 -.51	.46	.40
Behavioral conduct	.32 -.50	.41 -.47	.45	.45
Athletic competence	.23 -.42	.24 -.38	.33	.30

Source: Harter, 1999, p.158

Moreover, for females their perceived physical appearance systematically decreases as a function of grade level (Harter, 1999). At middle childhood males and females perceive their appearance at a similar level but each successive year sees a greater disparity between the two. While males maintain a fairly constant score on the *Self Perception Profile for Children* of 2.9 to 3 rating (ratings can range from 1 to 4 where 1 denotes low and 4 represents high perceived competence in a particular domain) on the perceived appearance domain between third grade and eleventh grade, females drop from 3 to 2.3 during the same years. This disparity continues throughout adulthood (Harter, 1999). Other researchers have supported these findings (see Crocker & Wolfe, 2001; Maloney, McGuire, & Daniels, 1988; Stein, 1996; Wagner & Valtin, 2004).

Many authors proposed theories explaining this phenomenon. One theory that has received a lot of attention is the importance that is placed on appearance in western society. Starting in infancy children are responded to by adults based upon societal standards of attractiveness (Maccoby & Martin, 1983). Positive attention is endowed upon those who are judged more attractive. Accordingly, “the physical self is highly salient in provoking evaluative psychological reactions that are incorporated into the child’s emerging sense of worth.” (Harter, 1998, p. 592). As children become exposed to television, magazines, music videos, movies and advertising, the message of the importance and standards of physical appearance is strengthened.

Thus far, it is clear that self-esteem is a multi-dimensional concept that is regarded as critically important in an individual’s well-being and mental health. The positive outcomes associated with self-esteem suggest that establishing an intervention to enhance self-esteem is desirable. Furthermore the model proposed by Harter (1986, 1987) provides a compelling theory on which to base a self-esteem enhancement intervention. Before detailing the strategies involved in this endeavour, a review of meta-analytic studies and existing programmes can further provide information for designing an effective programme.

2.7 Enhancing Self-Esteem Programmes

There are many developmental stages, specific target groups and environments in which a self-esteem enhancement programme can be implemented.

Indeed, some researchers have sought to improve children's self-esteem by focussing on *remedial assistance in reading functions* (see McCormick & Williams, 1974), *self-portrait photography* (Ammerman & Fryrear, 1975), *role-play in a counselling programme* (Altmann & Firnesz, 1973), *physical activity* (Boyd & Hrycaiko, 1997) providing *big-brother/big-sister relationships* (Neale & Mussell, 1968), *social skills training* (Bierman & Furman, 1984) *relaxation training* (Loffredo, Omizo, & Hammett, 1984) and a *tutorial programme* (Edmondson & White, 1998). Others have utilised specific participant groups such as adolescents with *learning disabilities* (Wanat, 1983), *male juvenile delinquents* (Maskin & Flescher, 1975), *emotionally disturbed children* (Krop, Calhoon, & Verrier, 1971; Nahme-Huang, Singer, Singer, & Wheaton, 1977) *deaf children* (Barrett, 1986) and *children of divorce* (Burke & Van de Streek, 1989). This brief coverage of different approaches to changing self-esteem and the use of various target groups demonstrates the need for some parameters to be placed on this review to make sense of the variety in the literature.

Thus, this review of enhancement programmes will begin by detailing the three main approaches to enhancing self-esteem within a school system as the current study will be focusing on school aged children for reasons indicated in chapter one. This will be followed by what meta-analytic reviews inform the literature in terms of what makes an effective enhancement programme. Finally, individual self-esteem enhancement programmes identified by Mruk's (2006) phenomenological approach (programmes that demonstrate persistence and significance within the literature) will be reviewed for strengths and weaknesses that will assist in designing a programme.

2.7.1 *Enhancing Self-esteem in the School System*

There are three main approaches to enhancing self-esteem in the school system (Beane, 1991). The first approach enjoyed much popularity in the 1960s and early 1970s and was typified by activities in personal development. For example, an activity could require teachers and children to sit in a circle once per week and discuss how much they like themselves and others. This approach has often been criticised as unsupported "New Age, pop psychology fluff" (Beane, 1991, p. 28). Proponents of this criticism have included noted authors such as Martin Seligman

(1995) and William Damon (1995). They have argued that the focus on children's feelings and developing "warm fuzzies" instead of competence, is a waste of time. Seligman (1995, p. s27) goes further in arguing "By emphasizing how a child feels, at the expense of what the child does – mastery, persistence, overcoming frustration and boredom and meeting a challenge – parents and teachers are making this generation of children more vulnerable to depression". Mruk (1999) concurs with this argument but maintains that competence must not then be valued at the expense of worthiness. As discussed previously in his definition, he considers both domains equally important. This is further supported by Marsh (1999) who argues that an effective enhancement programme focussing on academic self-concept needs to consider and target both competence and affect in the programme.

The second approach involves implementing a self-esteem programme into schools. Bean (1991, p. 27) argues that these programmes are "more than mood feelings, namely a self-esteem curriculum, locally prepared or commercially purchased, assuring that students who go through the program will have better self-esteem and thus be immune to self-destructive behaviours and school failure." However, he claims that this approach does not produce lasting effects because it focuses on the individual and does not incorporate environmental influences. A school environment that is not safe or empowering is likely to diminish the effects of any isolated self-esteem programme.

The third approach takes into account the child's institutional environment. Beane (1991) argues that childhood self-esteem enhancing approaches need to go beyond the traditional individual approach and incorporate an ecological one. The ecological perspective suggests that schools, as a whole, need to be assessed as to whether they are self-enhancing. Table 2 outlines Bean and Lipka's (1986) suggestions for moving towards a self-enhancing school.

Table 2: Bean and Lipka's (1986, p. 180) "Moving toward the Self-enhancing School"

From	To
Low priority on self-perceptions Custodial climate	Self-perceptions as a focus Humanistic climate

From	To
Attribute grouping	Variable grouping
External control	Self-direction
Self-isolation	Peer interaction
Age isolation	Multiage interaction
Accepting failure	Expecting and assuring success
Avoiding or blaming parents	Working with parents
Negative expectations	Positive expectations
Debilitating teacher self-perceptions	Enhancing teacher self-perceptions
Vague self-perceptions goals	Clear self-perception goals
Confusion about learners	Clear understanding of learner characteristics
Vague learning constructs	Learning constructs to enhance self-perceptions
Subject-centeredness	Life centeredness
Teacher-exclusive planning	Teacher-student planning
Textbooks and tests	Problems and projects
Maintenance of the status quo	Continuous development

Source: (Beane & Lipka, 1986, p. 180)

Furthermore, DuBois, Bull, Sherman and Roberts' (1998) social-contextual self-esteem study suggests that self-esteem enhancement, prevention and health promotion strategies may facilitate favourable outcomes by incorporating both environmental and individual oriented interventions. For example, 'school' sources of self-esteem might be addressed by providing academic support services. 'Peer orientated' sources of self-esteem could be facilitated by providing opportunities for friendship formation and involvement in appropriate extracurricular activities. 'Significant others' sources of self-esteem could be addressed by training parent-child communication skills.

Canfield and Wells (1976) reflect Bean and Lipka's (1986) teacher-student planning by suggesting students should be included in the planning of the academic environment through decision-making regarding the physical setting, content, and sequence of activities. Furthermore, teachers can create a supportive classroom atmosphere by accepting pupil contributions without judgement, and maintaining a "you can do it" attitude (Canfield & Wells). It is clear from Bean's review encapsulating the three main approaches to enhancing self-esteem in school children that an intervention must be comprehensive in involving a whole school approach.

However, what can be elicited from previous research that has evaluated enhancement programmes?

2.7.2 Findings from Meta-analytic Reviews

Many books and curriculums can be found claiming to provide ideas and strategies on how to improve the self-esteem of school students. However, most of this material fails to provide evidence for the effectiveness of the advocated strategies. A computer search of databases such as Psychinfo and ERIC reveals 10,000s of articles and books related to self-esteem but few in relation to evaluation of enhancement programmes. Those enhancement studies that are found often contain methodological flaws that prevent conclusive results or do not provide evaluations of the advocated programmes. Indeed, Hattie's (1992a) meta-analytic review of enhancing self-concept studies, found that many had to be rejected from the analysis on the grounds of methodological problems and quality of research. Hattie comments that, "there were too many fair and poor studies, too many studies that were rejected because they evaluated programs by intuition, too few studies with follow-ups, and too few studies that included control groups" (p. 236). These failings highlight the point that future evaluations of enhancement programmes need to be designed with sound methodological principles in mind such as random allocation, control groups and building the programme upon firm theoretical foundations.

Hattie (1992a) sums up the implications of effective enhancement programmes that met the criteria of meta-analysis in the following way. Firstly, cognitively orientated programmes are superior to affective oriented programmes in enhancing self-concept. That is, programmes that replace maladaptive automatic thoughts with realistic thoughts, and/or teach social/life and communication skills are more effective than those programmes that focus on developing self- and feeling-awareness in a non-judgemental environment. This may, however, be an artefact of the difficulties in affective evaluation as opposed to the clearly set, definable and measured smaller goals of cognitively based programmes. Her analysis supports the use of "cognitive restructuring and goal- and task-oriented activities where positive thoughts and experiences are continually reinforced" (Hattie, 1992a. p. 239). Secondly, programmes are far more effective if people who are trained and experienced in running such programmes facilitate them. She found that

psychologists were more effective than teachers in enhancing self-concept in school children. Thirdly, programmes aimed at adults were more effective than those aimed at children. In particular, the self-concepts of preadolescents were far less malleable than adults or children. Hattie suggests cognitive development may be a factor in this difference and reasoned that it is harder for preadolescents to understand and change their sense of self than it is for adults who have a richer understanding and the “ability to encode information to bring about change” (p. 238). Furthermore, global self-concept is easier to change in adults whereas for children, specific dimensions of self-concept are easier. Fourthly, Hattie highlights two methodological issues. One, it is important that outcome measures match the aims of the programme and the cognitive levels of participants and two, follow-up studies are necessary to delineate between euphoric effects after treatment and real self-esteem change.

Gurney (1987) summarises his review of enhancement research as holding six important implications for classroom teachers who wish to enhance the self-esteem of their students. Firstly, providing teacher attention to students may be valuable in its own right. Therefore, the temptation to attend to the students who perform well should be avoided and more attention should be directed at those who display low self-esteem. Secondly, a non-judgemental acceptance of all children may be facilitated by knowledge of a student’s background both positive and negative. Implementation of a valid monitoring-of-progress system within the school may assist with this implication. Thirdly, fostering self-monitoring and self-reinforcing behaviours appears to be beneficial in self-esteem enhancement. Fourthly, parents have been crucial in the development and maintenance of self-esteem and therefore should continue to play a role within the school, where possible. For example, continuing the programme at home in the form of homework that involves parents could increase the impact of a programme. Fifthly, interventions should incorporate a whole school approach involving principals, teachers and students. Finally, it is important that the teachers pay attention to their own self-esteem. What is true for students is also true for teachers.

A more recent meta-analytic review conducted by Haney & Durlak (1998) found that levels of self-esteem and self-concept (SE/SC) could be significantly improved in children and adolescents. Furthermore, positive change in other areas of adjustment are simultaneously possible. They provide five qualifiers that are useful

to consider when designing an intervention. Firstly, it is important that an intervention specifically focus on SE/SC. Interventions in their analysis that centred on other goals (e.g., decreasing behaviour problems) were inclined to have little effect on SE/SC. Secondly, benefits experienced by participants among problem groups were unequal. In general those with externalising problems obtained the largest effect size, followed by internalising problems and mixed symptomatology, respectively. Thirdly, the treatment studies (youth with known psychological problems) exhibited a larger effect size than prevention programmes. However, primary prevention programmes performed better when specifically targeted SE/SC outcomes than when they did not. Also, the difference is to be expected given that prevention programmes would contain participants who were functioning in the normal SE/SC range while the treatment studies would not. Moreover, the SE/SC primary prevention studies' mean effect size was within the range of other successful prevention programmes. Haney and Durlak (1998) note that most of the SE/SC primary prevention programmes relied on self-report measures and recommend that future studies collect outcome data reflecting the risk and protective factors for subsequent adjustment.

Fourthly, and most importantly, effective studies were those that were “guided by a theoretical or empirical rationale, or both” (Haney & Durlak, 1998, p. 429). The use or nonuse of a rationale could explain 31% of the variance in SE/SC outcomes. Findings indicated that methodology also influenced outcomes. For example, studies utilising randomised experiments and attention-placebo groups were more effective and provided a richer analysis. Lastly, Hanley and Durlak identified several conceptual and empirical limitations. The superiority of models or approaches was impossible to determine due to the wide variety of theoretical and empirical bases. Many studies do not sufficiently define and differentiate between self-esteem and self-concept. Too few studies reported ethnicity, age and sex which again lessened the richness and depth of findings. However, Hanley and Durlak conclude their analysis provides encouraging results for future studies and clarification on methods for improving SE/SC enhancement interventions.

The previous discussion has outlined some general important points that need to be considered when designing an effective self-esteem enhancement programme. Such as, the superiority of cognitive over affective orientated programmes, the

importance of whole school or ecological approaches, the need for programmes to be guided by empirically validated theory, the necessity to improve upon previous methodological failings and the requirement for facilitators to be sufficiently trained. This review will now sharpen the focus to address self-esteem enhancement studies that specifically focus on self-esteem rather than many of the studies included in the meta-analytic reviews that include a focus of more general therapeutic goals.

2.7.3 Self-esteem Enhancement Programmes

Again, there are a scant number of applied programmes designed to enhance self-esteem that are grounded in theory and research. Indeed Mruk (2006, p. 128) reflected that there are “few genuinely comprehensive approaches in the field” of enhancement. Using Mruk’s criteria of persistence and significance there are four self-esteem enhancement programmes worthy of note to explore in terms of theory and techniques.

2.7.3.1 Frey and Carlock’s (1989) ‘Enhancing Self-Esteem’

Mruk (2006, p. 128) describes Frey and Carlock’s (1989, p. 128) programme as “eclectic variations on a Humanistic theme”. Eclectic in that they borrow from other disciplines such as cognitive theory (e.g. awareness and challenging self-talk and self-fulfilling prophecies) or social learning theory. Humanistic as in they utilise concepts such as “organismistic self-regulation” and activities that are experiential with a growth and development endeavour. There are four parts to this programme. The first part “identity phase”, is designed for participants to increase awareness of their identity and what they value. Generally, the identity of individuals with low self-worth is clouded by distorted perceptions and exercises in the programme are designed to clarify these perceptions. The second part focuses on increasing awareness of strengths and weaknesses. Typically the former are minimised and the later are exaggerated in low self-worth individuals. The facilitator of the programme is encouraged to provide genuine positive feedback to participants wherever possible. Exercises are designed to foster awareness of the biased cognitive filtering process and develop participants’ ability to receive information more accurately. There is an emphasis on strengths over weaknesses.

The third part – “nurturance phase” has an aim to nurture the stronger self-worth that participants have developed through phase one and two. It teaches

individuals to identify their self-esteem needs/supports and explore how to get these met. It also imparts skills in challenging negative thinking/self fulfilling prophecies and replacing them with more realistic positive ones. The final part – “maintenance phase” sets out to teach realistic goal setting and develop appropriate risk taking strategies that will maintain gains in, and further grow, self-worth.

One of the strengths of Frey and Carlock’s (1989) programme is it has clearly defined objectives that are operationalised in concrete activities. They also have an assessment component that allows the clinician to adjust the programme according to individual participants. There is one study to attest to its effectiveness. Using Frey and Carlock’s protocol to enhance self-esteem, Frey, Kelbley, Durham and James (1992) implemented a 12-week group counselling programme with 21 male nursing home residents (control group = 12, $M = 73.3$ years and intervention group = 9, $M = 71.3$ years). Results demonstrated a significant improvement in the self-esteem of the intervention group when compared to the control. However, to this author’s knowledge the programme has not been assessed using children or adolescents and has only been used in a clinical setting.

2.7.3.2 Pope, McHale and Craighead (1988) ‘Self-esteem Enhancement with Children and Adolescents’

Pope McHale and Craighead’s (1988) approach to enhancing self-esteem is based upon social learning theory and therefore techniques such as positive reinforcement and modelling are used to effect change. Self-esteem problems are viewed as arising from a discrepancy between an individual’s ideal self-concept and actual self-concept. The programme focuses on effecting change in five domains of self-esteem: global, social, academic, family and body image. A detailed assessment is crucial in tailoring the individual’s self-esteem problems according to the five domains, their strengths and their cognitive level. The programme can be run in a group and is organised around eight segments: solving social problems, developing positive self-statements, using a realistic attributional style, increasing self-control, setting appropriate standards, developing social understanding and social skills, increasing communication skills and improving body image.

One of the strengths of this programme is it has a clear logical step-by-step procedure that uses recognised cognitive behavioural therapeutic techniques. It is

also specifically designed for children/adolescents and provides a mechanism for adjusting the programme to the cognitive level of the participants. However, there is no experimental study that assesses the efficacy of the programme in its entirety. Horan (1996) designed a computer based cognitive restructuring programme for 16 to 19 year old high school students with low self-esteem. The programme was designed around seven irrational beliefs associated with low self-esteem and fits within the conceptual framework of Pope, McCale and Craighead (1988), according to Horan. Participants progressed through a computer programme dependent upon the tenacity with which they held the irrational belief. Those participants who endorsed the belief were then provided with challenging scripts and offered a rational response. Results demonstrated significant improvements on a number of self-esteem measures for the intervention group when compared to a relaxation-training control group.

2.7.3.3 Bednar, Wells and Peterson (1989) 'Self-esteem: Paradoxes and Innovations in Clinical Theory and Practice'

Bednar, Wells and Peterson (1989) draw from information-processing psychology and existential thought in developing their model of self-esteem. They propose that self-esteem develops through cognitive processes of feedback, circularity and self-regulations together with individual response styles. That is, over time, external feedback (information from others about the self) and more importantly internal feedback (personal evaluations of the self and behaviour) become self-regulating and result in a relatively stable positive or negative self-esteem. Furthermore, the ways in which an individual responds to psychological threat or conflict will impact on their self-esteem. Avoidance of such threats ultimately leads to a more negative self-esteem while the alternative of coping, promotes positive self-esteem.

Bednar and colleagues (1989) designed four stages, to occur in a clinical setting, to enhance self-esteem. Briefly, these stages are: 1) identify dominant avoidance patterns, 2) identify and label the thoughts and feelings that correspond to these patterns, 3) face the avoidance and negative self-evaluations realistically and 4) cope with personal conflict by continuing to utilise coping over avoiding in life events. The authors note that this process takes time and is tailored around the individual with low self-esteem.

There are no experimental studies to support the proposed self-esteem enhancement programme of Bednar, and colleagues (1989). Furthermore, they advocate the use of a “highly skilled experienced therapist” (Mruk, 2006, p. 140) to individualise the programme based upon the thorough assessment of the client’s level of self-esteem. Although this approach is at a more sophisticated level than appropriate for children, it again highlights the common practice of utilising cognitive techniques as an agent of change.

2.7.3.4 *Harter’s Developmental Approach*

Harter’s (1999) developmental approach to enhancing self-esteem is based upon her model outlined earlier. Thus, there are two sources of self-esteem: competence in domains that are personally important and social approval. Accordingly, low self-worth occurs in the context of “insufficient success in important domains, a lack of social approval at particularly significant times, and unfortunate mismatches between domains that are important to a particular person and the degree of approval that is received in relation to them” (Mruk, 2006, p. 141).

Aged based assessment plays an important role in identifying areas that require enhancing self-esteem techniques. Consistent with the model, there are two areas. If competencies are lacking in domains of importance then increasing relevant skills or decreasing the importance could facilitate enhancement. Alternatively, if low self-worth is related to social approval then increasing opportunities for social support may assist in enhancement. Like Bednar and colleagues (1989), there is no experimental study based upon Harter’s model to attest to its efficacy. However, it has strengths in that the programme is based upon theory, research and practice. It is developmental in that it can be applied to almost any age group and it can be individualised to the particular needs of the client in a clinical setting.

2.7.3.5 *Summary of Enhancing Self-esteem Programmes*

This review has outlined the basics of four programmes designed to enhance self-esteem. What is clear is the dearth of supporting literature for the efficacy of these programmes in modifying self-esteem. There is some evidence for the effectiveness of interventions that utilise cognitive restructuring as the agent of change. It would also appear that having ties to self-esteem theory, an assessment component, and clearly defined objectives and procedures is important in designing

an effective programme. Although none of the reviewed enhancement programmes stand out in terms of its empirical support, Harter's enhancement theory has a number of qualities that make her approach persuasive to pursue. Firstly, there is a plethora of supporting evidence for Harter's conceptualisation of self-esteem. Secondly, there is a measurement tool (i.e., Harter's 1985, Self-Perception Profile for Children) tied directly to the theory that also is supported by reliability and validity studies. This fits with Hattie's (1992a) recommendation that self-esteem enhancement programmes need to have outcome measures consistent with the aims of the programme. Finally, she provides detailed intervention strategies to assist in designing a self-esteem enhancement programme. Thus, the current study will develop an intervention based upon Harter's (1986, 1987) model. The following will expand upon the previously reviewed outline of Harter's self-esteem enhancement approach to provide further details of the approach underlying the current study.

2.7.4 Harter's Model of Self-esteem Enhancement

Harter (1998) argues that in order to develop enhancement programmes, determinants of self-esteem need to be identified. Thus, using her model the enhancement themes are both cognitive and social. Put simply, modifying competence for domains judged important (James' formulation) and changing the approval or disapproval from significant others (Cooley's formulation), should facilitate changes in self-esteem. The following discusses Harter's (1999) intervention strategies directed at cognitive determinants and social factors influencing self-representations.

2.7.4.1 Intervention Strategies Directed at Cognitive Determinants

2.7.4.1.1 A: Reduction of discrepancies between aspirations and perceived adequacies.

The first strategy aims to reduce the discrepancy between the real and ideal self-concept. An intervention would target skills development in the domain with discrepancies. For example, if academic achievement is important yet performance is below expectations then this discrepancy could be reduced by acquiring additional tutelage. Such an intervention increases skills competencies, thereby reducing the discrepancies between the real and ideal self-esteem domain. However, there may be natural limits to this strategy. For example, there is only so much a person can do to

improve their physical appearance. Pope and colleagues (1988) suggest an activity for this strategy such as the instruction in norms about personal appearance. This involves assisting children in seeing how they are perceived by others (techniques in social understanding) and the potential consequences of their behaviour (techniques in social problem solving). However, they caution the reader not “to impose on children conformity to fairly arbitrary standards of beauty” (Pope et al., p. 126).

Indeed, popular culture dispenses the message that perfection is attainable by all people (MacDonald, 1994). Advertisements, films and television present images of women and men fitting the perfect western cultural ideals. Typically these ideals make girls want to be thinner and boys bigger (Cohane & Pope, 2000). However, such ideals of attractiveness are virtually unattainable and therefore the standards or ideals need to be altered. Hamilton & Oswalt (1998) designed an activity which examines cultural standards of attractiveness. Opportunities are provided to critique these standards and develop nonappearance affirmations in enhancing self-esteem.

Several studies have demonstrated the importance of the relationship between the media and self-representations in body image. For example, Polce-Lynch and colleagues (1998) conducted a qualitative study examining gender and age patterns in body image, emotional expression and self-esteem. They hypothesised that media would influence body image in fifth to twelfth grade students. Previous quantitative research had identified media as influencing body image in children and adolescents. However, their qualitative open-ended format did not reflect this research. Rather than discrediting previous research, they argue that it reflects cognitive developmental levels. That is, the newly emerging abstract thought processes as well as levels in conscious awareness development were not at a sufficient level to make this connection. Polce-Lynch and colleagues (p. 1045) suggest this makes children and adolescents particularly vulnerable to the influence of mass media and argue that prevention and intervention efforts should instruct both girls and boys on “how to deconstruct and critically evaluate media’s messages about physical appearance”. They argue that these efforts should begin with girls prior to fifth grade.

Tiggemann, Gardner & Slater (2000) further refine this notion by hypothesising that peer group-based interventions will be more effective in generating commitment to attitudinal and behavioural body dissatisfaction change

than non-peer education. Their qualitative study found that 16 year old girls already had high baseline knowledge about media and media influence. However, it appeared that generally girls did not discuss these issues seriously with each other. Given the opportunity, group discussion was reassuring, and provided the occasion to discover how other girls felt, to realise that views were shared, to correct misconceptions and feel better about the issue.

A second strategy focuses on the importance component. This strategy assists the individual to emphasis the importance of areas in which they are skilful and discount those in which they are not. As Harter (1999, p. 317) reasons, the goal “is actively opting to spend more psychological time in those life niches where favorable self-appraisals are more common and avoiding arenas in which one feels inadequate”. For example, she suggests emphasising inner qualities, such as competence, kindness, morality, as more important than outer appearance. This emphasis will lead to the approval of their inner self as a worthwhile person, which in turn will provoke an acceptance of their outer self. Pope and colleagues (1988) recommend cognitive restructuring such that individuals shift their focus from concerns about appearance to other domains (academic, athletic, interpersonal or moral) where they are, or can be, more successful.

2.7.4.1.2 B: Encouragement of relatively accurate self-evaluations.

The encouragement of relatively accurate self-evaluations in young children is not appropriate. As discussed previously, their self-evaluations are typically inflated and Harter (1999) argues this should be understood as “normative distortions”. However, for older children the aim of this strategy would be to lead them to consider their abilities in a realistic light. Harter suggests utilising typically agreed upon objective markers offered from socialising agents (e.g., parents, teacher, and coaches) and their peer group. Children may be resistant to this notion as many selectively choose feedback that confirms their self-representation and typically repudiate information that threatens the stability of their self-concept. Therefore, addressing psychological roadblocks such as filtering, polarised thinking, overgeneralisation, mind reading, catastrophising, magnifying personalisation and shoulds is necessitated (see McKay, Davis, & Fanning, 1997).

2.7.4.1.3 C: Attention to individuals' own theories about the causes of their self-representations.

A child's self-representation or attribution style can either facilitate or impede efforts in self-concept change. For example, self-concept change can be obstructed by an external attribution style where others and not the self are perceived as the causes of successes (Gold, 1994; Tice, 1994). Pope and colleagues (1988) suggest a strategy that fosters an awareness of personal attributional styles and modifies them by generating alternative explanations. For example, an event such as "kids tease me" could be interpreted as "nobody likes me" (global); "the kids who tease me don't like me" (specific); "these kids don't like me" (stable); "these kids were being mean today" (unstable) "I must be weird since they tease me" (internal); "they were mad about something else and took it out on me" (external) (Pope et al., p. 64).

Analysing physical attractiveness attribution styles may also involve refocusing and modifying self-statements. Pope and colleagues (1988, p. 128) suggest the refocusing strategies should concentrate on

- 1) changing which *physical* attributes form the basis of a child's self-evaluation ("I may not have a very pretty face, but I have a good figure");
- 2) altering the domains a child focuses on in developing his general sense of self-worth ("I may not be very attractive, but I do really well at my school work");
- or 3) changing the reference group that provides the basis of a child's standards ("I may not be attractive as the prettiest girls in the class but compared to most kids my age I look okay")

Refocussing could also include cognitive restructuring whereby children shift their focus from physical appearance to other domains (athleticism, academic, behavioural conduct etc) as suggested earlier. They also suggest modifying self-statements using Canfield and Wells' (1976) "mirror-mirror" exercise. This involves asking a child to recount all the positive things they physically see in themselves while looking into a mirror. Additionally, four to five peers are asked to contribute to the positive reflections. According to Harter's model of the relationship between

peers and physical attractiveness, involving peer's comments would suggest an added enhancing effect.

2.7.4.2 Intervention Strategies Directed at Social Factors Influencing Self-evaluations

2.7.4.2.1 A: Provisions to increase approval support.

As demonstrated in Harter's (1986, 1987) model, approval or disapproval from significant others, impacts on global self-worth. Therefore, an intervention should assess whether a child feels supported by significant others including parents and peers. If they are not then it should be determined as to whether the child's perceptions are realistic. For those who underestimate the level of parental approval, developing more realistic appreciation for the support should be the focus of the intervention. On the other hand, for those with low self-worth and who are relatively accurate, strategies should focus on reducing disapproval and increasing approval. Harter's (1992) model reveals that success in the domains of academic competence and behavioural conduct are likely to glean parental support. However, this may not always be possible and parents need to be encouraged to be respectful of children's personal agenda. This respect is reflected in Altman Klein's (2000) suggestion for parents' assistance in the development of accurate self-perception in their children. They include:

- 1) encourage children to value a wide range of competencies;
- 2) accept and acknowledge weaknesses and limitations;
- 3) Encourage children's attempts to change;
- 4) Support children when they work hard;
- 5) Applaud real successes and
- 6) Foster a respect for others who excel in different areas.

Coopersmith (1967) also highlights the critical role parents play in developing self-esteem in children. His research demonstrated that children with high self-esteem possessed "parents who were (a) more likely to be accepting, approving, affectionate, and involved; (b) enforced rules consistently and encouraged children to uphold high standards of behaviour; (c) preferred noncoercive disciplinary practices, discussing the reasons why the child's behaviour was inappropriate; and (d) were democratic in considering the child's opinion around certain family decisions" (Harter, 1998, p. 583).

In terms of interventions for children, parental involvement has been supported by Maskin & Flescher's (1975) study comparing two group interventions with 15 to 17 year old male juvenile delinquents. One intervention involved individual vocational and personal skills training while the other intervention aimed to foster family communication, cohesion and solidarity between the parent and child. The latter group was significantly different at post intervention to the former group. This study highlighted the powerful contribution that parents can make to improve self-esteem in adolescents even at a developmental age where peer relationships and individual independence are growing in importance for the adolescent. Furthermore, the instruction in communication skills makes a meaningful contribution to this outcome.

With regard to peer support, again the first aim is to ascertain the reality. Is the child's perception of their peer support realistic? If not then the intervention strategy would need to focus on fostering a realistic awareness of this support. If the child is accurately aware of their lack of support then the strategy will need to focus on understanding this deficiency and change the environment accordingly. Using Harter's (1992) model, is it due to a lack of attributes in attractiveness, athletic ability or interpersonal qualities. Again, some of these attributes will have natural limitations, however interpersonal qualities can be assisted through communication or social skills training. Alternatively, refocussing toward interpersonal contexts in which support is forthcoming may be a useful strategy. Other strategies, often discussed in the resiliency literature, include programmes that emphasise compensatory support through the role of special adults such as grandparents, aunts, uncles, mentors, or older peers. Beane (1986) argues that curriculum should assist middle grade children to achieve connectedness through cooperative learning approaches, the development of interpersonal relationships and the imparting of communication skills. He also suggests the importance of student support networks in the school. Furthermore, as children move towards adolescence peer influence on self-esteem becomes more apparent (Rosenberg, 1979).

2.7.4.2.2 B: Internalisation of positive opinions of others.

Harter (1999) contends that although support from significant others is important, many other authors consider that healthy development is one that has

internalised realistic and positive opinions of the self. For those who primarily rely upon opinions of others their self-esteem will fluctuate accordingly. Strategies that encompass this principle aim to dissuade children from relying too heavily on social comparison, and encourage evaluations of present performance using outcomes from past performances. Critically evaluating the appropriateness of external standards could assist in developing realistic personal standards. Furthermore, establishing realistic personal goals constitutes another strategy for fostering the internalisation of standards.

2.8 General Conclusions and Research Direction

Chapter one, reasoned based upon theory and previous prevention efforts in the field of eating disturbances, that a prevention intervention needs to target a pre to early adolescent age group and be universal in its delivery. Does the self-esteem literature concur with this point of view?

2.8.1 *What Age?*

The literature review on the prevention of eating disturbances and body image dissatisfaction determined an appropriate age to introduce prevention effects as pre adolescent children aged 11 to 12 years prior to the transition to high school. What does the self-esteem literature suggest? Determining an appropriate age group to target a self-esteem enhancement intervention depends upon the matching of three important indicators. Firstly, what age has the literature suggested to be suitable for self-esteem enhancement. Several investigators (Andrews, 1998; Andrews & Brown, 1995; Harter, 1986; Simmons, Rosenberg, & Rosenberg, 1973) have stressed the role of transitional periods in changes to the self-system. The transition period from primary to high school is more likely to cause a re-evaluation of an individual's self-esteem than other periods due to three important points:

“[1] changes in one's perceptions of competence, given new developmental tasks to be mastered and new reference groups with who one compares the self;

[2] alterations in one's hierarchy of aspirations concerning which domains are the most important in the new environment; and

[3] the need to establish new social networks that will come to serve as sources of approval or disapproval.” (Harter, 1993, p. 109).

The child who was once in the oldest age group of Year 7 in primary school, now becomes the youngest age group in Year 8 high school. Therefore, targeting this age group, just before entering high school, could enhance self-esteem and provide skills of resiliency to deal with the self-esteem challenges that may be encountered during the transition period.

Secondly, developmental considerations need to be examined when deciding on an appropriate age of an intervention. When do children have the cognitive capacity to understand the concept of self-esteem and its differentiated domains? Harter & Pike (1984) investigated this question and found that children from 4 to 7 years can make reliable judgements in the domains of cognitive competence, physical competence, social acceptance and behavioural conduct. However, these four domains are not clearly differentiated. Using factor analytic techniques, Harter & Pike found that cognitive and physical items combine into a competence factor and social acceptance and behavioural conduct items combine into a second factor. Furthermore, at this developmental age, children are incapable of making judgements concerning their overall self-worth. Harter (1990a) argues that children do not possess the cognitive abilities to form concepts such as self-worth. Although she is careful to add that this does not mean they do not possess a *sense* of self-worth. Indeed, further empirical work conducted by Haltiwanger & Harter (1994) demonstrated “that young children “exude” a sense of overall self-worth as manifested in certain behaviors” (Harter, 1990a, p.70). Observers can rate these behaviours, such as displays of confidence, with reliability (Harter, 1998).

Stipek’s (1981) study found that young children are unable to make the distinction between the ideal self-image and the real self image. That is, they confuse the wish to be competent with reality and typically see themselves positively. As they move into middle childhood their self-evaluative judgements become less positive (Harter, 1982). Social comparison with peers is argued to be the mechanism in which the evaluations become more realistic (Marsh, 1989). This ability is not evident until approximately 9 years of age (Ruble, 1983) and reflects cognitive advances as well as the socialisation process (Harter, 1999). Therefore,

developmental considerations suggest that an intervention aimed at enhancing self-esteem would have to target children who are at least 9 years of age.

And finally, in order to demonstrate the efficacy of an intervention quantitatively, instruments have to be available that can assess self-esteem with reliability and validity. It is also important that the instrument measures the conceptualisation of self-esteem used within the enhancement programme. As this thesis has argued for the model presented by Harter (1986, 1987) it is most appropriate that her instrument, the Self-Perception Profile for Children, be used. This instrument is designed for children as young as 8 years old to use and measures both global and domain-specific self-evaluations.

Thus, in considering, the self-esteem enhancement literature, developmental and quantitative factors, an ideal time to target an intervention is during the transition period from primary to high school, 11 to 12 years old. This period is a time when self-esteem is more likely to be re-evaluated and vulnerable to threats; children can cognitively understand the concept of self-esteem and its differentiated domains; and Harter's (1985) instrument is available to tap this conceptualisation. This age is also consistent with the age determined from the prevention of eating disturbance literature.

2.8.2 Universal

The previous chapter has argued for a prevention intervention to be universal rather than specific. The significance that self-esteem plays in everyday life, behaviours and feelings as previously summarised, also suggests that a self-esteem enhancement intervention would be more comprehensive if it is pitched at a universal level of prevention. That is, to target a population rather than a specific identified group of individuals with low self-esteem. A universal intervention approach lends itself to targeting school children, as it is possible to capture a comprehensive population, as all children must attend school. Furthermore, the task-oriented educational system is a critical arena in which children learn to evaluate themselves (Curtis & Altmann, 1977). Therefore, as children enter the education system, the school environment and teachers begin to play an ever-important role in the development of their self-esteem. Given that the previously summarised enhancement programmes advocate for the need to thoroughly assess an individual

for self-esteem needs to tailor the programme, typically in a clinical setting, how will this fit within a universal group framework?

2.8.3 The Intervention Programme

Practical and financial considerations make the prospect of assessing each child and tailoring a programme impossible in the current study. Furthermore, the previous chapter argued for the importance of including all children in the intervention as eating disturbances is imbedded in a sociocultural context and therefore all children are needed to affect change. An answer to this conundrum is to target a domain that has been found to be critical in predicting global self-worth. As discussed earlier, the physical appearance domain has been identified as the best predictor of global self-esteem across the age range from 8 to 50 years. Therefore, an intervention that involves strategies to improve scores in this domain will have a bigger impact on self-esteem than strategies involving other domains. As such the tailoring of the programme for individual needs will not be conducted in the current study.

2.8.4 Summary

The purpose of this review was to explore the concept of self-esteem and to derive an empirically sound theory in which the current study can base an enhancement programme to prevent the emergence of eating disturbances and body dissatisfaction. It is the contention of this review that self-esteem is a multidimensional concept with global and domain-specific self-evaluations. Therefore, a self-esteem enhancement intervention needs to be based upon a theory that has this at the basis of its conceptualisation. Harter's (1986, 1987) model of the determinants and consequences of self-worth is one such theory that stands out in that it is derived from sound theoretical empirical and phenomenological principles. As such, Harter's model was used to base the development of a prevention intervention in the current study. Therefore, intervention strategies were directed at cognitive determinants and social factors influencing self-representations as depicted in her model. More specifically, utilising strategies related to the physical appearance domain appears to be a promising area for maximising positive effects on self-esteem in an efficient manner. A programme needs to embody a comprehensive approach, including teachers, parents and peers and thus this was incorporated into

the intervention. Attention also needs to be given to methodological issues discussed in this paper. Although there is limited empirical support for the effectiveness of the procedures outlined above, they are derived from the sound theoretical model of Harter's causes and correlates of self-esteem and provide the opportunity to attest to their effectiveness.

2.8.5 Structure of the Results Chapters

For clarity, the results section of this thesis is comprised of four chapters. Each chapter is a study within itself, with a review of the pertinent literature that has not already been discussed in Chapters 1 or 2 in addition to the aims, hypotheses, methodology, results and discussion. The first study, Chapter 4, examines the psychometric properties of the instrument used to measure the primary outcome variable in this study, self-worth. As will be discussed in the methodology chapter (Chapter 3) Harter's Self-Perception Profile for Children (SPPC; Harter, 1985) was used in the current study as it was derived from Harter's model of the determinants of self-worth. It was important to establish whether the S-PPC factor structure and internal consistency holds true for an Australian sample of children. To date, there is no study confirming the psychometric properties with an Australian sample using confirmatory factor analysis. Granleese and Joseph (1993) suggest that the structure of self-concept might be different in different cultures. Thus, for valid interpretations of the intervention findings, it was paramount that the structure of the underlying construct be confirmed.

The subsequent studies examine the effectiveness of the eating disturbances prevention programme designed for this thesis. Study 2, Chapter 5, examines this using a quantitative, randomised control trial methodology data while Study 3, Chapter 6, utilises the feedback from students, teachers and parents to determine the social validity of the intervention. The final study, Chapter 7, further utilises the prospective data collected for the intervention by examining the relationship between risk factors and eating disturbances in a longitudinal study. However, before examining the results of this thesis, the methodology used to conduct this intervention study will be detailed in the following chapter.

CHAPTER 3: METHODOLOGY

3.1 Participants and sampling

3.1.1 Schools

Schools were randomly selected from independent schools within the Perth metropolitan area in 2002. Non-government schools were chosen, as these have been less exposed to school interventions than government schools. The schools were stratified according to size (50 to 120 Year 7 students) and socio-economic status (based upon the Australian Bureau of Statistics' Socio-Economic Indexes for Areas - SEIFA 2001). The study comprised of middle and upper socio-economic groups because the literature at the time of designing this study suggested that these groups have more weight-related concerns (Smolak & Striegel Moore, 2001; Striegel-Moore et al., 1986; Wardle & Marsland, 1990). However, more recent studies do not support the role of SES in predicting disturbed eating or eating disorders (e.g., Johnson, Cohen, Kasen & Brook, 2002; Moorhead et al., 2003; Thomas, James & Bachmann, 2002; Wildes & Emery, 2001) or suggest that low socio-economic status is associated with weight dissatisfaction (Mikkila, Lahti-Koski, Pietinen, Virtanen & Rimpela, 2003).

Schools with 50 to 120 students Year 7 students were selected by random number generation from the upper three quartiles of the SEIFA 2001. Seventeen schools were approached before five schools agreed to participate. Schools were recruited firstly through a letter (see Appendix A) explaining the nature of the study and then a follow-up phone call to the principal to confirm their involvement. Schools who declined to participate explained that their school programme was already too busy or they were already involved with another health promotion programme. The final recruitment resulted in five schools agreeing to participate. Four schools were co-education and one was a single-sex female school. Although this constitutes a threat to external validity, Fear, Bulik and Sullivan (1996) found no difference between single-sex and co-ed schools on core disordered eating behaviours.

3.1.2 Power

Students who attend the same school will be exposed to common environmental and social influences. These common influences are expected to constrain scores on the outcome variables (Olweus & Alsaker, 1989). The outcome scores will therefore fragment into five groups of intra-dependent scores – each group corresponding to a particular school. This clustering phenomenon is referred to as intra-school dependency.

If there is intra-school dependency in the data, then the number of schools as well as the number of students should be taken into account when estimating an adequate sample size. Murray and Hannan's (1990) Equation 8, in conjunction with data from relevant previous research (R. Richman, personal communication, 8 April 2002) established that 32 Year 7 classes per condition were required for an 80% chance of detecting 'medium' to 'large' intervention effects at an alpha level of .05 (See Appendix B for calculations). Sixty-four Year 7 classes were not financially feasible. As this was an exploratory study looking at the efficacy of a new programme, intra-school clustering effects were not taken into account in the power calculations. Cohen's (1992) standard power tables were therefore consulted. In order to achieve an 80% chance of detecting 'medium' to 'large' intervention effects at an alpha-level of .05, 64 students in each condition are required (Cohen, 1992).

Schools and not participants or classes were randomly assigned to either the experimental or usual care control condition. This type of assignment, controls for possible contamination or "spillover" effects that have potentially compromised the results of previous prevention studies (e.g., Buddeberg-Fischer et al., 1998; Dalle Grave et al., 2001; Ghaderi et al., 2005; Smolak et al., 1998a; Steiner-Adair et al., 2002).

As this study was interested in long-term effects, it was estimated that some attrition would occur. A previous universal intervention using the same age group in Perth retained 80% of its initial sample at 8-month follow-up (Roberts, Kane, Thomson, Bishop, & Hart, 2003). Therefore, to account for an estimated 20% attrition the sample requires 77 students per condition. To maximise the detection of the hypothesised group differences at post-test and follow-up the sample was

increased within budget constraints and thus, 150 students were allocated to each condition.

3.1.3 Participants

There were 300 Year 7 girls and boys aged between 11 to 14 years in the five schools. Five had already moved school when baseline data were collected leaving 295 who were eligible to participate in the study. Questionnaires that were completed at all three time points comprised of 237 students (80.3%). Of the 58 students (19.7%) who did not participate, 30 did not have parental consent, 24 were absent and 4 were involved with educational support programmes due to learning difficulties. The mean age of participants was 12.7 years ($SD = .42$) with girls constituting ($n = 142$) 59.9% of the sample. Table 3 contains the demographic information for both the intervention and control groups. The table shows there were no significant differences between the intervention and control group on age, gender, body mass index (BMI) as reported by parents, and parent education level. However, ethnic diversity, which was collapsed to English-speaking (Australian, UK and Ireland) and non-English speaking background (European, Asian and other non-English) was significantly different. Examination of the observed cell frequencies reveals that the intervention group had more English-speaking background participants than the control group. Furthermore, the control group had more non-English speaking background participants than the intervention group. However, examining the independent t -tests of all the outcome variables using ethnicity as the independent variable resulted in no significant difference. Thus, it can be assumed that ethnicity is not impacting on the study results.

Table 3: Descriptive data for intervention and control groups.

Descriptive characteristics	Intervention		Control		Group differences
Average age of participant (SD)	12.7yrs	(.40830)	12.7yrs	(.41297)	$\chi^2[16, n=258] = 17.150, p = .376$
Gender of participants					
Females	67	(54.0%)	75	(66.4%)	$\chi^2[1, n=237] = 3.748, p = .053$
Males	57	(46.0%)	38	(33.6%)	

Descriptive characteristics	Intervention	Control	Group differences
Ethnic origin	<i>n</i> = 122	<i>n</i> = 111	$\chi^2[1, n=233] = 10.202, p = .001$
English speaking background	104 (85.2%)	75 (67.6%)	
Non-English speaking background	18 (14.8%)	36 (32.4%)	
BMI	<i>n</i> = 104	<i>n</i> = 82	
BMI (reported by parent)	18.639 (3.2408)	18.539 (3.3148)	$t(184) = -.207, p = .836$
Mother's education	<i>n</i> = 72	<i>n</i> = 60	$\chi^2[5, n=132] = 2.226, p = .817$
≤ Year 10	12 (16.7%)	8 (13.3%)	
Year 11-12	13 (18.1%)	12 (20.0%)	
Vocational college	17 (23.6%)	15 (25.0%)	
University qualifications	21 (29.2%)	21 (35.0%)	
Other	8 (11.1%)	4 (6.7%)	
Not stated	1 (1.4%)	0	
Father's education	<i>n</i> = 72	<i>n</i> = 60	$\chi^2[5, n=132] = 8.654, p = .124$
≤ Year 10	16 (22.2%)	4 (6.7%)	
Year 11-12	9 (12.5%)	5 (8.3%)	
Vocational college	20 (27.8%)	18 (30.0%)	
University qualifications	23 (31.9%)	29 (48.3%)	
Other	3 (4.2%)	2 (3.3%)	
Not stated	1 (1.4%)	2 (3.3%)	

3.2 Measures

The student questionnaire (see Appendix C) included demographic questions, the **Self-Perception Profile for Children (S-PPC)** (Harter, 1985), the **Importance Rating Scale for Children** (Harter, 1985), the **Children's Eating Attitude Test-26 (ChEAT-26)** (Maloney et al., 1988), the **Eating Disorder Inventory-2 (EDI-2)** (Garner, 1991) and dieting, self-description and teasing questions. The parent questionnaire included demographic questions. The teacher questionnaire comprised of **The Adult Self-Perception Profile (AS-PP)** (Messer & Harter, 1986). All participants were given the opportunity to provide feedback.

3.2.1 Student Measures

3.2.1.1 Self-esteem

The **Self-Perception Profile for Children** (S-PPC; Harter, 1985) was employed to measure self-reported global self-worth and self-concept in five domains: scholastic competence, social acceptance, athletic competence, physical appearance and behavioural conduct. A major strength of this measure is that it is based upon the empirically tested theoretical model of Harter's (1986, 1987) as discussed in Chapter 2. Indeed, many other measures of self-worth are chiefly atheoretical in nature (Keith, 1996).

The S-PPC is a 36-item scale, which is designed for 8 to 13 year olds. The S-PPC employs a "structured alternative format" (Harter, 1985, p. 7) whereby respondents are asked to make two decisions for each item. An example question is shown below:

Really true of me <input type="checkbox"/>	Sort of true for me <input type="checkbox"/>	Some kids think that they are good looking	BUT	Other kids think that they are not very good looking.	Sort of true for me <input type="checkbox"/>	Really true for me <input type="checkbox"/>
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In this example a respondent firstly has to decide whether they are more like the kids who think they are good looking or more like the other kids who don't think this way. Once the respondent has decided which kids they are more like they then have to decide whether that is 'sort of true' or 'really true' for them. Harter (1985) argues that this format "legitimises either choice" (p. 7). In other words it gives the respondent permission to respond honestly as the question implies that half of their reference group thinks one way and the other in the opposite manner. As such, this lessens the social desirability response found in more traditional two-choice formats (e.g., true-false answer format).

Each item is given a score from 1 – 4 where 1 denotes low perceived competence and 4 represents high perceived competence. Each subscale is measured by six items and counterbalanced such that three items have the first statement reflecting high competence and the other three reflecting low competence. Subscales are summed, then averaged to provide a total of six subscale means for each respondent.

Harter (1985) reports acceptable internal consistency reliabilities for all six subscales (0.71 – 0.86). A factor analysis of the 5 domains revealed a stable pattern across three different samples including students in Years 5 through to 8 (Harter). Each of the domain subscales defined a factor with no cross loadings more than 0.18.

The **Importance Rating Scale for Children** (Harter, 1985) was used to measure the importance of the domains assessed by the Self-Perception Profile. It is a 10-item questionnaire with two items for each of the five domains. A discrepancy score between competence and importance is determined by subtracting importance ratings from competency ratings. Large negative discrepancies are assumed to indicate low self-esteem (i.e., one is not competent in areas that are felt to be very important).

3.2.1.2 *Eating Disturbances*

The **Children's Eating Attitude Test-26** (ChEAT-26; Maloney et al., 1988) is a 26-item self-report questionnaire that measures maladaptive eating attitudes and behaviours in children 8 to 13 years. The ChEAT-26 was developed from the Eating Attitudes Test (EAT; Garner & Garfinkel, 1979) to simplify wording that was considered too difficult to interpret for a younger audience and reduce the number of items (i.e., 40 reduced to 26 items). This adult version largely focuses on anorexic symptoms and has been widely used to screen for eating disorder features in clinical and non-clinical populations (Button & Whitehouse, 1981; Garner, Olmsted, Bohr, & Garfinkel, 1982; Raciti & Norcross, 1987). The ChEAT-26 has been less widely used but has shown acceptable test-retest (.81) and internal (.76) reliabilities and evidence of concurrent validity, including a similar factor structure to the EAT (Maloney, McGuire, Daniels, & Specker, 1989; Maloney et al., 1988; Senra, Seoane, Vilas, & Sanchez-Cao, 2007; Smolak & Levine, 1994a).

The ChEAT-26 uses a 6-point Likert scale response format as follows: “always” = 3, “usually” = 2, “often” = 1, “sometimes” = 0, “rarely” = 0, “never” = 0. Total score can range from 0 through 78. High scores indicate a more disturbed level of eating attitudes and behaviours. Maloney and colleagues (1988) do not report norms but a comparison group was identified by age and English speaking culture. Smolak and Levine (1994a), using 308 middle school U.S. girls in Grades 6, 7 and 8, report a Cheat-26 mean of 15.74 ($SD = 12.42$). To differentiate potentially clinical

from subclinical participants, Maloney and colleagues (Maloney et al., 1988) maintain that a cut-off score of 20 or above is suggestive of disordered eating. The cut-off score has moderate sensitivity (53% in detecting true positives) and very high specificity (94.1% in detecting true negatives) with 10 to 12 year old girls (Erickson & Gerstle, 2007).

The Drive for Thinness subscale (EDI-DT) of the **Eating Disorder Inventory-2** (EDI-2; Garner, 1991) was used to measure self-reported concern for dieting, preoccupation with weight and pursuit of thinness. The EDI-2 is designed to assess a variety of psychological and behavioural characteristics common to anorexia and bulimia nervosa. It is considered a ‘gold standard’ instrument in the measurement of eating disorder psychopathology (Thiel & Thomas, 2006). Content validity for the EDI-2 was achieved through the generation of items by clinicians and clinical writings of prominent theorists in the field of eating disorders (Garner). Criterion-related validity has been established by the ability of the items to discriminate between eating disorder and non-patient samples (Garner, Olmstead, & Polivy, 1983). Concurrent validity is demonstrated by the significant correlation between patient self-report profiles with the judgements of experienced consultants familiar with the patients’ clinical presentations (Garner et al.). Convergent validity has been demonstrated with a strong relationship with other measures of the same construct such as the Eating Attitudes Test (Garner et al., 1982) and the Restraint Scale (Herman & Polivy, 1975). The EDI-2 uses a 6-point forced choice response format where respondents rate whether each item applies “always” = 3, “usually” = 2, “often” = 1, “sometimes” = 0, “rarely” = 0, “never” = 0. Scores are summed for each subscale with higher scores indicative of more extreme eating disturbance.

The EDI-DT is one of eight subscales and has 7 items that have been administered to girls as young as 8 years of age with no reported difficulties in interpretation and understanding (Mickalide & Andersen, 1985). However, the EDI-2 is intended for adolescents 11 years of age or older (Garner, 1991). This subscale has acceptable internal consistency (.83) and test-retest reliability (.81 to .91) from four separate studies (Garner) and more recently, test-retest reliability ranging from .86 to .91 (Thiel & Thomas, 2006). Normative and reliability data obtained by Shore and Porter (1990) suggest the EDI-DT is appropriate for screening and research purposes with this age group. Norms reported for a sample of 11 to 13 year old Canadian

public school children were 6.55 ($SD = 5.71$) for females and 2.95 ($SD = 3.64$) for males. Scores range from 0 to 21 with higher scores indicating a greater drive for thinness.

3.2.1.3 *Body Image*

The Body Dissatisfaction subscale (EDI-BD) of the **Eating Disorder Inventory-2** (EDI-2; Garner, 1991) was used to measure self-reported dissatisfaction with participants' bodies. The EDI-BD is one of eight subscales and has 9 items rating satisfaction with the individual's stomach, hips, thighs, and overall shape. Internal consistency for the EDI-BD is .92 (Garner) and test-retest reliability range from .89 to .94 (Garner; Thiel & Thomas, 2006). As with the EDI-DT, the normative and reliability data obtained by Shore and Porter (1990) suggest the EDI-BD is appropriate to be used for screening and research purposes for this age group. Norms reported for a sample of 11 to 13 year old Canadian public school children were 8.44 ($SD = 7.79$) for females and 4.65 ($SD = 5.83$) for males. Scores range from 0 to 27 with higher scores indicating greater dissatisfaction with the body.

3.2.1.4 *Dieting and Self-description Questions*

A number of dieting and self-description questions were included in the questionnaire. Participants were asked if their weight had changed during the past six months with the following response format: a) gone up a lot (more than 3kg/½ stone) b) stayed about the same or c) gone down a lot (more than 3kg/½ stone). Participants indicated yes or no when asked if they 1) had ever dieted to lose weight and 2) were on a diet at present. Finally, participants were asked to endorse the most accurate self-description from the following sentences: I feel: a) far too thin, b) a bit too thin, c) about just right, d) a bit too fat and e) far too fat.

3.2.1.5 *Self-reported Teasing*

Self-reported teasing was assessed using two questions about the presence of hurtful teasing. The first question, "In the last 4 weeks have you been teased in a hurtful way about your body size or shape?", was assessed in five different settings: a) by kids at school, b) by adults at school, c) by kids at home, d) by adults at home and e) by other people (not at school or home). The response format for each of the settings utilised a 3-point rating scale of "many times", "a few times" and "never".

The second question, “In the last 4 weeks have you ever teased other people about their body size or shape in a hurtful way?”, used a yes/no response format.

The questions were designed to identify “hurtful” teasing as Vander Wal and Thomas (2004, p. 293) suggest that “the degree to which teasing is emotionally hurtful is more important than the amount of teasing actually received”. This is also supported by Taylor and colleagues’ (2006) who found that even a few negative comments by parents or siblings was related to serious weight and shape concerns. Furthermore, Lieberman, Gauvin, Bukowski and White (2001) showed that it is hurtful teasing rather than non-hurtful teasing that has a significant impact on dieting behaviour. Both questions used “body size or shape” to capture both female and male experiences of teasing. This allows for the tendency of females’ desire to be thinner (i.e., teased for being too big) and males’ desire to be bulkier (i.e., teased for being too small).

3.2.1.6 Pilot Testing of the Questionnaire

Prior to administration, the questionnaire was distributed to two children of a similar age to the intended participants in order to check the appropriateness of the language used, perceived levels of user friendliness and appropriate length for concentration span. The questionnaire was found to be comprehensible with only one alteration required - adding a metric equivalent to question 85 (i.e., adding “½ kilo” after “1 pound”). The participants did report that it was difficult to concentrate for the length of time required to complete the questionnaire so it was deemed appropriate to break the administration into two parts with a stretching exercise in between.

3.2.2 Parent Measures

A demographic questionnaire (see Appendix D) including details of the child’s birth date, weight and height, ethnic origin and family’s socio-economic status variables were completed by parents/caregivers at baseline, post-intervention and 8-month follow-up. This questionnaire also asked parents/caregivers to nominate two people who could be contacted if the family moved during the follow-up period.

3.2.3 Teacher Measures

Curtis and Altmann (1977) maintain that a teacher's self-concept has a significant impact on their students' self-concept. That is, teachers with high self-concept rate their students' self-concept highly and students perceived that their teacher's evaluation was accurate. Wade, Davidson and O'Dea (2003) argue that the teaching style or other teacher variables can play an important role in prevention programmes. Indeed, Wilksch, Tiggemann and Wade (2006) suggest that the gender of the programme facilitator may help explain any gender differences in outcomes. Schwartz, Thomas, Bohan and Vartanian (2007) maintain that the impact of the presenter characteristics is another variable that may influence the efficacy of eating disorder prevention programmes. Piran (2004, p. 273) further argues that the failure to investigate teacher values, attitudes and behaviours may be "one factor that could explain the modest success" of many prevention programmes. Despite these findings there is a paucity of research in the prevention area that assesses potential teacher variables. Thus, this study aims to improve on this relatively neglected area by measuring teachers' self-esteem at baseline and post-intervention (see Appendix E).

The **Adult Self-Perception Profile** (AS-PP; Messer & Harter, 1986) was employed to measure self-reported *global self-worth* and self-concept in the *physical appearance* domain for the teachers participating in this study. The AS-PP is a 50-item scale with 11 subscales containing 4 items each, plus a *global self-worth* scale that contains 6 items. There are more subscales on the adult version than the child version of the scale. Messer and Harter explain that adults distinguish between more domains of perceived sense of competencies and adequacies than children. The AS-PP includes subscales analogous to the children's subscales plus domains pertinent to adults. For the purpose of this study, only *global self-worth* and *physical appearance* domains were utilised. The AS-PP uses the same response format and scoring procedures as the S-PPC.

Messer and Harter (1986) report acceptable internal consistency reliabilities for all subscales ranging from .73 to .91. Relevant to this study, global self-worth = .91 and physical appearance = .84. A factor analysis of the ten competency/adequacy subscales revealed a "very clear ten-factor solution" (p. 19) with cross-loadings no greater than .09. Messer and Harter do not report test-retest reliabilities.

3.3 Intervention Programme

3.3.1 Development of the School Intervention

The Straight Talking about Resilience & Self-Esteem (STARS) Project (see Appendix F) is a universal school-based intervention. There were four main steps in its development:

The first step, as discussed in Chapter 1, was to review: a) the risk and protective factors for eating disturbances, b) aetiological theories of eating disorders and c) previous prevention interventions to derive the major theme of the current study's prevention intervention – enhancing self-esteem. This review also elucidated the efficacy of various prevention strategies. For example, strategies that primarily focused on teaching the signs, prevalence and consequences of eating disorders were less effective than strategies focusing on body acceptance. Secondly, having decided upon the major theme, a thorough review of the self-esteem literature was necessary to empirically derive a model for developing the intervention strategies. As detailed in Chapter 2 the strategies were informed by Harter's (1986, 1987) theory of the determinants and enhancement of self-esteem.

Drawing from the above steps, the third step involved a curriculum writer developing the intervention manual consistent with the Health and Physical Education Learning Area Statement contained in the Curriculum Framework published by the Curriculum Council of WA. In this learning area curriculum needs to address the following four outcomes: 1) knowledge and understanding, 2) attitudes and values, 3) self-management skills and 4) interpersonal skills. The programme was designed to fit within the existing curriculum as “Teachers and administrators are more likely to be sympathetic to preventive interventions if they can be integrated into the normal school curriculum” (Favaro, Zanetti, Huon, & Santonastaso, 2005, p. 74). The design of the programme was also cognisant of the finding in O’Dea’s (2002) study that revealed the use of “seemingly perfect models” could lead to adverse self-comparisons with the unintended consequence of attenuating body satisfaction. Thus, the images and drawings tried to encompass a large range of body types.

The final step involved seeking feedback on the first draft of the manual and student workbook from psychology and health promotion professionals who work in

the prevention field and current Year 7 teachers. Some of the activities were tested with Year 7 students to ascertain ease of implementation and enjoyment. Feedback and recommendations were incorporated to produce the final version of the manual and student workbook.

3.3.2 *The Intervention and its Objectives*

The STARS project is a universal programme aimed at 11 to 12 year old school children who are not high-risk or already symptomatic of an eating disorder. It consists of ten classroom-based lessons for Year 7 students, to be integrated into the Health and Physical Education Learning Outcomes from the Curriculum Framework. The 40 to 60 minute modules focus on developing self-management and interpersonal skills in the context of self-esteem development and enhancement. A teacher resource and complementary student workbook detail the content, process and tools required for each of the ten modules (see Appendices F & G). Games and other teaching aids were provided to teachers. The main objectives for the modules are presented in Table 4.

Table 4: STARS project objectives for each module

Module Number	Module Title	Student Objectives
Module 1	Self-Esteem	To develop an understanding of what self-esteem is and how it develops. To identify the various components of self-esteem development. To assess their own self-image, what areas of their life are important and how they feel about themselves.
Module 2	Self-Image	To understand the different areas of self-image and how we think about these areas. To explore the factors that influence young people's ideas about self-image.
Module 3	Self-Image and the Media	To understand the influence of the media on how young people develop their self-image. To critically evaluate media images and how they impact on people's thoughts, ideas and self-esteem.

Module Number	Module Title	Student Objectives
Module 4	Body Image	To identify the people or characters young people admire and assess the characteristics of these people. To critically evaluate the images young people admire and how this may affect body image.
Module 5	Self-talk	To identify thinking styles and self-talk and how this affects how they feel. To develop awareness of their own thought processes in both positive and negative situations. To demonstrate the use of positive self-talk to enhance confidence and performance in activities.
Module 6	Loving ourselves from the inside out	To understand the importance of caring for themselves. To explore what their bodies need to make them healthy and happy. To develop a plan to work towards their goals for a healthy body both mentally and physically.
Module 7	Reach for the Stars	To understand the process of moving from their comfort zone to take on new challenges. To recognise the obstacles and fears they have when trying new things. To deal with obstacles and mistakes as an important part of the learning process.
Module 8	Know your values	To understand how we develop and use our personal values to make decisions. To demonstrate the use of values and contribute to discussions and activities. To clarify their values and beliefs in common situations experienced by young people.
Module 9	Taming Teasing	To understand what teasing is and how it affects people. To recognise the difference between friendly teasing and unkind teasing. To demonstrate strategies to respond to teasing.
Module 10	STARS Self-esteem	To understand the importance of caring for themselves.

Module Number	Module Title	Student Objectives
		To explore what their bodies need to make them healthy and happy. To develop a plan to work towards their goals for a healthy body both mentally and physically.

As detailed in Chapter 2, Harter's (1986, 1987) theory of the determinants of self-esteem suggests that interventions aimed at enhancing self-esteem need to employ strategies for both cognitive and social determinants. Thus, the following explains how the strategies employed in the STARS programme are in keeping with Harter's model.

3.3.2.1 Intervention Strategies Directed at Cognitive Determinants

3.3.2.1.1 Reduction of discrepancies between aspirations and perceived adequacies.

The first two modules introduce the concept of self-esteem and facilitate an understanding of how the discrepancies between the importance of self-image areas and competencies in these areas affect how participants feel about themselves. Harter (1999) identifies two pathways to reducing this discrepancy: 1) improving competency or 2) decreasing the importance placed on a certain domain.

Strategies in improving competency are explored in Modules 6 and 7. Module 6 (Loving ourselves from the inside out) explores how participants can improve their skills in areas where there are discrepancies. Participants are asked to think about all the domains and choose one where they would like to improve. They are then instructed on how to set goals and achieve them. This module also fosters a shift from assessing the physical appearance domain with a purely body image criterion to one of how the body feels on the inside ("making your body purr"). Therefore, participants are encouraged to think about enjoying a wide range of food to run their bodies, the benefits of exercise, rest and relaxation and positive self-talk. Module 7 (Reach for the stars) furthers the goal setting skills developed in Module 6 by developing an understanding of the process of change: moving out of their

comfort zone, recognising obstacles and fears and managing these obstacles and mistakes.

Strategies for decreasing the importance placed on domains with discrepancies are addressed in Modules 3 and 4. As discussed earlier, out of all the self-representation domains, physical appearance is the most predictive of global self-worth. Therefore, much of the programme is aimed at reducing the discrepancy between the importance and competency that is placed on this domain. Modules 3 and 4 aim to reduce the importance placed upon participants' appearance and body image. Participants develop knowledge in how the media works and how the value of appearance and body image is enhanced in order to sell a product. In particular, participants develop critical evaluation skills to challenge the virtually unattainable standards of attractiveness set by the media and recognise the influence these standards have on self-image. Participants are encouraged to identify role models with a wide range of qualities who are not simply recognised for their attractive appearance. This leads to an exercise where students identify their own range of qualities/competencies that they are developing. Thus, the overall aim is to discount domains where the participant feels unworthy and foster a focus on those domains in which the participants have a sense of competency.

3.3.2.1.2 Encouragement of relatively accurate self-evaluations.

Harter (1999, p. 323) suggests one strategy for encouraging relatively accurate self-evaluations is to provide “objective markers that are typically agreed upon by socialising agents (e.g., parents, teacher and coaches) and their peer group”. The STARS programme provides many opportunities for peer group discussions and homework activities with parents to explore participants' self-image and receive feedback from others. Furthermore, activities (e.g., Module 3) that foster an understanding of how participants' self-image is constructed through an interaction with influences such as the media, assist in challenging inaccurate self-evaluations. For example, realising that many body images presented as normal by the media are relatively unattainable may assist in reassessing the body image criteria adopted by participants.

Encouraging relatively accurate self-evaluations requires an awareness of current self-talk and identifying negative self-talk that impacts on these evaluations.

Building upon the critical evaluation skills in previous modules that have revealed unrealistic body image and appearance criteria, Module 5 encourages relatively accurate self-evaluations by addressing the influence of self-talk. This strategy increases awareness of “pest thoughts” (negative self-talk) and develops skills in challenging these thoughts to arrive at a more accurate self-evaluation. Harter (Harter, 1999, p. 323) maintains that “individuals go to great lengths to seek feedback that confirms their self-concepts and typically reject information that threatens the stability of their self-representations”. Thus building cognitive restructuring skills such as those dealt with in Module 5, can assist in dismantling these psychological roadblocks for those who overrate or underrate their abilities.

3.3.2.1.3 Attention to individuals’ own theories about the causes of their self-representations.

The STARS programme provides a model by which participants can conceptualise the origins of their self-perceptions using Harter’s competencies, importance and support model (Modules 1, 2 and 10). This assists participants in understanding why they feel a certain way about themselves and provides direction on how they can change if they feel this need. This is further explored in Module 8, which allows participants to recognise and clarify their personal values. Reflecting on previous activities where goals and targets were identified, participants now reassess whether the image area they chose is consistent with their values. A group activity demonstrates the diversity of values within the group and allows participants to re-examine their own values.

In a general sense, Harter (1999, p. 330) maintains that interventions that foster “global, stable, internal attributions for one’s successes, rather than failures” will enhance self-esteem. Thus, the STARS programme was designed to be both empowering through information and strategies that promote self-efficacy and a success focused attribution style. For example, Module 9 provides participants with skills and practice in responding to teasing that will foster self-efficacy in this area.

One of the strategies that attends to an individual’s own theories about the causes of their self-representations is refocussing (Harter, 1999). Module 4 addresses this strategy by shifting participants’ focus from physical appearance to other domains. This is partly achieved by developing healthy role models who are based

on a diverse set of characteristics rather than simply body image/appearance. It is further achieved through a cognitive restructuring process by challenging the importance of weight and shape on self-evaluations.

3.3.2.2 Intervention Strategies Directed at Social Factors Influencing Self-evaluations

3.3.2.2.1 Provisions to increase approval support.

All modules included time for participants to divide into small groups to discuss the main topic of the session. Half of Harter's determinants of self-esteem are influenced by the perceived approval/support from others. The discussion groups were designed to provide opportunities for the participants to share their experiences and work together to generate solutions, thereby providing peer support. This is of particular importance as many studies have demonstrated the influence of peer relations on body image and eating behaviours (McVey, Lieberman, Voorberg, Wardrope, & Blackmore, 2003; Paxton et al., 1999).

Module 9 is designed to encourage a more supportive peer group by decreasing teasing. As noted in Chapter 1, teasing is a recognised risk factor for the development of eating and body image problems. Participants learn what teasing is and how it affects people. They are encouraged to reflect on previous modules where they have learnt that everyone is different – different body shapes and sizes, different values, different self images and different abilities. Therefore, it is important not to judge. This module also provides skills in responding to teasing whereby self-esteem is protected.

As explored in Chapter 1, familial influences on body dissatisfaction/eating disturbances have received greater attention in more recent years (e.g., Desmond et al., 1986; Keery, Boutelle, van den Berg, & Thompson, 2005; Phares, Steinberg, & Thompson, 2004; Sanftner, Crowther, Crawford, & Watts, 1996; Thelen & Cormier, 1995). The two primary mechanisms of influences proposed have been 1) modelling of parent dysfunctional eating patterns and attitudes and 2) parental teasing/comments of children's body image, weight and eating (Phares et al.). These influences signal the importance of including a parental component in prevention interventions. Thus, parents/caregivers were included in the intervention by receiving three newsletter items (see Appendix H) summarising the most important points of

the modules and providing tips they could employ in supporting their child. The topics covered in these newsletters paralleled three of the curriculum lessons: Harter's self-worth model, healthy body image/self-talk and the impact of teasing.

3.3.2.2.2 Internalisation of positive opinions of others.

As noted in Chapter 2, although the positive opinions of others are vital to a child's self-definition, particularly in early child development, developing internal standards that foster a genuine sense of efficacy is a healthier developmental course as children grow and develop (Harter, 1999). Harter maintains that primarily relying upon the opinions of others leaves an individual vulnerable to "contingent self-esteem" (p.338) where self-esteem fluctuates accordingly and energy is focussed on impression management. Many of the modules assist in developing internal standards. For example, Modules 3 and 4 foster a more realistic body image by developing skills to critique the media portrayals of ideal images of women and men. Module 8 encourages participants to understand and clarify their own personal values towards which they strive and Module 7 provides skills in achieving these values. Finally, Module 9 is designed to enhance self-efficacy to impact on teasing norms.

3.3.3 Facilitators of the School Intervention

There is contention over who is best suited to facilitate prevention interventions in schools – outside professionals, teachers or peers. McVey and Davis (2002) suggest that programmes led by teachers "might have a greater chance of being generalized across schools". However, as noted in Chapter 1, programmes delivered by professional interventionists are associated with larger intervention effects (Stice, Shaw et al., 2007). Nevertheless, using teachers to conduct the programme is more cost effective and schools are more likely to adopt and sustain preventive interventions "if they can be integrated into the normal school curriculum" (Favaro et al., 2005, p. 74) that is run by teachers. Thus, Year 7 teachers from the intervention schools received an intensive half-day professional development in the intervention programme. The researcher and curriculum writer conducted the training using a training protocol for the school-based programmes. This included a presentation on the rationale and content of the programme, details for conducting each lesson, discussions, activity demonstrations, role-plays and

feedback. Teachers were provided with a manual detailing the programme and materials to use in presenting the modules (e.g., Cards for teasing).

3.4 Process Evaluation

It was expected that teachers would implement the programme with varying levels of implementation fidelity. Thus, it was intended that the extent of the implementation would be determined by assessing teacher logs (see Appendix I). However, these data are not complete due to unforeseen circumstances where information was either not recorded or lost at the school. Nevertheless, teacher interviews (see Appendix J) were conducted following the completion of the programme and provided some information concerning implementation. Further details regarding the types of questions asked and by whom are discussed in Chapter 6: Social Validity of the STARS programme. At the conclusion of each module students completed a feedback form where they were able to identify what they had learnt, how much they enjoyed the session, how useful the session was and any other comments on the module. At the end of the programme students provided a final evaluation of the programme as a whole (see Appendix K). Again, further details of this evaluation are provided in Chapter 6. Parents/caregivers were also given an opportunity to comment on the usefulness of the parent newsletters and the impact the programme had upon their child. This qualitative data from parents was collected via a final questionnaire upon the completion of the programme (see Appendix D).

3.5 Procedure

3.5.1 Pre-test and Post test, and 8-month Follow-up

Curtin University of Technology Human Research Ethics Committee provided approval for the study and the Education Department of Western Australia provided permission to recruit schools. As detailed earlier, five primary schools from the Perth metropolitan area were randomly selected and allocated to either the experimental or usual care control group. Year 7 students in the selected schools were given a parent information letter and passive consent form to take home to their parents/caregivers (see Appendix L). The information letter stipulated that participation was voluntary, that participants had the right to withdraw from the study at any time, the purpose of the research, the type of involvement required, who

would be conducting the research, how the data would be stored and reported and the manner in which confidentiality would be maintained. Parents/caregivers could contact the researcher, supervisor or an independent member of the School of Psychology's Ethics committee if they had any questions. The researcher offered to visit the schools to talk with parents/caregivers about the proposed study but this offer was declined. Parents who did not wish for their child to participate in the study returned a non-consent form to the classroom teacher. These students received the intervention but did not complete the questionnaires.

The intervention group received the 10-module STARS programme while the usual care control group received the regular health education curriculum. Both groups completed questionnaires at three assessment points - pre-intervention, post-intervention and 8-month follow-up. The questionnaires (with ID codes and no other identifying information) measuring self-esteem, eating disturbances, body image and teasing were administered to students during class time by the researcher and a number of trained research assistants. Teaching staff were asked to remain in the classroom during the administration to assist in behaviour management, but to avoid looking at student answers or answering their questions.

The questionnaires were introduced to students as "a study of how you feel about yourself and your appearance". The children were told that the questionnaires did not represent a test and that there were no correct or incorrect answers. Emphasis was placed on working alone and answering honestly and accurately. Students were assured that their responses would remain private and confidential unless their responses indicated a level of distress. In this case their parents would be notified. Teaching staff were not permitted to have access to questionnaires completed by students. The researcher/assistants read aloud each question to the class and answered any questions before collecting the questionnaire. When the children's responses indicated that they were distressed, or demonstrated an elevated risk for an eating disorder, parents/caregivers were notified and provided with options to manage the problems or assistance with a referral to a treatment agency.

At pre-test parents/caregivers completed a demographic questionnaire including birth date, weight and height and ethnic identification of their child participating in the intervention. At post-test parents/caregivers completed a

questionnaire on child's weight, height and were given an opportunity to comment on the programme. As an incentive, parents/caregivers were placed in a raffle to win a \$50 David Jones (Department store) voucher upon returning their questionnaire. Teachers were given reminder letters to send home to parents/caregivers to increase the participation rate.

3.6 Design and Analysis

3.6.1 *Testing and Delivery of Intervention*

Participants and their parents completed measures at three time points (see Table 5): August 2002 (baseline), November 2002 (post-intervention) and July/August 2003 (8 month follow-up). Teachers completed their self-esteem questionnaire at pre and post intervention together with process data on the implementation of the intervention.

Table 5: Research design

Condition	Baseline August	2002 (Yr 7) Intervention Term 3	Posttest 1 November	2003 (Yr 8) 8-month Follow-up, Term 2 July/August
<u>Intervention</u>				
School 1	O ₁	X ₁	O ₂	O ₃
School 2				
<u>Control</u>				
School 3	O ₁		O ₂	O ₃
School 4				
School 5				

O = Observation (Data collection)

X = Intervention (Straight Talking about Resilience & Self-Esteem)

3.6.2 *Research Design*

A nested cohort design (Murray & Hannan, 1990) with two fixed factors and one random factor was employed. The between-subjects fixed factor was condition (2 levels: intervention and control). The within-subjects fixed factor was time (3 levels: pre, post and 8 month follow-up). The between-subjects random factor was schools with 5 schools nested within the 2 levels of the condition factor.

3.7 Analysis

As indicated earlier, a number of conceptually distinct studies were conducted on the present data (see Chapters 5 to 8). The particular analysis conducted for each study will be detailed in subsequent chapters. However, some general information will be provided here. There were two families of outcome variables, partitioned according to conceptual similarities: 1. Self-esteem (S-PPC, Importance Rating Scale) and 2. Body Image and Eating Disturbances (EDI-BD, EDI-DT and ChEAT). Bonferroni adjustments were subsequently made to maintain the family-wise error at .05 within each family of outcomes.

Students who attend the same school will be exposed to common environmental and social influences. These common influences are expected to constrain scores on the outcome variables. The outcome scores will therefore fragment into five groups of intra-dependent scores – each group corresponding to a particular school. This clustering phenomenon is referred to as intra-school dependency. Murray and Hannan (1990) have argued that we should be concerned about intra-school dependencies that are associated with intra-class correlations (ICCs) greater than or equal to .02 – regardless of whether these dependencies are statistically significant (see also Donner & Klar, 1996). Intra-school dependencies of this magnitude will inflate the Type I error rate for the analysis of the intervention effect.

Random effects regression models were used to control intra-school dependencies. This involved conceptualizing the research design in terms of a regression model in which condition (i.e., intervention versus control) represented the primary predictor and the post-intervention outcome scores represented the criterion measure. Covariates such as gender and the pre-test scores were entered on Step 1 of the regression model prior to entering the primary predictor on Step 2. Intra-school dependency was controlled by using a sandwich estimator for the standard errors (Rabe-Hesketh & Skrondal, 2005). The statistical package known as Stata 10 (StataCorp, 2007) was used to fit the appropriate regression models.

Consistent with a secondary prevention approach (Huon et al., 1997) an analysis of individuals who could be deemed at risk of an eating disorder as measured by the ChEAT was examined. Thus, subjects at risk at baseline were

analysed separately using the same outcome measures and analytic procedures as used for the whole group analysis.

CHAPTER 4: PSYCHOMETRIC PROPERTIES OF THE SELF-PERCEPTION PROFILE FOR CHILDREN

4.1 Introduction

Chapter 2's review of the self-esteem literature argued for the adoption of Harter's (1986, 1987) model of self-worth as the basis for a self-esteem enhancement intervention. In keeping with Hattie's (1992a) recommendation that self-esteem enhancement programmes have outcome measures consistent with the programmes' conceptualisation of self-esteem, Harter's (1985) Self-Perception Profile for Children (S-PPC) was used in Study 2. Therefore, before conducting the intervention evaluation it is important to confirm that the psychometric properties of S-PPC are in keeping with those of Harter's research. To this aim, this chapter will focus on assessing the reliability and validity of the S-PPC in order to establish its appropriateness for the current sample. Results from these analyses will assist in interpreting the outcomes of the intervention evaluation. Before detailing the results, however, a brief description of the S-PPC will be provided, followed by psychometric findings from previous research.

As detailed in the methodology chapter (Chapter 3), the S-PPC is a 36-item instrument designed to measure global self-worth and self-concept of children aged 8 to 13 years. There are five domain specific subscales of six items, each measuring *scholastic competence*, *social acceptance*, *athletic competence*, *physical appearance* and *behavioral conduct*.

Muris, Meesters and Fijen (2003, p. 1792) maintain that the S-PPC is "the most widely used questionnaire for assessing self-esteem in youths". Eiser, Eiser and Havermans (1995) argue that the S-PPC is distinguished from other self-esteem scales in two important ways. Firstly, by measuring self-perceived competency in different domains and differentiating these from an independent measure of global self-worth, the scale provides a richer picture of an individual's self-esteem than a single self-esteem score. Secondly, Harter's "structured alternative format" avoids socially desirable responses (see Chapter 3 for a detailed discussion of this issue). The psychometric properties of the S-PPC have been examined in a number of studies and are summarised as follows.

4.1.1 Review of Studies Examining the Psychometric Properties of the S-PPC

Harter (1985) evaluated the psychometric properties of the S-PPC on four samples drawn from the Colorado area in the U.S. They ranged from third grade to eighth grade girls and boys from lower middle to upper middle class socio-economic groups. Harter reported that 90% of the sample were Caucasian. Harter's Sample A (sixth to seventh grade girls and boys) was chosen as the comparison group for this thesis as they were the most closely matched in age and grade with the current sample.

The internal consistency of the S-PPC across various cross-cultural samples, as measured by Cronbach's alphas, are summarised in Table 6. Generally, the internal consistency of the S-PPC is very good and comparable to Harter's (1985) original samples. Most studies report mean Cronbach's alphas above .71 with the exception of Hess and Petersen (1996) who report alphas ranging between .62 to .74, and Shevlin, Adamson and Collins (2003) who report alphas ranging between .53 to .74. Although lower than those reported by other studies, these values are still deemed sufficiently strong to support the use of the instrument (Hess & Petersen, 1996). However, Eapen and Naqvi (2000) recommend a need to exercise caution when using the instrument with young boys in the United Arab Emirates. As reported in Table 6, Eapen and Naqvi obtained Cronbach's alphas for the total sample's (8 to 16 years) ranging from .86 to .92. When analysed by age and gender they found that boys aged 8 to 12 years had the lowest alphas ranging from .54 to .66. They also noted an improvement in internal consistency as the sample aged. This study highlights the importance of conducting analyses according to gender and age, as well as the total sample.

The temporal stability of the S-PPC, as measured by test-retest correlations, has also been investigated but not as thoroughly as its internal consistency. Harter (1985), for instance, does not report test-retest correlations. The three studies to report these correlations (see Table 7) attest to the scale's stability over time. Hymel (1999) reports test-retest correlations over a one week time frame ranging from .72 to .86. Using a four week interval, Van Dongen-Melman, Koot and Verhulst (1993) obtained test-retest correlations ranging from

.59 to .84. More recently, Muris and colleagues (Muris et al., 2003) report higher test-retest correlations ranging from .84 to .90.

Table 6: Internal consistency of S-PPC across published samples.

Study	Internal Consistency (Mean Cronbach's)					
	Scholastic Competence	Social Acceptance	Athletic Competence	Physical Appearance	Behavioural Conduct	Global Self- worth
Harter (1985) U.S. Sample A: Grade 6-7 (11-13yrs)	.80	.80	.84	.81	.75	.84
Schumann et al (1999) U.S. White (11-12yrs)	.83	.82	.85	.85	.82	.81
Hess & Petersen (1996) Mexican-American 8.9–13.3yrs	.74	.62	(only report range)			
Eiser et al (1995) Britain Mean age 12.20–14.19yrs	.77	.78	.85	.81	.76	.80
Pereda & Forns (2004) Spain 9-12yrs	.71	.77	.72	.81	.78	.73
Eapen & Naqvi (2000) United Arab Emirates 8-16yrs	.87	.86	.88	.90	.91	.92
Veerman et al (1996) The Netherlands 8-12yrs	Average across subscales = .74					
Van Dongen-Melman et. al. (1993) The Netherlands Mean age 10.4–11.4yrs (Grade 5-6)	.81	.79	.75	.83	.59	.79
Muris et. al. (2003) The Netherlands 8-14yrs	.79	.80	.81	.86	.73	.80
Van Den Bergh & Van Ranst (1998) Belgium 8-13yrs	(only report range)			.83	.73	

Study	Internal Consistency (Mean Cronbach's)						
	Scholastic Competence	Social Acceptance	Athletic Competence	Physical Appearance	Behavioural Conduct	Global Self- worth	
Boivin et. al. (1992) French Canadian 6 th grade	.84	.77	.84	.80	.80	.74	
Worth Gavin & Herry (1995) French Canadian 6 th grade	.84	.76	.80	.82	.72	.77	
Hymel et. al. (1999) Canada 5 th & 6 th grade students	.82	.80	.84	.79	n/r	.78	
Shevlin et. al. (2003) Northern Ireland Year 6 (8-10yrs) – Year 7	.66 - .74	.58 - .68	.53 - .66	.59 - .72	.58 - .65		

Note: n/r = not reported

Psychometric evaluation of the S-PPC's factor structure has been undertaken using exploratory and confirmatory factor analytic methods. It should be noted that Harter (1985) argues that the *global self-worth* subscale is qualitatively different from the five specific domain subscales and therefore should not be included in the same factor-analysis. She maintains that the *global self-worth* subscale is partly determined by the competence an individual attributes to specific domains deemed important. As such this will vary between individuals and consequently is unlikely to "systematically emerge as a distinctive factor" (Harter, p. 18).

Harter's five-factor structure has been supported in exploratory factor analytic studies (EFAs) in *Northern Ireland* (Granleese & Joseph, 1993; Granleese & Joseph, 1994), *Spain* (Pereda & Forns, 2004), *Finland* (Miller, 2000), *United States of America* (Schumann et al., 1999) and the *United Arab Emirates* (Eapen & Naqvi, 2000), explaining 49%, 51%, 50.7%, 56.9%, 56% of the variance in item responses respectively. However, not all EFAs have supported Harter's structure. Although Eiser, Eiser and Havermans (1995) study

with British Year 7 and 8 children found that the five-factor structure explained 52.5% of the variance, there were a number of cross-loadings, particularly in terms of *behavioral conduct* and *scholastic competence*. They argue that their results question the cross-cultural generalisability of the scale and that British children are “less disposed to compartmentalise their self-evaluations into separate domains” (p. 432) than their American counterparts.

Table 7: Temporal Stability of the S-PPC across published samples

Study	Temporal Stability (test-retest correlations)						
	Scholastic Competence	Social Acceptance	Athletic Competence	Physical Appearance	Behavioural Conduct	Global Self-worth	
<u>1 week test-retest</u>							
Hymel et. al. (1999) Canada 5 th & 6 th grade students	.79	.86	.73	.74	n/r	.72	
<u>4 week test-retest</u>							
Van Dongen-Melman(1993) The Netherlands Mean age 10.4yrs – 11.4yrs (Grade 5-6)	.81	.76	.84	.82	.59	.74	
Muris et. al. (2003) The Netherlands 8-14yrs	.85	.84	.90	.89	.84	.86	

Note: n/r = not reported

Using confirmatory factor analysis (CFA) the five-factor solution has been generally supported in *French-speaking Canada* (Boivin et al., 1992), *The Netherlands* (Muris et al., 2003; Van Dongen-Melman et al., 1993) and *Northern Ireland* (Shevlin et al., 2003). However, Worth Gavin and Herry (1995) failed to confirm Harter’s five-factor solution with a sample of 810 Grade 4 to Grade 6 French-speaking Canadian children, and had to conduct post-hoc fitting to establish an improved five-factor model. Factorial invariance, that is

factorial equivalence across different samples, has also been conducted on the S-PPC using CFA. In these studies only partial support for factorial invariance was found. However, factorial invariance was observed for both non-clinic and clinic group children (Veerman et al., 1996) and boys and girls (Van den Bergh & Van Ranst, 1998) suggesting that the two groups in each study perceived the SPPC items in the same way.

As discussed in Chapter 2, Harter (1999) demonstrates that the *physical appearance* domain has the strongest correlation with *global self-worth* when compared to the other four domains. This finding is robust in that it has been supported by many other studies (Boivin et al., 1992; Granleese & Joseph, 1993; Granleese & Joseph, 1994; Hess & Petersen, 1996; Hymel et al., 1999; Muris et al., 2003; Pereda & Forns, 2004; Schumann et al., 1999; Van Dongen-Melman et al., 1993). Correlation coefficients have ranged from 0.52 to 0.71. However, not all studies have found such a dominant relationship between *physical appearance* and *global self-worth*. Eapen, Naqvi and Al-Dhaheri (2000), for instance, found *behavioral conduct* to have the strongest relationship with self-worth. They suggest that cultural differences may help to explain their anomalous finding. That is, the culture of the United Arab Emirates places greater significance on “the manner in which an individual behaves” (p. 4) and thus this quality plays a central role in an individual’s self-worth. However, when they analysed females separately, *physical appearance* showed the highest correlation with *general self-worth*.

Low self-esteem is a symptom of many mental disorders as detailed in the DSM-IV-TR (American Psychiatric Association, 2000). Studies of criterion validity using the S-PPC are less common but show that the *global self-worth* subscale is negatively correlated with symptoms of psychopathology (Muris et al., 2003). That is, lower self-worth corresponds with higher psychopathology. For example, Muris, Meesters and Fijen (2003) found that 8 to 14 year old Dutch children showed moderate correlations between *global self-worth* and trait anxiety as measured by the State-Trait Anxiety Inventory ($r = -0.56$) and depressive symptoms as measured by the *Depressie Vragenlijst voor Kinderen* ($r = -0.67$). Weaker associations were found with internalising ($r = -0.22$) and externalising ($r = -0.30$) problems as measured by the Child Behavior Checklist.

4.1.2 Aim of Study 1

Taken together, the findings of this review of cross-cultural psychometric studies provide strong support for the notion that the S-PPC is a reliable and valid measure. To date, however, no study has examined the psychometric properties of the S-PPC in an Australian population. It is important to establish the reliability and validity of using Harter's (1985) scale with an Australian population, particularly when some studies have reported difficulties with cross-cultural generalisability.

The overall aim of Study 1 is to investigate the psychometric properties of the S-PPC in an Australian sample, in order to determine its appropriateness for Study 2. The construct validity of the S-PPC will be evaluated by (i) investigating gender differences across subscale means (the contrasted groups approach to construct validity), (ii) testing the five-factor structure implied by the domain-specific subscales and investigating the intercorrelations among the subscales (the factorial validity approach to construct validity) and (iii) examining the correlations between S-PPC subscale scores and symptoms of eating disturbances and body-image dissatisfaction as measured by the ChEAT-26, EDI-DT and EDI-BD (the convergent validity approach to construct validity). In addition, the cross-cultural stability of the S-PPC will be evaluated by comparing data from Study 1's sample with those of Harter's (1985) normative sample. Finally, the reliability of the S-PPC will be assessed. Two aspects of reliability will be examined: internal consistency (as measured by Cronbach's alphas) and temporal stability (as measured by test-retest correlations).

4.1.3 Hypotheses

1. The factorial structure of the S-PPC will be found for Australian children aged 11 to 14 years.
2. The S-PPC's *global self-worth* and the *physical appearance* subscale will be negatively correlated with eating disturbances as measured by the ChEAT-26, EDI-DT and EDI-BD.
3. The internal consistency of the S-PPC subscales and *global self-worth* scale will be reliable, with alphas greater than .75 (Harter, 1985).

4. The temporal stability of the S-PPC subscales and *global self-worth* scale will be stable over a three-month period with alphas greater than .59 (Van Dongen-Melman et al., 1993).

4.2 Method

The methodology used in this study is the same as the one outlined in Chapter 3. What follows is therefore a summary of that methodology.

4.2.1 Participants

The sample consisted of all participants who completed the pre-intervention questionnaire ($n = 264$) designed for the intervention evaluation. Participants were Year 7 students from five primary schools in the Perth metropolitan area and were aged between 11 and 14 years ($M: 12.7$ years, $SD = .42$).

4.2.2 Measures

The **Self-perception Profile for Children** (S-PPC; Harter, 1985) consists of 36 items and six subscales: The scale is designed to measure self-reported *global self-worth* and five discrete aspects of self-concept, namely: *scholastic competence, social acceptance, athletic competence, physical appearance* and *behavioral conduct*. Subscales scores averaged across items can range between 1 and 4 with high scores denoting a higher degree of perceived competence.

The **Children's Eating attitude Test-26** (ChEAT-26; Maloney et al., 1988) is a 26-item self-report questionnaire measuring maladaptive eating attitudes and behaviours in children aged 8 to 13 years. Each item in the ChEAT-26 uses a 6-point Likert scale response format providing a total score ranging from 0 to 78. Higher scores indicate greater eating disturbances.

The Body Dissatisfaction (EDI-BD) and the Drive for Thinness (EDI-DT) subscales of the **Eating Disorder Inventory-2** (EDI-2; Garner, 1991) were used in the present study. The 9-item EDI-BD provides a measurement of self-reported body dissatisfaction and the 7-item EDI-DT measures self-reported concern for dieting, preoccupation with weight and pursuit of thinness. Both

subscales use 6-point Likert scale with the same response format as the ChEAT-26. The EDI-2 is intended for adolescents aged 11 years and older.

4.2.3 Procedure

The S-PPC, ChEAT-26, EDI-DT and EDI-BD were administered as part of the evaluation of Study 2's eating disturbance and body dissatisfaction prevention intervention. The instruments were administered by trained administrators within a classroom environment and were completed individually in August 2002.

4.3 Results

All analyses, with the exception of the confirmatory factor analysis (CFA), were completed using SPSS for Windows (Version 15.0). EQS for Windows (Version 6.1) was used for the CFA. CFA was chosen over exploratory factor analysis (EFA) since the current aim was not to *explore* the factor structure of the S-PPC but to *confirm* the five-factor structure that has already been proposed for the scale. Student's *t*-tests were used to assess pre-intervention gender effects and to compare the current results to normative data.

4.3.1 Data Screening and Assumption testing

Outliers were identified using studentized deleted residuals (SDR) (McClelland, 2000). Cases with SDR scores greater than an absolute value of 3.67 are considered outliers. According to this criterion, the current sample was free from outliers.

4.3.1.1 Subscale scores

Normality of the S-PPC subscales was assessed using measures of skewness and kurtosis together with normal probability and detrended normal plots. Skewness and kurtosis values were minimal (i.e., maximum skew = -.834 and maximum kurtosis = -.696) and showed no serious threat to the underlying assumption of normality. Examination of scatterplots indicated no violation of the assumptions linearity and homoscedascity for the correlation statistics.

4.3.1.2 Item Scores

Multivariate normality was compromised with high levels of kurtosis (normalised estimate was 21.321 where a value of >10 is required). In these circumstances, Jöreskog (2005) recommends testing model fit with a chi-square statistic that corrects for multivariate non-normality. The Satorra-Bentler chi-square provides such a statistic (Jöreskog) and was therefore, used as the fit statistic in the current CFA.

4.3.2 Construct Validity of the S-PPC

4.3.2.1 Gender Effects

Student's *t*-tests revealed no significant pre-intervention difference between girls and boys on *scholastic competence* [$t(262) = 0.429, p = .668$], *social acceptance* [$t(262) = 1.027, p = .305$], *physical appearance* [$t(262) = 1.061, p = .290$] and *global self-worth* [$t(262) = 0.819, p = .819$] subscales of the S-PPC. However, as can be seen in Table 8, boys reported significantly higher scores than girls on the *athletic competence* subscale [$t(262) = 4.127, p < 0.001$] and girls reported significantly higher scores than boys on the *behavioral conduct* subscale [$t(262) = -5.955, p < 0.001$]. These findings are partly consistent with the gender effects found in Harter's (1985) study of the S-PPC psychometric properties. Harter found additional gender effects with boys scoring significantly higher on the *physical appearance* and *global self-worth* subscales.

Table 8: Means and standard deviations for S-PPC scales

SPPC	Means (Standard Deviations)					
	Total	Girls		Boys		
Scholastic Competence	2.86	(0.61)	2.85	(0.61)	2.88	(0.62)
Social Acceptance	3.06	(0.70)	3.03	(0.70)	3.12	(0.69)
Athletic Competence	3.03	(0.68)	2.89	(0.68)	3.23	(0.64)
Physical Appearance	2.77	(0.71)	2.73	(0.70)	2.83	(0.72)
Behavioral Conduct	3.03	(0.61)	3.20	(0.60)	2.77	(0.54)
Global Self-worth	3.24	(0.58)	3.25	(0.58)	3.23	(0.57)

4.3.2.2 Factorial Validity

Confirmatory factor analysis (CFA) was conducted in order to determine whether Harter's five-factor model fitted the current data. The CFA focused on the five specific domains of self-perceptions (i.e., *scholastic competence*, *social acceptance*, *athletic competence*, *physical appearance* and *behavioral conduct*) in keeping with Harter's (1985) argument that the *global self-worth* domain is qualitatively different from the other domains. A one-factor model provided a theoretically plausible alternative model (Sobel & Bohrnstedt, 1985) to compare with the five-factor model. Maximum likelihood was used to estimate model parameters. For each model the variance of the five constructs was fixed at 1, with their covariances calculated freely.

4.3.2.2.1 Assessment criteria of model fit.

It was argued in Section 1.2.1.2 that the consequences of multivariate normality can be controlled by using the Satorra-Bentler chi-square, a fit statistic that is robust to violations of multivariate normality. For a good model fit, the chi-square value should *not* be significant. Relying on chi-square statistics alone, however, may be misleading because chi-square can be significant even for relatively good fit models due its dependence on sample size (Bentler & Bonett, 1980). Furthermore, there is general consensus for the need to employ multiple criteria to judge the fit of CFA models. There is much debate, however, over the number, choice and performance of the various Goodness of Fit indices. The current study utilises a "two-index presentation strategy" (Hu & Bentler, 1999, p. 5) that employs fit indices with demonstrated sensitivity in evaluating models. The two indices selected from Hu and Bentler's better performing fit indices were the Standardised Root Mean Square Residual (SRMR) and the Comparative Fit Index (CFI). EQS computes robust versions of these indices that are robust to violations of multivariate normality (Byrne, 1994).

The SRMR is the most sensitive measure in identifying models with misspecifications in factor covariances. The smaller the SRMR, the better the model fit. Hu and Bentler (1999) recommend a cut-off close to 0.08 as an acceptable fit. The CFI is sensitive to identifying models with misspecified factor loadings (Marsh, Hau, & Wen, 2004). There is some contention regarding

appropriate cut-off criteria for CFI. Since 1999, many researchers have advocated the stringent cut-off of .95 proposed by Hu and Bentler. More recently, however, Marsh, Hau and Wen have argued that researchers have overgeneralised these cut-offs as golden rules without considering the limitations noted by Hu and Bentler. Hu and Bentler (p. 28) suggest that small sample sizes “have a slight tendency to over reject true-population models under nonrobustness condition”. Furthermore Marsh and colleagues (2004) question the generalisability of a single cut-off value for each index as proposed by Hu and Bentler. In view of the small sample size and the multivariate non-normal data, the current study adopted the less stringent cut-off of .90 to minimise Type 1 errors. The closer CFI is to 1, the better the model fit.

A supplementary fit index, the Root mean Square Error of Approximation (RMSEA), was also used. This index is relatively unaffected by sample size and the accompanying confidence intervals provide a measure in comparing competing models (Wegener & Fabrigar, 2000). Steiger (1989) recommends a cut-off value of 0.05 and below as denoting a close fit, although more recently Hu and Bentler (1999) have recommended 0.06 as acceptable. The closer the RMSEA is to 0, the better the model fit. The RMSEA confidence intervals can be used to compare competing models. If the confidence intervals of competing models do not overlap, the model with the smallest RMSEA can be argued to be indicative of a better fit.

4.3.2.2.2 *Model fit.*

Table 9 presents a summary of the model fit for the null, one-factor and five-factor models. The five-factor model proposed by Harter (1985) provided a reasonable fit for the data $\chi^2(395) = 638.299, p < 0.001, SRMR = 0.062, Robust CFI = 0.917$ and $RMSEA = 0.048$. The null and the single factor models did not provide a better fit. Table 10 shows the standardised coefficients and z scores of the five-factor model and demonstrates that the 36 items are loading on their intended factor.

Table 9: Comparison of competing models

Model	χ^2	df	S-B χ^2	CFI	RCFI	SRMR	RMSEA	Confidence Interval	
Null	3830.127	435							
One-Factor	3830.127	435	2220.336	.364	.381	.155	.131	(.125	.136)
Five-Factor	760.512	395	638.299	.892	.917	.062	.048	(.041	.055)

Note: n=264 S-B = Satorra-Bentler Scaled Statistic; CFI Comparative Fit Index, RCFI = Robust Comparative Fit Index; SRMR = Standardised root mean square residual; RMSEA= Root Mean Error of Approximation; CI = Confidence Interval.

Table 10: Standardised Coefficients and z Scores of 5 Factor Model

		Standardised Coefficients	Z scores
<u>Scholastic Competence</u>			
1.	Good at homework	.734	14.087
7.	Just as smart	.648	12.793
13.	Do schoolwork quickly	.669	11.692
19.	Remember things easily	.562	8.484
25.	Do well at classwork	.779	14.259
31.	Can figure out answers	.730	14.535
<u>Social Acceptance</u>			
2.	Easy to make friends	.738	12.323
8.	Have lots of friends	.847	14.619
14.	Easy to like	.680	13.288
20.	Do things with a lot of kids	.619	8.779
26.	Most kids like me	.581	8.828
32.	Popular with others	.765	14.618
<u>Athletic Competence</u>			
3.	Do well at sports	.777	15.032
9.	Good enough at sports	.630	12.209
15.	Good at outdoor activity	.756	14.491
21.	Better than others at sports	.824	17.537
27.	Play rather than watch	.639	9.271
33.	Good at new outdoor games	.684	11.300
<u>Physical Appearance</u>			
4	Happy with the way I look	.724	12.044
10.	Happy with height and weight	.574	9.779
16.	Like body the way it is	.693	12.419
22.	Like physical appearance	.813	17.990
28.	Like face and hair as it is	.621	11.113
34.	Attractive or good looking	.606	10.165

	Standardised Coefficients	Z scores
<u>Behavioral Conduct</u>		
5. Like the way I behave	.407	5.677
11. Usually do the right thing	.801	14.497
17. Act the way supposed to	.731	14.132
23. Don't get into trouble	.677	12.215
29. Don't do things shouldn't	.684	13.388
35. Kind to others	.805	15.023

Note: $z = z\text{-score or } T\text{-Ratio (unstandardised coefficients/standard error)}$.

4.3.2.3 Correlations Among Subscales

The intercorrelations between subscales are shown in Table 11. Note that all self-concept domains, with the exception of *behavioral conduct* with *social acceptance* and *physical appearance*, are moderately significantly correlated with correlations ranging from -0.160 to 0.397 . More substantially correlated are the self-concept domains with *global self-worth*. These correlations ranged from 0.251 to 0.608 and are all significant ($p < .01$). In keeping with Harter's (1985) normative sample, the highest correlation coefficient was observed between the *physical appearance* subscale and *global self-worth* ($r = 0.608$).

Table 11: Inter-correlations among subscales (Pearson's coefficients) at pre-intervention ($n = 264$)

	1 SC	2 SA	3 AC	4 PA	5 BC	6 GS
1. Scholastic Competence	1	.240**	.136*	.212**	.307**	.386**
2. Social acceptance		1	.392**	.397**	.079	.505**
3. Athletic competence			1	.397**	-.160**	.386**
4. Physical appearance				1	.094	.608**
5. Behaviour conduct					1	.251**
6. Global self-worth						1

* $p < .05$ (2 tailed tests)

** $p < .01$ (2 tailed tests)

4.3.2.4 Convergent Validity

The construct validity of the S-PPC was further examined through its association with measures with which it, theoretically, should be associated (convergent validity). It was argued in Chapter 2 that measures of *global self-worth* and *physical appearance* should be negatively correlated with measures of eating disturbance psychopathology. The moderate negative correlations between *global self-worth* and *physical appearance* and each of the three measures of eating disturbances (see Table 12) are consistent with this argument, thereby providing further support for the construct validity of these two S-PPC subscales.

Table 12: Correlations between S-PPC scores and measures of psychopathology ($n = 264$)

S-PPC Subscales	ChEAT-26	EDI-DT	EDI-BD
Scholastic Competence	-.018	-.083	-.111
Social Acceptance	-.122*	-.166**	-.226**
Athletic Competence	-.059	-.223**	-.340**
Physical Appearance	-.321**	-.486**	-.661**
Behavioral Conduct	-.134*	-.091	-.040
Global Self-worth	-.341**	-.408**	-.474**

Note: ChEAT-26 = Child's Eating Attitude Test-26; EDI-DT = Eating Disorder Inventory – Drive for Thinness subscale and EDI-BD = Eating Disorder Inventory – Body Dissatisfaction.

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

4.3.3 Cross-cultural Stability of the S-PPC

One-sample *t*-tests were used to compare the current subscale means to those of Harter's (1985) normative Sample A. As argued earlier, Sample A was selected because it consisted of individuals similar in age to the current sample. Females in the current sample had significantly higher scores than Harter's normative sample on the following subscales: *physical appearance* (2.73 cf. 2.50; $p < 0.001$), *athletic competence* (2.89 cf. 2.54; $p < 0.001$), *behavioral conduct* (3.20 cf. 2.96; $p < 0.001$) and *global self-worth* (3.25 cf. 2.97; $p < 0.001$). *Scholastic competence* and *social acceptance* were not significantly different. For males there were no significant differences between the current sample and Harter's sample.

4.3.4 Reliability of the S-PPC

4.3.4.1 Internal Consistency (Cronbach's alphas)

The internal consistency of the S-PPC subscales and *global self-worth* scale were evaluated with Cronbach's Alphas. Alphas ranged from .82 to .86 and are presented in Table 13. These values are comparable to normative data reported by Harter (1985) for Sample A in the S-PPC manual.

Table 13: Cronbach's alpha coefficients for S-PPC subscales at pre-intervention ($n = 264$) and comparison alpha coefficients from normative data (Harter, 1985)

Self-Perception Profile for Children Subscales	Current sample	Normative Data	Number of Items
Global Self-worth	.82	.80 - .84	6
Physical Appearance	.82	.81 - .82	6
Scholastic Competence	.84	.80 - .85	6
Social Acceptance	.85	.80	6
Athletic Competence	.86	.84 - .86	6
Behavioural Conduct	.84	.75 - .77	6

4.3.4.2 Temporal Stability (Test-retest Correlations)

Using the control group only, the test-retest reliabilities of the six subscales were obtained for the 3-month interval between pre-intervention and post-intervention ($n = 124$). The test-retest correlations for the six subscales for the total sample and both gender groups are presented in Table 14. All correlations were significant. For the total sample the correlations ranged from .40 for *general self-worth* to .78 for *social acceptance*, indicating that not all subscales were equally stable over time. A similar pattern was found by gender. For girls, the correlations ranged from .39 for *general self-worth* to .85 for *social acceptance*. For boys the correlations ranged from .30 for *scholastic competence* to .75 for *athletic competence*. *Global self-worth* was the least stable for the total group and girls.

Table 14: Three-month S-PPC subscale test-retest reliabilities (Pearson's *r*)

Self-Perception Profile for Children Subscales	Total sample (n=124)	Girls (n=80)	Boys (n=44)
Scholastic competence	.56**	.76**	.30*
Social Acceptance	.78**	.85**	.70**
Athletic competence	.73**	.71**	.75**
Physical appearance	.65**	.72**	.58**
Behavioral conduct	.55**	.55**	.43**
Global self-worth	.40**	.39**	.45**

* significant at 0.05 level

** significant at the 0.01 level

4.4 Discussion

The overall aim of Study 1 was to examine the psychometric properties of the S-PPC with the current Australian sample to determine comparability with Harter's (1985) normative sample and therefore its appropriateness for use in the main intervention evaluation. As discussed earlier, Study 2's intervention was developed from Harter's (1986, 1987) conceptualisation of self-esteem and as such her measure was used to assess global self-worth and the five competency domains.

The first aim of Study 1 was to examine gender effects in the means of the S-PPC subscale scores. Significant gender effects were found within the subscales. In the current sample, boys reported being more athletically competent (S-PPC: *athletic competence*) than girls, while girls reported being better behaved (S-PPC: *behavioral conduct*) than boys. No other significant gender effects were revealed. These findings are partly consistent with Harter's (1985) normative sample and broadly paralleled samples in **England** (Eiser et al., 1995), **Ireland** (Granleese & Joseph, 1994), **The Netherlands** (Muris et al., 2003), **Mexican speaking America** (Hess & Petersen, 1996), and **Spain** (Pereda & Forns, 2004). Pereda and Forns maintain that these gender differences (i.e., boys reporting greater competency in sports and girls reporting greater satisfaction with the way they behave) illustrate social stereotypes of many "if not all cultures" (p. 696).

Harter's (1985) normative sample reported additional gender differences with boys scoring significantly higher on the *physical appearance* and *global self-worth* subscales. This was supported by findings in *Ireland* (Granleese & Joseph, 1993), *Britain* (Eiser et al., 1995) and *The Netherlands* (Muris et al., 2003). A possible explanation for why the current sample did not support all gender differences of Harter's normative sample can be derived from cross-cultural findings.

The cross-cultural analysis compared Harter's (1985) normative sample with the current sample. Girls in the present study were far happier with their physical appearance, athletic competence, the way they behaved and their overall self-worth than Harter's sample. Therefore, it is not surprising that the male and female scores on *physical appearance* and *global self-worth* were equivalent as the female scores were already higher than those reported by Harter. Cross-cultural comparisons have been performed between Harter's U.S. sample and other cultural groups. Dutch children in the third to sixth grade, report higher perceived confidence on *social acceptance*, *physical appearance* and *global self-worth* than their American counterparts (Van Dongen-Melman et al., 1993). In contrast, 100 school children aged 8 to 16 years from the United Arab Emirates (UAE) indicated lower scores of esteem and competency in all areas when compared to Harter's sample. These cross-cultural differences, including the present sample, are worthy of note and warrant further study.

Having means higher than Harter's (1985) normative sample may attenuate the effectiveness of an intervention designed to enhance self-esteem. Harter (1993), as detailed in Chapter 2, found that older children and adolescents are more amenable to self-esteem enhancement if they report moderately low self-worth (2.0 to 2.5) rather than low self-worth (1.0 to 1.75). The current sample reported a mean ranging from 2.77 to 3.06 for the five self-concept subscales and a mean of 3.24 on the *global self-worth* subscale. These scores are well above Harter's moderately low self-worth group identified as being more likely to experience self-esteem benefits from an intervention based upon her model. Therefore, an intervention designed to enhance self-esteem by focussing on the *physical appearance* domain may experience difficulties in attesting to its

effectiveness if participants already have higher than average attitudes in this area.

The second aim of Study 1 was to test the five-factor structure of the S-PPC. The present sample replicated the five-factor solution that has been reported by Harter (1985) in confirmatory factor analysis. It provides further evidence that children can meaningfully discriminate between self-perceptions in *scholastic competence*, *social acceptance*, *athletic competence*, *physical appearance* and *behavioral conduct*. This result is also consistent with S-PPC factorial studies in ***French-Canada*** (Boivin et al., 1992), ***The Netherlands*** (Muris et al., 2003; Van Dongen-Melman et al., 1993) and ***Northern Ireland*** (Shevlin et al., 2003). The similarity in the factorial structure between the current sample and Harter's normative sample suggests that the S-PPC measures similar attributes between the two cultural groups.

As noted by Harter (1985) and many other studies (Boivin et al., 1992; Granleese & Joseph, 1993; Granleese & Joseph, 1994; Hess & Petersen, 1996; Hymel et al., 1999; Muris et al., 2003; Pereda & Forns, 2004; Schumann et al., 1999; Van Dongen-Melman et al., 1993) the *physical appearance* subscale is consistently found to be the highest correlated subscale with *global self-worth*. The current study is in accord with these findings. Furthermore, a correlation coefficient of .61 fits well within the finding of previous studies which range from .52 to .71. This gives credence to the design of the self-esteem enhancement programme focusing on the *physical appearance* domain as argued in Chapter 2.

The third aim of Study 1 was to examine the correlations between the S-PPC subscales and theoretically associated measures of *global self-worth* and *physical appearance*. Evidence was established in regard to the convergent validity of the S-PPC. The scale significantly correlated in a theoretically meaningful way with measures of eating disturbances. Specifically, lower levels of *global self-worth* were associated with higher levels of eating disturbances (Cheat-26 and EDI-DT) and body dissatisfaction (EDI-BD). These findings are in keeping with Muris and colleagues' (2003) results of the significant association of lower levels of *global self-worth* and higher levels of anxiety with 8 to 14 year old Dutch children.

The final aim this psychometric properties study was to assess the reliability of the S-PPC. Results indicated that the internal consistency of the S-PPC subscales ranged from .82 to .86 and are considered high, indicating a reliable measurement instrument (i.e., Cronbach's alpha $> .70$ are considered reliable, Nunnally, 1978). The estimates are consistent with those reported in Harter's (1985) normative sample and those detailed in the introduction. Of the subscales, *athletic competence* had the highest reliability score in the current sample and equally *global self-worth* and *physical appearance* had the lowest reliability score. These results are in contrast with Harter's normative sample, which found *behavioral conduct* as the least reliable subscale and *global self-worth* and *athletic competence* as the most reliable subscales. However, the high alpha coefficients support the use of this instrument with the current population for research purposes.

The 3-month test-retest results demonstrate that the S-PPC was not as stable over time as previous data suggests. The correlations ranged from .40 to .78, which are considerably lower than previous data ranging from .72 to .86 (Hymel et al., 1999); .59 to .84 (Van Dongen-Melman et al., 1993) and .84 to .90 (Muris et al., 2003). Furthermore, test-retest reliabilities reported by other self-report self-esteem instruments for children over several weeks, typically range between .63 and .88 (Butler & Gasson, 2005).

These results can be explained in terms of the time period utilised combined with the age of the sample. The current study used a 3-month time period (determined by the intervention evaluation study) while the other studies used either a 1-week or a 4-week test-retest time period. The participants are sampled during an age (11 to 14 years old) when reevaluation of an individual's self-esteem is common as discussed in Chapter 2. It is not until later adolescence and adulthood that an individual's sense of self becomes more consistent over time (Harter, 1990a). Therefore, it is not surprising to observe a lower test re-test statistic in the current study. Subscales of particular note for forthcoming chapters are *physical appearance* and *global self-worth*. The *physical appearance* subscale is moderately reliable at .65, more so for females (.72) than males (.58). However, it is less reliable than those reported by Hymel and colleagues ($r = .74$ 1999), Van Dongen-Melman and colleagues ($r = .82$, 1993)

and Muris and colleagues ($r = .89$, 2003). In terms of the *global self-worth* subscale, as well as having a low stability coefficient of .40, it was also the least reliable out of all the subscales. This suggests the S-PPC for the present sample is less reliable in terms of stability over moderate time periods.

4.4.1 Summary and Implications

In summary, Study 1 confirms the five factor structure of the S-PPC maintained by Harter (1985) and hence the multi-dimensional conceptualisation of a child's self-perceptions. It also demonstrates that the measure is reliable and valid with this population and consistent with those of the normative sample detailed by Harter, although slightly less stable over time. The low stability of the S-PPC suggests that interpretations using this measure over a moderate time frame should be read with some caution. Designing the self-esteem enhancement programme around the *physical appearance* domain was supported with the finding that this domain had the highest correlation with *global self-worth*. The criterion validity results also support the underpinnings of the eating disturbance prevention programme in its focus on enhancing self-esteem. That is, lower levels of self-worth were associated with higher levels of eating disturbances and body dissatisfaction.

The findings of Study 1 highlight the use of the S-PPC in a new cultural group – Australian primary school students. Thus, Study 1 supports the view of Van Dongen-Melman and colleagues (1993, p. 752) that the S-PPC “is able to detect cultural variations in children's self-esteem”. Indeed, findings from the current sample show that Australian females, at least, have greater esteem and competency in areas of *global self-worth*, *physical appearance*, *athletic competence* and *behavioral conduct* than their American counterparts. As noted earlier, higher esteem in *global self-worth* and *physical appearance* may have some bearing on how effective the current study's prevention intervention can be. Nevertheless, this psychometric study does confirm the S-PPC is a measure suitable to be used as an outcome measure for Study 2's intervention aimed at preventing the development of eating and body image disturbances.

CHAPTER 5: EVALUATION OF THE STARS PROGRAMME

5.1 Introduction

The primary aim of Study 2 was to assess the short- and long-term efficacy of a new approach to eating disorders prevention. As detailed in previous chapters, the STARS programme is unique in its strong theoretical basis using Harter's (1986, 1987) conceptualisation of self-worth. In particular, Study 2 was designed to test whether the STARS programme could improve body image and eating attitudes in pre-adolescent females and males by enhancing their self-worth. Furthermore, this study was designed to see whether the STARS programme was effective with a group who are at a higher-risk of developing an eating disturbance. An important aim in all prevention studies is to ensure that interventions do not inadvertently contribute to harmful effects and as such this too will be assessed.

In order to evaluate the STARS programme thoroughly, a number of areas will be explored. Firstly, the pre-intervention evaluation will determine whether 1) the intervention and control groups are equivalent in terms of outcome and demographic variables and 2) the participants are comparable to normative samples. As suggested in Chapter 4, if participants have higher self-worth and lower body dissatisfaction and eating disturbances than normative samples, then this has important implications for the potential effectiveness of the intervention. Secondly, intervention effects will be assessed at post-intervention and follow-up for both the whole sample and the higher-risk sample. Finally, as discussed in Chapter 3, the self-perceptions of teachers involved in the present study will be evaluated as this has important potential implications for the effectiveness of a programme.

5.1.1 Hypotheses

When compared to the usual care control group, and after controlling for pre-intervention scores, it is predicted that:

1. Participation in the self-esteem enhancement intervention will be associated with an increase in global self-worth at post-intervention.
2. Participation in the self-esteem enhancement intervention will be associated with an increase in global self-worth at 8-month follow-up.

3. Participation in the self-esteem enhancement intervention will be associated with lower levels of eating disturbances in students at post-intervention.
4. Participation in the self-esteem enhancement intervention will be associated with lower levels of eating disturbances in students at 8-month follow-up.
5. Participation in the self-esteem enhancement intervention will be associated with lower levels of body dissatisfaction in students at post-intervention.
6. Participation in the self-esteem enhancement intervention will be associated with lower levels of body dissatisfaction in students at 8-month follow-up.
7. Participation in the self-esteem enhancement intervention will be associated with an increase in physical appearance self-concept at post-intervention.
8. Participation in the self-esteem enhancement intervention will be associated with an increase in physical appearance self-concept at 8-month follow-up.
9. Participation in the self-esteem enhancement intervention will be associated with a decrease in the importance placed on physical appearance self-concept at post-intervention.
10. Participation in the self-esteem enhancement intervention will be associated with a decrease in the importance placed on physical appearance self-concept at 8-month follow-up.

5.2 Method

The methodology used in Study 2 is the same as the one outlined in Chapter 3. Therefore, the method that follows is a summary. More comprehensive details can be found in Chapter 3.

5.2.1 Participants

The sample consisted of all participants who completed questionnaires designed for the intervention evaluation at pre- and post-intervention and at 8-month follow-up ($n = 237$). Of these, 142 were girls (59.9%) and 95 were boys (40.1%). Participants were Year 7 students from five primary schools in the Perth metropolitan area and were aged between 11 and 14 years ($M = 12.7$ years, $SD = .42$).

5.2.2 Measures

The **Self-perception Profile for Children** (S-PPC; Harter, 1985) consists of 36 items and six subscales. The scale is designed to measure self-reported *global self-worth* and five discrete domains of self-concept namely *scholastic competence*, *social acceptance*, *athletic competence*, *physical appearance* and *behavioral conduct*. Subscales scores can range between 1 and 4 with high scores denoting a higher degree of perceived competence. Items within subscales are summed and then averaged to provide a total of six subscale means for each respondent.

The current chapter focuses on the *physical appearance* (average, importance and discrepancy scores), *global self-worth* and total discrepancy scores in the analysis. As noted in Chapter 2, the current intervention is designed to manipulate the *physical appearance* subscale to impact on *global self-worth*. The internal consistencies of these scales are acceptable with Cronbach's alphas of .81 for both *physical appearance* and *global self-worth* and are comparable to previous research (.81 and .80 respectively; Harter, 1985).

The **Children's Eating attitude Test-26** (ChEAT-26; Maloney et al., 1988) is a 26-item self-report questionnaire measuring maladaptive eating attitudes and behaviours in children aged 8 to 13 years. The ChEAT-26 uses a 6-point Likert scale response format with a total score ranging from 0 to 78. Higher scores indicate greater eating disturbances. No norms are provided but a comparison group was identified by age and English speaking culture. Smolak and Levine (1994a) using 308 middle school U.S. girls in grades 6, 7 and 8 reported a Cheat-26 mean of 15.74 ($SD = 12.42$). The internal consistency of the Cheat-26 had a Cronbach's Alpha of .75 and is comparable to previous research (.76; Maloney et al., 1988). Maloney, McGuire and Daniels (1988) maintain that a score of 20 or above is suggestive of disordered eating. As such, this cut-off was used to identify a higher-risk group to conduct efficacy analysis.

The Body Dissatisfaction (EDI-BD) and the Drive for Thinness (EDI-DT) subscales of the **Eating Disorder Inventory-2** (EDI-2; Garner, 1991) were used in the present study. The EDI-BD provides a measurement of self-reported body dissatisfaction and the EDI-DT measures self-reported concern for dieting, preoccupation with weight and pursuit of thinness. The EDI-2 is intended for

adolescents aged 11 years and older. The EDI-BD has a 9-item subscale and the EDI-DT has a 7-item subscale. Both use a 6-point Likert scale with the same response format as the ChEAT-26. Normative data obtained by Shore and Porter (1990) is based upon a sample of 316 11 to 13 year old Canadian public school children. Norms for EDI-BD were 8.44 ($SD = 7.79$) for females and 4.65 ($SD = 5.83$) for males. Norms for EDI-DT were 6.55 ($SD = 5.71$) for females and 2.95 ($SD = 3.64$) for males. The present study has acceptable internal Cronbach's alphas of .90 for EDI-BD and .78 for EDI-DT which are comparable to previous research in which alphas of .92 and .83 were observed respectively (Garner, 1991).

A number of **dieting and self-description questions** were included in the questionnaire. Participants were asked if their weight had changed during the past six months with the following response format: a) gone up a lot (more than 3kg/½ stone) b) stayed about the same or c) gone down a lot (more than 3kg/½ stone). Participants indicated 'yes' or 'no' if they 1) had ever dieted to lose weight and 2) were on a diet at present. Finally, participants were asked to endorse the most accurate self-description from the following sentences: I feel: a) far too thin, b) a bit too thin, c) about just right, d) a bit too fat and e) far too fat.

Self-reported teasing was assessed using two questions about the presence of hurtful teasing. The first question, "In the last 4 weeks have you been teased in a hurtful way about your body size or shape?" was assessed in five different settings: a) by kids at school, b) by adults at school, c) by kids at home, d) by adults at home and e) by other people (not at school or home). The response format for each of the settings utilised a three point rating scale of "many times", "a few times" and "never". The second question, "In the last 4 weeks have you ever teased other people about their body size or shape in a hurtful way?" used a yes/no response format.

The **Adult Self-Perception Profile** (AS-PP; Messer & Harter, 1986) was administered to the teachers in order to measure their self-reported *global self-worth* and self-concept in the *physical appearance* domain. The *physical appearance* subscale has 4-items and the *global self-worth* subscale has 6-items. The AS-PP uses the same response format and scoring procedures as the S-PPC.

5.2.3 Procedure

The questionnaire (See Appendix C), comprised of the preceding measures, was administered as part of the evaluation of the Study 2's eating disturbance prevention intervention. The instruments were administered by trained administrators within a classroom environment and were completed individually between August 2002 and August 2003.

5.3 Results

5.3.1 Statistical Analysis

Data was analysed using SPSS, Version 15, statistical package for Windows and Stata 10 (StataCorp, 2007). Baseline differences between the intervention and control groups were compared by chi-square for nominal data and Student's *t*-tests for interval data. Regression models were fitted in Stata 10 (StataCorp, 2007) and used to study the impact of the prevention programme on the following measures at post intervention and follow-up: Cheat-26, EDI-DT, EDI-BD, S-PPC – *global self-worth* and *physical appearance* subscales, S-PPC *physical appearance* importance rating and discrepancy scores on the S-PPC *physical appearance and total discrepancy score*. For each regression model, intra-school clustering on the outcome was controlled by using a *sandwich estimator* for the standard errors (Rabe-Hesketh & Skrondal, 2005). Baseline levels of the outcomes were used as covariates to rule out the possibility that intervention effects were generated by initial differences between the groups. An alpha level of .05 was used for all statistical tests apart from those indicated otherwise. Alpha levels were corrected using the Bonferroni procedure in order to control for the inflation of the familywise error rate associated with conducting multiple statistical tests. There were two conceptually distinct post-intervention and follow-up families. The Bonferroni corrections were applied within each family by dividing the conventional alpha-level of .05 by 8 (outcome variables). All regression models were therefore evaluated at a corrected alpha-level of .006 (i.e., .05/8). All significance levels were two-tailed. Intervention effect analyses conducted on dichotomous variables used the chi-square statistic.

5.3.2 *Data Screening and Missing values*

Data entry of the Student Questionnaire was undertaken by the Curtin University of Technology data preparation unit. Scores for any negatively worded items were recoded prior to analysis. The data were examined for accuracy of input, out of range values and missing values.

Missing values were assessed using SPSS Missing Values Analysis. Variables with 5% or more missing data were subjected to further testing in order to determine whether ‘missingness’ was related to other variables (Tabachnick & Fidell, 2001). Baseline data indicated no variables with 5% or more missing data. However, the post-intervention data had three variables with 5% or more missing data (no more than 8.1%) and follow-up data had four variables with 5% or more missing data (no more than 6.5%). Student’s *t*-tests demonstrated that there were systematic relationships between ‘missingness’ on these variables and other variables. This was supported by comments written on some of the questions that suggested that missingness was related to an attitude. For example, question 90 “I like the shape of my buttocks” which had 7.8% of the data missing had one student refuse to answer this question commenting: “I don't think you should be asking these questions”. To address this issue, mean substitution was employed (Tabachnick & Fidell). A simulation by Downey, King, & Craig (1998) showed that mean substitution provided good representations of the original data when both the number of respondents with missing data and the number of items missing were 20% or less.

5.3.3 *Sample Size and Assumption Testing*

The sample size was estimated using Cohen’s (1992) power tables. For a regression model with four predictors, 75 participants were required in order to detect ‘moderate’ to ‘large’ relationships between predictors and outcomes. With a sample size of 237, Study 2 is clearly sufficiently powered to detect relationships of this magnitude. Furthermore, the current sample has a ratio of approximately 79 cases to each predictor variable which indicates the results should be generalisable given that the sample is representative [Hair and colleagues (1995) recommend 15 to 20:1 ratio].

Outliers were identified using studentized deleted residuals (SDR) (McClelland, 2000). SDR scores greater than an absolute value of 3.67 are

considered outliers and this resulted in a total of 16 cases in the current study. Rather than deleting the outliers, which would compromise the generalisability of the results (Hair et al., 1995), outliers were changed to one unit larger than the next extreme score (Tabachnick & Fidell, 2001). As such, results reported are based upon trimmed data (i.e., outliers reduced).

Examination of residual scatterplots revealed that data points were more or less unsystematically distributed about the central horizontal axis suggesting no serious violation for the assumptions of normality, linearity and homoscedasticity (Tabachnick & Fidell, 2001). Singularity and multicollinearity were examined using tolerance values. Most values apart from the pre-intervention scores that were used to control for pre-intervention differences, were less than .1 and thus indicated a multicollinearity assumption violation (Tabachnick & Fidell). Using deviation scores in product-term regression (in the following regression analysis the product term codes the sex x group [intervention vs. control] interaction) has been recommended as a cure for the multicollinearity problem (high correlation between the product-term and one or more of its constituents) that often arises with the use of untransformed (raw) scores (Finney, Mitchell, Cronkite, & Moos, 1984). Although deviation scores will reduce the product-term's correlation with the constituent variables, multicollinearity poses no threat to the analysis of interaction or main effects unless the correlation is so high as to produce rounding errors in computer calculations (Finney et al., 1984).

5.3.4 Preliminary Analyses

Means and standard deviations for outcome variables at baseline, post-intervention and 8-month follow-up with the 237 Year 7 participants are presented in Table 15 and for the higher-risk participants ($n = 20$) are presented in Table 16.

Table 15: Group means and standard deviations (in parentheses) for dependent variables for each group at pre-intervention, post-intervention & 8-month follow-up (n =237)

Outcome variable	Time Intervals					
	Pre-intervention		Post-intervention		8-month follow-up	
	Intervention	Control	Intervention	Control	Intervention	Control
Eating Disturbances						
Cheat-26	7.6 (6.4)	7.8 (7.1)	7.6 (6.0)	6.5 (5.5)	6.2 (5.5)	5.8 (4.9)
EDI-2 – Drive for thinness	3.2 (4.3)	3.1 (3.9)	3.0 (4.3)	1.7 (3.1)	1.8 (3.6)	2.0 (3.4)
Body Image satisfaction						
EDI-2 – Body Dissatisfaction	4.9 (6.0)	5.3 (6.0)	4.4 (6.1)	3.9 (5.5)	3.7 (5.3)	3.9 (5.2)
Self-Perception Profile for Children						
Physical Appearance						
Average	2.6 (0.7)	2.9 (0.7)	2.9 (0.8)	2.9 (0.7)	2.9 (0.7)	3.0 (0.6)
Importance	2.3 (0.8)	2.5 (0.7)	2.4 (0.9)	2.5 (0.7)	2.4 (0.7)	2.5 (0.7)
Discrepancy	-0.8 (1.0)	-0.4 (0.5)	-0.1 (0.8)	-0.1 (0.9)	-0.6 (1.1)	-0.4 (1.0)
Global Self-worth	3.2 (0.6)	3.3 (0.6)	3.3 (0.6)	3.4 (0.5)	3.2 (0.5)	3.3 (0.5)
Total Discrepancy Score	-0.4 (0.6)	-0.4 (0.5)	-0.4 (0.5)	-0.1 (0.5)	-0.3 (0.5)	-0.2 (0.5)

NOTE: ChEAT= Children's version of the Eating Attitude Test-26; EDI-2 = Eating Disorder Inventory-2

Table 16: Higher-risk group means and standard deviations (in parentheses) for dependent variables for each group at pre-intervention, post-intervention & 8-month follow-up (n = 20)

Outcome variable	Time Intervals					
	Pre-intervention		Post-intervention		8-month follow-up	
	Intervention	Control	Intervention	Control	Intervention	Control
Eating Disturbances						
Cheat-26	23.8 (3.9)	24.2 (4.8)	17.1 (7.2)	12.8 (9.3)	14.8 (7.7)	7.8 (4.6)
EDI-2 – Drive for thinness	11.3 (5.4)	8.4 (6.5)	9.4 (6.0)	2.5 (4.3)	7.8 (6.1)	2.3 (3.2)
Body Image satisfaction						
EDI-2 – Body Dissatisfaction	14.1 (8.3)	10.8 (8.4)	10.6 (7.5)	5.9 (4.6)	2.2 (0.8)	5.5 (5.7)
Self-Perception Profile for Children						
Physical Appearance						
Average	1.9 (0.7)	2.7 (0.6)	2.2 (0.6)	2.5 (0.9)	2.2 (0.8)	2.9 (0.9)
Importance	2.5 (1.0)	2.8 (1.1)	2.4 (1.0)	2.5 (1.0)	2.3 (0.9)	2.6 (0.9)
Discrepancy	-1.9 (0.8)	-0.9 (0.9)	-1.3 (0.5)	-1.2 (0.9)	-1.2 (1.0)	-0.7 (1.5)
Global Self-worth	2.6 (0.7)	2.9 (0.6)	2.8 (0.7)	3.4 (0.8)	2.8 (0.5)	3.3 (0.6)
Total Discrepancy Score	-0.8 (0.5)	-0.5 (0.6)	-0.7 (0.5)	-0.3 (0.6)	-0.7 (0.5)	-0.2 (0.8)

NOTE: ChEAT= Children's version of the Eating Attitude Test-26; EDI-2 = Eating Disorder Inventory-2

5.3.5 Pre-intervention Comparisons

To ensure that the randomisation process had created equivalent groups, prior to the intervention, outcome and demographic variables were compared between the two groups. The Student's *t*-tests revealed no significant pre-intervention difference between the intervention and control group on the ChEAT, EDI-BD, EDI-DT and S-PPC for *global self-worth, physical appearance* (average, importance and discrepancy) and total discrepancy subscales (See Table 17). However, the control group reported significantly higher pre-intervention scores on the S-PPC *physical appearance* average and importance subscale. Also, the intervention group reported significantly greater pre-intervention discrepancy scores on the S-PPC *physical appearance* subscale. These pre-intervention differences were statically controlled in the main analysis.

Table 17: Mean scores, standard deviations and *t*-test pre-intervention comparisons on outcome measures

Variable	Intervention <i>n</i> = 124		Control <i>n</i> = 113		<i>t</i> -value	<i>p</i> - Value
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Cheat-26	7.6	6.4	7.8	7.1	<i>t</i> (1,235) = 0.243	.808
EDI-DT	3.2	4.3	3.1	3.9	<i>t</i> (1,235) = -0.154	.877
EDI-BD	4.9	6.0	5.3	6.0	<i>t</i> (1,235) = 0.482	.630
S-PPC GS	3.2	0.6	3.3	0.6	<i>t</i> (1,235) = 0.996	.320
S-PPC PA	2.6	0.7	2.9	0.7	<i>t</i> (1,235) = 2.672	.008**
S-PPC PI	2.3	0.8	2.5	0.7	<i>t</i> (1,235) = 2.334	.020*
S-PPC PD	-0.9	1.0	-0.4	0.8	<i>t</i> (1,85) = 2.236	.028*
S-PPC TD	-0.4	0.6	-0.4	0.5	<i>t</i> (1,227) = 0.505	.552

Note: Cheat -26 = Children's Eating Attitudes Test - 26; EDI = Eating Disorder Inventory II with subscales: DT - Drive for Thinness, BD - Body Dissatisfaction; S-PPC = Self-Perception Profile for Children with subscales: GS - Global Self-worth, PA - Physical Appearance, PI - Physical Importance, PD - Physical Appearance Discrepancy Score, TD - Total Discrepancy score.

* $p < .05$, ** $p < .001$

Chi-square analyses and Student's *t*-tests indicated that the groups did not differ significantly at baseline on age ($M_{\text{intervention}} = 12.7$ years, $SD = 0.41$; M_{control}

= 12.7 years, $SD = 0.41$, $p = .376$), children's BMI reported by parents ($M_{\text{intervention}} = 18.6$, $SD = 3.2$; $M_{\text{control}} = 18.5$, $SD = 3.3$, $p = .836$) mother's education achievement ($p = .817$) or father's education achievement ($p = .124$). The intervention and control group did differ on ethnic origin ($p = .001$), however, this difference did not significantly impact on any of the outcome variables at pre-intervention. For demographic variable details see Table 3 in Chapter 3.

5.3.6 Baseline Attitudes and Behaviours

5.3.6.1 Baseline Eating Disturbances

At baseline, the current study's means by gender were compared with the Canadian norms reported by Shore and Porter (1990) for the EDI-DT and for the Cheat-26. The current study's Australian females reported lower levels of drive for thinness than the Canadian norms ($t(141) = -9.481$, $p < 0.001$). There were no other significant differences between the present means and the Canadian norms.

The current sample's Australian females reported lower means than U.S. females (Smolak & Levine, 1994a) on the Cheat-26 (6.8 vs 15.7, $t(141) = -16.465$, $p < 0.001$). A total of 204 participants (86.1%) scored below the U.S. sample mean. Furthermore the healthier mean of the present sample was lower than reported for other Australian females of a similar age (Rolland, Farnill, & Griffiths, 1998) (6.8 vs 9.89, $t(141) = -5.730$, $p < 0.001$). Smolak and Levine do not report norms for males but when comparing males in Rolland and colleagues' study to the current study, no significant difference was found (9.0 vs 9.6, $t(94) = .823$, $p = .412$).

Of the 237 children who participated in Study 2, 20 (8.4%) scored in the clinical range on the Cheat-26 (≥ 20), 11 (55%) of which came from the control group and 9 (45%) from the intervention group. In terms of gender, 11 were girls (4.6%) and 9 were boys (3.8%). These findings are within the range of previous studies using similarly aged participants, which have found percentages of total sample ranging from 6.8% (Maloney et al., 1988) to 17% (Erickson & Gerstle, 2007). However, they are considerably lower than an Australian study of 8 to 12 year olds who found 14% of girls and 8% of boys scored above the screening threshold (Rolland et al., 1998).

5.3.6.2 *Baseline Body Image Dissatisfaction*

As with the EDI-DT, females reported lower levels of body image dissatisfaction than their Canadian normed counterparts (5.6 vs 8.4, $t(141) = -6.258$, $p < 0.001$). There was no significant difference between the Australian and Canadian males.

5.3.6.3 *Baseline Self-esteem*

At baseline, the current study's means by gender were compared with the normative Sample A reported by Harter (1985) for the S-PPC. As detailed in Chapter 4, there was no significant difference between males in the current and Harter's sample. However, for females the present sample reported higher means on the *physical appearance* (2.72 vs. 2.5; $p < 0.001$), *athletic competence* (2.90 vs. 2.54; $p < 0.001$), *behavioral conduct* (3.17 vs. 2.96; $p < 0.001$) and *global self-worth* (3.21 vs. 2.97, $p < 0.001$). Hence, the present sample had higher levels of self-perceptions in many domains compared to Harter's normative sample.

5.3.6.4 *Baseline Dieting Behaviour and Self-description*

Most participants (167, 70.5%) reported that their weight had "stayed about the same" during the past six months. Of those who reported a change more felt their weight had increased a lot (44, 18.6%) than decreased a lot (26, 11%). On the whole, 166 (70%) children had never dieted to lose weight with only 27 (11.4%) currently reporting to being on a diet. As expected, this current dieting group was mostly represented by girls (17, 63%). The majority of participants (141, 59.5%) described their weight/bodies as "just about right". Of those who didn't, more felt "too fat" (72, 30.4%) than "too thin" (24, 10.1%). In addition, 43.2% of the girls and 37.5 % of the boys at least sometimes "thought a lot about wanting to be thinner" (ChEAT-26 item 11).

5.3.6.5 *Baseline Teasing*

As can be seen in Table 18, the overwhelming majority of participants had never been teased about their body size or shape (range: 71.1% to 97.0%). The other notable finding is that when teasing is reported, it is more likely to be perpetrated by other children than by adults.

Table 18: Number and percentage of participants teased in a hurtful way about their body size or shape in the last 4 weeks at pre-intervention

	Never	A few times	Many times
By kids at school	170 (71.7%)	56 (23.6%)	11 (4.6%)
By adults at school	230 (97.0%)	3 (1.3%)	4 (1.7%)
By kids at home	161 (67.9%)	59 (24.9%)	17 (7.2%)
By adults at home	212 (89.5%)	20 (8.4%)	5 (2.1%)
By other people	196 (82.7%)	38 (16.0%)	3 (1.3%)

5.3.7 Dropouts at Post-intervention

Participants who dropped out by post-intervention were compared to those who remained in the study to determine if there were any differences between the two groups that could compromise the generalisability of the findings. Six participants who completed baseline data did not fill in the post-intervention questionnaires. At post-intervention, 97.75% ($n = 261$) of baseline participants completed the assessment questionnaires – 52.5% ($n = 137$) from the intervention group and 47.5% ($n = 124$) from the control group. The intervention, 3.9% ($n = 5$), and the control, 0.7% ($n = 1$), groups did not differ significantly in attrition rates (Fisher Exact Probability Test = 0.92). This suggests that differential attrition did not compromise the randomisation process.

Student's t -tests were used to assess differences on the outcome variables between those who remained in the study at post-intervention and those who did not. The two groups were equivalent on all outcomes except two – EDI-BD and S-PPC – *physical appearance* mean. Those participants who were unavailable at post-intervention had lower levels of body dissatisfaction ($M_{\text{dropout}} = 2.17$, $SD = 1.83$; $M_{\text{remain}} = 4.98$, $SD = 5.95$, $p = .010$) and a higher degree of happiness with their *physical appearance* ($M_{\text{dropout}} = 3.17$, $SD = .35$; $M_{\text{remain}} = 2.77$, $SD = .71$, $p = .036$) at baseline than those who remained. Thus, there is some compromise to the internal validity of the results.

5.3.8 Dropouts at 8-Month Follow-up

Participants who dropped out at follow-up were compared to those who remained in the study to determine if there were any differences between the two groups. Twenty-nine participants who completed baseline data did not fill in the follow-up questionnaires. At follow-up, 89.1% ($n = 238$) of the baseline participants completed the assessment questionnaires – 52.1% ($n = 124$) in the intervention group and 47.9% ($n = 114$) in the control group. The intervention, 11.6% ($n = 15$), and the control, 10.1% ($n = 14$) groups did not differ significantly in attrition rates. Student's t -tests were used to assess for differences on the outcome variables between those who remained in the study at post-intervention and those who did not. The two groups did not differ on any of the outcome variables.

5.3.9 Intervention Effects

Intervention effects were analysed at post-intervention and 8-month follow-up for both the whole sample and higher-risk sample. The current study had five schools nested within condition (intervention versus control). Students who attend the same school will be exposed to common environmental and social influences. These common influences are expected to constrain scores on both the outcome variables and the predictors (Olweus & Alsaker, 1989). The scores on these variables will therefore fragment into five groups of intra-dependent scores – each group corresponding to a particular school. This clustering phenomenon is referred to as intra-school dependency and if left uncontrolled can inflate the Type I error rate for the intervention effect. Intraclass correlations (ICCs) provide a measure of intra-school dependency. ICCs in the current study ranged from -0.09 to 0.07. Even though ICCs of this magnitude indicate that the intra-school dependencies explain less than 10% of the variance in the corresponding outcome measures, Murray (1998, p. 353) maintains that “The impact of even modest positive intra class correlation can be dramatic” and thus advocates the use of analysis that takes this into account. Therefore, in the current study, intra-school dependencies were controlled by fitting random effects regression models using Stata 10 (StataCorp, 2007).

Regression models were fitted for each of the eight outcomes at post-intervention and follow-up. For each of the 16 models: (i) intra-school clustering on the outcome was controlled by using a *sandwich estimator* for the standard errors (Rabe-Hesketh & Skrondal, 2005), and (ii) the independent variables – pre-intervention scores, the main effect of group (intervention versus control), the main effect of sex and the group by sex interaction - were entered simultaneously according to the Type III sums of squares method (Cramer & Howitt, 2004).

The 16 regression models were partitioned into conceptually distinct post-intervention and follow-up families. The Bonferroni correction was applied within each family by dividing the conventional alpha-level of .05 by 8. All regression models were therefore evaluated at a corrected alpha-level of .006 (i.e., .05/8). There were no significant group, sex, or group by sex interaction effects for any of the eight outcomes at either of the two post-intervention assessments (See Table 19 and 20).

Table 19: Regression results for post-intervention outcomes for participants who completed all three waves of assessment (n = 237)

		<i>B</i>	Beta	<i>sr</i> ²	<i>p</i>	<i>B</i> Confidence Intervals		
Cheat-26	Pre-score	0.52	0.60	0.36289	0.002	0.31	–	0.73
	Group	- 0.35	- 0.03	0.00012	0.560	- 1.89	–	1.19
	Sex	- 1.60	- 0.14	0.00270	0.064	- 3.36	–	0.15
	Sex x Group	0.93	0.17	0.00244	0.054	- 0.03	–	1.89
<i>R</i> ² = 0.38								
EDI-BD	Pre-score	0.69	0.71	0.50922	0.002	0.42	–	0.96
	Group	1.21	0.10	0.00181	0.497	- 3.28	–	5.69
	Sex	0.17	0.01	0.00003	0.896	- 3.13	–	3.46
	Sex x Group	- 0.29	- 0.54	0.00031	0.648	- 1.95	–	1.36
<i>R</i> ² = 0.51								
EDI-DT	Pre-score	0.58	0.62	0.39753	0.012	0.21	–	0.96
	Group	1.30	0.17	0.00407	0.428	- 3.28	–	5.69
	Sex	0.39	0.05	0.00040	0.776	- 3.13	–	3.46
	Sex x Group	- 0.56	- 0.05	0.00002	0.938	- 1.95	–	1.36
<i>R</i> ² = 0.42								
S-PPC GS	Pre-score	0.49	0.48	0.23765	0.012	0.18	–	0.80
	Group	- 0.24	- 0.20	0.00460	0.032	- 0.44	–	- 0.33
	Sex	- 0.02	- 0.02	0.00005	0.458	- 0.11	–	0.58
	Sex x Group	0.07	0.13	0.00121	0.062	- 0.01	–	0.15
<i>R</i> ² = 0.26								
S-PPC PA	Pre-score	0.76	0.71	0.47623	0.000	0.58	–	0.95
	Group	0.52	0.34	0.01804	0.031	0.79	–	0.96
	Sex	0.45	0.29	0.01442	0.047	0.01	–	0.89
	Sex x Group	- 0.16	- 0.32	0.00998	0.044	- 0.45	–	- 0.01
<i>R</i> ² = 0.48								

		<i>B</i>	Beta	<i>sr</i> ²	<i>p</i>	<i>B</i> Confidence Intervals		
S-PPC PI	Pre-score	0.50	0.49	0.23107	0.015	0.15	–	0.84
	Group	- 0.05	- 0.03	0.00010	0.723	- 0.42	–	0.32
	Sex	0.19	0.01	0.00002	0.872	- 0.29	–	0.33
	Sex x Group	0.03	0.04	0.00010	0.633	- 0.13	–	0.19
<i>R</i> ² = 0.24								
S-PPC PD	Pre-score	0.93	0.75	0.63298	0.000	0.78	–	1.08
	Group	- 0.38	- 0.18	0.01024	0.091	- 0.87	–	0.10
	Sex	- 0.58	- 0.27	0.02696	0.159	- 1.52	–	0.35
	Sex x Group	0.09	0.10	0.00168	0.627	- 0.39	–	0.58
<i>R</i> ² = 0.74								
S-PPC TD	Pre-score	0.52	0.53	0.30548	0.000	0.38	–	0.66
	Group	- 0.26	- 0.26	0.00837	0.044	- 0.52	–	0.01
	Sex	- 0.07	- 0.06	0.00055	0.617	- 0.40	–	0.27
	Sex x Group	0.03	0.06	0.00032	0.644	- 0.14	–	0.20
<i>R</i> ² = 0.34								

Note: Cheat–26 = Children’s Eating Attitudes Test–26; EDI = Eating Disorder Inventory 2 with subscales: DT – Drive for Thinness, BD – Body Dissatisfaction; S-PPC = Self-Perception Profile for Children with subscales: GS – Global Self-worth, PA – Physical Appearance, PI – Physical Importance, PD – Physical Appearance Discrepancy Score, TD – Total Discrepancy score.

Table 20: Regression results for 8-month follow-up outcomes for participants who completed all three waves of assessment (n = 237)

		<i>B</i>	Beta	<i>sr</i> ²	<i>p</i>	<i>B</i> Confidence Intervals		
Cheat-26	Pre-score	0.35	0.45	0.20169	0.001	0.24	–	0.46
	Group	- 0.37	- 0.04	0.00013	0.786	- 3.88	–	3.14
	Sex	- 0.71	- 0.07	0.00052	0.652	- 4.78	–	3.35
	Sex x Group	0.57	0.12	0.00086	0.497	- 1.54	–	2.68
<i>R</i> ² = 0.21								
EDI-BD	Pre-score	0.47	0.54	0.29170	0.006	0.23	–	0.71
	Group	- 0.85	- 0.08	0.00077	0.311	- 2.89	–	1.19
	Sex	- 0.06	- 0.01	0.000004	0.936	- 2.11	–	1.99
	Sex x Group	0.58	0.12	0.00104	0.347	- 0.94	–	2.11
<i>R</i> ² = 0.30								
EDI-DT	Pre-score	0.39	0.46	0.21215	0.001	0.27	–	0.51
	Group	0.07	0.01	0.00001	0.927	- 2.01	–	2.16
	Sex	0.92	0.13	0.00197	0.267	- 1.06	–	2.91
	Sex x Group	- 0.13	- 0.04	0.00010	0.750	- 1.14	–	0.89
<i>R</i> ² = 0.22								
S-PPC GS	Pre-score	0.41	0.49	0.23921	0.007	0.18	–	0.80
	Group	- 0.06	- 0.06	0.00042	0.605	- 0.42	–	- 0.32
	Sex	0.07	0.07	0.00057	0.162	- 0.29	–	0.33
	Sex x Group	- 0.01	- 0.03	0.00007	0.668	- 0.13	–	0.19
<i>R</i> ² = 0.24								
S-PPC PA	Pre-score	0.57	0.60	0.34692	0.002	0.36	–	0.78
	Group	0.28	0.21	0.00543	0.210	- 0.24	–	0.79
	Sex	0.16	0.11	0.00186	0.405	- 0.31	–	0.62
	Sex x Group	- 0.16	- 0.26	0.00517	0.201	- 0.45	–	- 0.13
<i>R</i> ² = 0.36								
S-PPC PI	Pre-score	0.37	0.40	0.16080	0.000	0.30	–	0.43
	Group	0.02	0.02	0.00003	0.946	- 0.85	–	0.90
	Sex	0.17	0.12	0.00148	0.632	- 0.74	–	1.07
	Sex x Group	- 0.06	- 0.10	0.00057	0.755	- 0.60	–	0.47
<i>R</i> ² = 0.17								

		<i>B</i>	Beta	<i>sr</i> ²	<i>p</i>	<i>B</i> Confidence Intervals		
S-PPC PD	Pre-score	0.55	0.48	0.25050	0.017	0.16	–	0.95
	Group	0.08	0.04	0.00018	0.746	- 0.53	–	0.68
	Sex	- 0.63	- 0.30	0.01452	0.006	- 0.96	–	- 0.31
	Sex x Group	- 0.06	- 0.07	0.00037	0.435	- 0.27	–	0.14
<i>R</i> ² = 0.41								
S-PPC TD	Pre-score	0.44	0.45	0.20693	0.000	0.36	–	0.52
	Group	- 0.21	- 0.20	0.00429	0.357	- 0.75	–	0.34
	Sex	- 0.16	- 0.15	0.00279	0.476	- 0.72	–	0.40
	Sex x Group	0.07	0.16	0.00164	0.571	- 0.26	–	0.41
<i>R</i> ² = 0.21								

Note: Cheat-26 = Children's Eating Attitudes Test-26; EDI = Eating Disorder Inventory 2 with subscales: DT – Drive for Thinness, BD – Body Dissatisfaction; S-PPC = Self-Perception Profile for Children with subscales: GS – Global Self-worth, PA – Physical Appearance, PI – Physical Importance, PD – Physical Appearance Discrepancy Score, TD – Total Discrepancy score.

5.3.9.1 *Dieting and Teasing*

The effects of the intervention on the dichotomous variables were assessed using chi-square analysis. There was no significant difference between the number of participants currently dieting or being teased in the control and intervention groups at post-intervention or follow-up.

5.3.10 *Intervention Effects on Higher-Risk Participants*

At baseline a total of 20 participants (8.4% of the sample, 11 in the control group and 9 in the intervention group) were classified higher-risk based upon Cheat-26 scores equal to or over 20 (Maloney et al., 1988). The same 8 regression models were run on the higher-risk participants at post-intervention and follow-up and again no significant group, sex, or group by sex interaction effects were found (See Table 21 and 22). Furthermore, there was no significant difference between the control and intervention groups on dieting or teasing variables.

Table 21: Regression results for post-intervention outcomes for at-risk sample (n = 20)

		<i>B</i>	Beta	<i>sr</i> ²	<i>p</i>	<i>B</i> Confidence Intervals		
Cheat-26	Pre-score	1.59	0.81	0.55458	0.002	0.96	–	2.21
	Group	7.38	0.44	0.03956	0.322	- 10.75	–	25.52
	Sex	5.11	0.31	0.01988	0.495	- 13.82	–	24.06
	Sex x Group	- 1.60	- 0.21	0.00507	0.706	- 12.52	–	9.33
<i>R</i> ² = 0.62								

		<i>B</i>	Beta	<i>sr</i> ²	<i>p</i>	<i>B</i> Confidence Intervals	
EDI-BD	Pre-score	0.48	0.63	0.44876	0.023	0.11	– 0.84
	Group	14.24	1.15	0.21576	0.118	- 5.66	– 34.15
	Sex	6.39	0.52	0.05823	0.153	- 3.70	– 16.48
	Sex x Group	- 7.18	- 1.27	0.15148	0.108	- 16.82	– 2.47
<i>R</i> ² = 0.58							
EDI-DT	Pre-score	0.28	0.28	0.11242	0.212	- 0.24	– 0.82
	Group	6.99	0.58	0.05235	0.253	- 7.55	– 21.53
	Sex	2.19	0.18	0.00599	0.674	- 11.22	– 15.61
	Sex x Group	- 0.55	- 0.10	0.00089	0.836	- 7.52	– 6.41
<i>R</i> ² = 0.43							
S-PPC GS	Pre-score	0.49	0.39	0.17057	0.019	0.13	– 0.84
	Group	- 0.62	- 0.42	0.02557	0.172	- 1.68	– 0.42
	Sex	0.52	- 0.35	0.02011	0.368	- 0.91	– 1.95
	Sex x Group	0.14	0.21	0.00350	0.587	- 0.53	– 0.82
<i>R</i> ² = 0.39							
S-PPC PA	Pre-score	0.58	0.56	0.23610	0.009	0.23	– 0.92
	Group	- 0.29	- 0.19	0.00450	0.672	- 2.02	– 1.45
	Sex	- 0.07	- 0.05	0.00034	0.942	- 2.63	– 2.49
	Sex x Group	0.28	0.43	0.01286	0.583	- 1.06	– 1.64
<i>R</i> ² = 0.29							
S-PPC PI	Pre-score	0.52	0.54	0.22353	0.053	- 0.01	– 1.06
	Group	1.80	0.93	0.08462	0.363	- 3.08	– 6.68
	Sex	1.53	0.79	0.07662	0.429	- 3.30	– 6.36
	Sex x Group	- 1.13	- 1.28	0.08916	0.346	- 4.07	– 1.81
<i>R</i> ² = 0.25							
S-PPC TD	Pre-score	0.36	0.30	0.12257	0.030	0.05	– 0.66
	Group	- 1.12	- 0.96	0.11635	0.047	- 2.22	– - 0.02
	Sex	- 0.31	- 0.26	0.01117	0.539	- 4.83	– 0.97
	Sex x Group	0.48	0.90	0.06436	0.111	- 0.63	– 1.14
<i>R</i> ² = 0.40							

Note: Cheat-26 = Children's Eating Attitudes Test-26; EDI = Eating Disorder Inventory 2 with subscales: DT – Drive for Thinness, BD – Body Dissatisfaction; S-PPC = Self-Perception Profile for Children with subscales: GS – Global Self-worth, PA – Physical Appearance, PI – Physical Importance and TD – Total Discrepancy score.

Table 22: Regression results for 8-month follow-up outcomes for at-risk sample (*n* = 20)

		<i>B</i>	Beta	<i>sr</i> ²	<i>p</i>	<i>B</i> Confidence Intervals	
Cheat-26	Pre-score	- 0.06	- 0.04	0.00280	0.936	- 2.15	– 2.02
	Group	10.12	0.74	0.09548	0.197	- 8.05	– 28.28
	Sex	- 4.94	- 0.36	0.02525	0.600	- 29.12	– 19.23
	Sex x Group	- 2.00	- 0.32	0.01081	0.672	- 14.16	– 10.16
<i>R</i> ² = 0.58							
EDI-BD	Pre-score	0.12	0.17	0.02779	0.288	- 0.15	– 0.39
	Group	5.16	0.45	0.01962	0.369	- 9.01	– 19.32
	Sex	0.42	0.04	0.00015	0.936	- 13.42	– 14.27
	Sex x Group	- 2.05	- 0.39	0.00806	0.456	- 15.00	– 4.86
<i>R</i> ² = 0.11							
EDI-DT	Pre-score	0.21	0.26	0.08833	0.262	- 0.23	– 0.65
	Group	10.81	1.13	0.16024	0.034	- 1.31	– 20.33
	Sex	3.73	0.39	0.02459	0.361	- 6.33	– 13.79
	Sex x Group	- 4.38	- 1.00	0.07426	0.095	- 9.96	– 1.21
<i>R</i> ² = 0.39							

		<i>B</i>	Beta	<i>sr</i> ²	<i>p</i>	<i>B</i> Confidence Intervals	
S-PPC GS	Pre-score	0.08	0.08	0.00643	0.791	- 0.67	0.83
	Group	- 1.31	- 1.11	0.12674	0.113	- 3.11	0.48
	Sex	- 0.66	- 0.56	0.04036	0.501	- 3.15	1.83
	Sex x Group	0.56	1.05	0.06467	0.369	- 0.98	2.11
<i>R</i> ² = 0.22							
S-PPC PA	Pre-score	0.21	0.17	0.02621	0.484	- 0.55	0.97
	Group	- 1.70	- 0.95	0.09567	0.154	- 4.38	0.99
	Sex	- 0.78	- 0.44	0.02550	0.541	- 4.01	2.45
	Sex x Group	0.74	0.91	0.05318	0.270	- 0.86	2.34
<i>R</i> ² = 0.24							
S-PPC PI	Pre-score	0.14	0.16	0.02149	0.606	- 0.56	0.84
	Group	- 0.61	- 0.36	0.01119	0.745	- 5.50	4.28
	Sex	- 0.10	- 0.06	0.00376	0.965	- 6.08	5.88
	Sex x Group	2.59	0.31	0.00494	0.851	- 3.20	3.70
<i>R</i> ² = 0.10							
S-PPC TD	Pre-score	0.22	0.15	0.03179	0.712	- 1.31	1.75
	Group	- 2.22	- 1.58	0.23581	0.102	- 5.14	0.70
	Sex	- 1.58	- 1.10	0.14175	0.250	- 4.83	1.68
	Sex x Group	1.09	1.69	0.17214	0.153	- 0.63	2.80
<i>R</i> ² = 0.32							

Note: Cheat-26 = Children's Eating Attitudes Test-26; EDI = Eating Disorder Inventory 2 with subscales: DT – Drive for Thinness, BD – Body Dissatisfaction; S-PPC = Self-Perception Profile for Children with subscales: GS – Global Self-worth, PA – Physical Appearance, PI – Physical Importance and TD – Total Discrepancy score.

5.3.11 Teachers' Self Perceptions

The teachers involved in the study completed the AS-PP at pre- and post-intervention. The means on the *physical appearance* and *global self-worth* subscales were compared with Messer and Harter's (1986) normative sample of 30 to 50 year old mostly Caucasian upper middle class adults. Full-time working women and men norms separated by gender were chosen as the closest comparison group to the current sample. No significant difference was found between the present sample and Harter's (1985) norms. Mean scores on the subscales can range from 1 to 4. The means indicated that both female and male teachers scored above the midway point on Harter's measure for the *physical appearance* (F: 2.9; M: 2.8) and *global self-worth* (F: 3.5; M: 3.6) subscales.

Next, the intervention and control group teacher means were compared. Student's *t*-tests revealed no significant difference at pre-intervention between these two groups on the AS-PP on the *physical appearance* subscale ($t(8) = 1.191, p = .268$) and the *global self-worth* subscale ($t(8) = -.649, p = .534$). This was consistent with post-intervention evaluation (*physical appearance* subscale: $t(7) = 1.528, p = 1.70$; *global self-worth*: $t(7) = 1.191, p = .273$).

5.4 Discussion

Study 2 aimed to develop and test a model for prevention of eating disturbances in pre-adolescent children using an enhancing self-esteem approach. To the author's knowledge, this is the first study to evaluate a self-esteem eating disorder prevention programme derived from Harter's (1986, 1987) conceptualisation of self-worth. It was hypothesised that participants in the intervention group would show lower levels of eating disturbances and higher levels of self-worth than the control group following the intervention. These hypotheses were not supported for both the whole group and the higher-risk sample. These findings are in contrast with two previous evaluations of interventions with a self-esteem focus (O'Dea & Abraham, 2000; Stewart et al., 2001). However, they are consistent with the non-intervention effects of self-esteem interventions conducted by Baranowski and Hetherington (2001) and Wade, Davidson and O'Dea (2003). In terms of eating disorder prevention programmes in general, it is in keeping with the majority of programmes that do not impact on current or future eating pathology (Stice, Shaw et al., 2007). The non-significant findings of Study 2 add strength to Hattie's (1992a) conclusion in her meta-analytic review of self-esteem enhancement programmes that preadolescents' self-worth is far more difficult to strengthen than that of adults or children. There are a number of potential explanations for the non-significant effects found.

5.4.1 Self-esteem as a Focus for the Prevention of Eating Disturbances

The non-significant effects in Study 2 may imply that focussing eating disturbances prevention efforts on enhancing self-esteem is an ineffective approach. Perhaps, looking at more recent studies that have met the Society for Prevention Research's effective and efficacious intervention criteria and translating these approaches to a younger age group could prove more successful. Alternatively, these findings may question the conceptualisation of self-esteem (Harter's model of the determinants and consequences of self-worth) as O'Dea and Abraham (2000), Baranowski and Hetherington (2001) Stewart and colleagues (2001) use of self-esteem proved effective in prevention. However, this would contradict the plethora of supporting evidence for this

model as discussed in Chapter 2. The current study has a number of alternate explanations that may shed light on the non-significant findings.

5.4.2 *Healthier Status of Participants*

At baseline, female participants in the current study had healthier eating attitudes and behaviours, greater satisfaction in their body image and a higher sense of self-worth than their normed counterparts. The healthier status of participants at baseline concurs with the results reported by other researchers (e.g., Bruning Brown et al., 2004; Dalle Grave et al., 2001; Huon et al., 1997; Low et al., 2006; Phelps et al., 2000; Smolak et al., 1998a). These studies also found initial low scores on eating disturbance outcome measures and postulate it is expected to find a lack of change on these measures when participants' scores are already very low.

As Bruning Brown, Winzelberg, Abascal and Taylor (2004) suggest, which makes intuitive sense, prevention programmes are less likely to be effective on samples with lower levels of eating and body image concerns. Wiseman, Sunday, Bortolotti and Halmi (2004) found similar results to the current study when they implemented a cross-cultural eating disorder prevention programme. Their results established that the intervention proved useful in decreasing drive for thinness in the Italian sample of high school girls but not for the U.S. counterparts. However, further investigation found the U.S. sample had significantly lower levels of drive for thinness at baseline than the Italian participants and also when compared to U.S. high school norms. Wiseman and colleagues reasoned that the ethnic diversity could explain these differences. The U.S. sample was more heterogenous with approximately one quarter of the sample comprised of African Americans which literature supports as having lower levels of drive for thinness. No such explanation could be used in the current sample, as 86% of the sample was Caucasian.

Low and colleagues (2006) suggest an alternate explanation when they found lower eating and body image concerns than other prevention studies using the *Student Bodies* eating disorder prevention programme. They proposed that the differences might lie in the fact that previous trials using the *Student Bodies* programme were run in the western United States, while their study was

implemented in New England. A similar argument could be mounted to explain the present findings. The majority of studies have occurred outside of Australia, primarily in the United States. Of the Australian studies (e.g., Huon et al., 1997; O'Dea & Abraham, 2000; Paxton, 1993; Withers et al., 2002), all have been run in the eastern States of Australia. The current study is the first prevention study to be employed in Western Australia. What makes these Western Australian school children different?

5.4.3 School Ethos

In Smolak and Levine's (1998a) elementary school study, they too found lower rates of eating disturbances with corresponding non-intervention effects and suggest that the school environment may serve as a protective factor. Could these contextual differences play a role in the current findings? Identifying what was protective about these schools may provide valuable information for future studies. However, it is difficult to distinguish what might be protective in the current sample. One notable difference from many other prevention studies in this area is that the present sample was drawn from Catholic private schools (see Chapter 3 for more details of sampling). Mullin (1998) maintains that the ethos of Catholic schools, including Christian values and respect, fosters the development of self-esteem in high school students. Future research is needed to elucidate the protective factors that Mullin suggests are inherent in the Catholic school environment. As detailed in Chapter 1, there is growing empirical support for participatory ecological interactive strategies, which include environmental factors such as school policies, values and norms. Future studies would benefit from measuring these factors and also comparing them between Catholic and Government schools.

5.4.4 School Curriculum

Another possible explanation can be found in the routine health curriculum that is presented to both the intervention and control group. The Education Department of Western Australia health curriculum does include concepts of a healthy lifestyle and self-management skills that address students' strengths and weakness which contribute to their feelings of self-worth. This makes it difficult to assess the efficacy of strategies aimed at enhancing self-

esteem, as control schools would need to suspend this part of the curriculum until completion of the research. As McVey and Davis (2002) argue this “poses both clinical and ethical challenges for researchers who conduct longitudinal work in the area of prevention”. Further support for this potential contamination of the control aspect of the study will be presented in Chapter 6 from teachers’ feedback. Future studies would benefit from assessing school curricula for potential overlap before implementing prevention strategies. School ethos and curriculum are not the only factors within schools that potentially influence the results of this study. The facilitators of the programme, schoolteachers, are another important possible influence.

5.4.5 Teachers’ Self-perceptions

Schwartz, Thomas, Bohan and Vartanian (2007) maintain that the impact of presenter characteristics is a relatively neglected area of research in eating disorder prevention programmes. It is an area that has the potential to undermine programme efficacy with teachers inadvertently conveying messages counterproductive to the programme’s aim. Yager and O’Dea (2005, p. 267) argue that teachers “are likely to be influenced by the same sociocultural factors as other adults” and therefore, may have their own eating or body image concerns that they may be conveying inadvertently. To this objective, the teachers participating in the current study were assessed in terms of self-perceptions as measured by the AS-PP. Higher self-perceptions in the control schools or lower self-perceptions in the intervention schools could explain non-significant results by counteracting intervention effects. To the author’s knowledge this is the first such eating disorder prevention programme to investigate this potential influence. However, there was no significant difference between the control and intervention teachers on the *global self-worth* and *physical appearance* subscales. Furthermore, the mean scores were consistent with Harter’s (1985) normative sample and were above the midway point, indicative of healthy self-perceptions.

However, it is still possible that teachers were conveying unhelpful message in terms of body image and eating attitudes. There were some comments made by teachers to the author that suggested they had unintentionally

reinforced the importance of physical appearance in the classroom which was contrary to the aims of the programme. There were also comments made to the author by some intervention teachers regarding their own body dissatisfaction. Therefore, it is possible that these attitudes/beliefs counteracted the underlying message of the programme. Future programmes would benefit from incorporating consciousness-raising activities within the teacher training to firstly reinforce the importance of this factor and secondly assist teachers in preventing this influence. Indeed, Bardick, and colleagues (2004, p. 169) maintain that facilitators of eating disorder prevention programmes need to “explore their own values, beliefs, and practices about weight, dieting, and body image to identify how their attitudes may inadvertently affect children”. Furthermore, future programmes could measure attitudes and behaviours in terms of body image and eating behaviours to provide a more comprehensive picture of this important potential influence. Alternatively, future interventions may benefit from employing “dedicated interventionists” to deliver programmes as Stice, Shaw and Marti’s (2007) recent meta-analytic review found that programmes using professional interventionists were more effective than “endogenous providers” such as teachers.

5.4.6 Implementation

The fidelity of a programme’s implementation can have important bearings on the results. There was some indication that this factor was compromised (For detail of implementation compromises see Study 3, Chapter 6: Social validity of the STARS programme). The programme was designed to be delivered over a 10-week period. However, due to time constraints and teachers wanting the programme to be finished before third term break, the programme was compressed into 5-weeks by presenting two modules per week. This may have resulted in the intervention being presented with insufficient intensity and less time for the participants to absorb and internalise the information. Indeed, there is some support for longer interventions resulting in greater efficacy than shorter interventions (see Stice, Shaw et al., 2007; Watson & Vaughn, 2006). In particular, Varnado-Sullivan, Zucker, Williamson, Reas and Thaw (2001) suggest that the difference in intervention success between two intervention schools in their study could be due to one school compressing the modules into

three consecutive class times while the other school implemented the modules over a three week period. Also teachers agreed that there was not enough time to complete all activities in the programme. In particular, many of the discussion activities were left out due to the lack of time or participants reticence to sharing ideas and personal experiences out of fear of ridicule. Discussion activities were an important component of the STARS programme. As noted in Chapter 2, based upon Harter's (1986, 1987) model, fostering approval and support is one avenue of enhancing self-esteem. The peer discussion activities were designed so that opportunities were provided for children to share their experiences and work together to generate solutions. Hence, there were some problems in the implementation but it is difficult to measure this impact. This may create an error variance from an experimental perspective (see Smolak et al., 1998a, p. 343). Future studies could benefit from observing the implementation to ascertain the degree to which the spirit of the programme has being adhered to, or providing specially trained staff to facilitate the sessions.

5.4.7 *Higher-risk Participants*

In the present study, a total of 8.43% (4.6% girls and 3.8% boys) obtained Cheat-26 scores of 20 or higher at baseline. These findings are similar to those reported in previous studies, which have found total percentages ranging from 6.8% (Maloney et al., 1988) to 17% (Erickson & Gerstle, 2007). As with the whole group results, the intervention did not have a significant impact on the participants at higher-risk of an eating disturbance. Buddeberg-Fischer and Reed (2001) have argued that by the time students reach high school their eating pathology and body dissatisfaction are already ingrained and hence difficult to shift. As the current participants were in the year before high school and these higher-risk students were already reporting unhealthy eating attitudes and behaviours at baseline, it suggests two implications. Firstly, perhaps the intervention should be targeted at an earlier age group, before these attitudes and behaviours are entrenched. Secondly, as Stice, Shaw and Marti (2007) found in their meta-analytic review, designing an intervention for *indicated* (i.e., higher-risk students) rather than universal implementation may prove more effective. Other secondary prevention strategies such as screening and referral to treatment are proving promising in preventing eating disturbances (Becker et al., 2004).

5.4.8 *Limitations of Study 2*

Study 2 had a number of limitations. Caution against overgeneralising the current results should be exercised, because of the small sample size, and the participants being drawn from Catholic private schools and higher socioeconomic status sample. Although schools were randomly allocated to conditions, participants were not. This is a particular problem in prevention research as it compromises the experimental design. However, previous research that has randomly allocated students within schools, experienced spillover effects where intervention students share their experience of the programme with control students (McVey & Davis, 2002). The 8-month follow-up period was an improvement on many other studies but a longer follow-up timeframe given the gap between the age of the participants and the onset of eating disorders would be more effective in picking up prevention effects.

There were difficulties encountered during the implementation of the programme. There was evidence of a fidelity threat and there were also concerns regarding some of the intervention teachers' commitment to the programme. From the outset teachers were unable to attend the intended full training day and opted to attend a half-day and even then some arrived late or left early. This is a difficulty reported by other researchers (McVey et al., 2007; Smolak, Harris, Levine, & Shisslak, 2001; Varnado-Sullivan et al., 2001). There were also problems with incomplete or missing data that teachers were instructed to record during the implementation. These difficulties may denote a lack of engagement in the study, leading to a watering down of the intervention and in turn may attenuate the true effectiveness of the intervention. Future programmes could benefit from efforts focused on engaging teachers to ensure they are committed and fully understand the importance of the programme (Smolak et al.). Alternatively, Varnado-Sullivan and Horton (2006) suggest that prevention programmes may well be better delivered by trained professionals, instead of teachers, as it "would ensure programs would be implemented with fidelity and facilitate interactive presentations" (p. 700). Furthermore, undergraduates in Varnado-Sullivan and Horton's eating disorder acceptability study, indicated that interventions presented by trained professionals were preferred over teachers, peers or parents.

The current study relied upon self-report measures to assess the quantitative efficacy of the intervention. Fairburn and Beglin (1994) suggest that such measures tend to overestimate psychopathology. The gold standard for the evaluation of a prevention programme has more recently been recommended by meta-analytic researchers (Cororve Fingeret et al., 2006; Stice & Shaw, 2004) as a diagnostic eating disorder measure collected via clinical interviews.

A component of the intervention involved disseminating psychoeducational material regarding self-esteem, body image and teasing to parents via three school newsletter items. Unfortunately, not all newsletters were disseminated and when asked for feedback from the parents regarding this information, many commented they were unaware of the newsletters. There is growing evidence that involving parents in prevention efforts may be beneficial (O'Dea & Abraham, 2000) and thus future studies should explore methods of engaging parents to create healthier norms in the family environment.

Insufficient statistical power may have restricted the ability to detect intervention effects. For a regression model with four predictors, 75 participants were required in order to detect 'moderate' to 'large' relationships between predictors and outcomes. The present sample size of 237 is clearly sufficient to detect relationships of this magnitude. The number of at-risk subjects ($n = 20$), however, is too small to draw firm conclusions from the analysis undertaken and thus future research should encompass a larger sample size in order to generate more at-risk subjects.

As noted earlier there was some compromise to the internal validity of the results. However, as those participants who dropped out at post-intervention had healthier body dissatisfaction and physical appearance attitudes, it is not considered detrimental to the interpretation of the results.

5.4.9 *Strengths of Study 2*

The perceived strengths of this programme are as follows. Firstly, the programme was developed through a thorough review of risk/protective factors and existing prevention programmes. Secondly, the programme has a distinct theoretical foundation (i.e., Harter's 1986, 1987; 1999, model of the determinants

of self-esteem and approaches to enhancement). Thirdly, the programme incorporated multiple learning strategies (i.e., lecturettes, small discussion groups, homework tasks that included participation of parents and parent newsletter items). Fourthly, the current study improved upon methodological limitations of many of the earlier prevention studies by: ensuring a controlled experimental design, including an 8-month follow-up interval, using well validated outcome measures, preventing potential spillover effects by ensuring intervention and control groups came from separate schools, using statistical controls for pre-intervention differences and including male participants. The response rate was high with 89.1% of the students participating and this lessens the bias that is inherent in low response rate studies. Stice and Shaw (2004, p. 221) argue that “a clear articulation of the mechanisms by which an intervention is hypothesized to produce reductions in eating pathology is crucial because it yields falsifiable hypotheses that may lead to refinement of prevention theory”. The current study did just that, by basing the programme on a well-validated theory of self-esteem and predicting how the manipulation of physical appearance and its importance would enhance self-worth and decrease eating pathology.

5.4.10 Implications of Study 2

Some may argue that given the disappointing results in many universal studies, including the present study, prevention efforts should target those at higher-risk (see Killen et al., 1993). Given the contemporary milieu of body dissatisfaction and engagement of harmful weight control behaviours, especially among females, universal programmes are still pertinent. A programme targeting a general risk factor such as low self-esteem has the potential to not only reduce the development of eating disturbances but also impact on other emotional and behavioural problems and could improve life satisfaction. Rather than rejecting research that advocates targeted interventions (e.g., Stice, Shaw et al., 2007), future studies could provide a parallel curriculum, as suggested by Abascal, Bruning Brown, Winzelberg, Dev and Barr Taylor (2004). This approach uses both universal and targeted prevention programmes that are run concurrently. The targeted component could involve screening and referring to individual counselling (Becker et al., 2004; Neumark-Sztainer et al., 1995).

In terms of the STARS programme, a definite conclusion cannot be drawn regarding its efficacy as a prevention programme. It is true the programme failed to impact on levels of eating disturbances, body dissatisfaction and self-worth. However, the current sample had lower than normed scores on eating beliefs and behaviours. As noted earlier, it is difficult to demonstrate the efficacy of a programme when baseline behaviours and attitudes are already low. When using a pre-adolescent sample, future studies would be better equipped to test the efficacy of a prevention programme, by utilising a longer follow-up period and tracking participants through the onset ages during high-school (Phelps et al., 2000). With such a long-term follow-up, the recommendation of booster sessions (O'Dea & Abraham, 2000; Phelps et al., 2000) would seem a logical inclusion to avoid potential treatment effects declining over time.

This study should be repeated on a larger sample, paying particular attention to rectifying the implementation problems experienced. Considerable attention should be given to engaging both teachers and parents. In terms of teachers, consciousness-raising activities regarding eating attitudes and body image would be important in attenuating unintentional counter messages to the programme. Future studies should also pay particular attention to the school environment as a potential protective factor. A comprehensive programme may start with assessing the current status of participating schools including both individual measures for students and teachers alike, but also school values, policies and curriculum that may have a significant contribution to be made in the prevention area. This may identify some potential protective factors already operating within the school environment. Using this information in conjunction with current literature and involving teachers, students and parents, a programme could be developed aimed at multiple contexts – individual, school environment and family.

5.4.11 Summary

Overall, although the STARS prevention of eating disturbances programme did not inadvertently contribute to harmful effects, it also did not produce healthier body image and eating practices or higher self-worth. It is likely that floor effects had a bearing on these results as the current sample had

healthier eating attitudes and behaviours, greater satisfaction in their body image and a higher sense of self-worth than their normed counterparts at baseline. As Hattie (1992a, p. 237) maintains, “people with positive self-concepts appear to be more resistant to change”. The lower rates of eating disturbance symptoms as compared to several other primary school studies suggest that contextual differences may play a role in the prevention of eating disturbances. These findings do require replication with a less healthier sample or a longer follow-up period to assess the efficacy of a programme based upon Harter’s model (1986, 1987, 1999) for enhancing self-esteem. However, the results do provide future directions for eating disturbance prevention programmes in terms of programme development and implementation. They also highlight that greater effort needs to be dedicated to investigating protective factors that when understood more clearly could make a significant contribution to the prevention of eating disturbances and body dissatisfaction.

CHAPTER 6: SOCIAL VALIDITY OF THE STARS PROGRAMME

6.1 Introduction

As many writers have noted (Gresham & Lopez, 1996; Gullone & King, 1989; Kazdin, 1977; Wolf, 1978), it is not enough for an intervention to be effective, it also needs to be received well by facilitators and participants alike. This concept is known as social validity. This chapter, Study 3, will firstly define social validity, secondly examine the existing eating disorder prevention studies that investigate social validity and thirdly examine the social validity of the STARS programme utilised in this study. As Abascal and colleagues (2004, p. 2) maintain, universal prevention programmes need to be “easy and cost effective to deliver before schools will adopt them into their curricula”. An important part of this ease in delivery is to ensure that both participants and facilitators find the programme enjoyable.

6.1.1 Social Validity

Social validity refers to the stakeholders’ evaluation of “the worth, importance and social significance of a treatment and encompasses the goals, procedures and outcomes of an intervention” (Lyst, Stacey, O’Shaughnessy, Meyers, & Meyers, 2005, p. 199). This concept originated in the applied behavioural analysis field in the seminal works by Wolf (1978) and Kazdin (1977). Measuring the social validity of interventions is considered imperative as irrespective of how effective a programme is in causing behavioural change, if it is not acceptable to participants they will be less likely to complete the programme (Nastasi & Truscott, 2000; Wolf, 1978). Measuring social validity can also be an important tool in the design of a programme where acceptable/enjoyable aspects of the programme are maintained while those that are less acceptable are modified.

Fin and Sladeczek (2001) maintain that the majority of social validity research has focused on the appropriateness of treatment procedures. There are two main approaches to measuring social validity of treatment approaches (Foster & Mash, 1999). Firstly, researchers present hypothetical vignettes that detail the intervention goal and procedures and ask relevant community members

to rate the acceptability on a number of aspects. Foster and Marsh (1999) present several limitations to this approach including questioning how well these vignettes generalise to “real world settings”. The second approach requires participants to complete consumer satisfaction questionnaires following the conclusion of the intervention.

When examining the acceptability of a treatment, Gresham and Lopez (1996) advocate a combination of social validation methods. For example, treatment acceptability questionnaires can be used in conjunction with integrity checks and semi-structured interviews with teachers, students and parents alike. Gresham and Lopez maintain that although a questionnaire has advantages in terms of “efficiency and amenability to psychometric analyses, it also limits the information that can be provided and decontextualizes the intervention.” (p. 219). Thus, they suggest adding semi-structured interviews to provide further breadth and depth. Furthermore, integrity assessments can give an indication of the intervention’s acceptability by assessing how much of the intervention was faithfully implemented. The less faithfully implemented, the less acceptable the treatment is to the facilitator and semi-structured interviews may shed some light on the reasons.

6.1.2 Previous Research on Social Validity

There has been a paucity of social validity research in the prevention of eating disorders field. Indeed, Wade, Davidson and O’Dea (2002, p. 6) call for future prevention programmes to 1) incorporate both pupil and teacher involvement in their design and 2) pilot test programmes to “ensure favourable student perceptions of the program”. The small number of published prevention of eating disorder studies that incorporate a social validity component are summarised as follows.

Varnado-Sullivan and Horton (2006) examined the acceptability of a number of prevention of eating disorders programme with U.S. undergraduate students. The authors developed five alternate prevention programme vignettes from a review of the existing literature. Vignettes included:

1. Eating disorder education (EDE) – a psycho-educational programme that provides information on eating disorder symptomatology, risk factors and healthy eating habits.
2. Body image and other risk factors (BI) – focused on reducing risk factors for eating disorders such as a) developing skills in managing socio-cultural pressures for thinness and negative body image, b) providing information on body changes and nutrition during puberty and c) improving communication and problem solving skills.
3. Targeted programme for at-risk only (ARO) – programme that targets only at-risk individuals and focuses on reducing body image concerns and unhealthy weight loss behaviours.
4. Recovered patient (RP) – this vignette describes a recovered patient sharing her experiences of an eating disorder with the aim of discouraging such behaviours.
5. General prevention (GP) – this programme did not focus on eating disorders, but rather provided for the promotion of self-esteem, problem solving, goal setting and stress management.

Participants (347 U.S. undergraduate students) completed the *Treatment Evaluation Inventory - Short Form*, which assessed treatment acceptability of each vignette and also completed a survey that assessed the perceived importance of prevention programmes, implementation factors and choice of the most effective programme. Results indicated that the psycho-educational approach (EDE programme) was rated the most acceptable treatment approach and that junior high aged students would be the most appropriate age group to target. However, participants favoured other prevention efforts (such as prevention of suicide, substance abuse or juvenile delinquency) and lacked confidence in the efficacy of eating disorder prevention. The choice of the psycho-educational approach over other methods is consistent with findings that schools often request educational information sessions dealing with signs, symptoms and dangers of eating disorders (O'Dea & Maloney, 2000). However, as Varnado-Sullivan and Horton (2006) point out, this is contrary to the outcomes of meta-analytic reviews that maintain that these types of programmes are less effective than those programmes without this focus (see Stice & Shaw, 2004). They

suggest that “providing information to participants, parents, or educators about effective prevention programs may help increase the acceptability of promising interventions” (p. 699).

Varnado-Sullivan et al. (2001) investigated the social validity of the *Body Logic Program*, a two-staged prevention programme for U.S. sixth and seventh graders. The programme included a 3-session universal component and then a more intensive 2-session intervention for the at-risk students and their families. At the end of the programme students completed a 7-item treatment acceptability measure using a 5-point Likert scale. Mean scores indicated that in general, participants from one of the intervention schools rated the programme higher than the other intervention school. Females and males in school 1 *enjoyed the program* more than school 2 [school 1 F:4.39(.68) M: 3.97(.97) cf school 2 F: 4.32(.67) M: 3.61(1.21) ($p < .01$)]. Although Varnado-Sullivan and colleagues concluded that the treatment acceptability measure supported the use of the programme, they suggested that logistical differences might explain the differences between the two intervention schools. They surmise that having a larger class size with more male participants in school 2 plus the fact that this school condensed the sessions into three consecutive classes instead of three weekly sessions may have contributed to the difference.

Wade, Davidson and O’Dea (2002) compared two eating disorder prevention interventions by examining the enjoyment and perceived value of the programmes. The first programme focussed on developing self-esteem using a five-session version of the *Everyone’s Different* programme (O’Dea & Abraham, 2000). The second programme had a media literacy focus designed to foster critical evaluation of media content and challenge the thin ideal presented in the media. For this focus, Wade and colleagues used a 5-session version of the *GO GIRLS!* programme (Eating Disorder Awareness and Prevention, 1999). Year 8 Australian students were randomly allocated to a control condition or one of the two programmes. At the end of the intervention participants were asked to complete a questionnaire assessing the level of enjoyment and value of each lesson. Wade and colleagues found that both programmes were enjoyable and valuable to participants. However, the media literacy programme scored better on both accounts. For example, 95% of students in the media literacy programme

indicated that the lessons were valuable compared to 64% of students in the self-esteem programme. Student feedback suggested that the programmes had helped them to become more accepting of themselves and Wade and colleagues note that this demonstrates the potential of the programmes to “inoculate young adolescents against the development of an eating disorder” (p. 5).

Neumark-Sztainer, Sherwood, Collier and Hannan (2000) assessed programme satisfaction of their *Free to be Me* programme aimed at preventing disordered eating in preadolescent girls. Participants were 226 U.S. girl scouts and the *Free to be Me* intervention was a six 90-minute session programme focusing on media literacy and advocacy skills. Participants completed a brief survey at the end of each week and a final survey at the completion of the programme (response rate = 91%). The troop leaders also completed surveys at the same time intervals (response rate = 96%) with parents completing one final survey at the end of the programme (response rate 72%). Surveys assessed overall satisfaction and satisfaction with specific activities with closed and open-ended questions. Girls were also asked “do you think the programme helped you to feel better about yourself?”

Close to 57% of participants rated the programme as “great”, while 38.5% indicated that it was “OK” and 4.8% stated they “didn’t like it”. Approximately half of the girl scouts (52.4%) reported that they would recommend the “Free to be Me” programme to a friend. In terms of the activities, those that were interactive were rated with the highest level of satisfaction. Open-ended responses, related to what participants liked about the programme, had a major theme of developing body acceptance. All troop leaders expressed satisfaction with the programme (29.2% = very satisfied and 70.8% = satisfied) and 80% indicated they would recommend the programme to other troop leaders. Troop leaders reported that they implemented all activities and that the girl scouts enjoyed activities with skit performances and matching ideal figures to an historical timeline. Parents also indicated programme satisfaction: 26.5% very satisfied, 71.1% satisfied and 2.4% dissatisfied or very dissatisfied. Furthermore, 90.4% of parents would recommend the programme to other parents. In summary, a media literacy and advocacy focussed programme was received well by girls, troop leaders and parents alike.

Wilksch, Tiggemann and Wade (2006) also implemented a six session media literacy programme. This programme was aimed at 237 Grade 8 Australian students (M : 13.79 years) who randomly received one of the six sessions. Participants completed feedback forms rating enjoyment and value of the lessons, what they had learned and open-ended suggestions for future programmes. Most participants enjoyed the lessons with 80% rating the lesson either moderately or very much enjoyable. A further 92% reported finding the lessons valuable. When asked about what students had learnt, themes identified were consistent with the programme's aims, namely, "awareness of misleading media images and increased self-acceptance" (p. 390). Teachers and parents were not asked to provide feedback on the programme.

In a self-esteem building programme called *Everyone's Different* O'Dea and Abraham (2000) examined the social validity of the programme with 470 11 to 14 year olds Australians. Participants anonymously assessed "perception of program aims, knowledge, enjoyment and the self-perceived value of lessons" (O'Dea & Abraham, p. 46). Most of the participants identified building self-esteem as the main aim of the programme and the majority (89.6%) evaluated the programme as valuable. O'Dea and Abraham note that none of the participants identified body image improvement or the prevention of eating disorders as the main aim of the programme. Those who did not find it valuable (10.4%) explained that the main reason was they had covered similar content at a previous school. A further 70% of students indicated they would participate in a similar programme if run another time. Again, teachers and parents were not involved in providing feedback.

Using the *Everybody's Different* programme (O'Dea & Abraham, 2000), Ghaderi, Martensson, Schwan (2005) delivered the programme to 164 fifth grade Swedish students (11 years). They examined the enjoyment and value of the programme for both the students and teachers. The majority of students (92%) reported that the programme was valuable and slightly less (90%) indicated that the programme was enjoyable. Ghaderi and colleagues reported that only 48.1% of students attended all sessions. As was the finding in the O'Dea and Abrahams study, no participant reported that the main aim of the programme was to prevent eating disorders or body image dissatisfaction. According to Ghaderi and

colleagues this “might decrease theoretically assumed negative effects of information-based interventions, given the selective perception and handling of information among children at risk” (p. 256). In addition, although teachers evaluated the programme positively, they advised that the programme was “partially too abstract” (p. 254). They suggested that making the programme longer might help children grasp the concepts more easily.

Kater, Rohwer and Levine (2000) incorporated a brief examination of social validity in their *Eating Smart, Eating for Me* programme, a 10-lesson curriculum designed for fourth and sixth graders in the U.S. At the completion of the programme students were surveyed to gauge their overall reaction to the curriculum. Seventy-seven percent of the participants stated they “liked the lessons” and 79% reported that the “lessons were helpful”(p. 11). The teachers implementing the programme also provided qualitative positive feedback regarding the programme.

Haines Nuemark-Sztainer, Perry, Hannan and Levine (2006) targeted a similar age group (fourth and sixth graders) to assess the efficacy of the *Very Important Kids* after school programme designed to prevent teasing and unhealthy weight-control behaviours. They examined aspects of social validity by surveying children at the completion of the programme. Almost all children (95%) reported being *happy* or *very happy* with the programme. Somewhat less (79%) indicated they would recommend it to a friend.

McVey, Tweed and Blackmore (2007) included a programme satisfaction component in their evaluation of the *Healthy Schools-Healthy Kids* programme, a universal eating disorder prevention programme. Programme satisfaction data was solicited from 982 Grade 6 and 7 Canadian school students after each of the 12 sessions together with an overall satisfaction survey. Participants utilised a 5-point Likert scale to indicate how satisfied they were with the programme. They also responded to open-ended questions about what they liked or disliked about the programme. Except for the introduction and review (both were rated highly, 76.6% and 90% respectively), the percentage of students satisfied with sessions ranged from 38.9% (*Let's talk about puberty*) to 74.2% (*Being a girl in today's society*). McVey and colleagues (2007, p. 130) identified the following four

themes from the open ended question asking what the students appreciated about the programme: “a) learning new skills..., b) improving confidence...c) having access to a supportive environment to share opinions and d) feeling a sense of connectedness and belonging to a group...”.

Using a much older sample of 135 medical students from a Spanish university, Sepúlveda, Carrobbles, Gandarillas, Poveda and Pastor (2007) examined the social validity of the 16 session *Healthy Eating Workshops Program*. Students completed open- and closed-ended questions assessing their satisfaction and dissatisfaction with the workshops. Sepúlveda and colleagues found that typically students found the content and objectives *very satisfactory* (87%). Furthermore, 85% of students would choose to participate in a similar programme. Positive comments from open-ended questions suggested the programme “presented them with practical and useful values for their life and improved their knowledge about themselves” (Sepúlveda et al., p. 325). The “spontaneous and flexible nature of the session” (Sepúlveda et al., p. 325) appeared to be the only negative aspect of the feedback. However, Sepúlveda and colleagues do not provide further details.

In summary, of those prevention studies that have incorporated a social validity component; students, teachers and parents have generally positively endorsed the programmes. Interactive sessions, learning new practical skills, building confidence and supportive environments were all elements appreciated by participants. However, it must be emphasised that despite the number of prevention of eating disorder studies outlined in Chapter 1, very few have incorporated the social validity of their programme. This is an important component to be incorporated in any evaluation of a prevention intervention. In particular, as the STARS programme failed to report an intervention effect, soliciting feedback from participants may be an important tool in understanding this finding. Indeed, Carr, Austin, Britton, Kellum and Bailey (1999, p. 226) argue, without this examination, researchers “may have few (if any) methods for predicting programme rejection either during or after treatment”.

6.1.3 Aim of Study 3

The aim of Study 3 is to evaluate the social validity of the STARS programme through the perspective of teachers implementing and children participating in the programme. In particular, two aspects will be covered.

1. The global social validity will examine programme integrity, attendance and global evaluation of the programme by students, teachers and parents. Programme attendance data is a neglected area in the prevention of eating disorder programmes. It is important data when assessing the efficacy of the programme, as a poor attendance is likely to water down the potential success of a programme.
2. The students' enjoyment and perceived usefulness of the programme will be explored for each module.

6.2 Method

The methodology utilised in Study 3 is similar to the one outlined in Chapter 3 and as such, the following is a summary of that information.

6.2.1 Participants

Participants consisted of 268 Year 7 girls and boys aged between 11 to 14 years ($M = 12.7$ years, $SD = .42$) attending five Catholic primary schools in Perth. The group of interest for the social validity study was the intervention group ($n = 138$). Ethics approval for the study was received from the Curtin University of Technology Human Research Ethics Committee. Parents of the participants provided passive consent. The teachers in the intervention group (3 females and 2 males), the facilitators of the STARS programme, also provided process evaluations. Parents of the intervention group ($n = 138$) were also given the opportunity to provide feedback on the programme.

6.2.2 Measures

6.2.2.1 Student Process Evaluation Form

After the completion of each module, participants receiving the STARS intervention completed a feedback form assessing their level of enjoyment and the usefulness of the lesson. There were three questions for each module. The

first question asked participants to identify what they had learnt in the lesson. The second and third questions asked what participants thought about the session. They responded using two 5-point Likert scales. The first scale ranged from 1 – *Didn't enjoy it* to 5 – *Loved it* and the second scale ranged from 1 – *not useful* to 5 *useful*. Finally, participants were given the opportunity to offer any other comments regarding the lesson. At the conclusion of the STARS programme participants were then asked to give feedback on the programme as a whole (see Appendix K). The Student Evaluation Form consisted of three sections. Section A comprised of 13 statements concerning the satisfaction with the STARS programme as a whole. Again, they responded using a 5-point Likert scale with 1 anchored as *not at all*, 3 anchored as *about average* and 5 anchored as *very much*. Section B comprised of 10 statements concerning the usefulness of each module using the same 5-point Likert scale. Section C comprised of open ended statements whereby participants were also given the opportunity to indicate what they enjoyed most and least, what skills from the STARS programme they used the most, how they would improve the STARS programme and what other areas should be included in the STARS programme.

6.2.2.2 *Teacher Log and Interview*

Facilitators of the STARS programme (i.e., intervention teachers) were required to complete a teacher's log (see Appendix I) that contained an attendance checklist, a 4-point rating scale (All, most, some and none) indicating how much of the module was completed, and a comments sections where teachers could indicate what they liked or disliked about the module and detail any modifications. At the end of the programme all intervention teachers were interviewed using a semi-structured interview (see Appendix J) to provide more detailed feedback about the STARS programme.

6.2.2.3 *Parent Process Evaluation Form*

Parents in the intervention group were asked to complete a *Parent/Caregiver Questionnaire & Evaluation Form* (see Appendix D). The form requested 1) demographic information, 2) an indication as to whether parents had received the newsletter items and how useful they were on a 10-point Likert scale (ranging from *Not useful* to *Useful*), 3) eight questions asking

parents for their responses to the programme and their child's participation on a 5-point Likert scale and 4) an open-ended question allowing parents to make any comments regarding the programme.

6.2.3 Procedure

The experimental schools, which had been randomly selected, received the STARS intervention during third term 2002. Teachers administered the Student Process Evaluation forms after the completion of each module. Participants were instructed that this evaluation was anonymous and voluntary to assist in honest feedback. After the final module students were requested to take home a *Parent/Caregiver Questionnaire & Evaluation Form* for their parents to complete. This form, too, was voluntary. Parents were asked to return the completed form or a form indicating they did not wish to participate, to the school and a researcher collected them from the teacher.

Teachers were asked to complete the Teacher's Log, giving an indication of implementation integrity and student attendance checklist at the end of each module. At the completion of the STARS programme teachers were interviewed by a trained research assistant, to provide more detailed feedback on the modules.

6.2.4 Data Analysis

To assess programme satisfaction for questions using Likert response ratings, means, standard deviations and percentages were calculated. Missing values were estimated by substituting group means with the exception of the parent question that asked whether parents had received the newsletter items and how valuable they were. For the parent questions the number of missing values ranged from 0 to 14% with a median percentage of 2.2%. Open-ended questions were compiled and reviewed for consistent themes.

6.3 Results

6.3.1 Sample Characteristics

As the Student Process Evaluation was voluntary, a varying number of students participated at the completion of each module. Out of a sample of 139

participants, numbers ranged from 47 (*Module 10: STARS Self-esteem*) to 133 (*Module 1: Self-esteem*). Therefore, participation in the social validity study ranged from 33.8% to 95.7%. The number of students participating in this feedback declined as they completed more evaluation forms. There are two possible reasons for this decline. Firstly, when the evaluation forms were collected at the end of the STARS programme, the forms from two of the classes were mislaid. As a result, from module 4 onwards only three classes had completed evaluation forms. Secondly, some teachers reported that asking children to complete evaluations at the end of each session “was a little unnecessary” and they claimed some children “found them annoying after a while”.

Again, parent participation with the post-intervention evaluation was voluntary. Out of 139 intervention parents, 92 returned completed questionnaires (66.2% participation rate). Eleven parents returned forms indicating they did not wish to participate.

6.3.2 Programme Integrity and Attendance

Again, due to collection difficulties outlined in the previous section, only two from the five teachers were able to provide teacher logs and attendance checklists. Teachers were asked to indicate how much (all, most, some or none) of the module was covered in the classroom. One of these teachers reported covering ‘all’ of the contents in modules 1, 2, 4, 5, 7 and 9 and ‘most’ of the content in module 3, 6, 8 and 10. For the other teacher only module 1 was covered in its entirety. For the rest of the modules, ‘most’ of the content was covered. Reasons cited for incomplete modules related to time constraints. One teacher commented about *Module 3: Self-image and the Media*: “this could easily take three lessons”. Furthermore, some of the teachers decided to modify the group activities to a whole class exercise because it required less time.

Examination of the attendance checklists of two out of five intervention classes indicated 45.8% and 46.9% students respectively were absent for less than 25% of the modules, while 20.8% and 9.4% of student respectively were absent for greater than 25% of the modules. These classes were from separate schools and show that while comparable numbers of participants were absent for

less than 25% of the modules there was a difference, with one school experiencing a much larger number of students missing more than 25% of the modules.

6.3.3 Students' Feedback

Examination of student feedback that was completed following the end of each session revealed that the mean rating in terms of enjoyment ranged from 3.04 ($SD = 1.197$) for *Module 10: STARS Self-esteem* to 3.96 ($SD = 1.209$) for *Module 5: Self-Talk*. When considering each lesson in order of delivery, 79.1%, 74.2%, 91.8%, 84.8%, 90.1%, 92.8%, 85.3%, 75.3%, 84.1% and 76.6% of participants gave ratings of average or above. The most enjoyable lesson was *Module 6: Loving ourselves* where students learnt to care for themselves physically and mentally and developed a plan consistent with this. The least enjoyable was session *Module 2: Self-image* where students learnt in detail the self-worth model proposed by Harter (1986, 1987) and applied it to themselves.

In terms of usefulness of the lessons, student mean ratings ranged from 3.11 ($SD = 1.263$) for *Module 2: Self-Image* to 4.14 ($SD = 1.004$) for *Module 9: Taming Teasing*. When considering each lesson in order of delivery, 78.2%, 66.4%, 85.7%, 83.5%, 84.5%, 94.2%, 88.2%, 78.3%, 89.6% and 70.2% of participants gave ratings of average or above. In keeping with findings of level of enjoyment, participants again indicated that *Module 6: Loving Ourselves* was the most useful and *Module 2: Self-Image* was the least useful. When asked what they learnt from the lessons, students identified themes consistent with the aims of the lessons. No student identified the prevention of eating disorders or body dissatisfaction as the main aim of the programme.

Students were also asked to provide an overall evaluation of the STARS programme (see Table 23). Qualitative comments demonstrated that overall, students positively endorsed the programme. Participants described the STARS programme as “fun”, “cool!”, “interesting”, “helpful and “very useful in everyday life”. Indeed most of the students (71.6% rated as average or above) rated the programme as being useful to their everyday life. Over half the participants (60.8% rated as average or above) would recommend the STARS programme to a friend. A further 81.1% (rated as average or above) of students

indicated that the programme *helped me feel better about myself*. A couple of students stated: “I learnt that we should accept the way we are and get on with life” and “that you should focus on the things you’re good at not bad at”. Another reported, “All people feel different about themselves and that we should respect others and feel good about ourselves”.

The majority of the students thought *the lessons were easy to understand* (93.2% rated as average or above) and *the student activity manual was easy to read* (95.9% rated as average or above). When identifying the most enjoyable activities in the programme, two activities stood out from the others – 27.4% of students chose the ‘self-talk wall’ and 21.9% chose the ‘snakes and ladders game’. Both activities explored positive and negative self-talk in Module 5: *Self-Talk*. When identifying the least enjoyable activities, the greatest percentage of students (13.8%) chose ‘none’. Two activities, the ‘STARS plan’ and ‘Making the body Puurr’, from Module 6: *Loving ourselves from the inside out*, attracted the least enjoyable percentages with 12.3% and 10.8% of students respectively. Both were paper and pencil activities unlike the more interactive and physical exercises identified as enjoyable. This distinction was also revealed in responses to open-ended questions.

Many students responded to open-ended questions by reporting enjoyment with activities that related to popular culture or were interactive. For example, one student after completing the *Self-talk* module stated, “It was fun to do some other things like games rather than just reading and filling out sheets”. Some participants suggested ways in which the STARS programme could be improved and included things such as using more animation in the workbooks and including more group activities. Indeed, much of the qualitative feedback was in regard to enjoying the group exercises. When identifying what skills students used most from the programme, skills related to ‘Self-talk’ (36.4%) and ‘Taming teasing’ (12.1%) obtained the highest percentages. Overall, students responded positively towards the programme with comments including: “the STARS programme has really helped my self-esteem” and the programme has “built up my self-esteem and I know what to do if my self-esteem is low.”

Table 23: Students' evaluation of STARS programme overall

Question	Mean	SD	Percentage indicating average and above (3+)
1. I looked forward to the lessons each week.	2.71	1.079	64.9
2. The lessons were easy to understand.	4.10	0.924	93.2
3. The student activity manual was easy to read.	4.14	0.913	95.9
4. The student activity manual was useful.	3.49	1.312	77.0
5. The STARS programme was useful in my everyday life.	3.29	1.447	71.6
6. The STARS programme helped me feel better about myself.	3.55	1.271	81.1
7. The STARS programme helped me have confidence in myself.	3.50	1.335	78.4
8. The STARS programme helped me to feel more positive about everyday life.	3.44	1.313	77.0
9. I talked about the STARS programme to my friends	2.23	1.222	37.8
10. My friends have commented on changes in me as a result of the STARS programme.	1.73	1.138	20.3
11. I talked about the STARS programme with my family.	2.37	1.350	43.2
12. My family has commented on changes in me as a result of the STARS programme.	1.69	1.169	16.2
13. I would recommend the STARS programme to my friends.	3.04	1.457	60.8
14. Learning about how we develop our self-esteem was useful.	3.51	1.252	79.7
15. Learning about the self-image scale was useful.	3.30	1.301	74.3
16. Learning how advertising works was useful.	3.64	1.458	78.4
17. Learning that bodies come in all shapes and sizes and that you don't have to have a certain body to be successful was useful.	3.49	1.346	78.4
18. Learning how to listen to my self-talk was useful.	3.46	1.406	73.0
19. Learning how to make your body Puuuurr was useful.	3.08	1.431	67.6
20. Learning how to set goals and targets was useful.	3.72	1.211	83.8
21. Learning how to "have a go" was useful.	3.70	1.290	81.1
22. Learning what I value was useful.	3.60	1.382	77.0
23. Learning to take the sting out of teasing was useful.	3.69	1.374	75.7

6.3.4 Teachers' Feedback

Examination of the teachers' verbal feedback from semi structured interviews indicated that in general teachers thought highly of the programme with comments like "I honestly just thought it was brilliant", "Overall, I say this is a fantastic programme", "After the programme I sat down with the kids and we talked about how they went on the programme and it's really good to hear that they think that their self-esteem has improved" and "A project like the STARS project should be implemented in each year level and repeated each year". All teachers reported that the STARS programme was pitched at an appropriate developmental level and was enjoyable for students. One stated that they "...enjoyed the activities which used real-life examples and famous people because it kept the students' interest and was relevant to them".

Although not all the discussion group activities were utilised by teachers, when they were, comments were positive. One comment in particular demonstrates the peer support that can be facilitated through activities in groups: "...it brought up a lot of stuff that a lot of the kids felt the same way... and so they felt like, you know, everyone feels it – that was the best about it".

Module 3: *Self-image and the Media* was very popular amongst teachers. They reported that students enjoyed the activities in this module and that it was very interesting to them. So much so that they suggested this module could easily be divided into three sessions "because kids enjoyed them so much" and "had so much to say". One teacher had to stop after two days "because they just wanted to keep going".

Teachers also reported that the skills learnt in the modules generalised to outside activities. For example, in module 5 students learnt to identify their thinking styles/self-talk and challenge the negative 'pest' thoughts with more realistic and positive self-talk. One teacher commented that after running this module, "the following day was the athletics carnival and so I said to the kids the night before and on the day of the carnival that I wanted them to use their self-talk today. And you wouldn't believe it but I had girls running up to me, one of them had come first in her running race, and she said 'Miss X self-talk really

works, it really works!’ and it was just one of those moments when you just go ‘oh yeah!’ and even the boys were saying ‘oh you should try that self-talk’”.

The final module (*Module 10: STARS self-esteem*) where children reassessed their self-image scales was also reported as an important and enjoyable session. One teacher noted, “...some of them said that they thought their self-esteem had improved and they noticed that some things aren’t that important and so they shouldn’t get so worked up about it”. Teachers also commented that the newsletter items were an integral component of the programme to include as they thought it was important “for all parents to see what the focus was on in any part of the school”.

All teachers indicated that they would be happy to teach the STARS programme again next year with the modifications they suggested. A common theme in the feedback in terms of modifications, was that the sessions took longer than anticipated and if they were to run the programme again they would utilise a longer period to implement. Some teachers chose to conduct the modules over several sessions explaining, “...that’s because they loved doing it, you know like when you do a lesson and you know their (sic) getting bored so you stop it, they wanted to keep going all the time”. While other teachers decided to pick and choose which sections in the module to do. In particular, *Module 3: Self-image and the Media* and *Module 9: Taming Teasing* were modules that were identified by most teachers as needing more time to implement. For the former, it related to the enjoyment the students experienced and for the latter, teachers saw it as pertinent because bullying had been a problem in the school.

One concern raised by a couple of the teachers was that the self-esteem scale was difficult for children to comprehend. One teacher commented “Children were confused as to how being good in an area but not placing much importance on it could result in a low self-esteem.” They thought this concept was important but that it might need some reworking in order for children to understand it more readily. It was also noted that many of the home activities were not completed.

6.3.5 *Parents' Feedback*

Firstly, parents were asked whether they received the three newsletter items covering self-esteem, self-talk and teasing. Of the 92 respondents 13 (14.1%) indicated they had not received any newsletter items, 63 (82.9%) received the self-esteem item, 10 (10.9%) received the self-talk item and 8 (8.7%) received the teasing item. Parents were then asked about the usefulness of the three newsletters with 44 (77.2%), 26 (72.2%), 21 (70%) parents responding with average and above levels of usefulness of the self-esteem, self-talk and teasing items respectively.

Parents also responded to a number of questions evaluating the programme and their child's experience of the programme (see Table 24). Of note, most parents were satisfied with the content of the programme (90.2% rated as average or above) and found the programme was consistent with their values (94.6% rated as average or above). As one parent articulated, "self-esteem programmes are very helpful in helping adolescents deal with common issues. I am a strong advocate of 'positive self-talk' and 'you can do it' and I was pleased to see this included!". Another was satisfied to see a focus on broadly enhancing self-esteem, as they "strongly believe that too many young girls are encouraged to focus on their appearance at a too young age". However, a number of parents, although agreeing with the sentiments of the programme, claimed that it wasn't useful for their child as he/she already had high self-esteem. A few of these parents indicated their child thought the programme was "boring" and they didn't learn anything they didn't already know. Another thought the self-esteem message was confusing and misunderstood when their child stated "I am good at sport (and music, art, singing, writing) I'm good at lots of things...therefore I'm told I have low self-esteem".

Table 24: Parents' evaluation of the STARS programme

Question	Mean	SD	Percentage indicating average and above (3+)
1. How much did your child enjoy participating in the Enhancing Self-esteem project?	2.99	0.932	75.0
2. How satisfied were you with the content covered in the programme?	3.40	0.885	90.2
3. How much has your child talked with you about the programme?	2.33	0.973	42.3
4. How useful was the programme for developing a positive self-esteem in your child?	2.76	1.072	63.0
5. How useful was the programme for developing a positive body image in your child?	2.78	1.035	65.2
6. To what extent have you noticed positive changes in your child since participating in the programme?	2.43	1.090	45.7
7. To what extent have you noticed negative changes in your child since participating in the programme?	1.49	0.774	13.0
8. How consistent is the programme with the values you hold?	3.80	0.918	94.6
9. Overall, how would you rate the programme?	3.27	1.152	80.4

A number of parents indicated that they would like to see a programme like STARS start earlier and be ongoing. As one parent stated, "I would like such a programme to be implemented much earlier (Years 5 or 6). Children start to have negative thoughts about themselves much earlier than Year 7 and it would be beneficial for them to have strategies and positiveness to prepare for puberty". Some parents called for more involvement suggesting that parents be given an outline of the programme with goals to be achieved so they could "keep up with and understand the whole programme". Another suggested that more information would help parents in "reinforcing the positives through each developing stage".

6.4 Discussion

The purpose of Study 3 was to examine the social validity of the STARS programme for a school-based prevention of eating disturbances intervention from the perspective of students, teachers and parents. This is an important part of any programme evaluation as understanding the opinions and acceptability of a programme “may facilitate future recruitment, implementation and, potentially, the efficacy of prevention efforts” (Varnado-Sullivan & Horton, 2006, p. 688).

Overall, students positively endorsed the STARS programme. Between 74.2% and 91.8% of students rated their enjoyment of the 10 lessons as average or above. In terms of the usefulness, between 66.5% and 89.6% rated the lessons average or above. For both enjoyment and usefulness, Learning *Loving Ourselves* received the highest number of endorsements and learning about the self-worth model in *Self-image* received the least. It is difficult to compare ratings with previous studies as most studies use different rating scales or different anchors (e.g., *happy*, *satisfied*, *great*). However, for similar rating scales the present study is comparable (e.g., Wilksch et al., 2006, 80%). Similar to findings of Neumark-Sztainer and colleagues (2000), students in the present study consistently reported enjoying the interactive activities (e.g., group work and games) and references to popular culture (e.g., activities in media literacy and body image modules).

In general the teachers in this study rated the acceptability of the STARS intervention highly. They indicated that overall the programme was straightforward to use, developmentally appropriate and held value in enhancing the self-worth and confidence of their students. Their endorsement was reflected in their willingness to implement the programme in the following year. Many noted how some of the skills generalised to other subject areas. However, examination of the treatment integrity data showed that most, but not all, of the programme content was implemented by teachers. Teachers indicated they needed more time to do justice to the programme content and some modified group activities to whole class exercises to reduce the time it took to complete. However, there is some evidence that adherence to a programme predicts outcome. Manwaring and colleagues (2008) utilised an Internet eating disorder

prevention programme which allowed for the examination of outcomes with objective tracking of the usage of the programme components. The main findings in this study were that higher participation rates and access of the programme were associated with less dietary restraint from pre- to post-treatment. Thus, the true effectiveness of the STARS programme may have been compromised with one school having one fifth of the students absent for more than one quarter of the time and teachers not faithfully facilitating the whole programme. An important part of the STARS programme was to facilitate peer support through small group activities and due to time constraints some of these activities were either dropped or modified to whole class exercises. This has implications related to student feedback in that reducing the number of group activities may reduce the social validity of the programme, as students rated group activities highly and suggested including more in the programme.

One important observation made by teachers and reflected in some students' and parents' comments was that the self-esteem model was to some extent confusing for some students. Furthermore, this model was taught in *Module 2: Self-image*, which, as indicated earlier, was identified as the least enjoyable and useful lesson identified by students. Teachers reported that a few students could not understand how being good in a self-image area that is not held with much importance results in low self-esteem. This is a misunderstanding as it is only those self-image areas that hold high importance to the individual that impact most on self-esteem. This confusion could be rectified in the teacher training and modified in the teachers' manual and students' workbook.

Again, in general, parents were positive about their child's participation in the STARS programme. They reported that the content was consistent with their values and that the enhancement of self-esteem was a worthy endeavour. Indeed, many parents suggested that a programme like the STARS programme should start at an earlier age and be ongoing to prepare children for puberty. Of note were a number of parents indicating that the programme was not useful for their child as they already had high self-esteem. These qualitative data support the quantitative data detailed in Chapter 5 that demonstrated participants had higher self-worth scores than equivalent normed samples. As such this provides

further support for the claim in Chapter 5 that the STARS programme needs to be evaluated with a more diverse sample.

Qualitative feedback from parents indicated that 1) not all parents were aware of the programme or the newsletters sent home and 2) more parental involvement would be welcomed. As McVey and colleagues (2007, p. 134) maintain, “finding effective ways to engage them [parents] in the prevention process remains a challenge for researchers”. Future programmes should employ more creative ways of enlisting parental involvement.

6.4.1 Limitations of Study 3

In interpreting the findings of Study 3 several limitations need to be mentioned. Firstly, this descriptive study was based upon a small number of teachers from two urban schools in Perth, Western Australia. Furthermore, participation by students and parents was voluntary and consequently full participation was not forthcoming. Thus, it does not permit generalisations to other students, parent or professionals in other school settings.

Secondly, there were problems in data collection so that not all teachers provided the feedback information required. Therefore, the generalisability of the conclusions drawn from programme attendance and treatment fidelity data is compromised. Future studies might benefit from including a number of data collection points to firstly ensure collection and secondly, to act as a reminder for teachers to collect these data. In the current study teacher logs were relied upon to assess treatment fidelity. Although the teachers who completed the teacher logs, indicated most of the modules were covered, employing classroom observations would have strengthened the confidence in this reporting and provided qualitative information on the implementation. However, this may compromise programme fidelity due to an observer being present in the classroom.

6.4.2 Implications for the STARS Programme

Despite the lack of an intervention effect detailed in Chapter 5, the participants, teachers and parents from the current study provided positive feedback in their evaluations of the STARS programme, suggesting that an

enhancing self-esteem focus might be a socially valid format for the prevention of eating disorders with this age group. Study 3 has also shown how including a social validity component can elicit suggestions to enhance the acceptability of a programme, and therefore ultimately augment the efficacy of a programme.

Feedback from participants suggests that employing more interactive group activities, animation in workbooks and examples from popular culture will enhance the acceptability of prevention messages presented to pre-adolescents as it ensures students' interest and relevance. Indeed, small interactive group work and class discussions were an important means of enhancing self-esteem. However, as teachers' feedback suggests, this method of delivery was not always achieved due to time constraints. Ensuring sufficient time allocation to each module will assist in allowing teachers to implement the programme in its entirety and therefore allow researchers to accurately examine the effectiveness of the programme. Furthermore, training teachers with the STARS programme should provide more emphasis on the rationale of including group work and homework activities to involve parents so teachers understand the mechanisms underlying the enhancement of self-esteem.

Qualitative data from students, teachers and parents alike suggest that the representation of Harter's (1986, 1987) model needs to be revised in order that the misunderstandings experienced in the current study are amended. Particular attention should be placed on developing a more thorough understanding of the model in the teacher training so that teachers are able to correct children's misapprehensions. Furthermore, as has been noted by others (e.g., O'Dea & Abraham, 2000) and suggested by parents in the current study, the increased involvement of parents would potentially assist in reinforcing messages learnt in the programme across multiple domains.

It is too early to conclude that the STARS programme is ineffective in preventing eating disturbances and body image dissatisfaction in pre-adolescents. Study 3 experienced problems in programme integrity with 1) not all the programme being completed by all children, 2) many of the group, extension and home activities were not completed, 3) teachers reported time constraints compromising the integrity of the programme, and 4) the programme was

presented over 5 weeks instead of 10. Future studies using the STARS programme would need to rectify these issues in order that the programme is allowed a true evaluation. Furthermore, this study provided added support for Study 2's finding that the efficacy of the programme may have been limited by the proportion of participants who already had high levels of self-esteem.

In summary, students, teachers and parents alike positively received the STARS programme. Although unsupported by quantitative data in Chapter 5, students, teachers and parents reported that the programme had enhanced students' self-esteem. Study 3 demonstrates that qualitative data offers important additional information in accessing the usefulness of a prevention programme. It also highlights that programme developers for eating disturbance prevention programmes should ensure the views of all stakeholders are taken into consideration when designing and evaluating a programme.

CHAPTER 7: PREDICTORS OF EATING DISTURBANCES

7.1 Introduction

In light of the non-significant intervention effects in Study 2 it is important to explore the relationship that exists between the risk factors utilised in this sample and the eating disturbance measures. Determining risk factors that are most predictive of eating disturbances may assist in understanding these non-significant results by ascertaining whether the risk factors highlighted in the prevention programme, were relevant to this sample. Indeed, many researchers have called for an improved understanding of risk factors to advance existing eating disorder prevention programmes (McVey, Pepler, Davis, Flett, & Abdoell, 2002). Furthermore, using longitudinal data can add a developmental perspective that can provide important information regarding risk factors and how they present over time (Attie & Brooks Gunn, 1989).

It is also important to understand the stability of eating problems. That is, are they usually transient or chronic? Is there an age where disturbed eating attitudes and behaviours are still malleable before they become entrenched? This information can help determine whether the age group of the current sample was the most appropriate developmental period to implement prevention programmes. For example, Wertheim, Koerner and Paxton's (2001) study of three different age groups (Grades 7, 8 and 9) found that by Grade 8, girls' eating behaviours were relatively stable suggesting that interventions should start in early adolescence or even younger.

7.1.1 Review of the Stability of Eating Disturbances in Early Adolescence

Previous studies have found the stability of eating disturbances to be moderate to high with test-retest correlation coefficients ranging between 0.28 and 0.67 (Attie & Brooks Gunn, 1989; Kansil, Wichstrom, & Bergman, 2005; Leon et al., 1995; Wertheim et al., 2001; Wichstrom, 2000). This relationship appears to be dependent upon the time between measurements. For example, Kansil and colleagues reported test-retest correlations of 0.5 over 2 years, 0.34 over 5 years and 0.28 over 7 years for the 12-item Eating Attitudes Test (EAT-12). However, not all studies have reported high stability. Beato-Fernandez,

Rodriguez-Cano, Belmonte-Llario and Martinez-Delgado (2004) found fluctuations of abnormal eating in adolescence. That is, after 2 years female scores on an eating disorder measure dropped while their scores on a Bulimia measure increased.

7.1.2 Review of Relevant Risk Factor Literature

Despite the numerous risk factors investigated in eating disorders studies there is only modest consensus on the most important risk factors. In Stice's (2002, p. 825) meta-analytic review of risk and maintenance factors for eating pathology, he remarks that, "many of the risk factors that are widely accepted by researchers and clinicians have not been empirically supported". With this in mind, this review will primarily focus research findings derived from prospective studies. There are many studies that use cross-sectional and retrospective data. However, this limits their ability to infer causality.

7.1.2.1 Low Self-esteem

There have been 18 prospective studies investigating the relationship between self-esteem and eating disturbances. Table 25 summarises the findings from these prospective studies. These studies used many different dependent variables as outlined below.

Measures Used

The Global Self-worth subscale of the Self-Perception Profile for Children (S-PPC; Harter, 1985) and Adolescents (S-PPA; Harter, 1988), Eating Disorder Inventory-II - Ineffectiveness subscale (EDI-2; Garner, 1991), Coopersmith Self-esteem Inventory (COOP; Coopersmith, 1981), Setting Conditions for Anorexia Nervosa Scale – Dissatisfaction subscale (SCAN; Slade & Dewey, 1986), Rosenberg's Self-Esteem Scale (RSE; Rosenberg, 1965), The Self-Concept Questionnaire (Robson, 1989), the Global Negative Self-Evaluation Scale (GSE; Alsaker & Olweus, 1986)

There have been three longitudinal studies that have used Harter's *global self-worth* scale of the Self-Perception Profiles (S-PPC and S-PPA). The Field, Camargo, Taylor, Berkey and Colditz's (1999) 12-month longitudinal study of a large sample of U.S. girls aged 9 to 14 years found an inverse relationship

between self-esteem (as measured by the *global self-worth* subscale of the S-PPC) and purging. That is, as self-esteem scores dropped purging behaviour increased. Gardner, Stark, Friedman and Jackson (2000) also used the S-PPC *global self-worth* subscale to measure self-esteem in 6, 9 and 12 year olds but that it did not predict eating disorder scores as measured by the EDI-C and ChEAT three years later. However, they did find that esteem related to the body was predictive of disordered eating. Kansi and colleagues (2005) found “no consistent or strong relationships” between eating problem symptoms (EAT-12) and low self-esteem (*global self-worth* subscale of S-PPA) in their large representative Norwegian study where 623 13 to 14 year old girls were followed for 7 years. In contrast, data taken from the same study pool in their earlier cross-sectional study (Kansi, Wichstrom, & Bergman, 2003) showed that high self-esteem was predictive of bulimic tendencies and dieting behaviour. When the restrictive subscale was added to the above two subscales of the EAT-12, the role of self-esteem became less clear, suggesting the value of studying eating problem dimensions separately.

Longitudinal studies that have utilised the EDI-Ineffectiveness subscale (Garner, 1991) as a measure of self-esteem have not found it to be predictive of eating disturbances in early adolescent females (Attie & Brooks Gunn, 1989; Killen et al., 1996; Killen et al., 1994), adolescent female ballet students (Garner et al., 1987), or female undergraduates (Dobmeyer & Stein, 2003). However, Leon, Fulkerson, Perry, Keel and Klump’s (1999) 4 year longitudinal study found that negative emotionality, depression, body dissatisfaction, and the EDI-ineffectiveness subscale in combination were predictive of disordered eating 4 years later for adolescents.

Button and colleagues (1996) found that 11 to 12 year old U.K. girls with low self-esteem (as measured by RSE) were eight times more likely to exhibit high eating problem scores as measured by EAT-26 (Garner et al., 1982) 4 years later, than girls with high self-esteem. However, not all studies that have used RSE to measure self-esteem have found significant results. Wertheim and colleagues (2001) found that self-esteem did not play a strong role in predicting future drive for thinness or bulimia at 8-month follow-up for 435 Australian females in Grades 7, 8 and 10. Self-esteem significantly predicted EDI-drive for

thinness and bulimia at 8-month follow-up for Grade 7 girls but not for Grades 8 and 10 girls. However, path models demonstrated that low self-esteem significantly predicted depression, which in turn predicted Bulimia symptoms. Using a much younger age group of 165 U.S. fifth and sixth graders, the RSE failed to account for a significant proportion of the variance in EAT-9 scores at 2-year follow-up (Keel, Fulkerson et al., 1997).

In Calam and Waller's (1998) 7 year longitudinal study with 12 year-old girls from the United Kingdom, only weak associations were established between self-esteem (SCAN – Dissatisfaction subscale; Slade & Dewey, 1986) measured at 12 years and eating pathology (EAT-26; Garner et al., 1982) at 19 years. Using the same measure, Wood, Waller and Gowers (1994) found it could significantly distinguish between high- and low-risk status mid-adolescent girls identified using the EAT-26 scores. That is, high-risk girls had lower self-worth at 2-year follow-up than low risk girls.

Cattarin and Thompson (1994) found that a combination of the Coopersmith Self-esteem Inventory (COOP; Coopersmith, 1981) and various depression and anxiety inventories did not significantly predict 3-year follow-up scores on the EDI-DT and Bulimia subscales for 10 to 15 year old U.S. female students.

Using an older sample of 18 to 30 year-old Swedish females from the general population, Ghaderi and Scott (2001) found that participants who developed an eating disorder by 2-year follow-up had significantly lower self-worth at Time 1 as measured by The Self-concept Questionnaire (Robson, 1989), than the control group.

The GSE, a less frequently used measure, was not predictive of dieting for 15 year old Norwegian girls 3 and 6 years later (Friestad & Rise, 2004). For their male counterparts, however, self-esteem predicted dieting at 18 years but not 21 years. Although the GSE is not a well-used measure and indeed not a screening instrument for eating disorders, it does suggest a gender and developmental influence.

Seven out of the 18 longitudinal studies found low self-esteem was predictive of problematic eating behaviours at follow-up. There were no clear age or cultural differences in the findings illustrating that self-esteem can predict subsequent problem eating from 9 to 30 years in the cultures outlined in Table 25. It is possible that the measurement of self-esteem may have compromised some of the findings. In particular, six studies that used the EDI-Ineffectiveness subscale as a measure of self-esteem found that it did not predict problematic eating behaviours which indicates that this measure may be assessing a different construct. As discussed in Chapter 2, there is still a degree of controversy regarding the definition and measurement of self-esteem and perhaps the contradictory longitudinal results reflect this.

Dobmeyer and Stein have argued (2003, p. 137) that the failure of many studies to find self-esteem as a significant predictor of eating disturbances was surprising, given the “strong clinical sentiment” that this relationship is a “core feature”. However, given the different measures used and methodological limitations (e.g., most studies do not report a power analysis to determine whether their non-significant findings reflect an inadequate sample size, different time periods may not capture the developmental nature of the predictors and a failure to control for Time 1 differences) it would be too early to consider self-esteem as an unreliable predictor. Furthermore, there is some suggestion that self-esteem may be a mediating variable, rather than a predictor. For example, Beato-Fernandez, Rodriguez-Cano, Belmonte-Llario and Martinez-Delgado (2004) found in their 2-year longitudinal study that self-esteem, as measured by RSE was not predictive of EAT-40 scores 2 years later. However, it was a protective factor for pathological body dissatisfaction, which was strongly predictive of eating disorders. Also, Vohs and colleagues (2001) found in their 5-week longitudinal study with 18 to 20 year old university students that self-esteem alone (as measured by RSE) was not predictive of bulimic symptoms (EDI-B). Rather, high perfectionism, low body dissatisfaction in combination with low self-esteem predicted high bulimic scores.

Table 25: Longitudinal outcome studies: Relation of initial self-worth and subsequent eating pathology

Outcome	Follow-up (months)	Age	Methodological Features			Sample size	<i>p</i>
			Culture & Gender	Self-esteem measure	ED outcome		
Attie & Brooks-Gunn (1989)	24	12-15yrs	US F	EDI-I	EAT-26	193	ns
Beato-Fernandez et al. (2004)	24	12-13yrs	Spain F&M	RSE	EAT-40	1076	ns
Button et al. (1996)	48	11-12yrs	UK F	RSE	EAT-26	400	.01
Callam & Waller (1998)	84	11-13yrs	UK F	SCAN	EAT-26	63	<.08
Cattarin & Thompson (1994)	36	10-15yrs	US F	COOP	EDI-DT&B	87	ns
Dobmeyer & Stein (2003)	28	Under- graduates	US F	EDI-I	SCID	80	ns
Field et al. (1999)	12	9-14yrs	US F	S-PPC	Purging question	6982	<.05
Friestad & Rise (2004)	72	15-21yrs	Norway F&M	GSE	Dieting question	487	.001 (M)
Gardner et al. (2000)	36	6-12yrs	US F & M	S-PPC	EDI-C & ChEAT	189	ns
Garner & Garfinkle (1987)	72	11-14yrs	US F	EDI-I	DIP	35	ns
Ghaderi & Scott (2001)	24	18-30yrs	Sweden F	S-CQ	SEDS	826	.00001
Kansi et al. (2005)	84	13-14yrs	Norway F	S-PPA	EAT-12	623	ns
Keel et al. (1997)	24	5 th & 6 th graders	US F&M	RSE	EAT-9	165	ns

Outcome	Follow-up (months)	Age	Methodological Features			Sample size	<i>p</i>
			Culture & Gender	Self-esteem measure	ED outcome		
Killen et al. (1994)	36	\bar{x} = 12.4yrs	US F	EDI-I	unique	887	ns
Killen et al. (1996)	48	\bar{x} = 14.9yrs	US F	EDI-I	unique	825	ns
Leon et al. (1999)	48	11-16yrs	US F & M	EDI-I	EDRFI	1424	<.001
Wertheim et al. (2001)	8	\bar{x} = 12.82 – 15.75yrs	Aust F	RSE	EDI-DT & B	437	.01
Wood, Waller & Gowers (1994)	24	\bar{x} = 13.9 – 14.1yrs	US F	SCAN	EAT-26	33	.01
Vohs et al. (2001)	4.25	18-20yrs	US F	RSE	EDI-B	70	ns

EDI-I, -DT, -B: Eating Disorder Inventory II – Ineffectiveness, Drive for Thinness & Bulimia subscale, **EAT-9,26,40:** Eating Attitudes Test, **RSE:** Rosenberg Self-esteem Inventory, **SCAN:** Setting Conditions for Anorexia Nervosa Scale – Dissatisfaction subscale, **COOP:** Coppersmith Self-esteem Inventory, **SCID:** Structured Clinical Interview and Clinician’s DMS Checklist, **S-PPC, A:** Self-Perception Profile for Children & Adolescence, **GSE:** Global Negative Self-evaluation Scale, **EDI-C:** Eating Disorder Inventory for Children, **ChEAT-26:** Children’s Eating Attitudes Test, **DIP:** Diagnostic Interview by Psychiatrist, **S-CQ:** The Self-Concept Questionnaire, **SEDS:** Survey for Eating disorders, **unique:** unique questions for study, **EDRFI:** Eating Disorder Risk Factor Index, and **ns:** not significant

7.1.2.2 *Body Dissatisfaction*

Theorists have argued that body dissatisfaction leads to eating pathology via negative affect and dieting (Stice, 2002). There have been 12 prospective studies that have investigated the ability of body dissatisfaction to predict eating disturbances. Table 26 summarises the findings from these prospective studies.

Measures Used:

The Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairburn, 1987), Mendelson Body Esteem Scale, (MBES; Mendelson & White, 1982), Body Image Subscale of the Self-Image Questionnaire for Young Adolescents (SIQYA; Petersen, Schulenberg, Abramowitz, Offer, & Jarcho, 1984), Body Areas Satisfaction Scale (BASS; Brown, Cash, & Lewis, 1989), Physical Self-Concept subscale of Self-Perception Profile for Adolescents (Harter, 1988) Satisfaction and Dissatisfaction with Body Parts Scale (Berscheid, Walster, & Bohrnstedt, 1973)

Two studies have used the BSQ to measure body dissatisfaction. In a large 2-year longitudinal study consisting of 1076 Spanish adolescents aged 12 to 13 years, Beato-Fernandez and colleagues (2004) found body dissatisfaction to be a strong predictor of eating disorders at Time 2 (after controlling for initial BSQ and EAT-40 scores). Using a much older sample of 18 to 30 year-old Swedish females, Ghaderi & Scott (2001) found that participants who developed an eating disorder by 2-year follow-up had significantly higher body concerns (i.e. BSQ) at Time 1 than the control group who had not reported any eating disorder symptoms.

Attie and Brooks (1989) using the body image subscale of the SIQYA found that negative body image significantly predicted higher scores for 12 to 15 year old girls on the EAT-26 at 2-year follow-up. This accounted for only 2% of the variance after controlling for baseline EAT-26 scores. Employing the same body dissatisfaction measure, Graber, Brooks-Gunn, Paikoff, and Warren (1994) found that body image was predictive of EAT-26 scores 2 years later but not after 8 years for U.S. 7th, 8th and 9th graders. This finding suggests that, once this age group reached adulthood, body dissatisfaction no longer influenced eating

pathology. Keel, Fulkerson and Leon (1997) assessed risk factors in a much younger age group of U.S. fifth and sixth graders. The SIQYA accounted for a significant proportion of the variance in EAT-9 scores at 2-year follow-up for boys but not for girls, pointing to a gender-specific mechanism for the development of eating disorders.

Similar to Graber and colleagues' (1994) developmental findings, Wertheim and colleagues (2001) found both restrictive (EDI-DT) and bulimic (EDI-B) symptoms were predicted by body dissatisfaction (EDI-BD) for Australian Grade 7 girls but not Grades 8 and 10 girls at 8-month follow-up. According to these findings, the influence of body dissatisfaction is more salient in early adolescence than middle adolescence.

Using their own measure for weight concern, Killen and colleagues found that it predicted bulimic symptom onset for a U.S. community sample of sixth and seventh grade girls over 3 years (Killen et al., 1994) and ninth grade girls over 4 years (Killen et al., 1996). However, they also employed the EDI-Body dissatisfaction subscale, which was not found to be predictive of bulimic symptom onset. The SDBPS, another less recognised measure of body dissatisfaction, prospectively predicted the onset of binge eating and compensatory behaviours (The Bulimia Test Revised and bulimia subscale of EAT-26) in 16 to 18 year old U.S. females after 9-months (Stice & Agras, 1998).

Other studies have found body dissatisfaction on its own is not predictive of eating pathology but when pooled with other variables, collectively they become predictive. For example, Leon and colleagues' (1999) 4 year longitudinal study established that negative emotionality, depression, body dissatisfaction and the EDI-ineffectiveness subscale in combination were predictive of disordered eating for U.S. Grades 7 to 10 children. Some studies have found body dissatisfaction to be involved in a pathway to eating pathology. For example, Stice (2001a) found that relationships between initial body dissatisfaction and 20-month follow-up bulimic pathology in 13 to 17 year old U.S. girls was mediated by change in dieting and negative affect.

Not all studies have found body dissatisfaction predictive of eating disturbances. Vohs and colleagues (2001) found in their 5-week longitudinal

study that body dissatisfaction alone (as measured by EDI-BD) was not predictive of bulimic symptoms (EDI-B) for 18 to 20 year old female university students. However, as reported earlier, high perfectionism, low body dissatisfaction and low self-esteem predicted high bulimic scores in combination.

Wichstrom (2000) found that body satisfaction as measured by the Body Areas Satisfaction Scale and the Physical Self-concept subscale of Harter's S-PP for Adolescents, was a modest predictor of Time 2 disordered eating as measured by EAT-12 in 12 to 19 year-old Norwegian adolescents. However, this significance was lost when Time 1 EAT-12 scores were controlled for in the regression analysis. The physical self-concept subscale has been predictive of EDI-DT but only in cross-sectional analyses (Striegel-Moore, Schreiber, Pike, & Wilfley, 1995). This study demonstrates the importance of controlling for existing eating disorder pathology.

Finally, Gardner and colleagues (2000), using the discrepancy between perceived and ideal body size as a measure of body dissatisfaction, found that this was not a significant predictor of Cheat-26. However, their measure of body esteem (MBES), although not demonstrating longitudinal predictive significance, showed that at ages 6, 9 and 11 to 14 years, low body esteem predicted higher eating disorder scores.

Taken together, these studies suggest that body dissatisfaction is a well-supported risk factor for eating disturbances. In fact, many have argued that body dissatisfaction is one of the most robust risk factors for eating disturbances (e.g., Ghaderi, 2001; Stice, 2001b) particularly as it has been demonstrated using different measures and developmental periods.

Table 26: Longitudinal outcome studies: Relation of initial body dissatisfaction and subsequent eating disturbances

Outcome	Follow-up (months)	Age	Methodological Features			ED outcome	Sample size	<i>p</i>
			Culture & Gender	Body Dis-satisfaction				
Attie & Brooks-Gunn (1989)	24	12-15yrs	US F	SIQYA	EAT-26	193	.05	
Beato-Fernandez et al. (2004)	24	12-13yrs	Spain F&M	BSQ	EAT-40	1076	.000	
Gardner et al. (2000)	36	6-12yrs	US F & M	S-PPC	EDI-C & ChEAT	189	ns	
Ghaderi & Scott (2001)	24	18-30yrs	Sweden F	BSQ	SEDS	826	.000	
Graber et al. (1994)	96	\bar{x} = 14.31	US F	SIQYA	EAT-26	116	<.001	
Keel et al. (1997)	24	5 th & 6 th graders	US F&M	SIQYA	EAT-9	165	<.05(M)	
Killen et al. (1994)	36	\bar{x} = 12.4yrs	US F	WC	unique	887	<.001	
Killen et al. (1996)	48	\bar{x} = 14.9yrs	US F	WC	unique	825	<.001	
Leon et al. (1999)	48	11-16yrs	US F & M	EDI-BD	EDRFI	1424	<.001	
Stice & Agras (1998)	9	16-18yrs	US F	SDBPS	BT-R	218	.001	
Wertheim et al. (2001)	8	\bar{x} = 12.82 – 15.75yrs	Aust F	EDI-BD	EDI-DT & B	437	.01	
Wichstrom (2000)	24	12-19yrs	Norway F&M	BASS	EAT-12	7751	.001	
Vohs et al. (2001)	4.25	18-20yrs	US F	EDI-BD	EDI-B	70	ns	

S-PPC: Self-Perception Profile for Children – Physical Appearance discrepancy score, **EDI-C**: Eating Disorder Inventory for Children, **ChEAT-26**: Children’s Eating Attitudes Test, **SIQYA**: Self Image Questionnaire for Young Adolescents, **EAT-9,26,40**: Eating Attitudes Test, **WC**: Weight Concerns **BSQ**: Body Shape Questionnaire, **EDI-2-BD, -DT, -B**: Eating Disorder Inventory 2 – Body Dissatisfaction, Drive for Thinness & Bulimia subscale, **unique**: unique questions for study, **SDBPS**: Satisfaction and Dissatisfaction with Body Parts Scale, **BT-R**: The Bulimia Test – Revised, **BASS**: The Body Areas Satisfaction Scale

7.1.2.3 Teasing

Weight-related teasing has not received as much attention in the literature as self-esteem and body dissatisfaction. There have been five prospective designs examining the effects of weight-related teasing on eating pathology. Table 27 summarises the findings from these prospective studies. These studies have used the following measures:

Measures Used:

Physical Appearance-related Teasing Scale (PARTS; Thompson, Fabian, Moulton, Dunn, & Altabe, 1991), Perception of Teasing Scale (POTS; Thompson, Cattarin, Fowler, & Fisher, 1995), teasing and comments about weight by peers and adults domains of the McKnight Risk Factor Survey (MRF; Shisslak et al., 1999) and the Dutch Eating Behaviour Questionnaire - Restraint (DEBQ-R; Van Strien, Frijters, Bergers, & Defares, 1986)

Gardner and colleagues (2000) utilised a subset of the POTS to measure self-reported teasing with a sample of 6 to 12 year old U.S. children for 3 years. They found it predicted eating disorders' scores (EDI-C and ChEAT) for boys but not girls. Similar gender differences were found in Haines, Neumark-Sztainer Eisenber, Hannan's 5-year longitudinal study that followed 2516 U.S. adolescents. When Gardner and colleagues analysed the results by age of participants, they observed that teasing was significant at ages 6, 12 and 14 but not during the ages of 7 to 11 years. Haines and colleagues suggest that the gender difference may reflect the observation that girls receive far more "thin-ideal" messages from many different sources than boys and therefore teasing alone does not explain as much of the variance for girls as it does for boys.

Wertheim and colleagues (2001) used The Weight-related teasing frequency subscale of the POTS and found that it predicted EDI-DT and bulimia scores (after controlling for Time 1 scores) 8-months later for Grade 7 Australian girls. These findings did not hold up for the Grade 8 sample but did for the Grade 10 girls for bulimia Time 2 scores only. In path analysis, however, teasing was only predictive of bulimic behaviours and not restrictive eating.

Not all longitudinal studies have found this positive relationship between teasing and eating pathology. Field and colleagues (1999) followed a sample of U.S. girls aged between 9 and 14 years for 1 year and found that weight-related teasing by peers was not related to purging after other risk factors had been taken into account. Cattarin and Thompson (1994) found that the weight/size teasing subscale of PARTS failed to account for a significant proportion of the variance in EDI-DT and bulimia scores (after controlling for Time 1 scores and age) 3 years later for 10 to 15 year old U.S. female students. However, they did find that teasing accounted for a unique 6% of the variance in overall appearance dissatisfaction as measured by the SIQYA, but not body dissatisfaction as measured the EDI-BD. Furthermore, the appearance dissatisfaction in turn predicted use of restrictive and bulimic behaviours.

As there are limited longitudinal studies from which to draw, cross-sectional research will be reviewed to explore the relationship between teasing and eating pathology, albeit with the cross-sectional data limitations. For U.S. girls and boys aged 8 to 11 years, perceptions of teasing were significantly related to lower body dissatisfaction and higher drive for thinness as measured by the EDI-II (Phares et al., 2004). Similarly, Fabian and Thompson (1989) found the effect of past teasing explained 8.5% of the variance in EDI-DT with a slightly older age range of U.S. adolescent girls. Using an Australian sample, Paxton, Schutz, Wertheim and Muir (1999) found that peer teasing about being fat contributed to dietary restraint for 523 Year 10 girls ($M = 15.5$ years) as measured by the Dutch Eating Behaviour Questionnaire - Restraint (DEBQ-R; Van Strien et al., 1986). The effect of teasing has also been related to bulimic symptoms. Comparing 114 female binge eaters to a matched control group Brown, Cash and Lewis (1989) found that binge eaters were more likely than controls to report being teased about their appearance by peers in childhood.

Shisslak, Crago, McKnight, Estes, Gray and Parnaby's (1998) cross-sectional study found sensitivity to weight-related peer pressures (a domain of the MRFS that encompasses teasing) predicted weight control behaviours for U.S. schoolgirls aged 9 to 15 years. For elementary and middle school girls teasing accounted for 5% and 2% respectively of the variance in weight control behaviours. Although significant, this was a small percentage of the overall

explained variance for their risk factor models (i.e., 61% and 51% respectively) and therefore supports multi-factorial risk factor theories.

Some studies have found cultural differences in the effect of teasing on eating pathology. Striegel-Moore and colleagues (1995) tested the predictive relationship between criticisms about body size and EDI-DT with 9 to 10 year old U.S. girls. They found support for this relationship with Black American girls but not their white counterparts. Cultural differences have also been observed in Sheffield, Tse & Sofronoff's (2005) cross-cultural study. They found that teasing was a significant predictor of eating disturbances for Hong Kong female undergraduates but not for Australians.

Two studies have compared different sources of teasing (mother vs father or peer vs family) and have found this provides additional information about the impact of teasing. For example, Keery, Boutelle, van den Berg and Thompson (2005) found that parental teasing of girls aged 11 to 15 years, as measured by POTS, accounted for 15%, 9%, 11% and 9% of the variance in body dissatisfaction (EDI), drive for thinness (EDI), bulimic behaviours (EDI) and self-esteem (Rosenberg Self-esteem Inventory) respectively. However, it was father teasing that was the significant predictor of these variables and not mother teasing. Also, Levine, Smolak & Hayden (1994) found family teasing, but not peer teasing, explained 8% of the variance in ChEAT scores for Grades 6 to 8 U.S. girls ($M = 13.2$ years). These studies highlight the importance of identifying the teasing group.

Lieberman Gauvin, Bukowski and White (2001) partitioned their teasing variables into weight, body shape and appearance teasing. For Years 7 to 10 Canadian girls ($M = 14.08$ years) hurtful teasing about weight by peers was a significant predictor of dieting as measured by the ChEAT-26. However, this was not consistent with the findings related to body shape and appearance teasing.

In summary, findings from the cross-sectional and longitudinal studies suggest that appearance/weight related teasing might function as a direct or indirect (by influencing body dissatisfaction that leads to dieting or disordered eating behaviours) risk factor for disordered eating. Some studies are finding that

the relationship between teasing and eating disturbances is moderated by age, gender and cultural differences. However, there are too few longitudinal studies to make any firm conclusion about these relationships. Further research would be required to confirm and clarify these findings. Furthermore, typically the studies reviewed in this section report small percentages of explained variance in the eating disturbance measure. This indicates that, although important, teasing about body size/shape makes up only a small part of the picture in developing eating disturbance symptomatology.

7.1.3 Summary of Risk Studies

In summary, body dissatisfaction appears to be the most robust risk factor outlined in this review. Teasing also emerges as an important risk factor, but evidence to support this is sparse with only a few longitudinal studies. The relationship between self-esteem and eating problems is much more equivocal. The number of longitudinal studies investigating the link between low self-esteem and disordered eating, have reported contradictory results. As Jacobi, Hayward, deZwaan, Kraemer and Agras (2004, p. 43) posit “on the basis of existing studies, their specificity [low self-esteem and ineffectiveness] is unclear, although it seems reasonable to assume that they are not highly specific for eating disorders.” Furthermore, of the studies that do report percentage of explained variance for risk factors, the proportion is often small and therefore there are other variables or a constellation of variables that account for the unexplained proportion.

Table 27: Longitudinal outcome studies: Relation of initial teasing and subsequent eating pathology

Outcome	Follow-up (months)	Age	Methodological Features			Sample size	<i>p</i>
			Culture & Gender	Teasing measure	ED outcome		
Longitudinal							
Cattarin & Thompson (1994)	36	10-15yrs	US F	PARTS	EDI-DT&B	87	ns
Field et al. (1999)	12	9-14yrs	US F	MRFS	Purging question	6982	ns
Gardner et al. (2000)	36	6-12yrs	US F & M	POTS	EDI-C & ChEAT	189	<.001
Haines et al. (2006)	60		US F & M			2516	
Wertheim et al. (2001)	8	$\bar{x} = 12.82 -$ 15.75yrs	Aust F	POTS	EDI-DT & B	437	<.006
Cross-sectional							
Brown et al. (1989)		15-19yrs	US F	Unique	Binge-Purge question	228	<.001
Fabian & Thompson (1989)		10-15yrs	US F	Unique	EDI-DT	121	<.001
Kerry et al. (2005)		11-15yrs	US F	POTS	EDI-DT	372	<.01
Levine et al. (1994)		$\bar{x} = 13.2$ yrs	US F	Unique	ChEAT-26	385	<.0001
Paxton et al. (1999)		$\bar{x} = 15.5$ yrs	Aust F	Unique	DEBQ-R	523	<.001
Phares et al. (2004)		8-11yrs	US F & M	POTS	EDI-DT	141	<.05
Sheffield et al. (2005)		17-28 yrs	Aust & Hong Kong F	PARTS	EDI-DT & B	148	<.001
Shisslak et al. (1998)		9-15yrs	US F	MRFS	MRFS	523	<.05

Outcome	Follow-up (months)	Age	Methodological Features			ED outcome	Sample size	<i>p</i>
			Culture & Gender	Teasing measure				
Striegel-Moore et al. (1995)		9-10yrs	US F	Unique	EDI-DT	613	.043	
Lieberman et al. (2001)		$\bar{x} = 14.08$ yrs	Canada F	POTS	ChEAT-26	711	<.01	

POTS: Perception of Teasing Scale, **EDI-C:** Eating Disorder Inventory for Children, **ChEAT-26:** Children's Eating Attitudes Test, **EDI-I, -DT, -B:** Eating Disorder Inventory II – Ineffectiveness, Drive for Thinness & Bulimia subscale, **PARTS:** Physical Appearance-related Teasing Scale, **unique:** unique questions for study, **DEBQ-R:** The Dutch Eating Behaviour Questionnaire Restraint subscale, **MRFS:** McKnight Risk Factor Survey

However, these conclusions might be compromised by the methodological limitations inherent in many of these studies. Stice (2002, p. 842) maintains that much of our understandings of risk factors for eating disturbances have been “constrained by methodological limitations”. Indeed, Eckert and colleagues (1995, p. 143) maintain “there have been few follow-up studies that avoid errors of selection bias, small sample size, ambiguous diagnosis, short or non-uniform follow-up periods, incomplete outcome assessment and faulty methods of data collection...”. Many of the studies do not control for Time 1 individual differences in their analyses. The importance of this is demonstrated in Wichstrom’s (2000) analysis, which found that the significance of the predictor was lost once Time 1 scores were controlled in the regression analysis. Keel, Jayne Fulkerson and Leon (1997) reported a similar loss of significance after controlling for Time 1 differences.

One difficulty in comparing these studies and determining the relative impact of factors, is the number of different Instruments that have been used to measure the predictor and criterion variables. This is clearly demonstrated in Griffiths and colleagues’ (1999) study investigating the most appropriate measure of self-esteem for dieting disordered patients. Their research compared the ability of the Rosenberg Self-Esteem Scale (SES; Rosenberg, 1965) and the Coopersmith Self-Esteem Inventory (SEI; Coopersmith, 1967) to predict eating disorder measures. The SES significantly predicted all the eating disorder criterion variables, whereas the SEI did not. However, as detailed previously, both measures are commonly used in risk factor research.

Another important limitation of existing risk factor research that impacts on the conclusions drawn in this chapter relates to the samples used. The majority of longitudinal studies reviewed here have used females of varying ages from the United States of America. This reflects a lag in the literature in staying abreast with research that advocates the need to understand the mechanisms that underlie the development of eating disorders in both females and males (i.e., Ricciardelli & McCabe, 2004). In terms of culture, it is important to determine any cultural differences particularly in light of theories that highlight the socio-cultural contributions to eating disorders.

The aim of this chapter, Study 4, is three-fold. Firstly, the stability of the eating disturbances in the present sample will be examined over a 1-year period for both girls and boys. Secondly, gender differences in eating disturbances and other risk factors will be investigated at baseline. The final aim, constituting the main purpose of Study 4, will be to examine the role of potential risk factors for eating disorder symptomatology in children aged between 11 and 14 years. These analyses will not only assist in explaining the non-significant results of the intervention outcome study but will also contribute to the risk factor literature in three important ways. Firstly, the majority of previous studies have primarily focused on young women. The current study assesses risk factors for both females and males. Secondly, most of the previous studies have been conducted in the U.S. with only one longitudinal risk factor study using an Australian sample (i.e., Wertheim et al., 2001). Indeed, Van den Berg, Wertheim, Thompson and Paxton (2002) state that little research in the area of risk factors has been conducted cross-culturally. Thirdly, the current study uses statistical methods to control for Time 1 individual differences. This is a method lacking in many longitudinal studies and therefore improves the rigour of the analysis.

7.1.4 Hypotheses

1. Eating disturbances will remain stable in early adolescence over a 12-month period.
2. Body dissatisfaction, low self-worth and weight-related teasing will predict eating pathology 12-months later, after controlling for initial eating disturbances.

7.2 Method

The methodology used in this study was the same as the one outlined in Chapter 3. The method that follows is a summary of the more comprehensive details found in Chapter 3.

7.2.1 Participants

The sample utilised in these analyses consisted of all participants who completed questionnaires designed for the intervention evaluation at baseline and 12-month follow-up ($n = 238$). Of these, 142 were girls (59.7%) and 96 were

boys (40.3%). Participants were Year 7 students from five primary schools in the Perth metropolitan area and were aged between 11 and 14 years ($M = 12.7$ years, $SD = .42$).

7.2.2 Instruments

More detailed information regarding the psychometric properties of the instruments used for this study can be found in Chapter 3. The purpose of this section is to outline the variables that were used in the analyses.

Cheat-26 (Maloney et al., 1988) was the criterion variable (dependent variable). Predictor variables (independent variables) were:

- Gender;
- Measures for self worth: S-PPC (Harter, 1985) – *global self-worth* subscale and S-PPC total discrepancy score;
- Measures of body image: EDI-2 (Garner, 1991) – Body Dissatisfaction subscale (EDI-BD), S-PPC (Harter, 1985) *physical appearance* subscale and physical appearance importance score;
- Self-reported teasing variable: The teasing questionnaire contained six questions related to being teased in a hurtful way about body size or shape. To minimise specification error (Hair et al., 1995), only one teasing variable was chosen to be included in the analysis. The question “in the last 4 weeks have you been teased in a hurtful way about your body size or shape by kids at home” was chosen, as out of the other six questions it was more highly correlated with the criterion variable; and
- Self-description measure of body size: This questionnaire contained four questions relating to self-perceptions of body size and dieting variables. As with the teasing variable only one question was chosen to be included in the analysis. The question “Which of these sentences best describes you? a) I feel far too thin, b) I feel a bit too thin, c) I feel about just right d) I feel a bit too fat and e) I feel far too fat” was chosen as out of the four questions it was the most highly correlated with the criterion variable.

7.2.3 Procedure

The questionnaire was administered as part of the evaluation of the current study's eating disturbance and body dissatisfaction prevention intervention. Trained administrators within a classroom environment administered the instruments. Baseline data were collected in August 2002 and 12-month follow-up was collected in July/August 2003.

7.2.4 Research Design and Statistical Analysis

As there was no significant difference between the control and intervention groups (see Chapter 5), the two groups were collapsed to form one group for the purpose of exploring the relationship between Time 1 risk factors and the Time 3 eating disturbance variable. Data were analysed using SPSS, Version 11, statistical package for Windows. Stability and gender differences were investigated with Student's *t*-tests. Longitudinal prediction of eating disturbances was examined using hierarchical multiple regression controlling for baseline eating disturbance. Prediction of eating disturbances at Time 1 was examined using hierarchical regression analysis. Effect sizes were calculated using Cohen's *d*.

7.3 Results

7.3.1 Statistical Power and Sample Size

In order to ensure that the regression analysis was sufficiently powered, Hair and colleagues' (Hair et al., 1995) sample size power tables (based upon Cohen and Cohen calculations) were examined. According to these tables, for a 10 predictor regression model at an alpha-level of .05, 250 subjects are required for an 80% chance of capturing a population R^2 value of 6%. The current study used a sample size of 238 and is therefore, slightly under-powered to these criteria.

7.3.2 Intraschool Dependence in the Data?

Intra-class Correlations (ICCs) of the regression variables were examined to determine the amount of intra-school dependence in the data. There were no significant ICCs (ChEAT-26: $p = .353$; EDI-Body Dissatisfaction: $p = .251$; SPPC – *physical appearance* Mean: $p = .385$; SPPC – *global self-worth* Mean: p

= .733; SPPC – *physical appearance importance* Mean: $p = .481$; SPPC – Total Discrepancy Mean: $p = .506$; Teased by kids at home variable: $p = .769$ and self-description of body weight variable: $p = .238$) and the ICCs were all less than .02 (as discussed in Chapter 3, ICCs above .02 may inflate the Type 1 error rate). Thus, the regression solution will not be compromised by intra-school dependency in the data.

7.3.3 Assumption Testing

Multiple linear regression analyses were performed to examine the ability of each risk factor to predict eating disturbances as measured by the Cheat-26. Before conducting the analyses, assumptions underlying the regression model were explored. The scatterplot of the standardised Studentised residuals against standardised predicted values was more or less randomly distributed about the central horizontal axis, indicating that the three regression assumptions of linearity, homoscedasticity and normality were satisfied (Tabachnick & Fidell, 2001). Cook's distance values were all less than one (range: 0.000 to 0.143) indicating that, if there were any univariate and multidimensional outliers, they were not distorting the regression solution (see Tabachnick & Fidell). Finally, tolerance values for the predictors were sufficiently large ($> .43$) to indicate that multicollinearity was not a serious problem (Tabachnick & Fidell).

7.3.4 Stability Findings for Eating Disturbances and Risk Factors

As the Cheat-26, EDI-BD and S-PPC have acceptable test-retest reliability (see Chapter 3), behavioural stability will not be obscured by measurement instability. Paired Student's t -tests and Pearson's correlations were used to examine the stability of eating behaviours over time. The paired t -test indicated that there was a significant difference between Time 1 and Time 3 Cheat-26 scores ($t(237) = 3.602$ $p < 0.001$, $d = 0.25$). Eating disturbances decreased from a mean of 7.7 ($S.D. = 6.9$) at Time 1 to 6.1 ($S.D. = 5.7$) at Time 3. However, when the analysis was performed separately by gender, only males reported a significant difference (**Males:** $t(95) = 4.293$ $p < 0.001$, $d = 0.4$, $M_{T1} = 9.1$, $SD = 7.3$, $M_{T2} = 6.4$, $SD = 4.8$); **Females:** $t(141) = 1.461$ $p = .146$ $d = 0.09$, $M_{T1} = 6.8$, $SD = 6.5$, $M_{T2} = 5.8$, $SD = 6.2$).

Table 28 presents stability coefficients (Pearson correlation coefficients) for the eating disturbance variable and risk factors over 12-months for the whole sample and broken down by gender. Correlations for the whole sample ranged from .41 to .60 (all significant at .01 alpha-level) with the S-PPC physical appearance importance variable showing the lowest stability and the teasing variable showing the highest stability. The eating disturbance variable, Cheat-26, revealed a modest stability coefficient of .42. The latter suggesting that participants shifted in their relative rank order with respect to self-reported eating pathology. When gender was examined separately, correlation coefficients ranged from .36 to .64 for males and .34 to .65 for females. There was a noticeable difference between males and females on the Cheat-26 correlation (males = .57 and females = .34), suggesting that individually, males were more stable in the eating disturbance measure than females.

Table 28: Stability coefficients for eating disturbance and risk factors over 12-months (n = 238)

Time 1 - 3	Risk Factors							
	Cheat	GS	PA	Paimp	Discrp	EDI-BD	Tease	BS
Whole Grp	.42	.49	.59	.41	.46	.54	.43	.60
Males	.57	.41	.49	.41	.39	.61	.36	.64
Females	.34	.55	.65	.42	.49	.50	.48	.58

Note: Cheat = Cheat-26, GS = S-PPC Global Self-worth subscale, PA: S-PPC Physical Appearance, Paimp: S-PPC Physical Appearance Importance, Discrp: S-PPC Total Discrepancy, EDI-BD, Eating Disorder Inventory – Body Dissatisfaction, Tease: teasing by kids at home question, BS: Self-description of Body size

All reported correlations are significant at the alpha level of .01

7.3.5 Gender Differences

Independent samples *t*-tests were performed to determine any gender differences at baseline for ChEAT scores and the risk factors. Results showed a significant gender difference for Time 1 Cheat-26 scores ($t(286) = 2.572, p = .011, d = 0.3$) but not on any other risk factor. Female participants reported lower Cheat-26 total scores at baseline ($M = 6.8, SD = 6.5$) than their male counterparts

($M = 9.1$, $SD = 7.3$). Means and standard deviations by variable and gender are presented in Table 29.

Mean scores on the Cheat-26, S-PPC *global self-worth* and EDI-Body Dissatisfaction (see Table 29) were significantly different from the reported norms using a similar age group. The current sample reported healthier scores on the Cheat-26 for girls ($M = 6.8$, $SD = 6.5$) and boys ($M = 9.1$, $SD = 7.3$) when compared to Smolak and Levine (Mfemale = 15.74 1994a), Senra and colleagues (Mfemale = 9.01 Mmale = 14.3, 2007) Sancho and colleagues (Mfemale = 15.3, 2005) and Rolland and colleagues (Mfemale = 9.89, 1998). Similarly, the current sample of girls reported higher levels of self-worth ($M = 3.2$, $SD = .58$) than Harter's (Mfemale = 2.97, 1985) normative sample and lower levels of body dissatisfaction ($M = 5.3$, $SD = 5.9$) than Shore and Porter's (Mfemale = 8.44, 1990).

Table 29: Means and standard deviations for each variable by gender at baseline (n = 238)

	Females		Males	
	Mean	SD	Mean	SD
Cheat-26*	6.8	6.5	9.1	7.3
S-PPC Global self-worth	3.2	0.58	3.2	0.56
S-PPC Physical appearance	2.7	0.70	2.8	0.70
S-PPC Physical appearance importance	2.4	0.77	2.5	0.81
S-PPC Total Discrepancy	-0.36	0.54	0.89	0.48
EDI-Body dissatisfaction	5.3	5.9	4.6	6.2
Body size	3.3	0.75	3.3	0.76
Teasing by kids at home	2.6	0.62	2.7	0.61

*p=.011

7.3.6 Multiple Linear Regressions

7.3.6.1 Relationship Between Time 1 Predictor Variables and Time 3 Criterion Variables

The relationships between Time 1 risk factors and Time 3 eating disturbances were initially explored with Pearson product-moment correlation

coefficients and are presented in Table 30. Gender was the only variable that was not associated with the criterion variable (Cheat-26 at Time 3). S-PPC discrepancy total and S-PPC physical appearance importance were significant predictors at the .05 level and all other variables, with the exception of gender were significant at the .01 level. Correlations between the predictor variables and eating disorder symptomatology, generally showed the predicted pattern. Higher levels of body dissatisfaction, eating disturbance at Time 1 and importance placed upon physical appearance were associated with higher levels of eating problems 12-months later. Lower levels of self-worth, self-perception of physical appearance and more frequent teasing about body size were associated with higher levels of eating problems 12-months later.

Table 30: Pearson product-moment correlation coefficients matrix of eating disturbances with risk factors (n = 238).

Risk Factors Time 1	Cheat-26 at Time 3
Gender	-.049
Cheat-26	.418**
S-PPC Global Self-worth	-.219**
S-PPC Discrepancy Total	-.160*
S-PPC Physical Appearance	-.298**
S-PPC Physical Appearance Importance	.148*
EDI – Body Dissatisfaction	.313**
Teased by kids at home	-.249**
Self-description of body weight	.216**

* p <.05 level (2-tailed)

** p <.01 level (2-tailed)

7.3.6.2 Longitudinal Regression Analysis

Hierarchical multiple regression analyses were performed to examine the ability of each Time 1 risk factor to predict eating disturbances 1 year later. Time 1 Cheat-26 scores were entered on Step 1 to control for pre-existing individual differences in the criterion variable. The risk factor predictor variables were

entered simultaneously on Step 2. This is an important methodological control that many of the reviewed studies in this chapter did not have.

On Step1, Time 1 Cheat-26 accounted for 18.5% ($p < 0.001$) of the variance in Time 3 Cheat-26 (see Table 31). After controlling for this variable the risk factors accounted for a further 7.3%. However, only the “teased by kids at home” risk factor variable (4%, $p = .002$) accounted for a significant unique proportion of variance of Time 3 Cheat-26 scores. The more children were teased, the higher reported eating problems.

Table 31: Hierarchical multiple regression predicting Time 3 ChEAT-26 from Time 1 risk factors (n = 238)

Risk Factor	Unstandardised beta weight <i>B</i> (<i>S.E.</i>)	Standardised beta weight β	Semipartial correlation (<i>r</i>)
<i>Step 1</i>			
ChEAT(Time1)	.36 (0.05)	.43***	.43***
$R^2 = .188, F_{inc}(1,220) = 52.880 (p < 0.001)$			
<i>Step 2</i>			
Gender	-.14 (0.70)	-.01	-.01
ChEAT (time1)	.30 (0.06)	.36***	.33***
S-PPC Global self-worth	.53 (0.79)	.05	.05
S-PPC Physical appearance	-1.2 (0.71)	-.15	-.11
S-PPC Physical appearance Imp	.60 (0.45)	.08	.09
S-PPC Total discrepancy score	-.25 (0.74)	-.02	-.02
EDI- body dissatisfaction	-.05 (0.09)	-.05	-.04
Teasing	-1.71 (0.55)	-.19**	-.20**
Body perception	.76 (0.56)	.10	.09
$R^2 = .261, R^2 \text{ change} = .073, F_{inc}(1,220) = 2.709 (p = .007)$			

** $p < .01$; *** $p < .001$

7.3.6.3 Concurrent Regression Analyses at Times 1 and 3

The relatively weak findings demonstrated in the longitudinal analysis may be an artefact of the risk factors having already been accounted for in Time 1 eating disturbance scores. To investigate this possibility, concurrent regression analyses were performed at both Time 1 and Time 3.

7.3.6.3.1 Predicting eating disturbances at Time 1.

Together, the predictor variables accounted for 31.5% of the total variance in the Time 1 ChEAT-26 ($R^2 = .315$, $F[8,221] = 12.71$, $p < 0.001$). However, as can be seen in Table 32, only *global self-worth* ($p = .03$, 1.4%) and EDI-BD ($p < 0.001$, 13%) account for significant unique proportions of variance in the ChEAT-26. The semipartial correlations indicated that lower levels of self-worth and higher levels of body dissatisfaction were associated with higher levels of ChEAT-26.

Table 32: Multiple linear regression predicting Time 1 ChEAT-26 from Time 1 risk factors ($n = 238$)

Risk Factor	Unstandardised beta weight B (S.E.)		Standardised beta weight β	Semipartial correlation (r)
Gender	-2.65	(0.80)	-.19	-.19
S-PPC Global self-worth	-1.95	(0.91)	-.16*	-.12*
S-PPC Physical appearance	.89	(0.83)	.09	.06
S-PPC Physical appearance Imp	.38	(0.52)	.04	.04
S-PPC Total discrepancy score	-.08	(0.86)	.01	.01
EDI- body dissatisfaction	.61	(0.10)	.53***	.36***
Teasing	-.43	(0.64)	-.04	-.04
Body perception	-.84	(0.65)	-.09	-.07

$R^2 = .315$, $F_{inc}(8,221) = 12.712$ ($p < 0.001$)

* $p < .05$; *** $p < .001$

7.3.6.3.2 Predicting eating disturbances at Time 3.

Together, the predictor variables accounted for 35.2% of the total variance in the Time 3 ChEAT-26 ($R^2 = .352$, $F[8,217] = 14.76$, $p < 0.001$). However, as can be seen in Table 33, only EDI-Body Dissatisfaction ($p < 0.001$, 10.2%) and teasing by children at home ($p = .001$, 3.2%) made significant unique contributions to the variance in the ChEAT-26 at Time 3. The partial correlations indicated that higher levels of body dissatisfaction and higher levels of teasing were associated with higher levels of ChEAT-26.

Table 33: Multiple linear regression predicting Time 3 ChEAT-26 from Time 3 risk factors ($n = 238$)

Risk Factor	Unstandardised beta weight B (<i>S.E.</i>)	Standardised beta weight β	Semipartial correlation (r)
Gender	-1.15 (0.66)	-.10	-.10
S-PPC Global self-worth	.23 (0.98)	.02	.01
S-PPC Physical appearance	-.06 (0.80)	-.01	-.004
S-PPC Physical appearance Imp	.56 (0.47)	.07	.07
S-PPC Total discrepancy score	-1.31 (0.76)	-.12	-.09
EDI- body dissatisfaction	.52 (0.09)	.48***	.32***
Teasing	-1.86 (0.55)	-.19***	-.18***
Body perception	-.73 (0.58)	-.09	-.07

$R^2 = .352$, $F_{inc}(8,217) = 14.763$ ($p < 0.001$)

* $p < .05$; *** $p < .001$

7.4 Discussion

Using a sample of 11 to 13 year old children, Study 4 examined the relationship between risk factors and eating disturbances both concurrently and longitudinally over a 1-year period that included the transition to high school.

Unlike previous research, Study 4 statistically controlled for pre-existing eating pathology and included both females and males. The stability of eating disturbances and gender differences in eating disturbances were also investigated.

7.4.1 Stability of Eating Problems

Study 4 demonstrated that eating problems significantly changed during the 12-month period of investigation. Eating disturbances as measured by the Cheat-26 dropped over time. This finding is in contrast to other studies using Cheat-26, that found no significant difference after 8-months (Wertheim et al., 2001) and 2-years (Attie & Brooks Gunn, 1989; Graber et al., 1994; Kansil et al., 2005) using a similar aged sample. When the current findings were investigated further, it was found that male participants and not their female counterparts reported a significantly lower mean on the eating disturbance measure at the 12-month follow-up. The previous studies presented above, exclusively used a female sample. Therefore, when limiting the findings to females, the current study is in keeping with previous research. However, this does demonstrate that the developmental course of eating problems may be different for males and females, and highlights the importance of including males in future studies to enrich this understanding.

Eating disturbances were found to have a modest stability (Cheat-26, $r = 0.42$, $p < .01$) and this is consistent with research by Attie and Brooks (1989), Kansil and colleagues (2005) and Graber and colleagues (1994) who report correlations between 0.43 and 0.50. However, these findings were not consistent with Wertheim and colleagues (2001, EDI-DT, $r = .67$) who used a similar time frame (8-months) and sample (Australian Year 7s). When examined separately by gender, males ($r = .57$) were found to be more stable than females ($r = .34$).

In terms of group means, the level of eating pathology for males fell over the 12-month period while females remained stable. However, the modest correlation for females suggests that inter-individual change occurred during this time period. In contrast, males experienced less inter-individual change. These results suggest that during this age range eating problem symptomatology is changing for females and to a lesser extent for males. Their attitudes and

behaviours towards eating are not yet fully entrenched and suggest an optimal time to implement an intervention to prevent onset of eating problems, as these may still be pliable.

7.4.2 Gender

Males in the present study reported higher levels of eating disturbances at baseline than females. This was unexpected given that previous research with the Cheat-26 has reported no significant difference (Rolland et al., 1998; Sancho et al., 2005; Senra et al., 2007). Studies have reported gender differences with other eating disturbance measures such as the EDI-DT (O'Dea & Abraham, 2000; Shore & Porter, 1990), but in these cases males have scored lower than females.

When the means in the current study are compared to other studies it is the female means that appear to be dissimilar and not the male means. The mean scores for females on the Cheat-26 at Time 1 and 3 were significantly lower than the mean scores reported for girls of a similar age (Rolland et al., 1998; Sancho et al., 2005; Senra et al., 2007; Smolak & Levine, 1994a). Only one study reported a significantly lower mean for females (Edlund et al., 1999, $M = 4.7(6.6)$). This study included a sample of 401 Swedish students aged 10 to 16 years. The data from the current study do not shed light on the reason for this discrepancy. However, the discrepancy does help explain why the predictive ability of the risk factors could be compromised.

7.4.3 Predictive Value of Risk Factors

On the whole, the best longitudinal predictor of eating disturbances was previously disturbed eating attitudes and behaviours, accounting for 18.5% of the variance. This is consistent with other studies that controlled for individual differences in eating disturbances scores at initial testing (Attie & Brooks Gunn, 1989; Keel, Fulkerson et al., 1997).

The prospective analysis showed that being teased in a hurtful way about body size or shape by children at home significantly contributed to the emergence of eating problems. This extends the work of Gardner and colleagues (2000) and Wertheim and colleagues (2001). However, it contradicts the findings of Field and colleagues (1999), who found no relationship between teasing and

eating disturbances. This difference may relate to Field and colleagues' use of assessed weight-related teasing by peers, whereas the current study specified many different teasing groups, including peers. The current study found that teasing at home was more strongly correlated than peer teasing with eating problems. The data in the current study cannot explain why teasing at home is more influential in developing eating problems. However, the more constant influence of such teasing throughout a child's life may be an explanation. Alternatively, the contrast between a home life which is supposed to be safe and nurturing and one that is damaging to mental health may also explain these results.

Although the impact of being teased by children at home was significant, this factor only explained a unique 4%. Others have argued that the impacts of predictor variables are typically modest (e.g., Dornmeyer & Stein, 2003; Wichstrom, 2000). Wichstrom (2000, p. 39) proposes that this can suggest a "lack of theoretical significance". However, Stice (2002) believes that the small effects may simply reflect the fact that no single risk factor can account for variance in eating pathology. In terms of the current study, this means that important risk factors might have been omitted from the regression models. At a more theoretical level it suggests that the risk factors for eating disorders are multivariate.

7.4.3.1 Self-esteem and Eating Disturbances

In Study 4, low self-esteem was not found to be a prospective risk factor for eating disturbances. This finding is consistent with longitudinal studies that have found non-significant results (e.g., Attie & Brooks Gunn, 1989; Beato-Fernandez et al., 2004; Cattarin & Thompson, 1994; Dornmeyer & Stein, 2003; Gardner et al., 2000; Garner et al., 1987; Kansi et al., 2005; Keel, Fulkerson et al., 1997; Killen et al., 1996; Killen et al., 1994). Dornmeyer and Stein (2003) who also found self-esteem to lack predictive value, suggest that self-esteem may have less of an influence on the onset of Eating Disorders than commonly thought. They suggest that the link between these two variables may be less predictive and more consequential of eating disturbances and explain why "the frustration over chronic failure to control one's dieting and eating disorder

symptoms along with the embarrassment over loss of impulse control (e.g., bingeing, purging), may lead to feelings of low self-esteem and depression after women develop an eating disorder” (p. 143).

The concurrent analyses, however, demonstrated that during the sample’s seventh year of school, self-esteem predicted a small but significant 1.4% of the variance in eating problem scores. When tested 12-months later, after participants made the transition to high school, self-esteem was no longer a significant predictor. These findings suggest it is too early to dismiss self-esteem as a contributor to eating disturbances as Dobmeyer and Stein (2003) have done. Rather it adds some support to findings that predictors of eating disorders are not stable but developmental and become significant according to age (Gardner et al., 2000; Gralen et al., 1990; Shisslak, Crago, McKnight et al., 1998; Wertheim et al., 2001).

A second possible interpretation for the inability of self-esteem to predict future eating pathology may be related to measurement problems. S-PPC *global self-worth* is less commonly used in risk factor research. There have been only three longitudinal studies using Harter’s (1985, 1988) Self-Perception Profiles. More commonly used is Rosenberg’s Self-esteem Inventory or the Eating Disorder Inventory – Ineffectiveness subscale. Of the three, only Field and colleagues (1999) reported a significant relationship between the self-worth subscale and eating problems. However, the outcome measure used was not a gold standard screening instrument (they devised for the study a purging question), which compromises the strength of interpretations. Thus, the non-significant results in the current study and mixed results in others may simply reflect the state of the self-esteem literature and measurement instruments as discussed in Chapter 2.

Alternatively, perhaps the role of self-esteem is dependent upon the type of eating disorder symptomatology as demonstrated by Kansil Wichstrom and Bergman (2003). That is, low self-esteem may play more of a role in bulimic-type, rather than anorexic-type symptoms. This would be consistent with the findings of Field and Colleagues (1999) who found global self-worth predictive of purging behaviour. The current study did not have the power to test this

possibility in conducting the analysis on the three subscales of the Cheat-26. Furthermore, Kelly, Ricciardelli and Clarke's (1999) psychometric research on the ChEAT-26 demonstrates different factor structures for boys and girls. Therefore, future risk factor research would need to explore gender differences as well as different eating problem symptoms.

Another possibility is that the present sample had higher self-esteem than reported norms and the eating problem scores were lower than reported norms. Therefore, it would be more difficult to find a predictive relationship when eating problems were not as pronounced as in other studies.

7.4.3.2 Body Dissatisfaction and Eating Disturbances

Study 4 found that body dissatisfaction did not contribute longitudinally to disturbed eating patterns. This is somewhat surprising given the overwhelming support for this risk factor as a robust predictor of unhealthy eating attitudes and behaviours (Attie & Brooks Gunn, 1989; Beato-Fernandez et al., 2004; Ghaderi & Scott, 2001; Keel, Fulkerson et al., 1997; Stice & Agras, 1998; Wichstrom, 2000). It was, however, predictive in both Time 1 and Time 3 concurrent analyses. A possible explanation for these results comes from Leon and colleagues (1995) who report similar findings and suggest that body dissatisfaction becomes normalised in the adolescent population, irrespective of their eating disorder status. As a consequence of this normalising, body dissatisfaction loses its predictive strength over time. As with the non-significant self-esteem findings, lower scores on eating problems as compared to reported norms may also be attenuating the relationship between body dissatisfaction and eating disturbances.

7.4.4 Limitations of Study 4

This risk factor study has some shortcomings. Firstly, there are a number of proposed risk factors that were not measured which may assist in explaining the variance in eating disturbances (see Chapter 1's outline of prospective risk factors). Clearly, with only 26.1% of the variance in Time 3 eating problem scores explained by the risk factors, other risk factors might need to be included in the regression model. In defence of this limitation the study's aim was to assist

in understanding the non-significant intervention effect and was not initially designed for a risk factor study.

Secondly, the 12-month follow-up period is relatively short. More recent research suggests that risk factor studies need to cover a period prior to the development of risk factors and continue through to the onset of eating disorders (Dobmeyer & Stein, 2003). Furthermore, there needs to be an emphasis on regular testing throughout this period to track developmental themes in keeping with longitudinal findings by Gardner and colleagues (2000), which demonstrated that predictors become significant at different ages. It is possible that other significant effects may have emerged in the current study after a longer follow-up period. Five of the seven longitudinal studies that showed self-esteem to be a significant predictor, used test-retest periods of 24-months or longer. The relatively short follow-up period in the current study may have restricted the amount of change in eating disturbances that could occur, which would then make it difficult to identify predictors of this change (Presnell, Bearman, & Stice, 2004). This may be particularly relevant to the present study as the eating disturbance results were lower than other reported norms.

Thirdly, although comparable with many other studies, the current study had a relatively small sample for a predictive study. Jacobi and colleagues (2004) argue that since prevalence rates for eating disorders are low (1-2% of the female population for bulimia nervosa) 3000-5000 subjects would be required in order to detect a sufficient number of cases (30-100). In addition, the sample was a relative healthy one with lower than normative means for eating disturbance.

Fourthly, this study relied solely on self-report data. Self-reporting measures have been criticised for potentially reflecting a self-representational bias. However, given the measures used in this study possess well-established psychometric properties, the results should be reasonably reliable. The use of cross-validation (e.g., measurement of teacher, peer and/or parent ratings) and diagnostic interviews to determine eating disorder status would improve future research. Finally, these findings should be interpreted with caution. As noted earlier, the power to detect population effects was compromised by the relatively small sample.

7.4.5 *Strengths of Study 4*

Study 4 removed many methodological limitations of many of the earlier risk factor studies. In particular, this study controlled for baseline individual differences in eating pathology when conducting the longitudinal regression analysis. This control is crucial, but has been lacking in many of the risk factor studies reviewed in this chapter. The importance of this method of control is underscored by Wichstrom (2000) and Keel and colleagues (1997) who both lost the significance of the predictor variable after applying this control.

Most of the prospective risk factor studies have been conducted in the U.S with females. Thus, this study makes a contribution to the literature by including both females and males in an Australian context – the second longitudinal study in Australia and the first to include both genders.

7.4.6 *Implications for Eating Disorder Prevention*

These findings have a number of implications for understanding the antecedents of eating disturbances and the development of eating disorder prevention programmes. Study 4 clearly demonstrates that there is no specific risk factor for the development of eating disturbances, apart from previous eating disturbances. Rather, risk factors are multivariate and contribute at varying levels dependent upon the developmental age of the child. Future risk factor research would need to encompass a greater number of risk factors in order to explain the large percentage of variance that remains unaccounted for in most studies.

It is necessary to determine the onset of attitudes and behaviours that later develop into eating disorders in order to target an appropriate age to implement prevention strategies. The findings in this chapter suggest that the present sample's age (11 – 14 years) may be an optimal time to begin these strategies because disturbed eating patterns have not yet been established. However, the fluctuating nature of the importance of certain risk factors suggests that programmes may need to be provided perhaps annually at different ages with the content focus changing accordingly. For example, a Year 7 intervention may have a particular focus on fostering respectful interpersonal attitudes and behaviours to prevent teasing about body shape with some attention paid to self-esteem. The following year's focus may change by adding an emphasis on

developing body satisfaction. A longitudinal prevention programme with an assessment component would have the added benefit of being able to provide secondary prevention efforts for those identified with significant eating problems (Dobmeyer & Stein, 2003). In order for such interventions to be designed, more comprehensive longitudinal risk factor research is required with multiple measurement points.

Enhancing self-esteem has been the focus of a few prevention interventions (e.g., O'Dea & Abraham, 2000) including Study 2. However, the results from this risk factor study question the effectiveness of enhancing self-esteem as the primary focus of preventative strategies. The data recommends that prevention programmes lessen the emphasis on enhancing global self-worth and pay more attention to teasing and the interpersonal context. In particular, Study 4 suggests that more attention should be given to teasing about body size/shape instigated by children in the home environment. Furthermore, this focus would be a small component of a prevention programme as it only constituted a modest (i.e., 4%) unique contribution to longitudinal eating disturbances.

Future strategies may need to target different settings, such as prevention intervention delivered in school and family environments. Teachers, children and parents would need to be educated regarding the detrimental effects of teasing about body size. Parents/caregivers would have to be included in this approach as their understanding will be important in ensuring that this type of teasing is not carried out in the home. When designing a more holistic approach to prevention it may be helpful to draw upon the Health Promoting School framework literature. This approach suggests that the particular message needs to be reinforced across classroom lessons/setting, policies and ethos of the school environment and school/home/wider community interactions (Booth & Samdal, 1997). If prevention work were to address teasing it could provide an added benefit, as more recent research (Haines & Neumark-Sztainer, 2006) suggests teasing is a shared risk factor for both obesity and eating disorders.

In conclusion, to extend recommendations for future prevention interventions, Study 4 investigated the relationship between risk factors and eating disturbances. This is the second Australian longitudinal study and the first

to include data from both females and males. It is also one of a few studies that have included the critical control for initial eating disturbances when identifying longitudinal predictors. In summary, unhealthy eating attitudes and behaviours were relatively unstable over a 12-month period suggesting early adolescence as an optimum time to begin prevention programmes. The results of the present study did not suggest a strong role for self-esteem or body dissatisfaction but highlighted the negative impact of teasing about body shape by children in the home on the development of eating disturbances. The findings also suggest that prevention interventions may have a greater impact on unhealthy eating attitudes and behaviours if they are longitudinal, have multiple measurement points and are developmental in content according to the salience of particular predictor variables at different ages.

CHAPTER 8: GENERAL DISCUSSION

Eating disorders encompass a spectrum of disturbances in body image and eating behaviours that are distinct in terms of chronicity and relapse (Stice & Shaw, 2004). The prevention of these disorders is an important public health objective (Herzog & Copeland, 1985; Paxton, 2002; Taylor et al., 1998). This study developed and investigated the effectiveness of an eating disturbance prevention programme designed to enhance self-esteem in pre-adolescent children. To the author's knowledge this is the first study to evaluate a self-esteem eating disorder prevention programme based upon Harter's (1986, 1987) conceptualisation of self-worth. Intervention strategies were directed at cognitive determinants and social factors influencing self-representations as depicted in Harter's self concept model. The thesis comprised four studies which were involved in investigating the efficacy of the prevention intervention. Study 1 (Chapter 4: Psychometric properties of the S-PPC), examined the psychometric properties of the S-PPC. This was deemed necessary as the preventative intervention used Harter's (1985) self esteem measure to assess *global self-worth* and other self-concepts based on her theory and it was important to confirm that the properties of this measure held true for an Australian population. The STARS programme was evaluated using quantitative data in Study 2 (Chapter 5: Evaluation of the STARS programme) and qualitative data in Study 3 (Chapter 6: Social validity of the STARS programme). Capitalising on the prospective data collected for the main intervention, Study 4 (Chapter 7: Predictors of eating disturbances) examined the relationship between risk factors and eating disturbances over a 12-month period. Together these studies provide a comprehensive picture of the prevention of eating disturbances in pre-adolescent children.

8.1 Findings from Study 1: Psychometric Properties of the Self-perception Profile for Children

Study 1 confirmed Harter's (1985) five-factor structure of the S-PPC and thus, the multi-dimensional conceptualisation of children's self-perceptions. The similarity of the structure to Harter's normative sample from the United States suggests that the S-PPC measures similar attributes between the two cultural

groups. These findings add support for the validity of the STARS programme which was designed using Harter's multi-dimensional construct of self-esteem. Further support for preventing eating disturbances by enhancing self-esteem was found from the convergent validity data. These data demonstrated that lower self-worth was related to higher levels of eating disturbances and body dissatisfaction. Furthermore, the superiority of the association between the *global self-worth* and *physical appearance* domain in comparison to other self-perception domains, provided support for the *physical appearance* focus of the intervention. Thus the STARS programme enhanced self-worth by directing strategies to the cognitive determinants and social factors influencing *physical appearance* self-perceptions. This study established that the S-PPC was reliable and valid and thus was appropriate to use for research purposes with Australian children aged 11 to 14 years.

One notable finding was that pre-adolescent Australians rated themselves significantly higher than their North American counterparts on four out of the six subscales of the S-PPC, based on Harter's (1985) normative sample. Females in the current sample were happier with their physical appearance, athletic competence, the way they behaved and their overall self-worth than American females. Thus, the self-perceptions, in particular *global self-worth*, in the current sample were more robust than would be expected. This provided the first indication that Study 2 (Chapter 5) might encounter some difficulties in attesting to the intervention's efficacy when participants' self-worth was higher than U.S norms.

8.2 Findings from Study 2: Evaluation of the STARS Programme

Study 2 hypothesised that involvement in the STARS programme would result in higher levels of self-worth, lower levels of eating pathology and body dissatisfaction together with a decrease in the importance placed upon the *physical appearance* domain when compared to those not involved. These hypotheses were not supported for either the whole group (*universal prevention*) or the sample deemed at higher risk of an eating disturbance (*indicated prevention*). These findings could be interpreted as suggesting that the focus of self-esteem is not the correct mechanism to effect change for eating disturbance

prevention in pre-adolescents. However, other data suggests that the intervention was not given optimum conditions to attest to its efficacy. Firstly, at baseline, female participants had healthier eating attitudes and behaviours, greater satisfaction with their body image and a higher sense of self-worth than their normed counterparts. These floor effects make it more difficult to demonstrate intervention effects, as participants already possess healthy eating variables and positive self-worth. The second group of data that suggests the intervention may not have had sufficient conditions to verify the effectiveness of the STARS programme comes from the social validity chapter of Study 3 (Chapter 6).

8.3 Findings from Study 3: Social Validity of the STARS Programme

Study 3 demonstrated that an enhancing self-esteem programme might be a socially valid format for preventing the development of eating disturbances in children aged 11 to 14 years. Overwhelmingly, students, teachers and parents positively endorsed the STARS programme. Most students found the programme both enjoyable and useful. Contrary to the findings relating to outcome measures in Study 2 (Chapter 5), students, teachers and parents perceived that participation in the STARS programme had improved the self-esteem of students. However, these results occurred in the absence of significant change on the objective measures of eating disturbance attitudes and behaviours or self esteem.

There were a number of implementation issues that may have compromised the efficacy of the STARS programme. Firstly, teachers indicated that not all of the programme content was delivered for all the modules. In particular, many of the group, extension and home activities were not completed and these activities represented important aspects of Harter's (1986, 1987) social factors that influence self-representations. Teachers cited time constraints as the main reason for this integrity compromise. Again, due to time limitations teachers compressed the 10-week programme into 5-weeks. This gave participants less time to absorb and internalise the programme content. In addition, all the children did not complete the entire programme. Approximately 45% of students were absent for up to 25% of the modules.

8.4 Findings from Study 4: Predictors of Eating Disturbances

Study 4 hypothesised that self-esteem, body dissatisfaction and teasing would predict eating disturbances at 1-year follow-up. However, baseline eating disturbances were the best predictor of eating disturbances longitudinally, accounting for 18.3% of the variance. Being teased in a hurtful way about body size or shape by children at home also significantly predicted to a small extent (3.2% of the variance) the emergence of eating problems, 12-months after baseline measurements. Concurrent analyses at baseline and 1-year follow-up demonstrated that predictors of eating disorders are developmental and significance varies according to age. For example, at baseline, self-esteem had a small but significant (1.4%) influence on eating problem scores, but this influence was lost 12 months later. Although body dissatisfaction did not predict eating problems longitudinally, it was significantly associated with eating problems at baseline (12.8%) and again at the 12-month follow-up assessment (9.9%).

8.6 Limitations

These studies had a number of limitations. Caution should be exercised against overgeneralising the results because of the small sample size and the sample was drawn from Catholic private schools in higher socioeconomic areas. In addition, schools were randomly allocated to conditions, but participants were not.

The follow-up period of 8-months for the intervention evaluation and 12-months for the predictive study is an improvement on many previous studies (Buddeberg-Fischer et al., 1998; Ghaderi et al., 2005; Irving et al., 1998; Kater et al.; Smolak et al., 1998a; Stice, Mazotti et al., 2000). However, a longer follow-up timeframe would be necessary to coincide with onset of eating disorders in adolescence/early adulthood to enhance the effectiveness of detecting prevention and predictive effects.

Quantitative analyses in Study 2 and 4 were compromised by the fact that the sample reported lower scores on eating problems compared to normative data. Thus, it was more difficult to demonstrate programme efficacy and the

predictive powers of risk factors when the sample was relatively healthy in terms of self-reported eating patterns and self esteem.

Finally, Studies 1, 2 and 4 relied solely on self-report questionnaire data. In defence, the measures used in these studies possess well-established psychometric properties and have been used extensively to measure the relevant constructs at the current study's design stage. However, more recent studies (Colton, Olmsted & Rodin, 2007; Tanofsky-Kraff et al., 2003) suggest that, in particular, the ChEAT-26 is inadequate as a screening tool with this population. Colton and colleagues (2007, p. 439) maintain that eating disturbances with preteen girls "may be too subtle to be detected reliably with a self-report questionnaire such as the cEAT(sic)". Thus, using more objective sources such as diagnostic interviews to measure clinical eating problems would improve future research. Furthermore, the EDI-BD and EDI-DT are not as relevant to boys' symptomatology as girls'. For example, the EDI-BD is not as sensitive in detecting boys' body dissatisfaction as girls'. More recent research suggests that boys' body dissatisfaction is focussed primarily on muscularity rather than thinness (Kostanski, Fisher & Gullone, 2004; McCreary & Sasse, 2000; Muris, Meesters, van de Blom & Mayer, 2005; Ricciardelli & McCabe, 2004) and the EDI-BD relates to a desire for thinness. There are measures that incorporate a more multi-dimensional construct of body dissatisfaction such as the Offer Self-Image Questionnaire (Offer, Ostrov, Howard & Dolan, 1992) and the Figure Rating Scale (Stunkard, Sorenson & Schulsinger, 1983). However, Ricciardelli & McCabe (2004) maintain that there is much need for research to assess the validity of body image scales for boys.

8.5 Strengths

There are a number of strengths inherent in the studies detailed in the previous chapters. The STARS prevention intervention has a strong theoretical basis in both its design and measurement. That is, the self-esteem enhancement programme was based upon the principles developed by Harter (1986, 1987) and her extensive research into the development of self-worth. Furthermore, the measurement of self-worth is derived from Harter's (1985) research, and its psychometric properties were verified in the current samples. Therefore, both

design and measurement are derived from the same principles and have been found to be reliable and valid. Indeed, it has been noted that many instruments designed to measure self-worth are atheoretical in nature (Keith, 1996). Other self-esteem interventions have not demonstrated the theoretical underpinning for their programme as derived from the self-esteem literature.

The evaluation of the STARS programme included the collection of both quantitative and qualitative data. There has been a lack of studies investigating the social validity of eating disorder prevention studies. Thus, these two studies provide a comprehensive evaluation of the STARS programme.

Both studies investigating the psychometric properties of the S-PPC and predictors of eating disturbances contribute to cross-cultural understandings in their respective areas. The S-PPC study was the first Australian study to investigate the psychometric properties of the S-PPC. The predictors' study was the second Australian longitudinal study and the first to include data from both Australian females and males. These studies make an important contribution to their respective fields as Butler and Gasson (2005, p. 199) recommend that as society and culture continue to change, self-esteem scales require regular psychometric updates "to maintain appropriate norms, validation and reliability..."

Finally and importantly, the studies improved upon methodological limitations of many earlier studies. Both the intervention evaluation chapter (Study 2) and the predictors of eating disturbances chapter (Study 4) utilised a methodological control for initial eating disturbances when conducting the analyses. Including an 8-month follow-up and the inclusion of males for the intervention evaluations were added improvements. Furthermore, the use of well-validated outcome measures strengthens the conclusions that can be drawn from the analyses.

8.7 Conclusions and Implications

In conclusion, an eating disturbance prevention programme based upon Harter's (1986, 1987) conceptualisation of self-worth, implemented with 237 Australian students aged 11 to 14 years was not effective. The lack of

intervention effects for the STARS programme does not necessarily suggest that using intervention strategies derived from Harter's determinants of self-worth is ineffective. Rather, there were a number of findings that encouraged the refining of this programme and further investigations into its efficacy. Firstly, the participants in Study 2 reported healthier eating attitudes/ behaviours and higher self-worth than normative samples, thereby compromising the capacity to detect intervention effects. Sampling a larger and more diverse sample would enable the effectiveness of the programme to be assessed more accurately. Furthermore, following the sample for longer, throughout the age of onset during high school would better equip the study to test intervention effects. The healthier attitudes and behaviours of participants in Study 2 also suggest that future research would benefit from identifying protective factors in the development of eating disturbances. In particular, investigating contextual differences, such as the influence school environment has on these attitudes and behaviours, could provide valuable information for future prevention studies.

Secondly, some of the fidelity threats experienced in Study 2 and 3 could be rectified in future studies by focusing efforts on engaging teachers to ensure their commitment and understanding of the importance of the programme. It also appears sensible to include consciousness raising activities in regard to teachers' own eating attitudes and body image to ensure that antithetical messages to the programme are not inadvertently conveyed. In the same vein, engaging and involving parents appears to be a productive avenue to reinforce messages that are explored in the school context at home, as qualitative data suggested that parents welcomed being more involved in the programme.

Finally, the multi-dimensional concept of self-esteem and designing the intervention around the *physical appearance* domain was supported. The five-factor structure of the S-PPC was confirmed with the Australian sample thereby substantiating the multi-dimensional concept of self-esteem. The S-PPC *physical appearance* subscale had the highest correlation with *global self-worth* scale when compared to other domains, thus supporting the focus of the STARS programme. Furthermore, qualitative data suggested that not only was the STARS programme enjoyable and useful; but participants, teachers and parents indicated that students' self-esteem had been enhanced through participation.

This finding was contrary to quantitative data demonstrating no improvement in self-esteem post intervention. The STARS programme could be modified to include some of the feedback from students, teachers and parents, such as ensuring sufficient time allocation for each module, clarifying Harter's (1986, 1987) model of self-esteem and employing more interactive group activities. Training of teachers should underscore the rationale for including the group and homework activities to make certain these social factors influencing self-representations are implemented. It also appears prudent to focus family prevention efforts on teasing about body size/shape in the home environment. Designing a programme to be implemented at different ages with content reflecting risk factors as they become developmentally more salient, emerges as a useful consideration for future programmes. This would necessitate more comprehensive prospective risk factors studies to identify the importance of certain risk factors at different ages.

It would be premature to conclude that a self-esteem approach to preventing eating pathology is ineffective based upon the lack of intervention effects in Study 2. This thesis demonstrates the importance of comprehensively evaluating a prevention intervention by not only assessing intervention effects but by assessing psychometric underpinnings of the programme, social validity and risk factor predictors. Incorporating the modifications and refinements suggested by these studies would provide a more optimum condition to attest to the efficacy of an eating disturbance prevention programme based upon Harter's (1986, 1987) determinants of self-worth.

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APPENDIX A

Recruitment Letters for Schools

Appendix A1: Recruitment Letter for Intervention Schools

[Date]

[Address]

Dear [Principal's Name]

RE: Permission to conduct research in [School's Name]: Enhancing Self-Esteem Project

The purpose of this letter is to invite you and your school to participate in a pilot of a new program, **Enhancing Self-Esteem Project** in 2002. This project is aimed at helping schools and parents to enhance self-esteem among primary school children.

The Importance of Self-Esteem

Many school principals and staff consider enhancing student self-esteem an important endeavour. Although there are numerous self-esteem programs available for implementation in schools, very few cite research supporting their efficacy. This new **Enhancing Self-Esteem Project** is aimed to fill this gap by firstly, developing the program from a sound theoretical and practical basis. Then secondly, ascertaining its efficacy using reliable measures and feedback.

There is ample research demonstrating the importance of self-esteem. Among school children, high self-esteem has been related to many positive outcomes such as higher school achievement, less eating disturbances and body dissatisfaction, greater life satisfaction, and fewer emotional and behavioural problems. On the other hand, low self-esteem has been related to psychological problems such as eating disorders, suicidal ideation and attempts, feelings of hopelessness and problematic use of alcohol and drugs.

The Program

In researching the content of this program physical appearance stood out in the literature as having a very strong relationship with global self-esteem. This relationship was stronger than other self-esteem domains such as scholastic competence, social acceptance, behavioural conduct and athletic competence. Therefore, a substantial component of this project is related to enhancing physical appearance self-esteem through building a positive sense of self and reducing body dissatisfaction. Self-esteem is not just an affective state. A sense of competence in areas that the child values is an important component of self-esteem. Thus, skills development in building personal competence, such as

communication skills, social problem solving and attribution styles, is another element of this project.

Research has shown that the transition period from primary school to high school is more likely to cause a re-evaluation of an individual's self-esteem than other periods in the schooling years. Therefore, this project is designed to fit the developmental needs of Year 7 students. Research also suggests it is essential that parents be included in effective school-based self-esteem intervention programs. Thus the project aims to include parents by communicating relevant information in the form of newsletters, encouraging parents to take part in suggested home activities with their child and incorporating their feedback from the intervention.

Healthway has provided funding for the Western Australian Centre for Health Promotion Research (WACHPR) at Curtin University to conduct this pilot. The Human Research Ethics Committee at Curtin University has also granted ethics approval for this project in compliance with the new Privacy Act. **We are inviting you and your school to participate in a study of this new program in 2002.**

What does the project involve?

To determine if the **Enhancing Self-Esteem Project** is effective, 6 primary schools will be randomly assigned to either an intervention or usual care control group. **Your school will be receiving the intervention project in 2002.** Instruments measuring self-esteem, body image and eating disturbances will be collected on three occasions from students over a 9-month period (see Table 1). Teachers and parents will also be required to complete questionnaires throughout this period. The school will receive a copy of the overall results of these surveys and individual results will be provided to parents of children who indicate that they are currently experiencing difficulties.

Table 1: Data Collection and Intervention Implementation Schedule

Condition	Baseline Wk beginning 5 th Aug Term 3 '02	Intervention Wk beginning 19 th Aug Term 3 '02	Posttest 1 Wk beginning 21 st Oct Term 4 '02	6mth Follow-up Yr 8, Term 2 2003
Enhancing Self-Esteem Program	O ₁	X ₁	O ₂	O ₃
Regular School Program	O ₁		O ₂	O ₃

O = Data collection
X = Intervention

This intervention will help schools meet the requirements of the Curriculum Framework and Student Outcome Statements. Support will be provided to these schools by the project team to implement these strategies, as part of staff training

and a training manual. The training will consist of a 1/2 day workshop involving information on the aims and the content of the program, role modelling of class activities and discussion. Funds are available to schools to pay for teacher relief during the training sessions.

The Benefits to your School

- Developing a better knowledge of students' self-esteem.
- The opportunity to provide your students with a *state of the art* self-esteem/resilience building program, which will help them in their school/personal life and the future.
- Obtaining program materials to keep as resources for cross-curricular learning areas.
- Participation in a health promotion project that provides resource materials and support, which is compatible with the Curriculum Framework.

The Commitments for your School

- Send Information and Consent forms to all parents of Year 7 students.
- Encourage parents and students to participate in the project.
- Provide time for pre-testing in term 3 (week beginning 12th August) and for post-testing in term 4 (week beginning 21st October), 2002.
- Support teacher training (week beginning 12th August) and implementation of the program.
- Provide time for the program to be run in term 3 2002.
- Encourage support for the program within the school as a whole.

Would you please advise Emily Townsend on (08) 9266 4032 at your earliest convenience as to whether this research project could proceed in your school.

Thank you for your attention to this matter.

Yours sincerely

Associate Professor Donna Cross
Principal Investigator
Enhancing Self-Esteem Project

WA Centre for Health Promotion Research
Curtin University of Technology

Marianne Poller
Project Coordinator
Enhancing Self-Esteem Project

School of Psychology
Curtin University of Technology

Appendix A2: Recruitment Letter for Control Schools

[Date]

[Address]

Dear [Principal's name]

RE: Permission to conduct research in [Name of School]: Enhancing Self-Esteem Project

The purpose of this letter is to invite you and your school to participate in a pilot of a new program, **Enhancing Self-Esteem Project** in 2002. This project is aimed at helping schools and parents to enhance self-esteem among primary school children.

The Importance of Self-Esteem

Many school principals and staff consider enhancing student self-esteem an important endeavour. Although there are numerous self-esteem programs available for implementation in schools, very few cite research supporting their efficacy. This new **Enhancing Self-Esteem Project** is aimed to fill this gap by firstly, developing the program from a sound theoretical and practical basis. Then secondly, ascertaining its efficacy using reliable measures and feedback.

There is ample research demonstrating the importance of self-esteem. Among school children, high self-esteem has been related to many positive outcomes such as higher school achievement, less eating disturbances and body dissatisfaction, greater life satisfaction, and fewer emotional and behavioural problems. On the other hand, low self-esteem has been related to psychological problems such as eating disorders, suicidal ideation and attempts, feelings of hopelessness and problematic use of alcohol and drugs.

The Program

In researching the content of this program physical appearance stood out in the literature as having a very strong relationship with global self-esteem. This relationship was stronger than other self-esteem domains such as scholastic competence, social acceptance, behavioural conduct and athletic competence. Therefore, a substantial component of this project is related to enhancing physical appearance self-esteem through building a positive sense of self and reducing body dissatisfaction. Self-esteem is not just an affective state. A sense of competence in areas that the child values is an important component of self-esteem. Thus, skills development in building personal competence, such as communication skills, social problem solving and attribution styles, is another element of this project.

Research has shown that the transition period from primary school to high school is more likely to cause a re-evaluation of an individual's self-esteem than other periods in the schooling years. Therefore, this project is designed to fit the developmental needs of year 7 students. Research also suggests it is essential that parents be included in effective school-based self-esteem intervention programs. Thus the project aims to include parents by communicating relevant information in the form of newsletters, encouraging parents to take part in suggested home activities with their child and incorporating their feedback from the intervention.

Healthway has provided funding for the Western Australian Centre for Health Promotion Research (WACHPR) at Curtin University to conduct this pilot. The Human Research Ethics Committee at Curtin University has also granted ethics approval for this project in compliance with the new Privacy Act. **We are inviting you and your school to participate in a study of this new program in 2002**

What does the project involve?

To determine if the **Enhancing Self-Esteem Project** is effective, 6 primary schools will be randomly assigned to either an intervention or usual care control group. **Your school will be receiving the intervention materials in 2003 and participate as a control school in 2002.** Instruments measuring self-esteem, body image and eating disturbances will be collected on three occasions from students over a 9-month period (see Table 1). Teachers and parents will also be required to complete questionnaires throughout this period. The school will receive a copy of the overall results of these surveys and individual results will be provided to parents of children who indicate that they are currently experiencing difficulties.

Table 1: Data Collection and Intervention Implementation Schedule

Condition	Baseline Wk beginning 5 th Aug Term 3 '02	Intervention Wk beginning 19 th Aug Term 3 '02	Posttest 1 Wk beginning 21 st Oct Term 4 '02	6mth Follow-up Yr 8, Term 2 2003
Enhancing Self-Esteem Program	O ₁	X ₁	O ₂	O ₃
Regular School Program	O ₁		O ₂	O ₃

O = Data collection
X = Intervention Group

This intervention will help schools meet the requirements of the Curriculum Framework and Student Outcome Statements. Support will be provided to these schools by the project team to implement these strategies, as part of staff training and a training manual. The training will consist of a 1/2 day workshop involving

information on the aims and the content of the program, role modelling of class activities and discussion. Control group schools such as yourselves will have the intervention materials made available to them without training in 2003.

The Benefits to your School

- Developing a better knowledge of students' self-esteem.
- The opportunity to provide your students with a *state of the art* self-esteem/resilience building program, which will help them in their school/personal life and the future.
- Obtaining program materials to keep as resources for cross-curricular learning areas.
- Participation in a health promotion project that provides resource materials and support, which is compatible with the Curriculum Framework.

The Commitments for your School

- Send Information and Consent forms to all parents of Year 7 students.
- Encourage parents and students to participate in the project.
- Provide time for pre-testing in term 3 (week beginning 12th August) and for post-testing in term 4 (week beginning 21st October), 2002.

Would you please advise Emily Townsend on (08) 9266 4032 at your earliest convenience as to whether this research project could proceed in your school.

Thank you for your attention to this matter.

Yours sincerely

Associate Professor Donna Cross
Principal Investigator
Enhancing Self-Esteem Project

WA Centre for Health Promotion Research
Curtin University of Technology

Marianne Poller
Project Coordinator
Enhancing Self-Esteem Project

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APPENDIX B

Calculations for Number of Schools Required

School-Based Intervention Studies: Determining the Number of Students and the Number of Schools

Preamble

The following discussion applies to studies in which schools are randomly (or quasi-randomly) allocated to one or more intervention conditions & one or more control conditions, and the intervention is then delivered to an intact group of students (a class) within each school. In these studies then, 'classes' must be treated as a random nested factor in the research design. Many variations in this type of nested design have been used in school-based intervention studies. At the heart of many of these designs, however, lies the critical comparison between the intervention condition and the control condition. This comparison normally uses post-intervention scores on the outcome measure as the DV (these scores are obtained either at post-test or follow-up), and the pre-test scores on the outcome measure (plus other explanatory variables such as gender & age) as covariates. The following discussion focuses on a procedure for estimating the number of classes (and therefore schools) per condition required to capture a real intervention effect with the two-group nested ANCOVA model described above.

Procedure (for each outcome variable)

- Nominate a per-test α -level & compute $t_{\alpha/2}$
At the conventional per-test α -level of .05, $t_{\alpha/2} = t_{.025} = 1.96$
At the reduced per-test α -level of .02, $t_{\alpha/2} = t_{.01} = 2.326$
At the reduced per-test α -level of .01, $t_{\alpha/2} = t_{.005} = 2.576$

Conventional per-test α -level assumed; therefore: $t_{\alpha/2} = t_{.025} = 1.96$

- Set power at .8 & compute $t_{1-\beta}$
At a power of .8, $\beta = .2$, and therefore $t_{1-\beta} = t_{.8} = 0.84$

$$t_{1-\beta} = t_{.8} = 0.84$$

- Estimate σ^2
 σ^2 represents the *total* variance for the outcome measure (i.e., $\sigma^2 = \sigma^2_{\text{within}} + \sigma^2_{\text{between}}$) This parameter was estimated on the basis of data from relevant previous research.

$$\sigma^2 = 44.59.$$

- Estimate Δ
 Δ is the hypothesised difference between the two condition means. This parameter was estimated on the basis of data from relevant previous research.

Given the variability in EAT scores observed in a previous study, $\Delta = 2.25$ represents a ‘moderate’ intervention effect. Because I’m only interested in capturing ‘moderate’ to ‘large’ intervention effects, Δ was set at 2.25.

- Estimate n
 n represents the estimated number of students available for testing in each of the classes.

$n = 25$ say.

- Estimate the ICC
 The ICC (the intra-class correlation) = $(MS_{\text{class}} - MS_{\text{error}}) / (MS_{\text{class}} + [n - 1]MS_{\text{error}})$. This parameter was estimated on the basis of data from relevant previous research.

There were no data for estimating the degree of intra-class dependency in the post-intervention CHEAT data. In the Aussie Optimism school-based intervention studies, however, ICCs less than .2 (much less in most cases) have been observed for other psychological outcomes. Therefore, assume an ICC of 0.2 for CHEAT.

- Estimate f
 $f = (1 - R^2)$, where R is the multiple correlation between the outcome measure and the set of covariates. Once again, this parameter was estimated on the basis of data from relevant previous research.

There were no data for estimating f in the post-intervention CHEAT data. In the Aussie Optimism school-based intervention studies, however, f values averaging 0.6 have been observed for other psychological outcomes with pre-test scores and gender as student-level covariates. Therefore, assume an f value of 0.6 for CHEAT.

- Estimate ν
 ν is the number of measurement occasions under scrutiny. For the two-group nested ANCOVA model, each measurement occasion is examined independently of the others, so $\nu = 1$.

$\nu = 1$.

To estimate the number of classes (m) in each of the two conditions (intervention versus control), the above estimates are plugged into the following generic formula:

$$m = [(t_{\alpha/2} + t_{1-\beta})^2 2\sigma^2 (1 + (n - 1) ICC \nu f)] / n\Delta^2$$

The calculations reveal that 32 Grade 7 classes are required in each condition for an 80% chance of detecting ‘medium’ to ‘large’ intervention effects at an alpha-level of .05.

APPENDIX C

The Student Questionnaire

CONFIDENTIAL SURVEY

Dear Year 8 Student

As you may remember from last year, The Western Australian Centre for Health Promotion Research and the School of Psychology at Curtin University is using this survey to find out how students feel about themselves.

We are interested in what each of you is like, what kind of a person you are. Since kids are very different from one another, each of you will be putting down something different.

All your answers will be kept private. The only people to see them will be the researchers from Curtin University, except if the answers show that things are not going well for you at present. If your answers show that you are feeling distressed then we will contact your parents, so that they can help you.

This is not a test and there are no right or wrong answers. Please answer all the questions as honestly as you can. We are very interested in what you have to say. If you don't want to answer any questions, you don't have to.

If you have any questions about the survey, please ask the research assistant visiting your class.

Marianne Poller
Enhancing Self-esteem Project

Instructions

We have some sentences here and, for each sentence you will be asked to pick a response by ticking a box. First let me explain how these questions work. There is a sample question below, marked (a). This question talks about two kinds of kids, and we want to know which kids are most like you.

So, what I want you to decide first is whether you are more like the kids on the left side who would rather play outdoors, or whether you are more like the kids on the right side who would rather watch T.V. Don't mark anything yet, but first decide which kind of kid is most like you, and go to that side of the sentence.

Now, the second thing I want you to think about, now that you have decided which kind of kids are most like you, is to decide whether that is only sort of true for you, or really true for you. If it's only sort of true, then put a tick in the box under sort of true; if it's really true for you, then put a tick in that box, under really true.

For each sentence you only tick one box. Sometimes it will be on one side of the page, another time it will be on the other side of the page, but you can only tick one box for each sentence. You don't tick both sides, just the one side most like you.

OK, that one was just for practice. Now we have some more sentences. For each one, just tick one box, the one that goes with what is true for you, what you are most like.

Example:

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
a)	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would rather play outdoors in their spare time	BUT	Other kids would rather watch T.V.	<input type="checkbox"/>	<input type="checkbox"/>

Great! Let's start the survey.

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
1.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel that they are very <i>good</i> at their school work	BUT	Other kids <i>worry</i> about whether they can do the school work assigned to them.	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids find it <i>hard</i> to make friends	BUT	Other kids find it's pretty <i>easy</i> to make friends.	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do very <i>well</i> at all kinds of sports.	BUT	Other kids <i>don't</i> feel that they are very good when it comes to sports.	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are <i>happy</i> with the way they look	BUT	Other kids are <i>not</i> happy with the way they look.	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids often do <i>not</i> like the way they behave	BUT	Other kids usually <i>like</i> the way they behave.	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are often <i>unhappy</i> with themselves	BUT	Other kids are pretty <i>pleased</i> with themselves.	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel like they are <i>just as smart</i> as other kids their age.	BUT	Other kids aren't so sure and <i>wonder</i> if they are as smart.	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids have <i>a lot</i> of friends	BUT	Other kids <i>don't</i> have very many friends.	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish they could be a lot better at sports.	BUT	Other kids feel they are good enough at sports.	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are <i>happy</i> with their height and weight	BUT	Other kids wish their height or weight were different.	<input type="checkbox"/>	<input type="checkbox"/>
11.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids usually do the <i>right</i> thing	BUT	Other kids often <i>don't</i> do the right	<input type="checkbox"/>	<input type="checkbox"/>

	Really True for me	Sort of True for me			Sort of True for me	Really True for me
				thing.		
12.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids <i>don't</i> like the way they are leading their life	BUT	Other kids <i>do</i> like the way they are leading their life.	<input type="checkbox"/>
13.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are pretty <i>slow</i> in finishing their school work	BUT	Other kids can do their school work <i>quickly</i> .	<input type="checkbox"/>
14.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would like to have a lot more friends	BUT	Other kids have as many friends as they want.	<input type="checkbox"/>
15.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think they could do well at just about any new sports activity they haven't tried before	BUT	Other kids are afraid they might not do well at sports they haven't ever tried.	<input type="checkbox"/>
16.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish their body was different	BUT	Other kids like their body the way it is.	<input type="checkbox"/>
17.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids usually act the way they know they are supposed to	BUT	Other kids often don't act the way they are supposed to.	<input type="checkbox"/>
18.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are happy with themselves as a person	BUT	Other kids are often not happy with themselves.	<input type="checkbox"/>
19.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids often forget what they learn	BUT	Other kids can remember things easily.	<input type="checkbox"/>
20.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are always doing things with a lot of kids	BUT	Other kids usually do things by themselves.	<input type="checkbox"/>
21.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel that they are better than others their age at sports	BUT	Other kids don't feel they can play as well.	<input type="checkbox"/>
22.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish their physical appearance (how they look) was	BUT	Other kids like their physical appearance the way it is.	<input type="checkbox"/>

	Really True for me	Sort of True for me			Sort of True for me	Really True for me
			different			
23.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids usually get in trouble because of things they do	BUT	Other kids usually don't do things that get them in trouble.	<input type="checkbox"/>
24.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids like the kind of person they are	BUT	Other kids often wish they were someone else.	<input type="checkbox"/>
25.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do very well at their classwork	BUT	Other kids don't do very well at their classwork.	<input type="checkbox"/>
26.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish that more people their age like them	BUT	Other kids feel that most people their age do like them.	<input type="checkbox"/>
27.	<input type="checkbox"/>	<input type="checkbox"/>	In games and sports some kids usually watch instead of play	BUT	Other kids usually play rather than just watch.	<input type="checkbox"/>
28.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish something about their face or hair looked different	BUT	Other kids like their face and hair the way they are.	<input type="checkbox"/>
29.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do things they know they shouldn't do	BUT	Other kids hardly ever do things they know they shouldn't do.	<input type="checkbox"/>
30.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are very happy being the way they are	BUT	Other kids wish they were different.	<input type="checkbox"/>
31.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids have trouble figuring out the answers in school	BUT	Other kids almost always can figure out the answers.	<input type="checkbox"/>
32.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are popular with others their age	BUT	Other kids are not very popular.	<input type="checkbox"/>

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
33.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't do well at new outdoor games	BUT	Other kids are good at new games right away.	<input type="checkbox"/>	<input type="checkbox"/>
34.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think that they are good looking	BUT	Other kids think that they are not very good looking.	<input type="checkbox"/>	<input type="checkbox"/>
35.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids behave themselves very well	BUT	Other kids often find it hard to behave themselves.	<input type="checkbox"/>	<input type="checkbox"/>
36.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are not very happy with the way they do a lot of things	BUT	Other kids think the way they do things is fine.	<input type="checkbox"/>	<input type="checkbox"/>

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
37.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think it is important to do well at schoolwork in order to feel good as a person	BUT	Other kids don't think how well they do at schoolwork is that important.	<input type="checkbox"/>	<input type="checkbox"/>
38.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't think that having a lot of friends is all that important	BUT	Other kids think that having a lot of friends is important to how they feel as a person.	<input type="checkbox"/>	<input type="checkbox"/>
39.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think it's important to be good at sports	BUT	Other kids don't think how good you are at sports is that important.	<input type="checkbox"/>	<input type="checkbox"/>
40.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think it's important to be good looking in order to feel good about themselves	BUT	Other kids don't think that's very important at all.	<input type="checkbox"/>	<input type="checkbox"/>
41.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think it's important to behave the way they should	BUT	Other kids don't think that how they behave is that	<input type="checkbox"/>	<input type="checkbox"/>

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
				important.			
42	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't think that getting good grades is all that important to how they feel about themselves	BUT	Other kids think that getting good grades is important.	<input type="checkbox"/>	<input type="checkbox"/>
43	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think it's important to be popular	BUT	Other kids don't think being popular is all that important to how they feel about themselves.	<input type="checkbox"/>	<input type="checkbox"/>
44	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't think doing well at athletics is that important to how they feel about themselves as a person	BUT	Other kids feel that doing well at athletics is important.	<input type="checkbox"/>	<input type="checkbox"/>
45	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't think that how they look is important to how they feel about themselves as a person.	BUT	Other kids think how they look is important.	<input type="checkbox"/>	<input type="checkbox"/>
46	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't think that how they act is all that important	BUT	Other kids think it's important to act the way you are supposed to.	<input type="checkbox"/>	<input type="checkbox"/>

(Self-Perception Profile for Children, Harter, 1985)

Instructions

When you answer the next questions, I want you to answer them in a different way. Instead of ticking a box, I want you to circle a response that most applies to you. If you change your answer, put a cross through the wrong answer and then circle the correct answer.

47. Has your weight changed during the past six months?
(please circle ONE number)

a. Gone up a lot (more than 3kg/ 1/2 stone)	1
b. Stayed about the same	2
c. Gone down a lot (more than 3kg/1/2 stone)	3

48. Have you ever dieted to lose weight?
(please circle ONE number)

a. Yes	1
b. No	2

49. Are you on a diet at present?
(please circle ONE number)

a. Yes	1
b. No	2

50. Which of these sentences best describes you?
(please circle ONE number)

I feel far too thin	1
I feel a bit too thin	2
I feel about just right	3
I feel a bit too fat	4
I feel far too fat	5

51. In the last 4 weeks have you been teased in a hurtful way about your body size or shape? (circle ONE number for each statement)

Teased in hurtful ways:	Many Times	A few times	Never
a) By kids at school	1	2	3
b) By adults at school	1	2	3
c) By kids at home	1	2	3
d) By adults at home	1	2	3
e) By other people (not at school or home)	1	2	3

52. In the last 4 weeks have you ever teased other people about their body size or shape in a hurtful way? (please circle ONE number)

a. Yes	1
b. No	2

Instructions

Great! You're all doing really well. The next part will be asking you questions about your attitude to eating. When you answer the next questions, I want you to answer them in a slightly different way. Please read each sentence and decide if the sentence is never true, rarely true, sometimes true, often true, very often true or always true. Circle the number that shows how true each sentence is for you.

If you change your answer, put a cross through the wrong answer and then circle the correct answer. Let's begin.

	Never	Rarely	Some- times	Often	Very often	Always
53. I am scared about being overweight	1	2	3	4	5	6
54. I stay away from eating when I'm hungry	1	2	3	4	5	6
55. I think about food a lot of the time.	1	2	3	4	5	6

	Never	Rarely	Some- times	Often	Very often	Always
56. I have gone on eating binges where I feel I might not be able to stop.	1	2	3	4	5	6
57. I cut my food into small pieces.	1	2	3	4	5	6
58. I am aware of the energy content in foods.	1	2	3	4	5	6
59. I try to stay away from such foods as breads, potatoes, and rice.	1	2	3	4	5	6
60. I feel others would like me to eat more.	1	2	3	4	5	6
61. I vomit after I have eaten.	1	2	3	4	5	6
62. I feel guilt after eating.	1	2	3	4	5	6
63. I think a lot about wanting to be thinner.	1	2	3	4	5	6
64. I think about burning up energy when I exercise.	1	2	3	4	5	6
65. Other people think I am too thin.	1	2	3	4	5	6
66. I think a lot about having fat on my body.	1	2	3	4	5	6
67. I take longer than others to eat my meals.	1	2	3	4	5	6
68. I stay away from foods with sugar in them.	1	2	3	4	5	6
69. I eat diet foods.	1	2	3	4	5	6
70. I think that food controls my life.	1	2	3	4	5	6
71. I can show self-control around food.	1	2	3	4	5	6
72. I feel that others pressure me to eat.	1	2	3	4	5	6

	Never	Rarely	Some- times	Often	Very often	Always
73. I give too much time and thought to food.	1	2	3	4	5	6
74. I feel uncomfortable after eating sweets.	1	2	3	4	5	6
75. I have been dieting.	1	2	3	4	5	6
76. I like my stomach to be empty.	1	2	3	4	5	6
77. I enjoy trying new rich foods.	1	2	3	4	5	6
78. I have the urge to vomit after eating.	1	2	3	4	5	6

(Children's Eating Attitudes Test, Maloney et al, 1988)

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	Never	Rarely	Some- times	Often	Usually	Always
79. I eat sweets and carbohydrates without feeling nervous.	1	2	3	4	5	6
80.	1	2	3	4	5	6
81.	1	2	3	4	5	6
82.	1	2	3	4	5	6
83.	1	2	3	4	5	6
84.	1	2	3	4	5	6
85.	1	2	3	4	5	6
86. I think that my stomach is too big.	1	2	3	4	5	6
87.	1	2	3	4	5	6
88.	1	2	3	4	5	6
89.	1	2	3	4	5	6
90.	1	2	3	4	5	6
91.	1	2	3	4	5	6
92.	1	2	3	4	5	6
93.	1	2	3	4	5	6
94. I think that my hips are just the right size.	1	2	3	4	5	6

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95. Are you a boy or a girl?
(please circle one number)

a. Boy	1
b. Girl	2

96 What is your postcode?

97 What is your date of birth:
Day Month Year

98 What is your height: _____ (cms)

99 What is your weight: _____ (kgs)

THANK YOU VERY MUCH FOR FILLING OUT THIS SURVEY

APPENDIX D

The Parent Questionnaire

	Intervention Group	Control Group
Pre-test	Qu. 1 – 14	Qu. 1 - 14
Post-test	Qu. 1 – 14 & 18 - 27	Qu. 1 - 14
8-month Follow-up	Qu. 1 – 17	Qu. 1 - 17

Enhancing Self-Esteem Project

Parent/Caregiver Questionnaire & Evaluation Form

Students in year seven at [insert school] have now completed the Enhancing Self-Esteem Project as part of their Health Education lessons. We are interested in what parents thought about the program and the effects of the program on their child. Below are a series of questions. Please write your answers in the spaces or circle the number that best reflects your answer where appropriate.

Your Full Name: _____

Your Current address: _____

Phone: _____

Your year 7 child's name: _____

Your year 7 child's sex: (please circle)

- I. Male II. Female

Your year 7 child's ethnicity: _____

Your year 7 child's date of birth: _____

What school will your child be attending in 2003: _____

What is your child's height: _____

How much does your child weigh? _____

Has your child's weight changed in the past six months? (please circle)

- I. Gone up a lot (more than 3 kg/ 1/2 stone)
II. Stayed about the same
III. Gone down a lot (more than 3kg/ 1/2 stone)

Does your child diet? (please circle)

- II. Yes
III. No

Is your child on a diet at present? (please circle)

- I. Yes
II. No

Which of these best describes your child? (please circle)

- I. Far too thin IV. A bit too fat
II. A bit too thin V. Far too fat
III. About just right

How satisfied were you with the content covered in the program?

Not at all satisfied				Very satisfied
1	2	3	4	5

How much has your child talked with you about the program?

None				A great deal
1	2	3	4	5

How useful was the program for developing a positive self-esteem in your child?

Not at all useful				Very useful
1	2	3	4	5

How useful was the program for developing a positive body image in your child?

Not at all useful				Very useful
1	2	3	4	5

To what extent have you noticed positive changes in your child since participating in the program?

None				A great deal
1	2	3	4	5

To what extent have you noticed negative changes in your child since participating in the program?

None				A great deal
1	2	3	4	5

How consistent is the program with the values you hold?

Not at all				A great deal
1	2	3	4	5

Please rate the usefulness of each of the parent newsletter items you received:

	Not useful					Useful				
1. Self-Esteem	1	2	3	4	5	6	7	8	9	10
2. Self-Talk	1	2	3	4	5	6	7	8	9	10
3. Teasing	1	2	3	4	5	6	7	8	9	10

Overall, how would you rate the program?

Not at all useful				Very useful
1	2	3	4	5

We would welcome any other comments you have about the program. Please write in the space below:

Thank you for your support of the Enhancing Self-Esteem Project at [insert school].

Please return this form to your son / daughter's class teacher no later than the **[insert date]**.

APPENDIX E

The Teacher Questionnaire

Teacher Questionnaire: “What I am Like”

These are statements which allow people to describe themselves. There are no right or wrong answers since people differ markedly. Please read the entire sentence across. *First* decide which one of the two parts of each statement *best describes* you, then go to that side of the statement and check whether that is just *sort of true* for you or *really true* for you. You will only check ONE of the four boxes for each statement.

	Really True for me	Sort of True for me		Sort of True for me	Really True for me		
1.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults like the way they are leading their lives.	BUT	other adults don't like the way they are leading their lives.	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults feel that they are enjoyable to be with	BUT	other adults often question whether they are enjoyable to be with.	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	In games and sports some adults usually watch instead of play	BUT	other adults usually play rather than just watch.	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults are happy with the way they look	BUT	other adults are not happy with the way they look.	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults live up to their own moral standards	BUT	other adults have trouble living up their moral standards.	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults are very happy being the way they are	BUT	other adults would like to be different.	<input type="checkbox"/>	<input type="checkbox"/>

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
7.	<input type="checkbox"/>	<input type="checkbox"/>	When some adults don't understand something, it makes them feel stupid	BUT	other adults don't necessarily feel stupid when they don't understand.	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults feel uncomfortable when they have to meet new people	BUT	other adults like to meet new people.	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults sometimes question whether they are a worthwhile person	BUT	other adults feel that they are a worthwhile person.	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults think they could do well at just about any new physical activity they haven't tried before	BUT	other adults are afraid they might not do well at physical activities they haven't ever tried.	<input type="checkbox"/>	<input type="checkbox"/>
11.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults think that they are not very attractive or good looking	BUT	other adults think that they are attractive or good looking.	<input type="checkbox"/>	<input type="checkbox"/>
12.	<input type="checkbox"/>	<input type="checkbox"/>	Some adult would like to be a better person morally	BUT	other adults think that they are quite moral.	<input type="checkbox"/>	<input type="checkbox"/>
13.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults feel that they are intelligent	BUT	other adults question whether they are very intelligent.	<input type="checkbox"/>	<input type="checkbox"/>
14.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults are disappointed with themselves	BUT	other adults are quite pleased with themselves.	<input type="checkbox"/>	<input type="checkbox"/>

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
15.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults feel at ease with other people	BUT	other adults are quite shy.	<input type="checkbox"/>	<input type="checkbox"/>
16.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults do not feel that they are very good when it comes to sports	BUT	other adults feel they do very well at all kinds of sports.	<input type="checkbox"/>	<input type="checkbox"/>
17.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults like their physical appearance the way it is	BUT	other adults do not like their physical appearance.	<input type="checkbox"/>	<input type="checkbox"/>
18.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults are dissatisfied with themselves	BUT	other adults are satisfied with themselves.	<input type="checkbox"/>	<input type="checkbox"/>
19.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults usually do what they know is morally right	BUT	other adults often don't do what they know is morally right.	<input type="checkbox"/>	<input type="checkbox"/>
20.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults do not feel that they are very intellectually capable	BUT	other adults feel that they are intellectually capable.	<input type="checkbox"/>	<input type="checkbox"/>
21.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults are not very sociable	BUT	other adults are sociable.	<input type="checkbox"/>	<input type="checkbox"/>
22.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults like the kind of person they are	BUT	other adults would like to be someone else.	<input type="checkbox"/>	<input type="checkbox"/>
23.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults feel they are better than others their age at sports	BUT	other adults don't feel they can paly as well.	<input type="checkbox"/>	<input type="checkbox"/>

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
24.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults are unsatisfied with something about their face or hair	BUT	other adults like their face and hair the way they are.	<input type="checkbox"/>	<input type="checkbox"/>
25.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults often question the morality of their behaviour	BUT	other adults feel that their behaviour is usually moral.	<input type="checkbox"/>	<input type="checkbox"/>
26.	<input type="checkbox"/>	<input type="checkbox"/>	Some adults feel like they are just as smart as other adults	BUT	other adults wonder if they are as smart.	<input type="checkbox"/>	<input type="checkbox"/>

(Adult Self-Perception Profile, Messer & Harter, 1986)

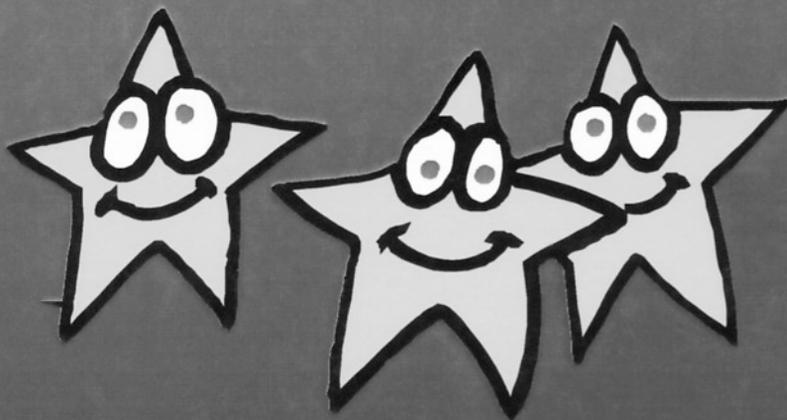
How Important is it to you?	Very Important	Pretty Important	Only sort of Important	Not very Important
27. To be sociable/at ease with others	_____	_____	_____	_____
28. To be good at physical activities	_____	_____	_____	_____
29. To be good looking.	_____	_____	_____	_____
30. To be moral	_____	_____	_____	_____
31. To be intelligent	_____	_____	_____	_____
32. Are you a male or female? (please circle one number)				
a. Male	1			
b. Female	2			

THANK YOU for your contribution and participation in the Enhancing Self-Esteem Project.

APPENDIX F

The Straight Talking about Resilience & Self-Esteem (STARS) Manual

STARS



STRAIGHT TALKING ABOUT
RESILIENCE & SELF-ESTEEM

TEACHER MANUAL YEAR 7

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INTRODUCTION

What does the STARS Project aim to achieve?

Straight Talking About Resilience and Self-esteem

The **STARS Project** is a pilot project, funded by Healthway and is being conducted by Curtin University's School of Psychology and the Western Australian Centre for Health Promotion Research. Most educators consider enhancing student self-esteem an important endeavour. Despite the number of resources available to schools that focus on self-esteem there is limited research and clinical information available to ascertain the efficacy of these resources. Thus, the aim of the **STARS Project** is to assess the effectiveness of an intervention designed with strong theoretical underpinnings, aimed at enhancing self-esteem. Following approximately 300 Year 7 students, their teachers and parents will achieve this in 2002.

What is Self-esteem?

Most people have a sense of what self-esteem is but definitions offered by educators, psychologists and theorists vary widely. The major theoretical underpinnings for the strategies utilised in this project is based upon a well-validated self-esteem model developed by Susan Harter and colleagues (Harter, 1987)(see figure 1). Using her model, self-esteem or self-worth is the *level of global regard that someone has for himself or herself as a person*. This global regard is made up of more specific self-evaluations.

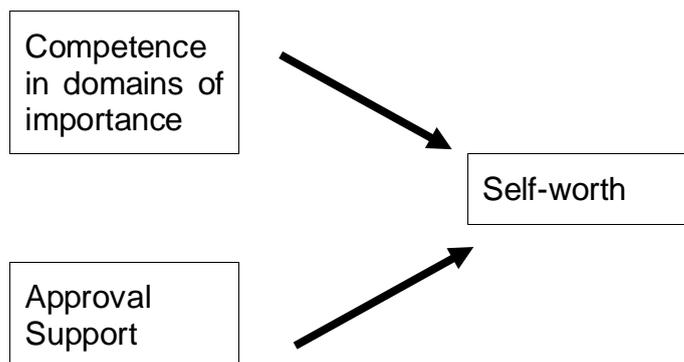


Figure 1: Harter's original model of the determinants of self-worth (Source: Harter, 1987, p. 223)

As can be seen in Harter's model the specific self-evaluation is determined in two distinct ways. Firstly, self-esteem is determined by an evaluation that a person makes regarding their perceived competencies. These areas of competency can be summarised for children in five different domains: physical appearance, social acceptance, athletic ability, academic ability and behavioural conduct. The evaluation is mediated by the personal importance placed on each of these domains. Therefore, if an individual's perceived

competencies are equal to or greater than the importance they place upon these competencies then their self-esteem will be high. For example if a child considers themselves to be a good student and they also value academic success then their academic self-esteem will be positive. Alternatively a child who thinks they are unattractive and values being attractive above all else will as a result have a low self-esteem.

Secondly, self-esteem is determined by the perceived approval or disapproval of others (Harter, 1993). Therefore, if an individual believes they receive little positive regard from significant others (i.e. parents, teachers and peers) their self-esteem will be lower than those who believe they gain more positive regard. Children begin to build a picture of themselves by a) the imagination of their appearance to other people, b) the imagination of other people's judgement of their appearance and c) how this makes them feel (Harter, 1998, p. 555). This is a developmental process, and by adulthood this socially derived notion of the self becomes internalised whereby it is no longer entirely dependent upon what others think.

Why is Self-esteem important?

How children feel about themselves is very important. It can affect many aspects of their lives including schooling, peer and family relationships and psychological well being. People with high self-esteem report; *greater life satisfaction* (Myers & Diener, 1995); *higher school achievement* (Covington, 1989; Marsh, 1990); *less anxiety* (Pyszczynski & Greenberg, 1987); *less feelings of hopelessness* (Crocker, Luhtanen, Blaine, & Broadnax, 1994); *fewer depressive symptoms* (Tennen & Herzberger, 1987) and *fewer emotional and behavioural problems* (DuBois, Bull, Sherman, & Roberts, 1998) than people with low self-esteem. On the other hand, low levels of self-esteem have been related to: *more severe signs of eating disorders and other psychological problems* (Button, Sonuga-Barke, Davies, & Thompson, 1996); *thinking about or attempting suicide in young people* (Roberts, Roberts, & Chen, 1998); *feelings of hopelessness or negative expectations about the future* (Hewitt, Newton, Flett, & Callander, 1997); *risk of adolescent pregnancy* (Crocker & Soby, 1989); and *problematic use of alcohol and drugs* (Skager & Kerst, 1989).

What is the main focus?

The self-esteem model presented in this project suggests two avenues for enhancing self-esteem. The first approach is to address the competencies in domains of importance. Many studies both in Australia and internationally, have found that the domain of physical appearance is the strongest predictor of global self-worth. This relationship has been found to be extremely robust across the entire age range and gender. Therefore, enhancing self-esteem in the area of physical appearance is a significant focus of this project. Strategies will involve reducing the discrepancy between perceived competency and importance in this domain, encouraging relatively accurate self-evaluations and attending to theories about the cause of self-representations.

The second approach is to address the support and approval determinant of self-esteem. This project is designed to include many opportunities for students to share their ideas and feelings in small groups. These types of opportunities can enhance support and approval. Securing support from others is not always possible, so skills development in internalising realistic and positive opinion of the self will dissuade children from relying too heavily on the opinions of others.

What does the STARS Project Involve?

The Enhancing STARS Project aims to enhance self-esteem in a Health Promoting Schools framework. The intervention includes:

- 10 classroom-based lessons for Year 7 students, to be integrated in the Health and Physical Education Learning Area of the Curriculum Framework;
- Parent newsletter items summarising the most important points of the classroom lessons and tips parents can employ in supporting their child.

All sessions are outcomes-based and have been developed to be consistent with Learning Area Statements in the Curriculum Framework published by the Curriculum Council of Western Australia.

OVERVIEW: STARS PROJECT

STARS SESSION	Key Message
STARS Session 1 Self-esteem	Self-esteem is the way we feel about ourselves. We compare how we see ourselves in all areas of our life with what is important to us, and the feedback we get from others. Healthy self-esteem is about accepting yourself as you are and feeling comfortable with yourself.
STARS Session 2 Self-image	The self-image is the collection of thoughts we have about who we are and what we can do. We build our self-image by discovering as much about ourselves as possible. We gather this information by looking at our features and abilities in all our Image Areas.
STARS Session 3 Self-image and the media	The importance we place on an image area can be out of balance. Our self-image can be tricked by feedback from outside (e.g. media) so that our image is unrealistic.
STARS Session 4 Body Image	We admire people for many reasons but often focus more heavily on the way people look and what we see in media images than what is real. People who are successful in life and achieve their goals have many different qualities.
STARS Session 5 Self-talk	Self-talk affects the way we feel and how we behave. Challenge the negative 'pest' thoughts with more realistic, helpful and positive self-talk.
STARS Session 6 Loving Ourselves from the Inside Out	It is very important to show yourself love and care. When we nurture our bodies on the inside we feel and look healthier and happier on the outside.
STARS Session 7 Reach for the Stars	We learn by taking challenges and having-a-go. Mistakes and obstacles are part of the process of reaching your goals. Setting goals helps you to plan for new challenges and achieve your goals.
STARS Session 8 Know your Values	We use our 'values' to judge our self-image. We value some areas of our life as more important than others, and what we value changes over time. We also decide what is important by how we think other people value us, in the different areas of our life.
STARS Session 9 Taming Teasing	Teasing is a problem if the person being teased is hurt by it and cannot stop it from happening. You don't have to put up with teasing.
STARS Session 10	Review of the STARS sessions and student reflection on their own self-esteem.

Stars Self-esteem	
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STARS PROJECT MATERIALS

The STARS TEACHER MANUAL

The *STARS Teacher Manual* – Is designed for teachers of students in Year 7 and contains classroom-based curriculum to be integrated into the Health and Physical Education Learning Area of the Curriculum Framework. Each manual contains descriptions of ten sessions including learning activities, home activities, background information and resource masters. Resources needed to teach the learning activities within each session are included, such as role-play cards and game packs. Reference to these resources is made within the session plans.

The STARS STUDENT ACTIVITY MANUAL

The *STARS Student Activity Manual* contains Information Sheets, Activity Sheets and Resource Sheets for the ten sessions in the Teachers Manual. The Student Activity Manual is designed for student use during each of the ten sessions. The Student Activity Manual provides a record of students' knowledge and application of the concepts and skills taught in each session.

The STARS NEWSLETTER ITEMS

Three newsletter items are provided for schools to insert into their school newsletter.

SESSION LAYOUT

Each STARS session contains the following:

- **Links to the Curriculum Framework**

This resource is outcomes-based and has been developed to be consistent with the Health and Physical Education Learning Area Statement contained in the Curriculum Framework published by the Curriculum Council of WA. Each session addresses the following four outcomes of the Health and Physical Education Learning Area:

Knowledge and understandings:

Students know and understand health and physical activity concepts that enable informed decisions for a healthy, active lifestyle.

Attitudes and values:

Students exhibit attitudes and values that promote personal, family and community health, and participation in physical activity.

Self-management skills:

Students demonstrate self-management skills, which enable them to make informed decisions for healthy, active lifestyles.

Interpersonal skills:

Students demonstrate the interpersonal skills necessary for effective relationships and healthy, active lifestyles.

Specific outcomes linked to the Health and Physical Education Learning Area Outcomes are described at beginning of each session. For example:



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Describing the different components of the development of self-esteem.
- Assessing the factors that influence the development of self-esteem.

Attitudes and values:

- Recognising the use of a person's set of values in developing self worth.

Self-management skills:

- Identifying their personal strengths and weaknesses in areas related to their self-image.
- Assessing how their strengths and weaknesses contribute to the development of their self-esteem.

Interpersonal skills:

- Collaborating effectively with others in small groups to identify the questions young people ask about themselves.

- **Purpose**

An outline of the knowledge, attitudes and skills to be developed in the session.

- **Preparation**

A list of resources and teacher sheets required for the session.

- **Procedure**

A detailed procedure of the session, including teacher's notes and references to resources required for this session.

- **Discussion Time**

Questions are provided to encourage students to reflect and discuss the issues from each session. Discussion time can be conducted in small groups. It is recommended that both boys and girls be represented in each group where possible to ensure all students get both the male and female perspective of the issues discussed. The students in each group should be changed at each session to allow students to share discussions with different group members.

- **Extension Activities**

In some sessions there are extension activities, which can be used to expand the topic further and/or provide the students with more practical activities to explore the area.

- **Information Sheets**

Information sheets provide teachers and students with additional information on the session. Some of these sheets are printed in the STARS Students Activity Manual to be read and discussed in the class session. In some sessions more detailed information sheets have been provided in the Teacher Manual. These sheets can be photocopied for students and used as reading research sheets to allow students to obtain better knowledge of the topic prior to the session.

- **Resource Sheets**

Resource sheets provide examples, diagrams and illustrations. Some of these sheets are printed into the Stars Student Activity Manual so that students can refer to their own sheet. Other sheets are in the form of posters and teacher resources. These sheets can be copied onto A3 photocopy paper/card or onto overhead projection sheets.

- **Activity Sheets**

Most sessions have activity sheets to compliment the session, for students to complete in their STARS Student Activity Manual. A copy of this activity sheet is also provided with the session in the Teacher Manual.

- **Home Activities**

There are three home activities provided in this manual for students to take home and complete with their family.

MONITORING STUDENT PROGRESS



The STARS Project activities provide students with opportunities to progress towards four of the Health and Physical Education Learning Area Outcomes:

- Knowledge and understandings;
- Attitudes and values;
- Self-management skills; and
- Interpersonal skills.

With an outcomes-focused approach, teachers make judgements about the progression of each student toward achieving the major outcomes. The Curriculum Framework (Curriculum Council, 1998) provides a guide to the phases of development for students in each of the eight learning areas. Based on this, each school needs to develop or identify a progress map or developmental continuum to monitor each student's progress towards achieving the major learning outcomes.

The Education Department of WA, Health and Physical Education Monitoring and Assessment Support Package, provides advice on how to monitor student progress in the learning area as well as examples of observation criteria.

Assessment Strategies

Monitoring and assessment strategies will involve teachers in the collection of assessment evidence. The STARS Project provides opportunities for a range of assessment methods, including:

- Student Activity Manuals – Activity Sheets.
- Discussions – discussion questions for each session.
- Direct observation – discussion and role-play.
- Performance assessment – student performance or product that allows them to demonstrate their learning.
- Self-assessment – students will be asked to report on their group work and individual understanding of session content.

Assessment of Attitudes and Values

It is important to monitor the demonstration of attitudes and values, because they are an integral component of an individual's decisions about health. There is no developmental sequence for the monitoring of values and attitudes. Reporting indicates a student's demonstration of the attitudes and values in terms of where he or she is at, at a given time. Students should be provided with learning opportunities to enable them to demonstrate values in more complex situations over time. Reporting should acknowledge what the student has demonstrated, given the content and complexity of the learning experience and environment.

TEACHERS' NOTES

Classroom Environment

While parents initially serve as the primary adult influence on self-esteem, that influence later shifts to include other adults, notably teachers. Educators are presented with the unique opportunity as well as responsibility to play an influential role in helping young people develop a positive self-esteem. Apart from the curriculum strategies detailed in this project teachers can make a significant contribution to self-esteem enhancement by creating a positive classroom environment.

Some characteristics of a caring classroom environment include:

- The establishment of rules both within and outside the classroom
- Acceptance of individual responsibilities
- Reinforcement of positive behaviours and comments
- Respect for individual rights
- Respect for opinions and comments of others
- Encouragement of openness by ensuring trust and respect
- Acceptance of individual differences
- Recognition that everyone is special and that it is okay to be different.

(Chute, Rule & Allen 1998 – The Body Image Project)

Group rules

- Everyone gets a turn to share, including the leader
- You can skip your turn if you wish
- Listen to the person who is sharing
- The time shared equally amongst group members
- Stay in your own space
- There are no interruptions, probing, put-downs, or gossip.

(Akin et al., 1990)– The Best Self-Esteem Activities

30 steps to self-esteem in the Classroom

As educators committed to the whole child, it is critical that you do as much as possible to enhance each child's self-esteem. Rather than a single teaching style, there are many strategies you can utilize to help accomplish this goal.

1. Accept children for who they are and what they are. Your acceptance will lead to feelings of self-acceptance in the child.
2. Treat children as individuals. Cherish their differences and don't compare them.
3. Use children's names frequently. Become familiar with their life outside of school by talking about their siblings, pets, hobbies, etc.
4. Respect children, their families and their culture.
5. Recognise that there are many ways for children to be talented other than an academic ability.

6. Help children see that they are multi-dimensional. "I'm good at _____, but I need to work on _____."
7. Children tell us things by their behaviour, so become a "child observer". Be sensitive to their reactions and comments during the school day.
8. Know what your students are developmentally capable of. Plan a program in which each child can be successful.
9. Empower children by giving them choices.
10. Encourage children to be independent, accept responsibilities, and follow through on tasks.
11. Set clear rules and expectations for behaviour. Studies suggest that when children have boundaries and know what is expected of them, they will develop higher self-esteem.
12. Be fair and consistent. Instead of punishment, help children learn to deal with the consequences of their behaviour.
13. Follow a schedule and routine so children know what to expect.
14. Provide children with opportunities to vent their energy and emotions with exercise breaks and outdoor play.
15. Remember, it's okay to make mistakes. Avoid overreacting when children do something wrong.
16. Don't use labels such as "slow poke," "messy" or "nosey".
17. Value creativity and originality.
18. Ask open-ended questions and accept divergent answers.
19. Encourage children to be problem-solvers.
20. Be available to children. Try to give them quality time and connect with them on an individual basis.
21. Model a positive self-esteem and try to be optimistic about life.
22. Let the children know you as a real person by sharing your personal life.
23. Keep a sense of humour and laugh often.
24. Take advantage of nonverbal messages with plenty of smiles and pats on the back.
25. Celebrate children's accomplishments. Recall their past successes and comment on how they are growing and changing.
26. Help children set goals and experience delayed gratification.
27. Use encouragement with children, rather than rewards.
28. Let children overhear you making positive comments about them.
29. Accept children's feelings. Let them know that it's okay to be angry, frustrated, or scared.
30. Say what you mean and mean what you say. Use positive speech and state what behaviour you expect.

(Ready to use self-esteem activities for young children (Feldman, 1997))

Health Promoting School Framework

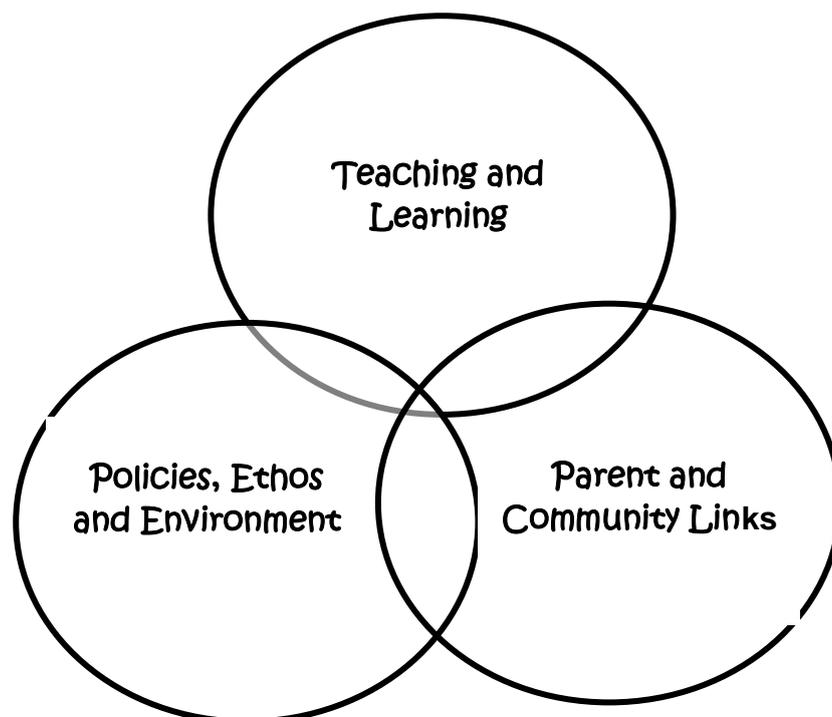
The Health Promoting School model provides a useful framework for identifying and planning whole-school enhancement of self-esteem activity.

A whole-school approach to health promotion is one of the most effective ways for schools to encourage students to develop healthy concepts. A health-promoting school aims to create an environment that is safe, stimulating and satisfying, and compliments classroom-based learning experiences.

What is a Health Promoting School?

Health Promoting Schools are characterised by three key areas:

- Teaching and Learning – this includes activity for students to develop a range of understandings that can help them to understand the factors influencing health and skills that can help them to have some control over these factors.
- Policies, Ethos and Environment – this includes policy
- Parent and-Community Links – this includes partnership roles with parents, local community members and health agencies



Whole-school intervention involves activity in each of the three key areas of a Health Promoting School.

Creating a Self-esteem Enhancing School

The following examples provide opportunities for promoting self-esteem among students, staff and the school community who work within a Health Promoting School framework.

Teaching and Learning

- The curriculum is based on the Curriculum Framework
- Staff receive professional development about self-esteem issues
- Self-esteem is taught in the overall context of health
- Learning style of all students is supported
- Classroom environment is supportive and safe

Policies, Ethos and Environment

- School policies are inclusive and promote self-esteem among the students
- School policies address bullying and harassment
- Activities are conducted to promote awareness of self-esteem
- Staff health promotion strategies are implemented to promote self-esteem
- Parents and community members are included in self-esteem education and promotion
- Teachers and administration role model healthy self-esteem
- Development and maintenance of a school ethos conducive to self-esteem

Parent and Community Links

- Learning activities are provided for students to complete at home with family members
- Parents are involved in policy and curriculum decisions relating to self-esteem
- Self-esteem information is included in the newsletter
- Support agencies are promoted to staff, parents and students

STARS SESSION 1

SELF-ESTEEM



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Describing the different components of the development of self-esteem.
- Assessing the factors that influence the development of self-esteem.

Attitudes and values:

- Recognising the use of a person's set of values in developing self worth.

Self-management skills:

- Identifying their personal strengths and weaknesses in areas related to their self-image.
- Assessing how their strengths and weaknesses contribute to the development of their self-esteem.

Interpersonal skills:

- Collaborating effectively with others in small groups to identify the questions young people ask about themselves.

PURPOSE

This activity will provide an opportunity for students to:

- Develop an understanding of what self-esteem is and how it develops.
- Identify the various components of self-esteem development.
- Assess their own self-image, what areas of their life are important and how they feel about themselves.

STARS MESSAGE

Self-esteem

Self-esteem is the way we feel about ourselves. We compare how we see ourselves in all areas of our life with what is important to us. Healthy self-esteem is about accepting yourself as you are and feeling comfortable with yourself.

PREPARATION

- Poster - Resource Sheet 1.1– enlarge onto A3 and display in the classroom
- 5 Large sheets of paper and felt pens for graffiti group activity
- STARS Student Activity Manual
 - Information Sheet 1.1.
 - Activity Sheet 1.1

PROCEDURE

1. Pass the Graffiti

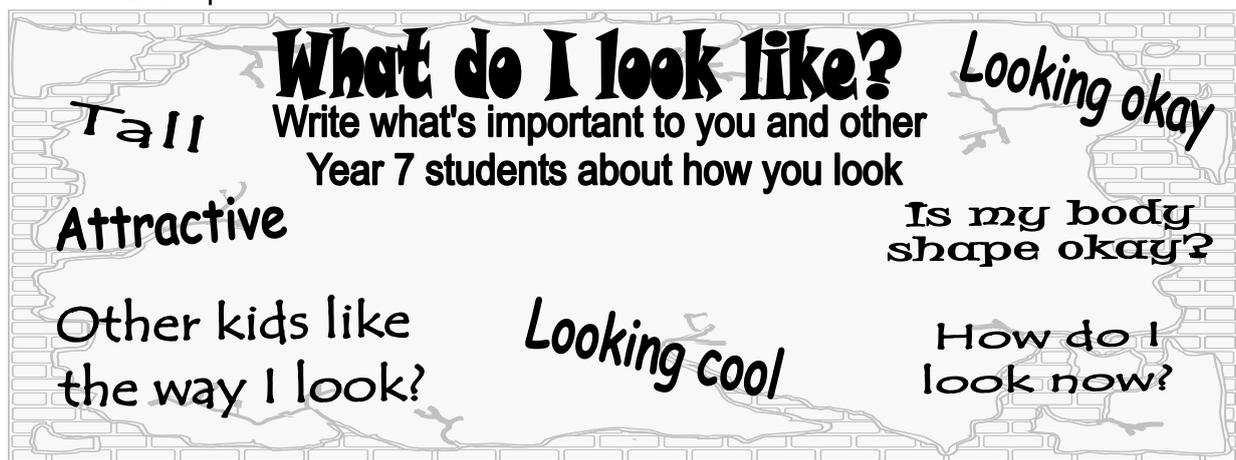
Prepare 5 large sheets of paper with one of the following questions on each sheet as a heading.

- What do I look like? (E.g. Do I look ok?)
- How do I get along with others? (E.g. Am I popular?)
- What are my athletic skills? (E.g. Will I get into the inter school sports?)
- What are my academic abilities? (E.g. Am I getting good marks in tests?)
- How do I behave or act? (E.g. Do I act in a cool way?)



Arrange the students into groups and allocate each group one of the sheets. Ask each group to think about what is important to you and other year seven students in this particular area. Ask them to 'graffiti' their questions onto the sheet.

For Example:



Give each group about one minute to write these questions on their page and then ask each group to pass their page on to the next group. Allow each group to add their ideas on each of the sheets and then display all sheets for the class to see. Discuss the feedback on each sheet.

Explain to students that all people, no matter what age, think about the following things:

- Who am I?
- What sort of person am I?
- Where do I fit?
- What is important to me?

Explain that the class is going to explore these questions and other aspects of ourselves in the STARS Project.

2. Introduction to the STARS Project

Introduce the STARS Project to the students

S.T.A.R.S = Straight Talk About Resilience and Self-esteem

Ask students to open their STARS Student Activity Manual to Information Sheet

1.1. Use the following guide to work through this information with the students.

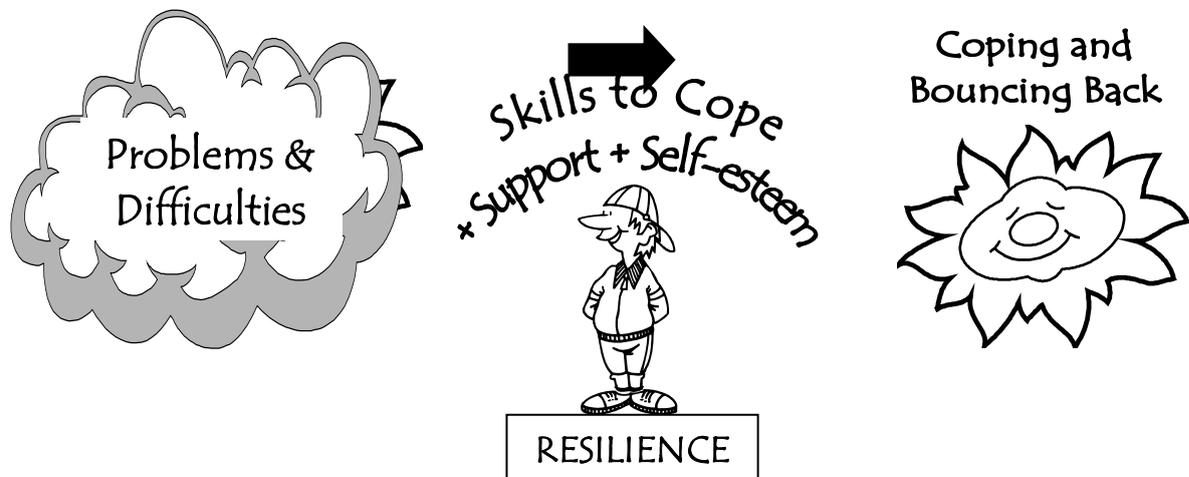
3. What is Resilience?

(Our ability to cope with difficult situations)

Resilience is our ability to cope with change and challenge and to bounce back in difficult times.



Ask students to look at the Resilience Model Information Sheet 1.1.



Explain the areas of resilience: Skills to cope, Support and Self-esteem as outlined below:

Skills to cope

Resilient people have confidence in themselves; when in difficult situations, they think about what could go wrong and prepare ahead of time. They have ways to cope with stress and they feel good about themselves and how they cope with life. They are good problem solvers and can think through situations, and decide on the best action.

Support

Resilient people have at least one caring adult, friends or other good role models in their lives. They get support and ideas about how to cope from their friends, their family and the role models in their life.

Self-esteem

Resilient people feel good about themselves and how they cope with life. They take responsibility for their actions and think positively about themselves. They know that even in the worst situations there can be opportunities to develop strength and understanding. They can survive and grow.



Ask students to read the **STAR Messages** on Information Sheet 1.1 and review to review the concept of resilience.

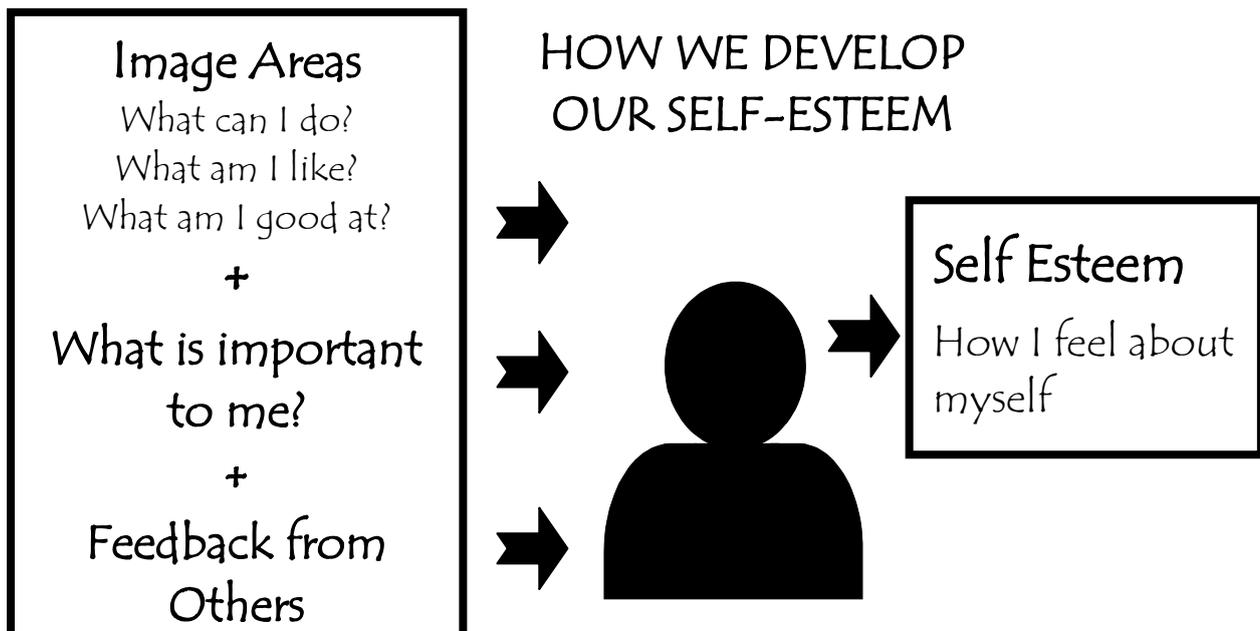
4. What is Self Esteem?

(How we feel about ourselves)

Self-esteem is the way we feel about ourselves. We compare how we see ourselves in all areas of our life with what is important to us.

- **Healthy self-esteem is about accepting yourself as you are and feeling comfortable with yourself.**
- **Low self-esteem is about wishing you were different or wishing you were someone else.**

Ask students to look at the Self-esteem Model on Information Sheet 1.1.



Explain the Self Esteem Model

Use the following information to explain to the students how we develop self-esteem.

Image Areas

The image we have of ourselves is the thoughts we have about who we are and what we can do and in all areas of our life. We build our self-image by discovering as much about ourselves as possible. We gather this information by looking at our features, our abilities and our talents.

We look at our talents and abilities in the following Image Areas:

- Physical appearance (What do I look like?)
- Social acceptance (How do I get along with others?)
- Athletic ability (What are my athletic skills?)
- Academic ability (What are my academic skills?)
- Behaviour (How do I behave or act?)

What is important to you?

Some areas of our life are more important than others. We use our 'values' to judge what areas are important to us. For example, you may value friendship and loyalty more than you value athletic achievement. Or you may think that both of these areas are really important.

Feedback from Others

We all have people in our lives that we feel are important. These people are usually:

- Family members;
- Friends;
- Peers (other people our age);
- Teachers; and
- Anyone else that we feel is important in our lives.

When we are thinking about our self-image we get feedback from these people about what kind of a person we are and how we are doing in life.

Information about our Image Areas, What is important to us, and feedback from others all go together to develop our Self Esteem.

6. The Self-Esteem Scale

Ask students to turn to **Activity Sheet 1.1 'My Self-esteem Scale' in their STARS Student Activity Manual**. Explain that the Self-esteem scale asks them to think about how they see themselves in each of the Image Areas.

Begin by asking each student to fill in the 'statements about me' section in the first Image Area: Physical appearance (What do I look like?) e.g. I am shorter than my friends, my hair is scruffy, I have strong legs, I have nice eyes.

Instruct the students to move through each Image Area completing the 'statements about me' sections. Explain to the students that the scale is a personal document and that they need to try to be honest when filling in the form

Ask students to think about how important this image area is to them and circle the number on the 'How important is this area of my life to me' scale of 1-5 where 5 = very important.

Now ask students to think about how they see themselves now in each area and circle the number on the Image Area scale that they think shows how they feel about themselves on a scale of 1 – 5 where 5 = the best that I can be, in that area.

Now ask them to think about how important this image area is to them and circle the number on the 'How important is this area of my life to me' scale of 1-5 where 5 = very important.

Example

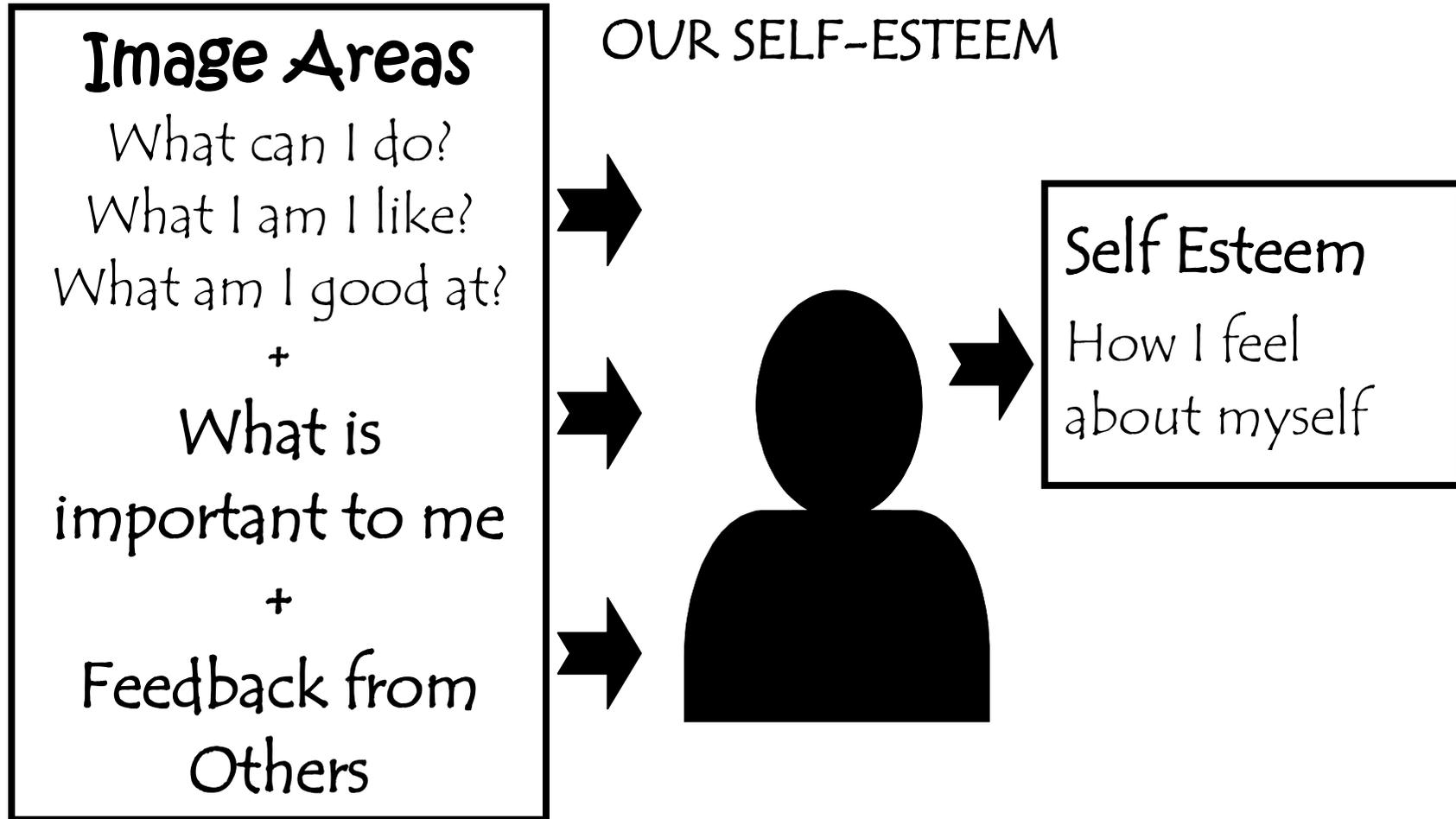
1. What are my athletic skills and abilities?		Statements about me							
I am good at football and was selected in the inter-school team. I can run quite fast but my ball handling skills are not so as good as I would like them to be. I don't play many other sports. Cricket is not my best sport as I am still working on my catching. I am quite tall and strong.									
How important is this area of my life to me?				How do I rate myself in this area?					
1	2	3	4	5	1	2	3	4	5

DISCUSSION TIME

Ask the students to discuss the following questions:

- How is our self-image in a particular area affected by what other people say?
- Who are the people that we listen to the most?
- How should we listen to what others say?
- How do we decide what in our life is really important to us?

HOW WE DEVELOP OUR SELF-ESTEEM





MY SELF-ESTEEM SCALE

ACTIVITY SHEET 1.1

1. WHAT DO I LOOK LIKE?

Statements about me

How important is this area of my life to me?

1 2 3 4 5

How do I rate myself in this area?

1 2 3 4 5

2. HOW DO I GET ALONG WITH OTHERS?

Statements about me

How important is this area of my life to me?

1 2 3 4 5

How do I rate myself in this area?

1 2 3 4 5

3. WHAT ARE MY ACADEMIC SKILLS AND ABILITIES?

Statements about me

How important is this area of my life to me?

1 2 3 4 5

How do I rate myself in this area?

1 2 3 4 5

4. WHAT ARE MY ACADEMIC SKILLS AND ABILITIES?

Statements about me

How important is this area of my life to me?

1 2 3 4 5

How do I rate myself in this area?

1 2 3 4 5

5. HOW DO I BEHAVE/ACT?

Statements about me

How important is this area of my life to me?

1 2 3 4 5

How do I rate myself in this area?

1 2 3 4 5



STARS SESSION 2 SELF-IMAGE



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Describing how people develop their ideas about self-image.
- Assessing factors that influence the way people develop their self-image.

Attitudes and values:

- Appreciating and understanding other people's points of view and the choices they make.

Self-management skills:

- Identifying the factors that influence the decisions young people make about what they admire in other people.

Interpersonal skills:

- Working cooperatively in small groups to identify factors that influence Year 7 students' feelings about themselves.

PURPOSE

This activity will provide an opportunity for students to:

- Understand the different areas of self-image and how we think about these areas.
- Explore the factors that influence young people's ideas about self-image.

STARS MESSAGE

Self-image

The self-image is the collection of thoughts we have about who we are and what we can do. We build our self-image by discovering as much about ourselves as possible. We gather this information by looking at our features and abilities in all our Image Areas, by using the feedback other people give us and by judging what is important to us.

PREPARATION

Prepare Example Sheets 2.1 and 2.2 by either photocopying onto A3 paper as a poster or onto overhead sheets for projector.

- Students' STARS Student Activity Manuals
- Information Sheet 2.1
- Activity Sheet 2.1

PROCEDURE

1. Self Image

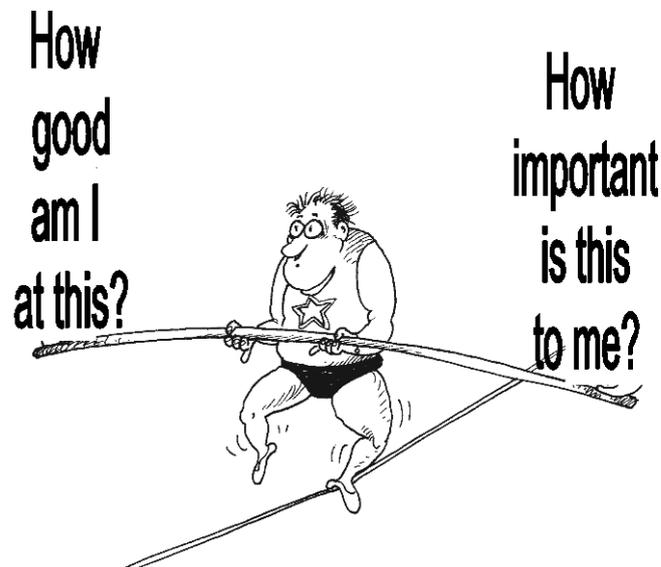
Explain to students that they will be looking at: what is self-image.

Ask students to look at **Information Sheet 2.1** in their **STARS Student Activity Manual**.

Review the section about Self Image and discuss the cartoon depicting balance

📖 The self-image is a person's thoughts and ideas about how they see themselves now in all the different areas of their life. It is a person's ideas and beliefs about themselves.

We compare how we see ourselves in a particular Image area with what importance we place on this area. When there is a good balance between how we see ourselves and the importance we place on this particular area we feel good about ourselves.



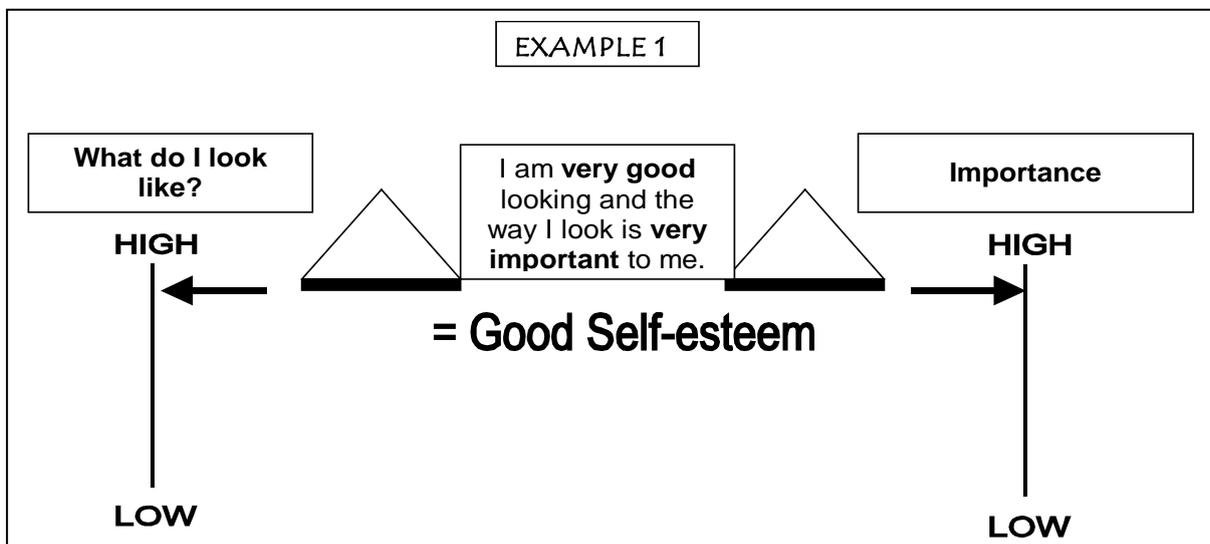
2. The Self-image Scale

Use a set of scales to demonstrate examples of how we can measure how we rate ourselves in an image area compared with how much importance we place on this area. Use 10 equal weights or blocks for the scale. You will need 5 for each side as the measurements are from 1 – 5 (for Image Area 5 = as good as I can be);(for Importance 5 = very important)

Use examples such as:

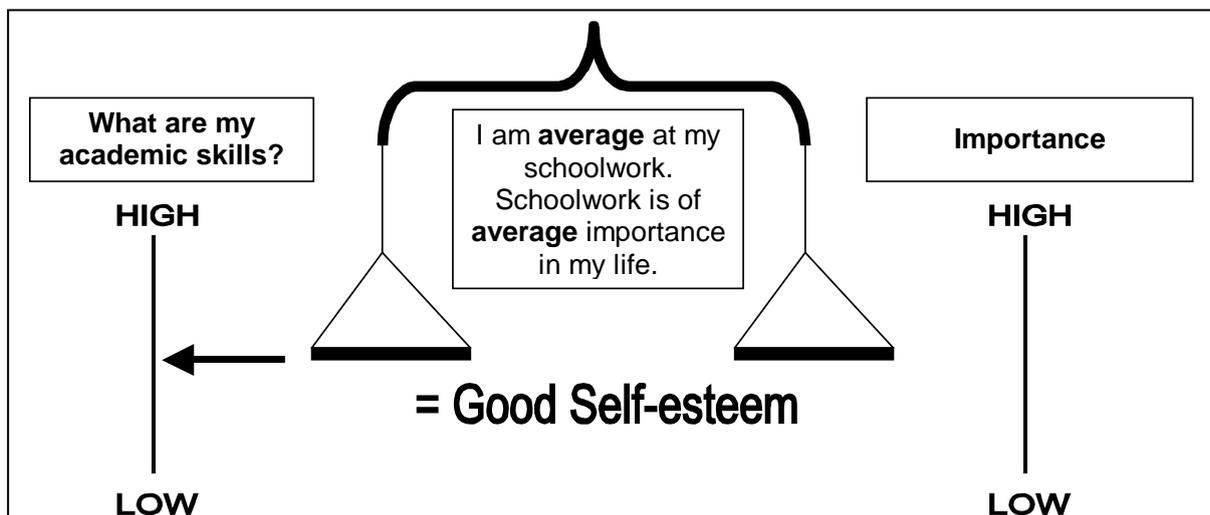
Academic: This person feels that he/she is quite good at schoolwork (3), put three weights in the Image side. He/she feels that schoolwork is of average importance (3). Show students how the scale is balanced, therefore that person would feel good about that area and have good self-esteem in that area.

Ask students to look at **Examples 1-3 on Example Sheet 2.1**. Read the captions in each diagram, ask students to use the scales to demonstrate each example and discuss the balance in each.



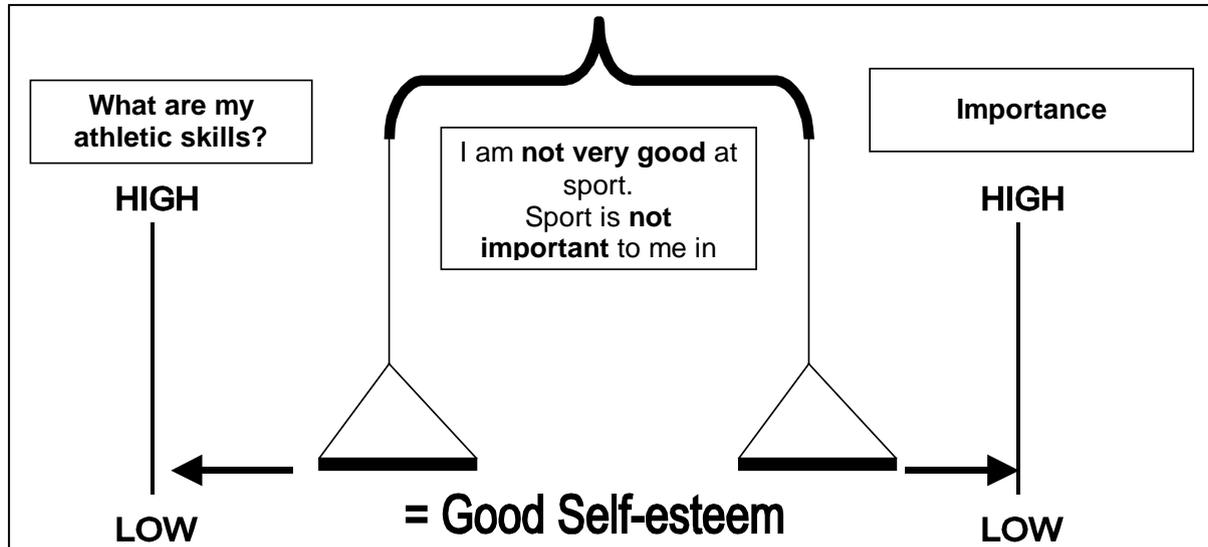
Explain that when the scales are reasonably even this usually results in the person feeling okay about him/herself and have good self-esteem. Explain that the scales don't have to be exactly even, but the more even they are the better a person will feel.

Example 2



Explain that if a person doesn't feel that they are doing so well in an image area this is only important if they feel that this is very important to them. If it is not very important to them in life they will not be worried about being really good in this area.

Example 3



3. Realistic Self-images

Ask the students to look at **Example Sheet 2.2**. Work through these examples with the class, asking the students to demonstrate each example using the scales

Sometimes people's Self Images are not realistic. They are too high or too low. Sometimes people place too much importance on a particular image area. This results in these people not feeling good about themselves because there is too much importance on the image area that is not a strength for them.

Ask the students to look at **Example 4 on Example Sheet 2.2**.

Some people have a low self image in an area of their life that they believe is very important, e.g. they think they are not good at sport – but sport is very important to them in life. This can result in them having low self esteem.

Ask the students to look at **Example 5 on Example Sheet 2.1**

Other people have a high self image but believe that this area of their life is not important, e.g. if a person was really good at basketball but didn't think sport was important as school work in life then that person may not think being good at basket ball was as important and would only have good self-esteem if they were also doing well at school.



What is a realistic self-image? Discuss

Discuss the importance of keeping a good balance between what you are capable of and what is most important you in life. Also discuss the importance of keeping a balance across the image areas. Putting all the emphasis on one area can be risky.

4. Exploring your own self-image

Ask the students to turn to **Activity Sheet 2.1 in their STARS Student Activity Manual**. Explain that they are going to explore an image area that is very important to them using the information that we have learnt in this session.

DISCUSSION TIME

Ask the students to discuss the following question:
Is it helpful or unhelpful to have high self-images? Give reasons for both.

EXTENSION

Ask the students to find information on the people they chose as the people they admire. Ask them to find their biography and research what this tells them about the person and their self-image in various areas of their life. What is their self-image like? Who are the people who had an influence on their self-image?

EXAMPLE 1

What do I look like?

HIGH

LOW

I am **very good** looking and the way I look is **very important** to me.

Importance

HIGH

LOW

= Good Self-esteem

EXAMPLE 2

What are my academic skills?

HIGH

LOW

I am **average** at my schoolwork. Schoolwork is of **average** importance in my life.

Importance

HIGH

LOW

= Good Self-esteem

EXAMPLE 3

What are my athletic skills?

HIGH

LOW

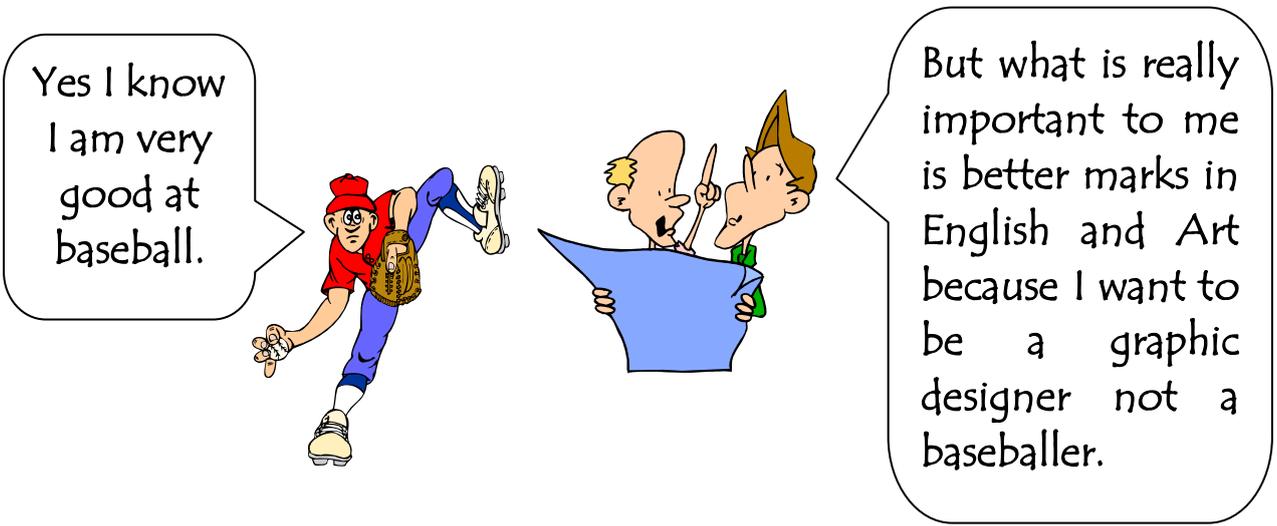
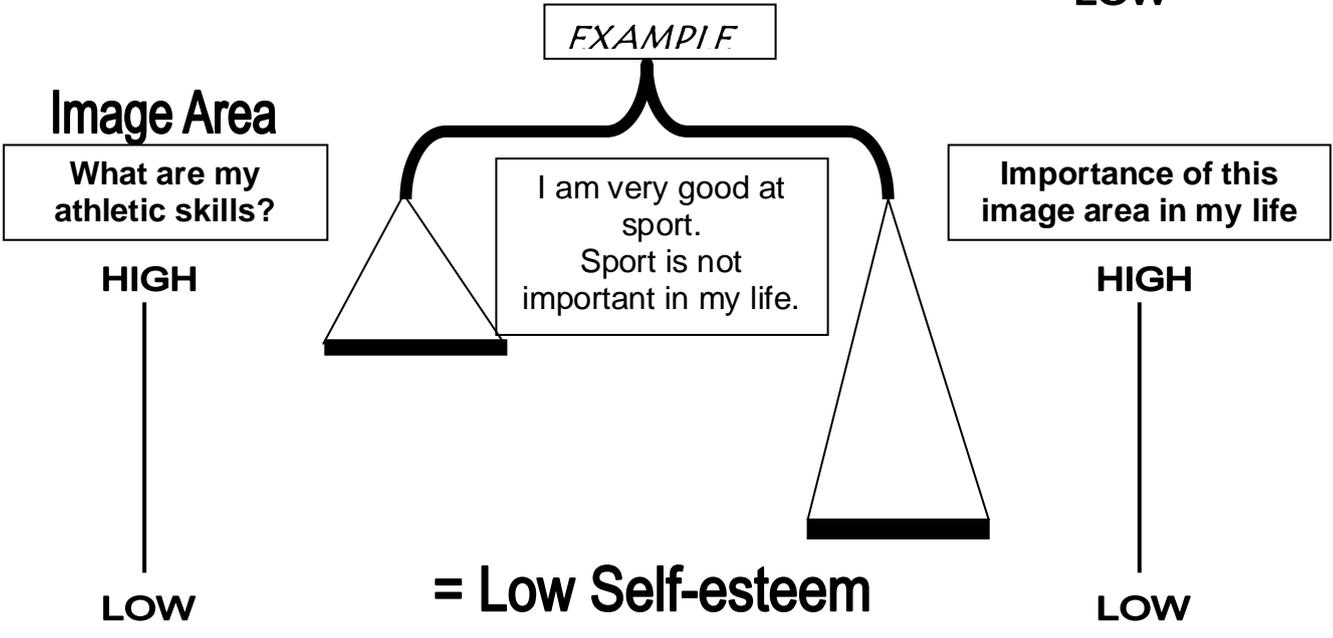
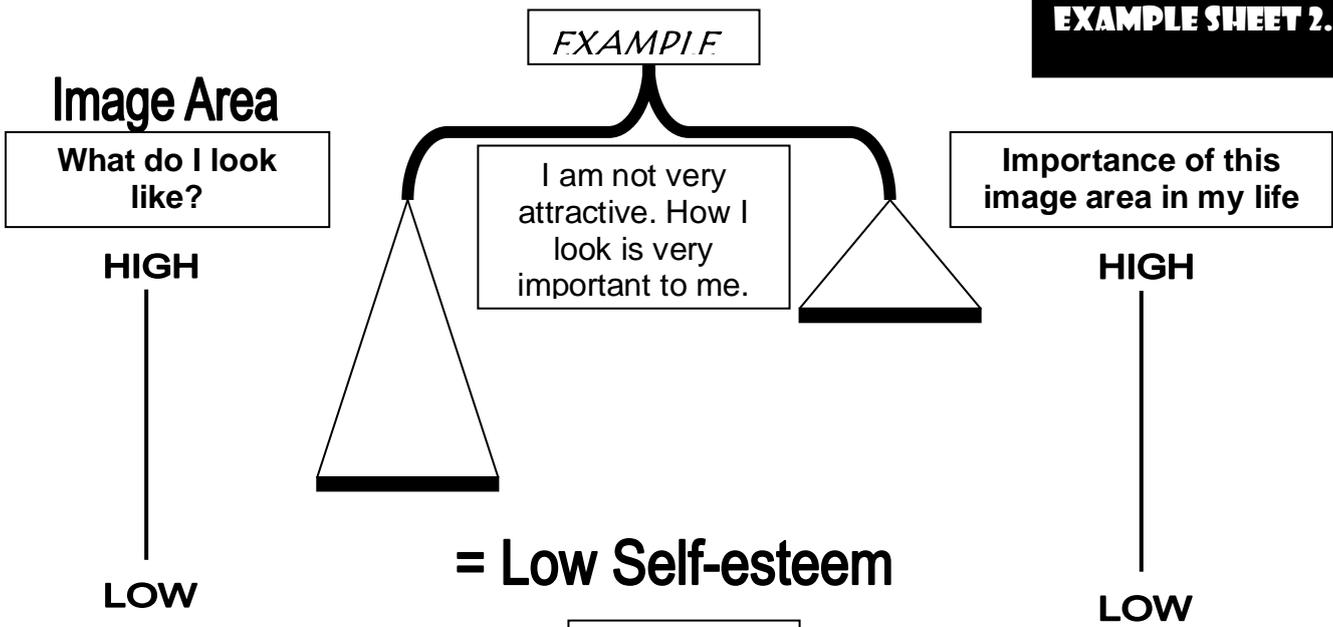
I am **not very good** at sport. Sport is **not important** to me in

Importance

HIGH

LOW

= Good Self-esteem



A Sample of my Self-image

1. Choose an area in your life that is important to you e.g. how I look, sport, school, friends etc. (refer to image areas)

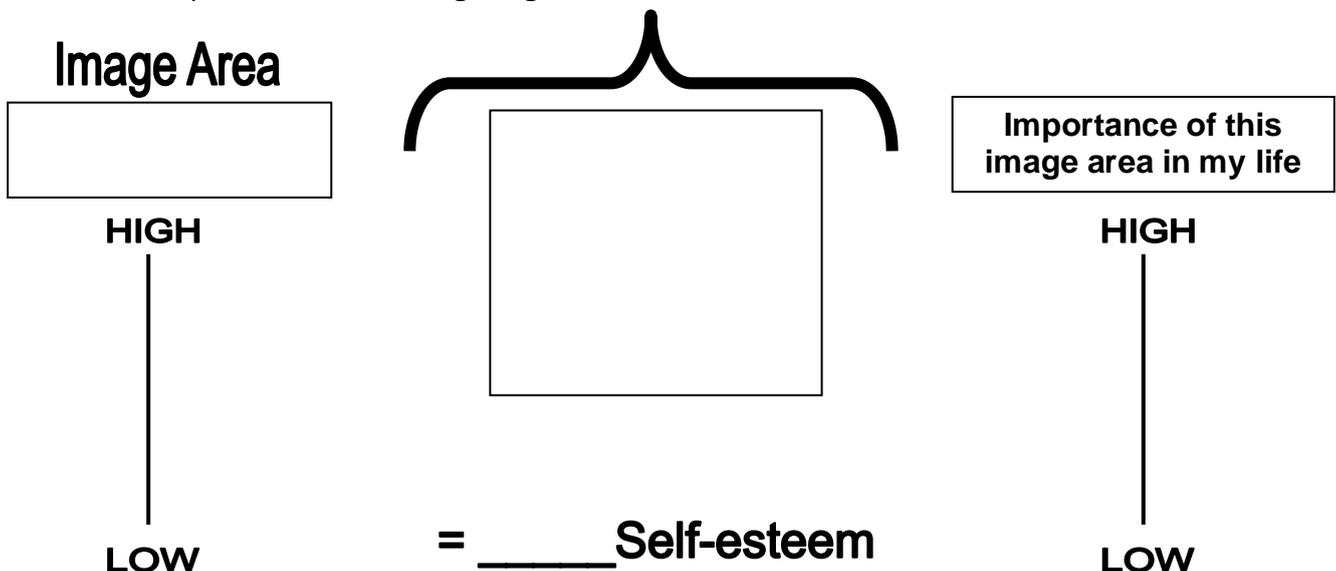
2. Write down the name of a person that gives you a lot of feedback in this area - or a person who influences you a lot in this area.

3. How does that person influence your self-image? (What messages do you get from that person?)

4. What you think about yourself in this area plus the feedback you get from others will influence how you feel about yourself

How do I rate myself in this important area?	1	2	3	4	5
How do others rate me in this area?	1	2	3	4	5
How do I feel about my self in this important area?	1	2	3	4	5

Now complete the following diagram.



STARS SESSION 3 SELF-IMAGE AND THE MEDIA



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Assessing the influence of the media on how young people develop their self-image.
- Identifying the different strategies used by advertisers and the media to target and influence the thoughts of young people.

Attitudes and values:

- Recognising the benefits of using their values to evaluate media images and make informed decisions.

Self-management skills:

- Examining the impact that advertising and the media images can have on the decisions young people make.
- Critically evaluating advertisements and other media images of young people.

Interpersonal skills:

- Demonstrating the ability to work cooperatively as a group to make decisions.

PURPOSE

This activity will provide an opportunity for students to:

- Understand the influence of the media on how young people develop their self-image.
- Critically evaluate media images and how they impact on people's thoughts, ideas and self-esteem.

STARS MESSAGE

Self-image and the Media

The importance we place on an image area can be out of balance. Our self-image can be tricked by feedback from outside (e.g. media) so that our image is unrealistic.

PREPARATION

To prepare for this activity it is suggested that students do the reading research activity using Research Sheet 3.1. This document will need to be photocopied for students.

- Example Sheet 3.2 and 3.3 are examples of advertisements and marketing plans that can be photocopied to show class.
- STARS Student Activity Manuals
 - Activity Sheet 3.1 'My Self-image Role Models'
 - Example Sheet 3.1 'How does Advertising Work?'
 - Activity Sheet 3.2 'Marketing Plan'
- Reflection Sheet 3.1 'The Price of Happiness' can be photocopied for each student.

READING RESEARCH ACTIVITY

Research Sheet 3.1 ADVERTISING: TRICKS OF THE TRADE

This research sheet is designed to give students background information on the topic before this session. It is suggested that teachers incorporate this reading research activity into the English Learning Area prior to this Health session, STARS Session 3.

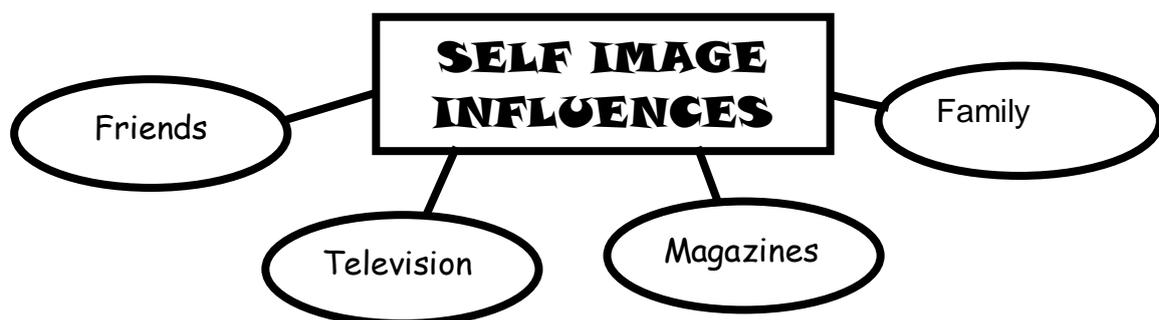
PROCEDURE

1. Images – Where do they come from?

Ask students to think about where their ideas about self -mage come from e.g. what they think of themselves, what others think of them, what they see on T.V., magazines, movies etc.

Ask students to list the most important influences in their life. The people or the things they see that influence their self-image or the importance they put on different areas in their life.

Create a class explosion chart.



Ask the students to turn to **Activity Sheet 3.1 'My Self-image Role Models' in their STARS Student Activity Manual** and to think about the images they have about what is cool and what their self-image is. Ask each student to write the name of the person and then the things they admire about that person. When they have finished all four descriptions ask them to combine all the qualities at the bottom to see a picture of what they admire over all.

Explain that ideal images are often affected by what is fashionable at the time and that we see most of these images in the media.

2. Let's look at the World of Advertising and Marketing

From the moment a person is born they are exposed to advertising.

Read the following to students.

Congratulations! It's a baby boy. As he leaves the hospital, his parents are given samples of Johnson and Johnson baby soap, trial packs of Snugglers nappies and sachets of baby formula.

Within days of him arriving home, his parents will be flooded with mail and phone calls offering everything from free portrait photos to a savings plan for when he goes to university.

Before he is two, he will be able to recognise some brand names and maybe even sing a few advertising jingles.

By age three, he'll have to have the character doll from his favourite television show (e.g. Bob the Builder) and the MacDonalD's cup promoting the latest Disney movie.

By seven, he'll be demanding the latest collectable fad (e.g. Scooby Doo or Harry Potter) and he will be receiving about 20 000 advertising messages a year on television alone.

By nine, he'll want the shoes his favourite basketball player wears or the jumper from his favourite footy team.

At thirteen, he will only wear the right brand of jeans, and his name and details will be stored in the huge data banks that marketing advertising firms keep about customers.

Explosion Chart

Every day we are bombarded with advertising. Ask students where they see advertising. Create a class explosion chart. Examples include:

Television or radio, billboards, newspapers, magazines, catalogues, the internet, company sponsored school programs, sporting events, concerts, clothing logos, packaging, competitions etc.

3. How Advertising Works

Ask the students to look at the cartoon '**How does Advertising Work?**' on **Resource Sheet 3.2 in their STARS Student Activity Manual** describing advertising and discuss.



Review the information from **Resource Sheet 3.1 Reading Research Activity**

Explain to the students that they are going to design an advertising campaign for a product using the Tricks of the Trade they have learned about in their reading research session.

Show students Examples of advertisements on Resource Sheets 3.2 and 3.3 and discuss the Marketing Plan for each.



Ask students to use the planning sheet on Activity Sheet 3.2 'Marketing Plan' in their STARS Student Activity Manual to plan their product and campaign.

4. Reflection

There is a reflection sheet provided if you wish to use it. Reflection Sheet 3.1 'The Price of Happiness'.

DISCUSSION TIME

Ask the students to discuss the following questions:

- Has this changed the way you feel about the media? How?
- What, if anything will you do differently from now on?

HOME ACTIVITY

Media Search

Ask the students and families to find examples of advertising and media images that target young people and critically analyse them by asking the following questions:

- What is the primary purpose of the advertisement/image?
- Who is the advertisement targeting?
- How is the advertisement targeting its audience?
- What tricks of the trade did you find?
- How does this ad/ image make you feel?

HOW ADVERTISING WORKS

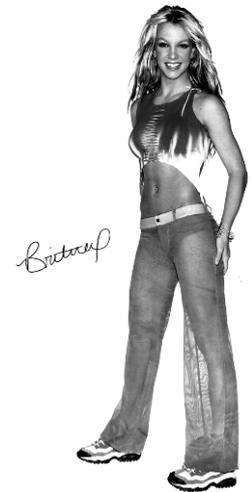
Image Advertising

Advertising persuades. Advertisers rely on the fact that people (particularly teenagers) are highly concerned with other people's opinions of them. Products sold through image advertising are promoted not for what they are but for the lifestyle they promise.

TRICKS OF THE TRADE

Using Famous People

Sometimes celebrities are used to sell products because kids want to be like these people so they will wear what they wear or use what they use. If Brittany Spears wears Levi's Jeans I should too.



The interesting thing about using famous people to advertise products is that in some cases these people don't even use the product. In 1986 Pepsi paid Michael Jackson nearly \$15 million to appear in two television commercials. Jackson would not be shown drinking or even holding the product. In fact many people knew that Jackson, as a Jehovah's Witness, did not consume caffeine and so never drank Pepsi. Even so the company agreed that it was worth the enormous amount of money for the few seconds Michael Jackson appeared in the Pepsi commercial.

Leaving Out Important Information

Sometimes advertisements are deceptive or misleading. One of the most common forms of deception in advertising is the lie of omission (leaving out important pieces of information). This can be seen in this example of an advertisement for a movie.

'Sam Jones from the Daily Telegraph says, "Fred Smith is clearly the best" on the advertisement for a movie. When what Sam Jones actually said was "This movie stinks. The cast is made up of a group of very bad actors amongst which Fred Smith is clearly the best."

Stretching the Truth

Advertisers often take a piece of information that is true and then add other pieces of information in a way that makes them sound true as well. For example, Ian Thorpe eats xxxx bread and wins Olympic gold. Ian Thorp may have eaten xxx bread but it did not necessarily make him win a gold medal as the advertisement suggests.

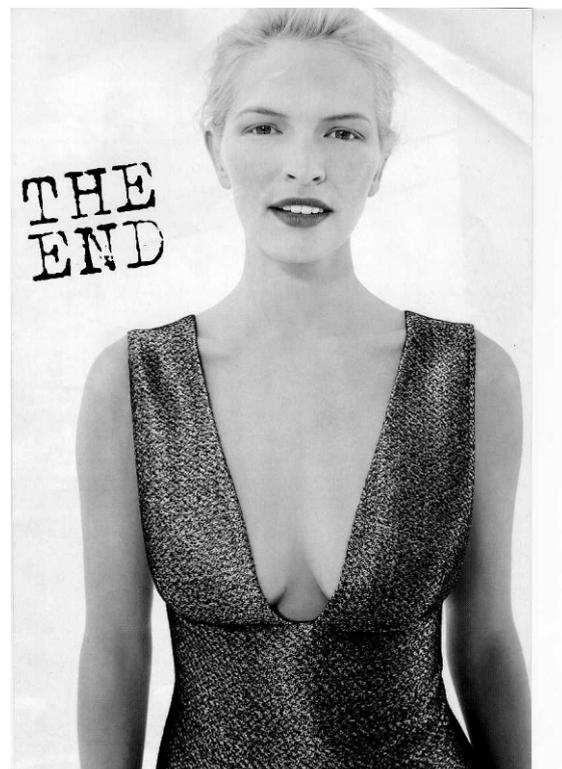
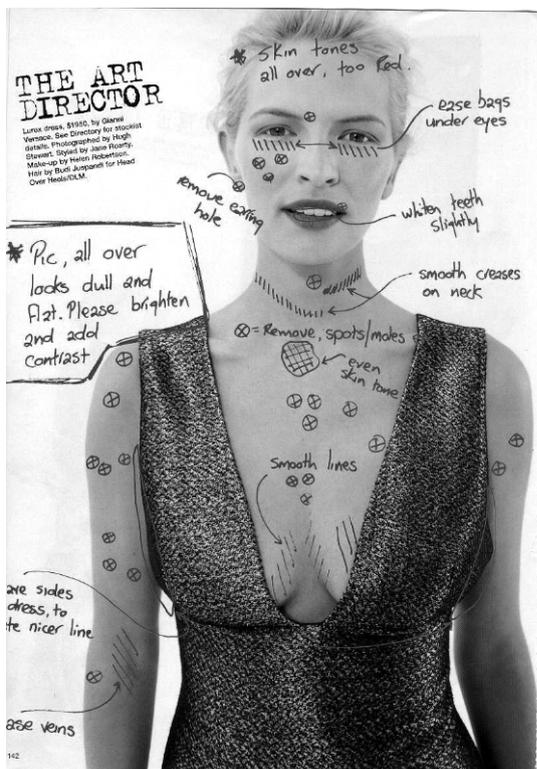
Before and After Pictures

Comparison Advertising is known for its use of before and after pictures to show dramatic results. In a case in America, the makers of a particular brand of weight loss tablets claimed that the tablets produced weight loss without dieting or exercise. The model in the photographs admitted that she had lost weight by living on black coffee, tranquillisers and other drugs to stop her from eating.



Making People look perfect

Other advertisements use tricks to make people look flawless in photographs. Realistically people have skin colouration differences, lines and other marks on the faces. However magazines regularly use computer enhancement techniques to alter the image between when they are photographed and when we see them in the magazine.



Each image is carefully worked over. Blemishes, wrinkles, and stray hairs are airbrushed away. Teeth and eyeballs are bleached white.

Badge Products

Ads targeting teenagers often cater to the teen's desire for independence, sophistication, social success, masculinity or femininity, and good looks. They try to make the teenagers think they need certain products and brand names to be like this. They cleverly play on teenager's concerns about what is cool and imply that without this product the teenager will never be popular.

'Badge' products are those products that teenagers use to send signals to other teenagers about who they are for example Nike, billabong etc. With badge products such as athletic shoes, jeans, and soft drinks, brand is everything.

Showing a world that is perfect compared to the real world

One of the biggest concerns about advertising is the impact on people's health both physical and mental. The world as it is shown by advertisements appears very different to the real world. People are thinner, better looking and richer. Critics fear that these sorts of commercials can lead to children shoplifting, stealing from other children and hurting or even killing other children to get badge products.

Tricks used for Girls

Changing the way we see ourselves

Another concern is the change in the way teenagers see themselves. In 1892 a teenage girl wrote in her diary "I want to be dignified and work hard and be interesting to other people". Now a modern teenage girl described her plans for improvement, as "I will lose weight. Get a new haircut, new clothes and makeup". Teenagers are now far more concerned with their appearance and this has resulted in obsessions with their bodies, drops in self-esteem and a rise in eating disorders and anxiety.

In reality, many different kinds of facial features and body types are beautiful. But the flawless appearance of women in advertisements isn't even real. In some cases the picture you see is actually made of several photos. The face of one model may be combined with the body of a second model and the legs of a third.

Tricks used for Boys

What about male images?

Ads also present an image of the "ideal" male. For girls and women, body image is pushed in most ads. For boys and men, the image is about 'attitude'.

Boys and young men in ads usually play the part of someone who is cool and confident, independent, even a bit of a rebel. Men in ads tend to have power, physical strength, and confidence. The male image in ads rarely includes such characteristics as sensitivity or compassion. This image can send boys the message that men should be tough and cool at all times and not showing caring or sensitive emotions.

Male Actors in ads tend to be handsome and athletic and involved in physically challenging, dangerous or aggressive sports.

AFL football players have been used in advertisement selling shoes, glasses and clothing.

Advertisements offer to sell us a new image

Once the advertisement has made us feel miserable about our self-image and body image, they offer to sell us a product that will solve our 'problem' and restore our self-esteem and make us feel better.

This quote comes from the president of an advertising agency.

Good advertising makes people feel that without your product, they are a loser. Kids are very sensitive to that. If you just tell them to go and buy something they won't. But if you tell them that they'll be a loser or a "dork" if they don't, they will listen. Kids are very worried about image and once you get them worried they will do what you want.

How does this make you feel?

MY SELF IMAGE ROLE MODELS

ACTIVITY SHEET 3.1

Write down below some people you admire and would like to be like and explain why.

1. _____

Why? _____

2. _____

Why? _____

3. _____

Why? _____

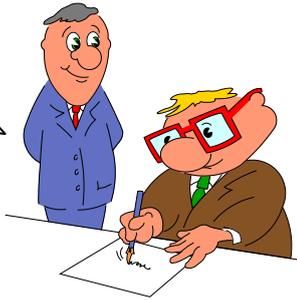
4. _____

Why? _____

Qualities I admire:

How does Advertising Work?

O.K. We want to sell the stuff to kids, but what message do we use?



We use advertising to persuade the kids that they need your product.
We convince them that they will be smarter, more attractive, thinner and more successful when they have your product.

I don't really understand this image thing.

How do you know what sort of image to give a product that you are trying to sell?

Well we use a market researcher to look at a whole lot of kids and see what they want from life.



I want to be grown up and cool

I want to be big and strong and do exciting things

I want to stand out from the crowd and be beautiful

I want to be popular and fit in with the group

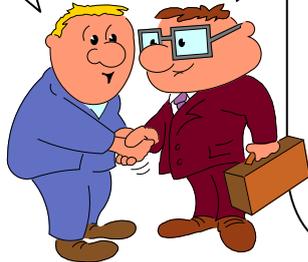
I want people to be friends with me



Then we design an 'Ad' that convinces the kids that the things and feelings they want are easy to get. They just need this product.



Gee. That sounds kind of sneaky. I don't know that my range of scratch and sniff socks are going to make kid's popular and successful in life.



Don't you worry about a thing we will have these kids believing their life is worthless without a pair of your scratch and sniff socks.

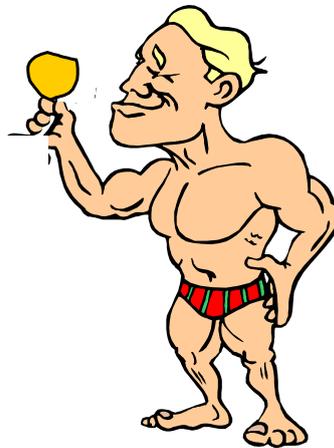
**GET STRONG, GET COOL,
GET**

CHUNKY FLAKES

Arnold Swatznagger
eats **CHUNKY FLAKES**



BEFORE

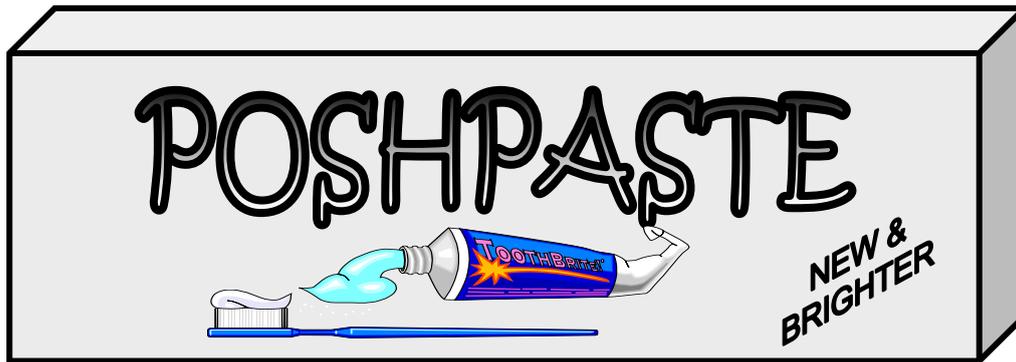


AFTER

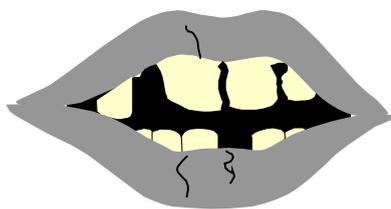
**No exercise, no weights, no sweat
just **CHUNKY FLAKES****

MARKETING PLAN

Product Name	CHUNKY FLAKES
What is the product?	Breakfast cereal
Target group	Teenage boys
Images my product will target	Body image: muscles and good looks with no effort. Athletic ability: strong
Tricks of the trade	Famous name: Arnold Swarznegger Before and After Photographs Stretching the truth



Victoria Peckingham used POSHPASTE and she became Posh. She was a world famous singer in all girl band Posh Girls.
Then she married a handsome, famous, international soccer star.



BEFORE



AFTER

MARKETING PLAN

Product Name	POSHPASTE
What is the product?	Toothpaste
Target group	Teen age girls
Images my product will target	Body image: Good teeth lead to success and happiness Behaviour: Great teeth lead to confidence
Tricks of the trade	Famous name: Victoria Beckham Before and After Pictures Leaving out important information Stretching the truth

MARKETING PLAN

OUTLINE SKETCH

--

MARKETING PLAN

Product Name	
What is the product?	
Target group	
Images my product will target	
Tricks of the trade	



The Price of Happiness

This purpose of this sheet is get you thinking. Don't worry if you have been caught by the advertiser's tricks, so have millions of other people. Tick the answer that is true of you.

Ask yourself	Many times	Sometimes	Never
Have I felt bad about myself for not having something?			
Have I felt that others might like me more if I owned a certain item?			
Has an ad made me feel that I would like myself more, or that others would like me more, if I owned the product the ad was selling?			
Have I worried about whether I look attractive?			
Have I felt that others might like me more if I looked different – if my face, body, skin or hair was different?			
Has an ad made me feel that I would like myself more, or that others would like me more, if I could change my appearance with the product being sold?			

I would like others to form their opinion of me based on: (Tick a box)

What I look like	
My personality and character traits	

Do you think the media has ever influenced you? If yes, how?

Do you think advertising can make people feel bad about themselves? How?



STARS SESSION 4 BODY IMAGE



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Recognising the difference between the images they see in the media and real life body images.
- Assessing the impact of body image as a criteria for becoming successful.

Attitudes and values:

- Understanding and appreciating the differences between all people.

Self-management skills:

- Identifying the qualities that help to make a person successful in life.

Interpersonal skills:

- Working cooperatively in groups.

PURPOSE

This activity will provide an opportunity for students to:

- Identify the people or characters young people admire and assess the characteristics of these people.
- Critically evaluate the images young people admire and how this may affect body image.

STARS MESSAGE

Body Image

We admire people for many reasons but often focus more heavily on the way people look and what we see in media images than what is real. People who are successful in life and achieve their goals have many different qualities.

PREPARATION

- Photocopy Body Pictures' Example Sheets 4.1(a) and 4.1(b) onto A3 Posters
- STARS Student Activity Manuals
 - Information Sheet 4.1
 - Example Sheets 4.1
 - Example Sheet 4.2 'Changes'
 - Resource Sheet 4.1 'Star Gazing at the Facts'
 - Activity Sheet 4.1 'Star Qualities'

PROCEDURE

1. Review of Self Image and the Media



Review the last stars session on self-image and the media. We looked at advertising and its effect on how we develop our self-images in the last session. We found that not all the images we see are necessarily real or sensible.

2. Lets Look at Stars and Other Famous People



Ask students to turn to **Information Sheet 4.1 In the STARS Student Activity Manual** and read it together.

We all have people or characters we admire in life. When children are very young they might like Bob the Builder, Barbie or Spiderman. As we get older we often admire film stars, popstars and other people we see in the media e.g. Brittany Spears, Arnold Schwarznegger, Ian Thorpe or Cathy Freeman.

We usually admire these people for many reasons but often focus more heavily on the way they look and what we see in media images rather than on what is really true. When we see images of these people in the media they appear to be perfect and have perfect lives.



Ask the students to look at the images we see of Barbie and Batman in their STARS Student Activity Manuals.

Ask students:

- What images do these dolls give young children of what men and women look like?

Ask the students to write the images around the pictures in their manuals.

Ask students:

- What pressures might this put on boys and girls as they grow up?
- Are the pressures that girls might feel different to that of boys? Discuss.

In the real world, even most professional bodybuilders don't have muscles like this image of Batman.

A perfect example is *Star Wars*. While these action figures are not as muscled as some others on the toy shelves, they have been made to look more muscled since their first release. The Action figures of Luke Skywalker and Han Solo, from the first release in 1978, had normal-looking bodies. But when figures of the same two characters hit the shelves 20 years later, they were much thicker through the arms and chest. The movie's characters didn't change at all, but their toy images did.

The same thing happened to G.I. Joe. In the mid-1960s, Joe's pectoral muscles barely registered and his stomach was smooth. Today's Joe has a chest so huge he can barely keep his arms at his sides. And his abs are as rippled as a washboard.

Now we hear every day of boys as young as 9 or 10 years old who are looking for some way to make their muscles bigger. A small fraction of them may turn to dangerous steroids, compulsive weightlifting or unhealthy eating habits in hopes of making their bodies perfect.

3. Looking closely at Body Image

Ask students to look at the '**Body Pictures' Example Sheets 4.1 in their STARS Student Activity Manual** and discuss the difference in body shapes and sizes. Ask the students to think of well know or famous people who have these body shapes and write their names next to that body.

e.g. Sarah Marie from Big Brother, Kylie Minogue – Pop star, Oprah Winfrey - wealthiest entertainer in the world.

Mathew 'Spider' Burton- Tallest AFL football player, Russell Crowe ; Actor, Robbie Williams – Entertainer etc

Explain the many famous people we see are all different sizes and shapes. Which shows that you don't have to have a certain body to be successful.

4. What are some of the other tricks for Bodies?

Read the information to the students from **Resource Sheet 4.1 'Star Gazing at the Facts' In the STARS Student Activity Manual** or photocopy and use as an information sheet and read together or in groups. Discuss the reasons why filmmakers use these strategies. Discuss the role of actors and other people involved in the movie industry who create these images.

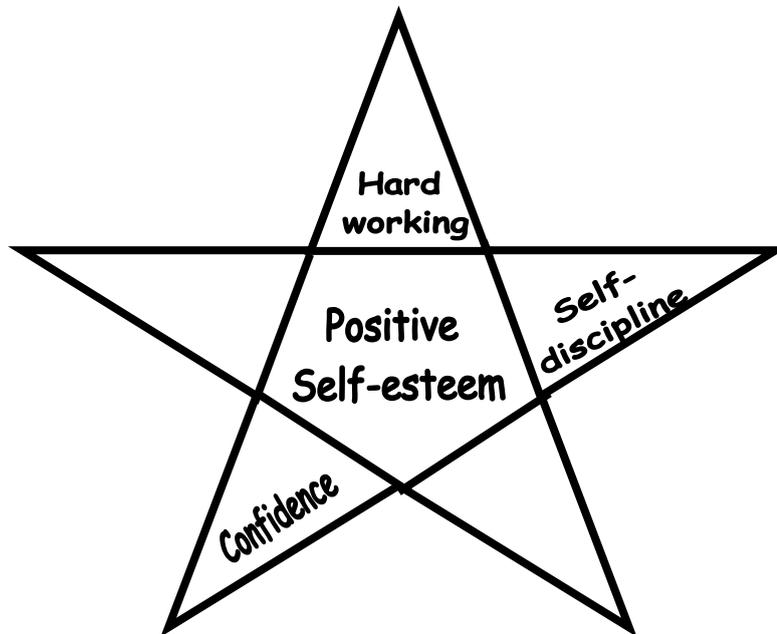
Show students the pictures from **Example Sheet 4.3 'Changes'** and discuss why and how people might change. Discuss changing artificially e.g. surgery, makeup, computer enhancement and changing naturally e.g. growing older and maturing.

5. Star Qualities

Arrange the students into groups and give each group a sheet of paper. Ask each group to write down on the paper some of the **characteristics they think famous people needed to help them become successful in their chosen area**. Explain that people

become successful in many different areas but there are many characteristics, which are similar whatever area they choose.

Ask each group to feed back to the class and then ask each student to open their **STARS Student Activity Manual to Activity Sheet 4.1 'Star Qualities'** and write into the star, as demonstrated below, what they personally believe to be the most important qualities in a person that helps them to become successful in life.



DISCUSSION TIME

Ask students to discuss the following questions:

- Do you think it would be possible for someone to become successful with no other qualities other than a perfect looking body? Why? Why not?

EXTENSION

Looking up the Stars

Ask the students to choose a celebrity or famous person who was/is not recognised for his/her good looks.

Ask them to research the person's background and how they came to be successful

- Was it easy or were there tough times?
- Did the star always feel good about him/herself or were there times when the star may have thought he/she wouldn't reach his/her goals?

HOME ACTIVITY

Students to ask their families to help them to collect pictures of different body shapes from magazines, newspapers, the internet etc. Ask them to bring them to school and discuss in groups what they found.



STARS SESSION 4 BODY IMAGE

LETS LOOK AT STARS AND OTHER FAMOUS PEOPLE

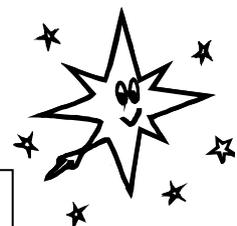
We all have people or characters we admire in life. When children are very young they might like Bob the Builder, Barbie or Spiderman. As we get older we often admire film stars, pop stars and other people we see in the media e.g. Brittany Spears, Arnold Schwarznegger, Ian Thorpe or Cathy Freeman.

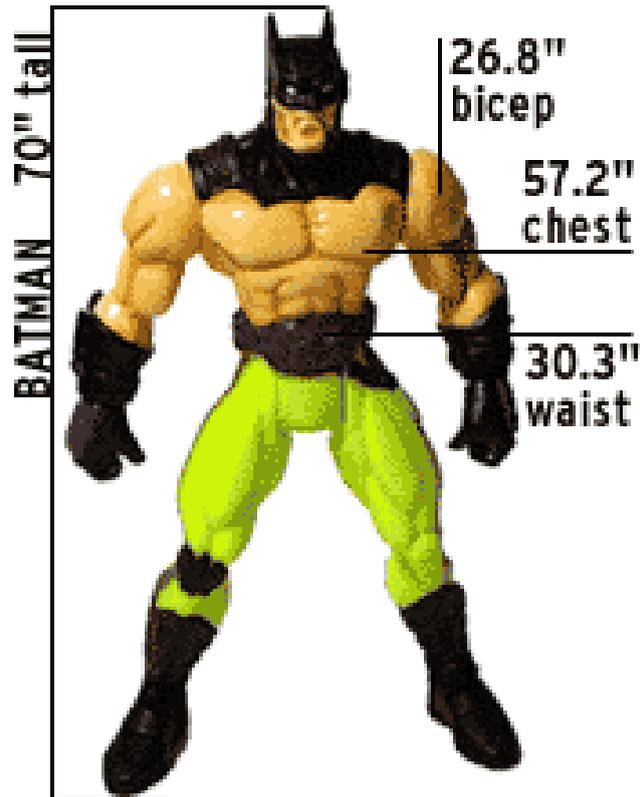
We usually admire these people for many reasons but often focus more heavily on the way they look and what we see in media images rather than on what is really true. When we see images of these people in the media they appear to be perfect and have perfect lives.



DID YOU KNOW THAT?

In the world today, there are three billion women who don't look like super models and only 8 who do.



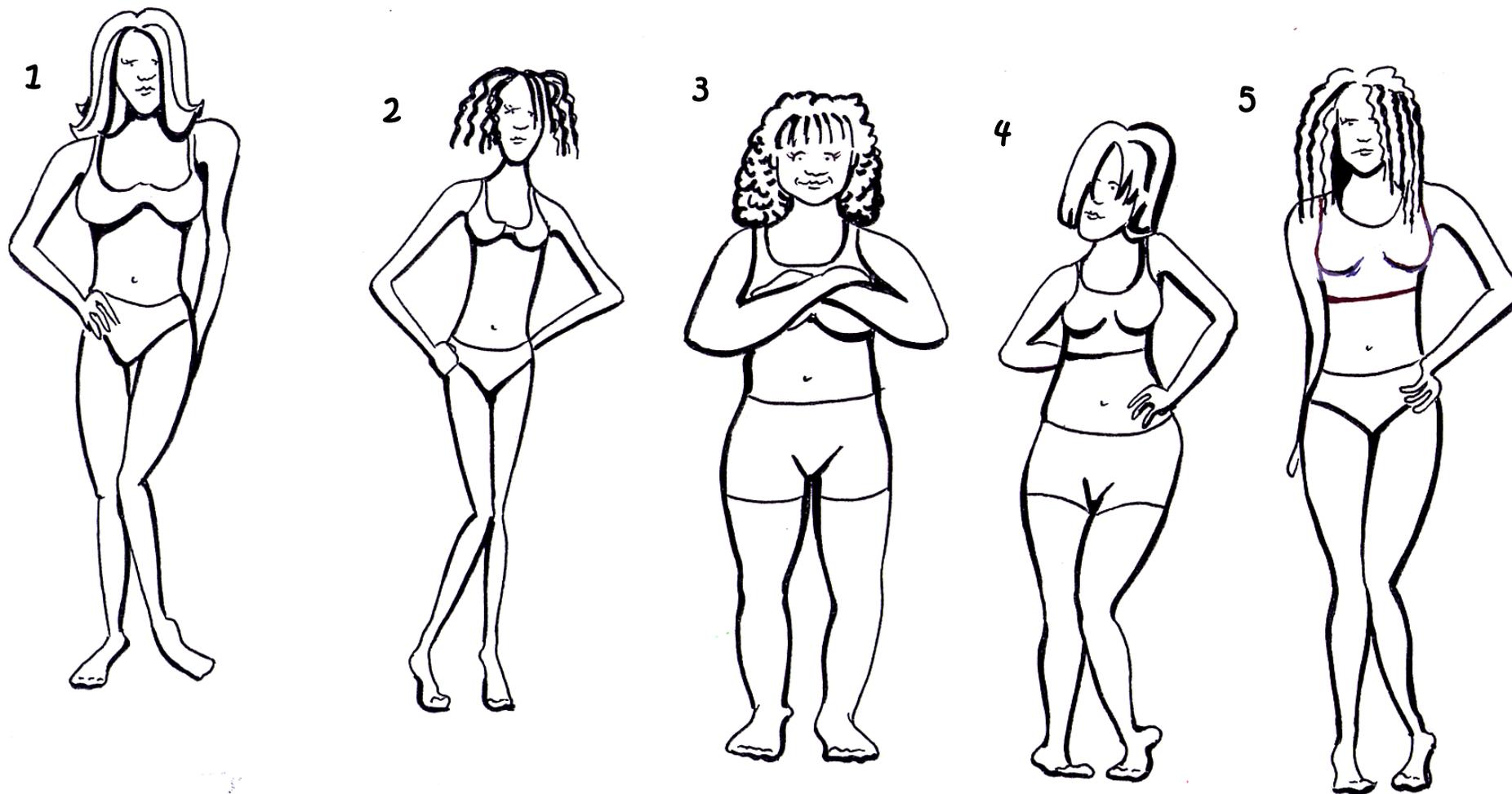


In the real world, even most professional bodybuilders don't have muscles like this image of Batman.

A perfect example is *Star Wars*. While these action figures are not as muscled as some others on the toy shelves, they have been made to look more muscled since their first release. The Action figures of Luke Skywalker and Han Solo, from the first release in 1978, had normal-looking bodies. But when figures of the same two characters hit the shelves 20 years later, they were much thicker through the arms and chest. The movie's characters didn't change at all, but their toy images did.

The same thing happened to *G.I. Joe*. In the mid-1960s, Joe's pectoral muscles barely registered and his stomach was smooth. Today's Joe has a chest so huge he can barely keep his arms at his sides. And his abdominal muscles are as rippled as a washboard.

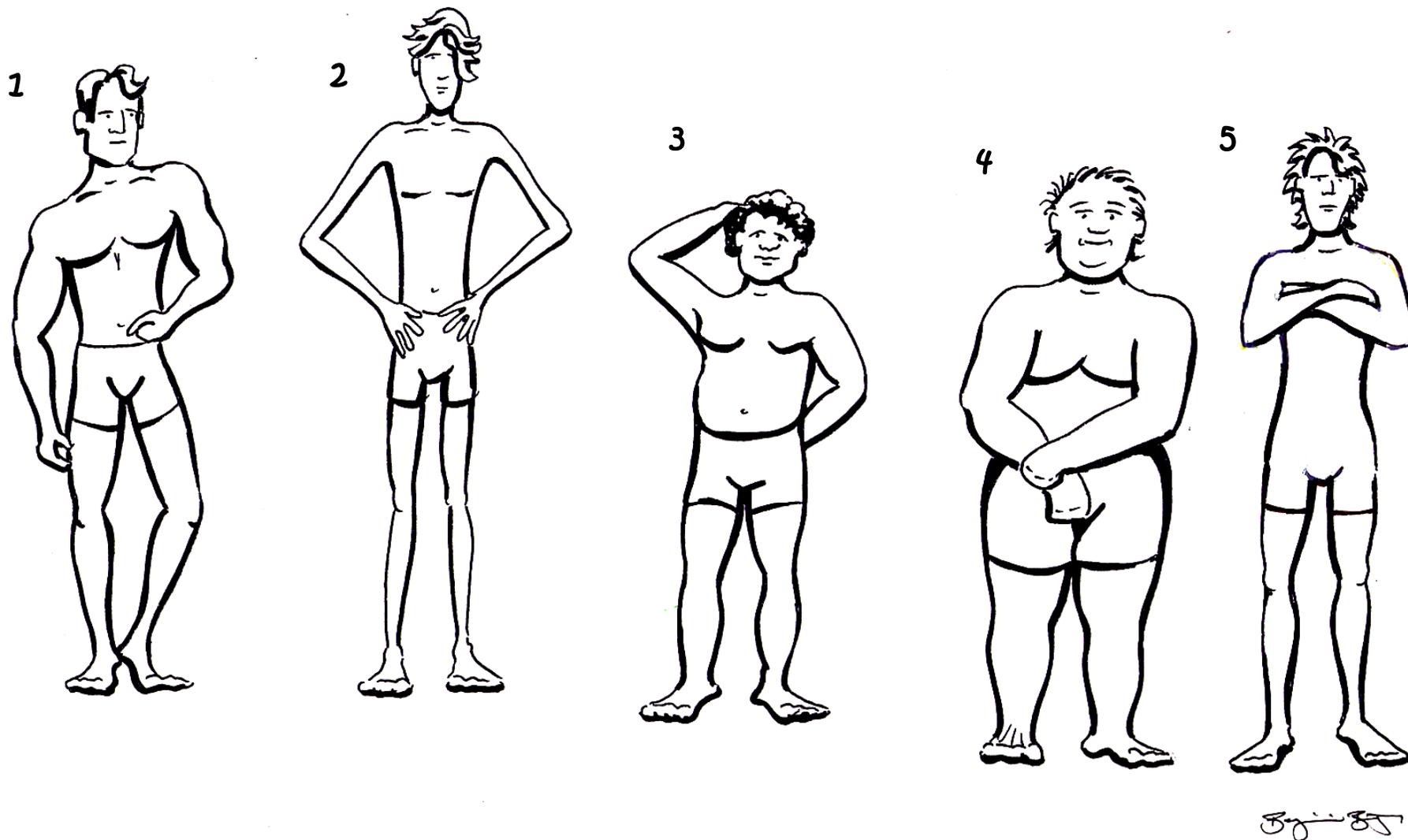
BODY PICTURES



Ben Bryant

Illustrations by Ben Bryant (Teacher-Upper Swan Primary School)

BODY PICTURES



Illustrations by Ben Bryant (Teacher-Upper Swan Primary School)

STAR GAZING AT THE FACTS

Action Heroes

Tom Cruise has played the part of the ultimate male symbol in movies such as *Top Gun*, *Mission Impossible* and *Days of Thunder*, for the past 15 years.

In his current movie *Minority Report* Tom faced some tricky problems while shooting on the set. The movie had a specially designed hi-tech car, but Tom who is 170cm tall couldn't reach the pedals to drive the car.

The car's designer had to go back to the drawing board and rebuild the car body to fit Tom. It wouldn't look so good if the latest action hero couldn't see over the dashboard.

In the movie *Top Gun* Tom Cruise played the role of a Top gun Air force Pilot who fell in love with the glamorous female instructor played by Kelly McGuiness. However for the romantic kissing scene Tom had to stand on a box to reach the 182cm Kelly.

Actor Steven Segal played the role of cool, tough guy in most of his movies. In the action thriller '*Under Siege*' he was fighting terrorists on a very large ship. The movie was filmed on a set made to look like they were aboard a ship. However just after filming began, the designers were asked to remake the set. The whole set including doorframes, tables and chairs were all made smaller than normal to make Steven look bigger to fit the image of the action man image.

Body Doubles

Body doubles are often used in movies to take the place of actors and actresses in various parts of movies. Julia Roberts had a body double for her body and leg shots in *Pretty Woman*.

In many movies actors or actresses may be very talented but not have the body shape or look that the director is after. Another person will come in for those scenes. For example if someone was a nail biter and the scene called for a close up shot of a ring on a hand, a hand model would be called in for the shot.

Stunts

Actor and actresses are good at acting but may not be so keen on jumping off a burning building and landing on a mattress so stunt people fill in for the dangerous scenes. These people are highly trained for this line of work and make a living out of filling in for all the dangerous scenes in movies.

CHANGES

SURGERY



MAKE UP

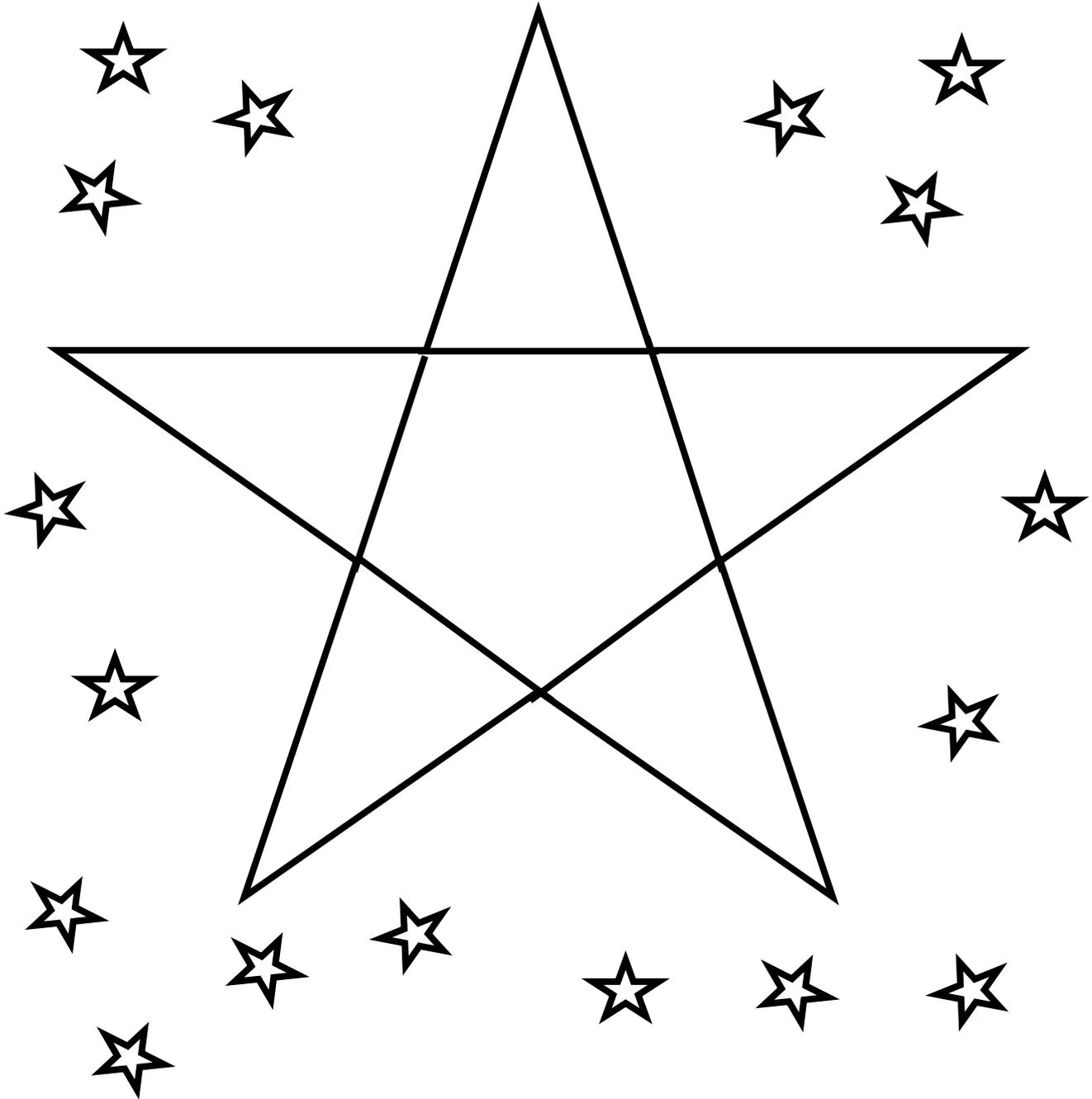


GROWING UP



STAR QUALITIES

Write the qualities you believe to be the most important for success in life.



Which of these qualities do you think you are developing, as you grow older?

STARS SESSION 5 SELF-TALK



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Identifying the effects of negative self-talk on our self-esteem.
- Assessing the advantages of positive talk on our ability to achieve things and feel good about ourselves.

Attitudes and values:

- Demonstrating their understanding of the value of positive self-talk.

Self-management skills:

- Displaying knowledge of positive and negative responses to situations and how these can effect their own personal decisions.
- Demonstrating the use positive of self-talk in activities.

Interpersonal skills:

- Demonstrating positive communication skills.

PURPOSE

This activity will provide an opportunity for students to:

- Identify thinking styles and self-talk they all have going on in their heads and how this effects how they feel.
- Develop awareness of their own thought processes in both positive and negative situations.
- Demonstrate the use of positive self-talk to enhance confidence and performance in activities.

STARS MESSAGE

Self-Talk

Self-talk affects the way we feel and how we behave. Challenge the negative 'pest' thoughts with more realistic and positive self-talk.

PREPARATION

- Snakes and Ladders game board and equipment
- Students' STARS Student Activity Manual
 - Activity Sheet 5.1
 - Activity Sheet 5.2
- Tape measures

PROCEDURE

1. Introducing Self-talk



Start the session by telling the children that you are going to role-play some thoughts going on in a pretend person's head. You might say something like this:

On the holidays I was asked by some new friends to do something I have never done before (e.g. horse riding, abseiling, windsurfing). I was excited about the idea. But then I started thinking to myself "What if I can't do it and I make a total fool of myself. They will all laugh at me and see how useless I am. I haven't got to know these people well yet and they probably won't ask me out ever again". Then I wasn't so excited about it anymore. I felt nervous and worried. So I didn't go.

Ask the students to identify the things I said to myself
e.g.

- "What if I can't do it and I make a total fool of myself"
- "They will all laugh at me and see how useless I am."
- "I haven't got to know these people well yet and they probably won't ask me out ever again."

Ask the students to identify how the things I said to myself made me feel and how this affected my decision about having-a-go at the new challenge.

Explain that I had been affected by my Self-talk.

In pairs ask the students to talk about their own self-talk if they were in this situation.

2. Snakes and Ladders



Arrange students in pairs and give each pair a Snakes and Ladders Game Board and equipment. Explain that the snakes are the negative (unhelpful) thoughts and the ladders are positive (helpful) thoughts.

The game plan is:

1. First player throws the dice to begin and moves his/her counter that number forward on the board.
2. If the player lands in an empty space he/she does nothing and waits for next turn.
3. If the player lands at the bottom of a ladder he/she picks up a Situation Ladder card and reads it out to the group. If this player can give a positive or helpful thought to this situation he/she can move up the ladder. He/she then waits in that space until his/her next turn.
4. If the player lands on the head of a snake he/she picks up a Challenging Situation Snake card and reads it out to the group. If the player can challenge this thought and think of a more helpful, positive thought then he/she does not have to go down the snake. If not he/she moves down the snake. He/she then waits in that space until his/her next turn.
5. If a player lands on the top of a ladder or the tail of a snake he/she should do nothing, but wait in that space until his/her next turn.
6. The winner is the first person to get to the finish.

Ask the students to play the game and then discuss what effect the snakes and ladders or negative and positive comments had on the game.

How many times a day do you spend thinking negative thoughts?

"I can't do this", "I am ugly", "They don't like me", "If I make a mistake everyone will think I am stupid", "I can't get it right", "I am not as good as them".

3. Why is self-talk important?

Explain that a lot of people think that their feelings come from the problems they face. They think that the **problem causes** their feelings. But it is not just the things that happen to us, such as getting yelled at, that makes us feel bad. It is what we say to ourselves (self-talk) in the situation that is the most important step

Sometimes we tell ourselves helpful things and sometimes we tell ourselves things that are not helpful.

Challenge ➡ **Thoughts** ➡ **Feelings?**

4. Thoughts can be pests (Negative self-talk)

Write the following on the board:

Some thoughts

Personal

Everlasting

Strong feelings

Thoughts that take over

Personal thoughts: When you take things too personally or when you don't take credit for your good ideas (e.g. It happened because I'm stupid).

Everlasting thoughts: When think things are never going to change (e.g. I won't ever make it)

Strong Negative Feelings: When your thoughts lead you to feel really bad

Thoughts That Take Over: **When you negative thoughts take over your life (e.g. I'll always be bad at ...; I can't do anything right).**

5. Pest Extermination



Explain that to build your self-esteem you must work on getting rid of your Pest thoughts and replacing them with more helpful thoughts. Let's find some of those Pests

Ask the students to turn to **Activity Sheet 5.1 'Pest Extermination' in their STARS Student Activity Manual**

Part A:

Ask students to:

1. Record a personal challenge they have faced or are currently facing and briefly describe the challenge in the space provided.
2. Write any thoughts that come to their head (positive or negative) in the space provided.
3. Record how these thoughts make them feel on the lines below.

Explain that once you are able to recognise your Pests then you can deal with them.

To identify Pests ask the students to look at each of their thoughts.

- Is this thought helpful?
- Is this the whole truth?
- Is there another way of looking at the situation?

Ask the students to identify the self-talk pests on their activity sheet and decorate them to look like pests by adding a few 'Pest' features.

Tell the students we will come back to this page soon to deal with these Pests.

6. Challenging Unhelpful Thoughts

Explain that you can choose whether to have a helpful or unhelpful self-talk. You can replace your Pests with positive self-talk. For example if you are saying to yourself "I can't do the maths test tomorrow I am going to fail"

Challenge your Pest thoughts by:

- Asking yourself “is this true of me” or am I making it seem more than it is. E.g. “I am not that hopeless”
- Thinking of things that prove that this is not necessarily true. E.g. “I passed my last test and I did alright last term”
- Trying to come up with a more helpful thought or way of looking at the situation. E.g. “I will do my best because last time I did a test that was good enough to pass.”

Our pests give us unhelpful messages, of failing or feeling bad. Our Positive Talk give us helpful messages which help you to feel good about yourself and to have-a-go at things.

Read Eva’s Case Study and discuss how she challenged her Pests

Eva aged 14

For a long time I told myself I couldn’t try out for the association netball squad. I had convinced myself I wasn’t good enough. When we were asked to put our names down for the squad I said things to myself like “ Don’t do it, you might fail”. Every time I thought about speaking to the coach about trying out I would start telling myself “there is no point in trying” and I won’t be any good”.

Then we did some activities in class about self-talk and I realised that there was another way of thinking. These thoughts were pests – they were stopping me from doing what I wanted to do.

I could challenge these pest thoughts. I started by thinking about whether what I was saying to myself was really true. I realised that I was being too hard on myself and I started to say things like “Go ahead give it a try. You love to play netball in the lunch hour and you can even shoot goals.” I started to push the unhelpful thoughts away and replace them with more helpful thoughts like “ What have I got to lose”, “ If I don’t try I’ll never know how good I am”, “I bet there are others trying out for the first time too”.

I am in the squad now and trying my best and even if I don’t make the A team I know I am improving my game and enjoying playing better than ever before.

Eva decided to challenge the thoughts and replace them with positive thoughts and this helped her to go on and do something she wanted to do. Now she doesn’t seem so worried about failure she is enjoying having-a-go. Even if she doesn’t make the team she still thinks it was all worth it and she feels good about herself.

Ask students to turn back to **Activity Sheet 5.1 of their STARS Student Activity Manual**

Part B

Ask students look back at the thoughts they wrote in the 'thoughts' box and challenge them by putting a more helpful thought in the box at the bottom of the page. Then ask them to highlight the positive thoughts they had already written.

Here are some general examples to help students think of their own:

- I've done it before
- I have a lot to offer
- I like the way I look
- I make a great friend
- I can learn to do this
- I can try this even if I don't do it perfectly
- I like the way I am
- It is possible
- I will have-a-go

7. Keeping the Pests Away

Explain the following to students:

If you have had pest thoughts for a long time it will probably feel a bit strange and difficult to challenge them at first and you will find you have to work hard at keeping those Pests away.

Remember

- Don't believe everything you see on TV and read in magazines.
- Don't believe the first negative thought that pops into your head
- Think about things carefully and make decisions based on what you really want and what is best for you.

When we have positive thoughts about ourselves we can cope better with whatever comes along, for example, if you feel good about yourself and have lots of positive self-talk, a negative comment isn't going to bother you as much.

Having positive self-talk and feeling good about yourself helps you to face what ever happens in your life and to try new things. When your self-esteem is high you are better able to make decisions for yourself. You won't worry about what other people might think or say and you will be able to work on what is important to you.

8. The 'SELF-TALK WALL' activity

Ask students to use **Activity Sheet 5.2 of their STARS Student Activity Manual The Self-talk wall.**

Arrange the students into groups and ask each group to go to the area of wall you have prepared with the tape measure stuck onto it.

Explain that you are going to ask them to each jump up from a two feet standing start and touch the tape high as they can. Ask them to arrange a recorder in each

group to read where each person touched. Ask that each student record their height in their Stars Activity Manual. Ask them to do this part of the activity now.

When everyone has their first recorded jump explain that next they are to think of positive self-talk to help them jump just a bit higher. Remind them to take the time before they jump to talk to themselves and suggest that they look at their last mark and imagine themselves jumping a bit higher.

Ask each student to write into their manual the positive talk they are going to use to help them.

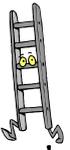
Ask each group to begin again and record the jumps.

DISCUSSION TIME

Many successful people use positive thinking to help them to achieve their goals. They create a mental picture of themselves succeeding and this helps them to perform.

- How do you think this works?
- Discuss different situations where this strategy might be useful and how you could use it in your own lives.

<p>SITUATION SNAKE CARD</p>  <p>I failed my spelling test. I am going to fail maths</p>	<p>SITUATION SNAKE CARD</p>  <p>I am going to hit every snake in this game</p>	<p>SITUATION SNAKE CARD</p>  <p>I missed the goal in basketball and we lost.</p>
<p>SITUATION SNAKE CARD</p>  <p>It's our assembly item and I am going to forget what to say</p>	<p>SITUATION SNAKE CARD</p>  <p>I am going to lose this game. I never win anything</p>	<p>SITUATION SNAKE CARD</p>  <p>I am going to a new school. I won't have any friends</p>
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 <p>SITUATION LADDER CARD</p> <p>I have been invited to a party with people I don't usually mix with</p>	 <p>SITUATION LADDER CARD</p> <p>I have three tickets in the raffle that is about to be drawn</p>	 <p>SITUATION LADDER CARD</p> <p>Our team is playing in the grand final of the soccer competition</p>
 <p>SITUATION LADDER CARD</p> <p>I have a maths test tomorrow morning</p>	 <p>SITUATION LADDER CARD</p> <p>I am presenting my project in front of the class today</p>	 <p>SITUATION LADDER CARD</p> <p>I have been asked to see the Principal after recess and I don't know why</p>
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PEST EXTERMINATION

A Personal Example.

Part A: In the space below, write about a challenge that you have been faced with recently.

Challenge

Write down any self-talk that comes to your mind when you think about this challenge:

Thoughts

How do these thoughts make you feel?

Part B: Now that you have challenged your pests write some more positive thoughts below.

Positive Thoughts

THE SELF-TALK WALL

ACTIVITY SHEET 5.2

First Jump: _____

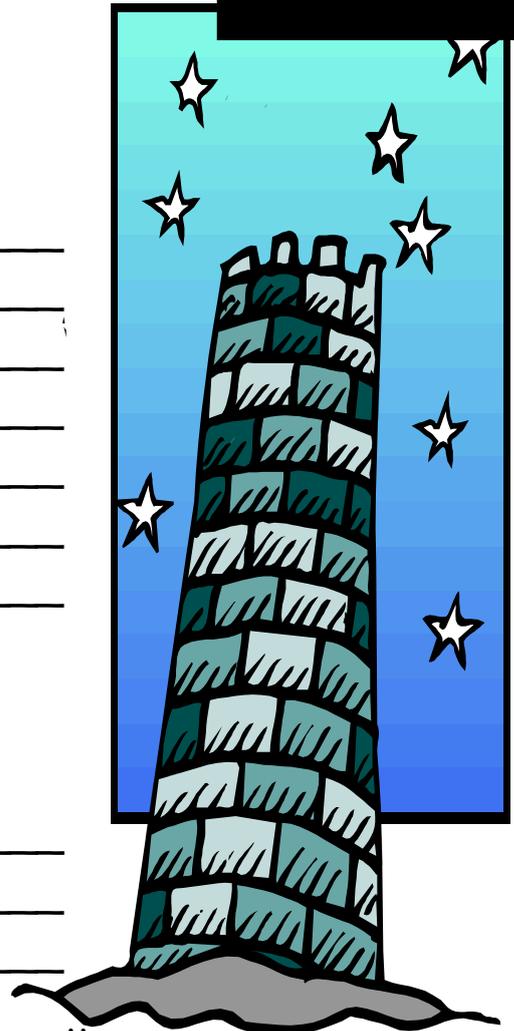
Positive Talk:

Second Jump _____

What happened? :

What do you think this result might be telling you? :

Why do you think it is important to have-a-go at trying to do just that little bit more in life?



REACH FOR THE STARS

STARS SESSION 6 LOVING OURSELVES FROM THE INSIDE OUT



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Understanding the importance of caring for themselves.
- Recognising the needs of their body both physically and mentally.

Attitudes and values:

- Demonstrating their understanding of the importance of valuing themselves.

Self-management skills:

- Setting goals to improve the health and well being of their bodies both physically and mentally.

Interpersonal skills:

- Working cooperatively to discuss issues concerning young people and how they feel about themselves.

PURPOSE

This activity will provide an opportunity for students to:

- Understand the importance of caring for themselves.
- Explore what their bodies need to make them healthy and happy.
- Develop a plan to work towards their goals for a healthy body both mentally and physically.

STARS MESSAGE

Self-talk

Self-talk can affect the way we feel about ourselves and how we behave. We know that we need to challenge the negative 'pest' thoughts with more realistic and positive self-talk.

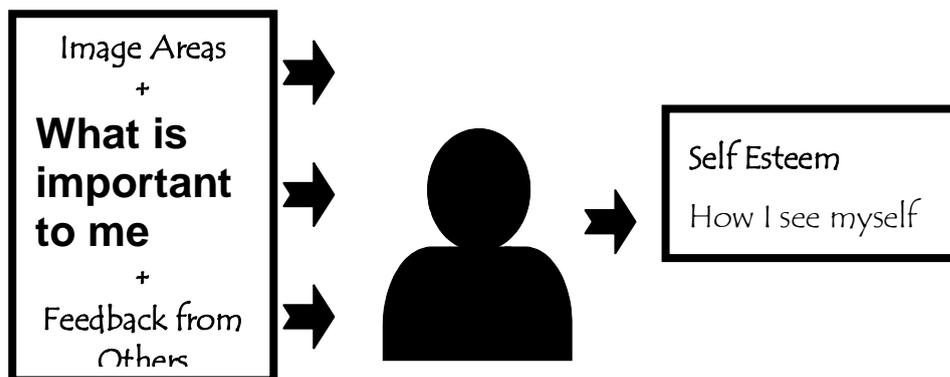
PREPARATION

- Photocopy Resource Sheet 6.1 'This Guy does not love Himself' onto A3 to make a poster or onto overhead for projector
- STARS Student Activity Manual
 - Information sheets 6.1(a) & (b) 'Making Your Body Purrr'
 - Activity Sheet 6.1 'Loving Yourself from the Inside Out'
 - Resource Sheet 6.2 'The Stars Plan'
 - Activity Sheet 6.2 'My Stars Plan'
 - Activity Sheet 6.3 'My Stars Plan Record'

PROCEDURE

1. REVIEW

We have explored many areas of our self-esteem.



We know that:

- ☆ The self-image is the collection of thoughts we have about who we are and what we can do. We build our self-image by discovering as much about ourselves as possible. We gather this information by looking at our features and abilities in certain areas (Image Areas), by using the feedback other people give us and by judging what is important to us.
- ☆ The self-image is the collection of thoughts we have about who we are and what we can do. We gather information by looking at our features and abilities in certain areas (Image Areas), by using the feedback other people give us and by judging what is important to us.
- ☆ We know that our self-image can be tricked by feedback from outside (e.g. media) so that our image is unrealistic.
- ☆ We know that Self-Talk can affect the way we feel about ourselves and how we behave. We know that we need to challenge the negative 'pest' thoughts with more realistic and positive self-talk.

2. Loving Ourselves

Some people think that “loving yourself” is selfish, or use it as a put down. (e.g. ‘He loves himself’) So it is no wonder we are sometimes cautious about showing that we like ourselves the way we are.

It is very important to show yourself love and care. You should nurture yourself and take care of your body.

Read the quotation from Jennifer Lopez

International Celebrity Jennifer Lopez says

“I take care of myself, because I feel better about myself when things are that way. I like feeling good, feeling healthy and eating right. I don’t feel good when I eat too much or too little or if I don’t exercise for weeks. I think smoking and drinking really wrecks you. I like my body too much to do that to it. Some people say I have a big bottom but I love my curves. I feel good in my body.”

Girlfriend Magazine



Ask students to open their STARS Student Activity Manual to Information Sheet 6.1 ‘Making Your Body Purr’

Read and discuss the points outlined on the information sheet.

3. Making your body Puuurr!



Have you ever patted a cat and heard it start to purr. This is its way of showing us how much it likes being loved and cared for.

When you treat your body well and show it love and attention it responds by producing feel-good hormones and reactions. The body has many ways of showing how it feels inside. For example:

FOOD and DRINK

Love food. Food is not the enemy. Allow yourself to enjoy all kinds of food, but remember: Everything in moderation. When we eat well our body produces energy and proteins to grow, build strength and repair damaged parts.

EXERCISE

Exercise brings a rush of feel-good hormones to your brain and helps make you feel great about yourself. Exercise also helps the blood to circulate through the body to help make you feel warm and energised.

REST AND RELAXATION

When we take time to relax our bodies rest and repair and in return they give us a feeling of calm and wellbeing.

POSITIVE SELF-TALK

Positive self-talk helps you to feel confident and happy and this also stimulates the brain to bring on feel- good hormones. These hormones can make you feel relaxed, happy and calm or stimulated, excited and ready for action.

4. How do I love myself from the Inside Out?

When we nurture our bodies on the inside we feel and look healthier and happier on the outside.

Show students the illustration on **Resource Sheet 6.1 'This guy does not love himself from the inside out'** and discuss the decisions he has made about what he does for his inside and how they affect his outside. How does he know his body is not purring? What are the signs?

Ask students to look at **Activity Sheet 6.1 'Loving yourself from the inside out' in your STARS Student Activity Manual** and ask them to draw an outline picture of themselves in the centre on the sheet. Then ask them to fill in what positive things you should do on the inside and how this will effect your outside. How does it look like your body would purr?

Discuss with the class.

Ask students to refer back to their **STARS Student Activity Manual to Information Sheet 6.1.**

Read and discuss the points outlined in the student manual titled 'How do I love myself.'

How do I love myself?

Take responsibility for yourself and be kind to your body by:

- Relaxing regularly
- Eating and drinking healthy food
- Sleeping at least 8 hours daily
- Accepting mistakes and learning from them
- Talking positively about yourself and others
- Using all your mind power positively
- Patting yourself on the back often
- Taking responsibility for your own health
- Watching only selected pictures and TV with healthy messages
- Doing what you know is right for you
- Expressing your own opinions

- Working out what is important to you
- Accepting helpful feedback and support from others

5. The Stars Plan

Explain the following:

If you really want to change and begin to really love your body from the inside, you can learn to take control of your behaviours. Evidence shows that if you start this now you will develop attitudes that you will take with you as you grow up and become an adult.

The STARS Plan helps you to take control and aim for improvement in your body's health and wellbeing. In return your body will reward you with many positive feelings and reactions.

The plan is very simple and can be used to help you in many different parts of your life e.g. sport, schoolwork, social life, health etc.

Ask students to look at the model of the Stars Plan on **Resource Sheet 6.2 in STARS Student Activity Manual**. Discuss the steps to developing the plan.

THE STARS PLAN

SET goals

TRACK progress

ACHIEVE targets

REWARD yourself

SEEK new challenges

What is a goal?

A goal is something you want to get, or be, or achieve in the future. Often you have to challenge yourself and learn new things to achieve your goal. The journey towards a goal includes many smaller steps or targets. The journey to each of these targets is often said to be the best part. People report that they feel good when they reach targets on the way to their goal.

6. Students Set Their Own Goals

Ask the students to turn to **Activity Sheet 6.2 'My STARS Plan'** in **STARS Student Activity Manual**.

Ask students to think about an image area they would really like to work on:
e.g.

- ☆ What do I Look Like?
- ☆ Am I liked and Accepted By Others?
- ☆ What are my Athletic Skills and Abilities?
- ☆ What are my Academic Skills and Abilities?
- ☆ How do I Behave or Act?

Ask students to think about how they could improve this image by working on the way they care for their bodies e.g:

- ☆ What do I Look Like? – Eat a better range of food, drink more water, exercise more regularly.
- ☆ Am I liked and Accepted By Others? – Being more positive about myself and others, accepting feedback from others, working out what is important to me, ask a friends about themselves, give a friend a compliment.
- ☆ What are my Athletic Skills and Abilities? - Accepting mistakes and learning from them, putting more time and effort into practising my skills, working on my fitness.
- ☆ What are my Academic Skills and Abilities? - Using all my mind power more positively, sleeping at least 8 hours daily, putting more effort into my homework, asking for help and support when I need it, doing homework straight after school.
- ☆ How do I Behave or Act - Doing what I know is right for me, taking responsibility for my actions, being more positive about myself and others, being considerate of other people.

Ask each student to fill in his or her Stars Plan. Now show them the **STARS Plan Record Sheet on Activity Sheet 6.3 in STARS Student Activity Manual** and ask them to fill this in over the next two weeks.

DISCUSSION TIME

Ask the students to discuss the following:

- Do you think people your age need to start planning and working on keeping their bodies healthy or is this something that can wait until later?
Give reasons for your answer.



Making your body Puuurrrr!

Puuurrrrrr

Have you ever patted a cat and heard it start to purr. This is its way of showing us how much it likes being loved and cared for. When you treat your body well and show it love and attention it responds by producing feel-good hormones and reactions. The body has many ways of showing how it feels inside. For example:



FOOD and DRINK

Love food. Food is not the enemy. Allow yourself to enjoy all kinds of food, but remember: Everything in moderation. When we eat well our body produces energy and proteins to grow, build strength and repair damaged parts.

EXERCISE

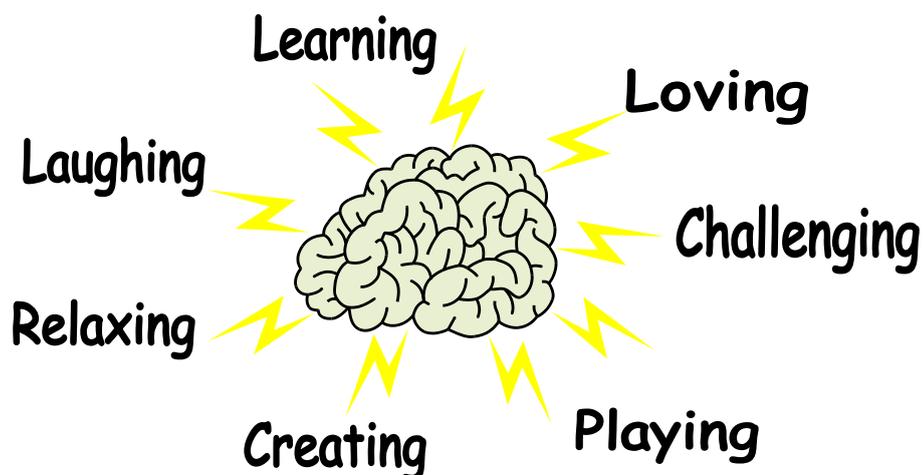
Exercise brings a rush of feel-good hormones to your brain and helps makes you feel great about yourself. Exercise also helps the blood to circulate through the body to help make you feel warm and energised.

REST AND RELAXATION

When we take time to relax our bodies rest and repair and in return they give us a feeling of calm and wellbeing.

POSITIVE SELF-TALK

Positive self-talk helps you to feel confident and happy and this also stimulates the brain to bring on feel-good hormones. These hormones can make you feel relaxed, happy and calm or stimulated, excited and ready for action.



Making Your Body Puuurrrr!

Puuurrrrrrrrr

Take responsibility for yourself and be kind to your body by:



- Relaxing often
- Eating and drinking healthy food
- Sleeping at least 8 hours daily
- Accepting mistakes and growing from them
- Talking positively about yourself and others
- Using all your mind power positively
- Patting yourself on the back often
- Taking responsibility for your own health
- Watching only selected pictures and TV with healthy messages
- Doing what you know is right for you
- Expressing your own opinions

When we nurture our bodies on the inside we feel and look healthier and happier on the outside.

This guy does not love himself from the inside out

**Negative attitude,
grumpy, stressed, sad**

Feeling tired

Dull eyes

**Thin, brittle or
unmanageable hair**

**Bad posture
-slouched
-round shouldered**

**Negative thoughts
Stress**

**Weak teeth
-decay
-gum disease**

**Dry, dull & flaky
or oily, spotty skin**

**Poor eating habits
-too much
-not enough
-unhealthy**

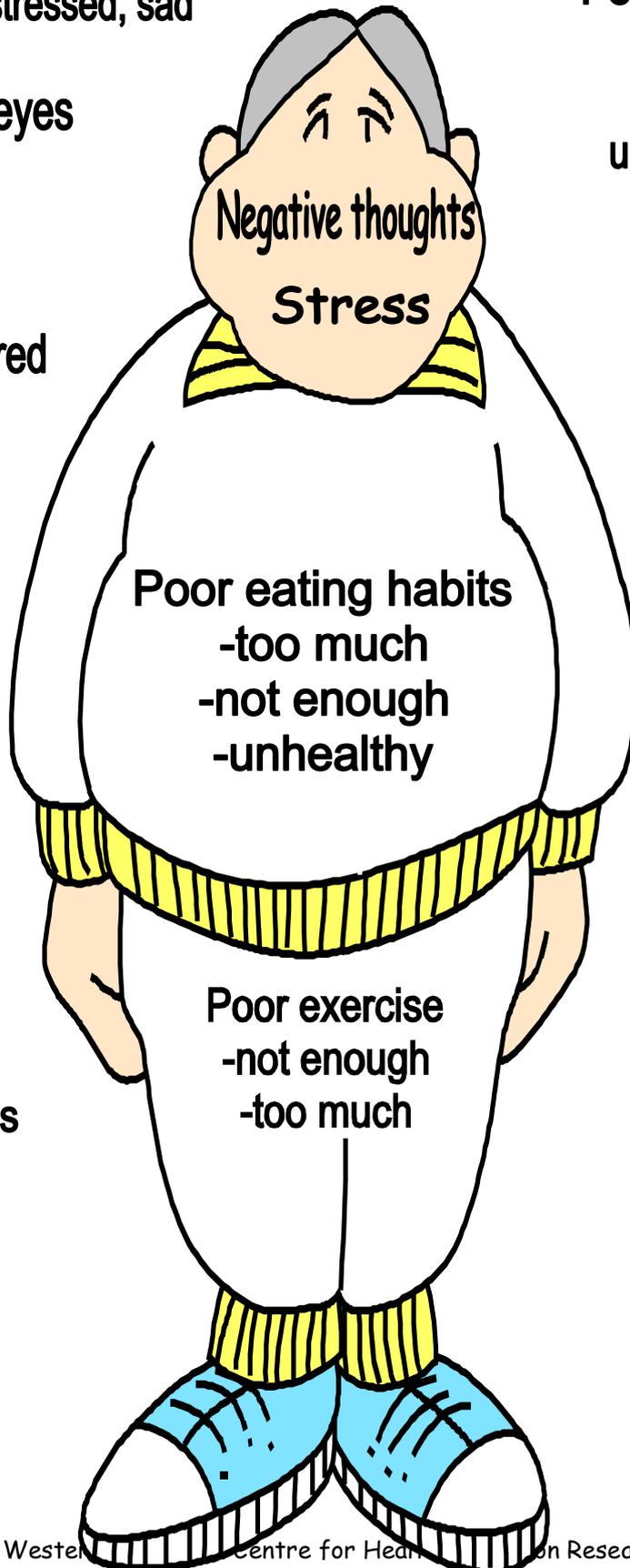
Brittle nails

**Poor circulation
of blood
- tiredness
- dull skin
- aches and pains**

**Weak, floppy
muscles**

**Poor exercise
-not enough
-too much**

Lack of energy



Loving yourself from the inside out

Draw an outline picture of yourself and show how you can work on yourself from the inside out and what the results can be.

THE STARS PLAN

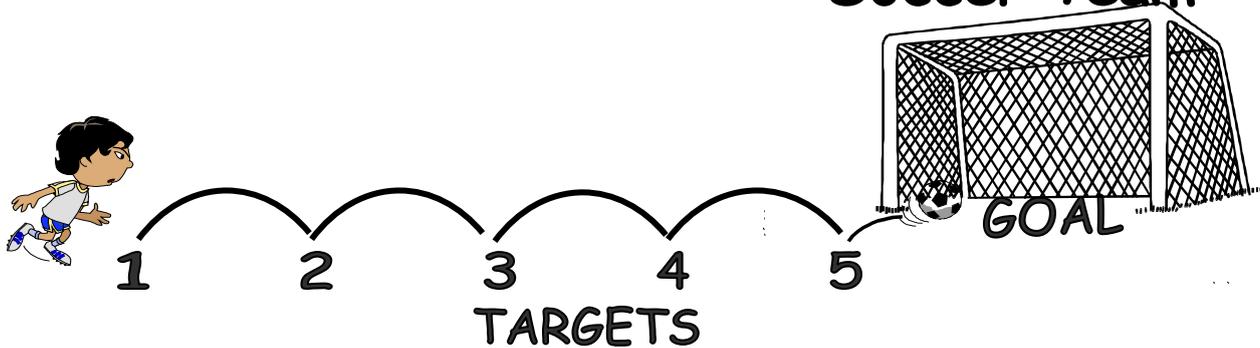
What is a goal?

A goal is something you want to get, or be or achieve in the future. Often you have to challenge yourself and learn new things to achieve your goal. The journey towards a goal includes many smaller steps or targets.

SET goals and targets

Think about what is important to me.

To make the Soccer Team



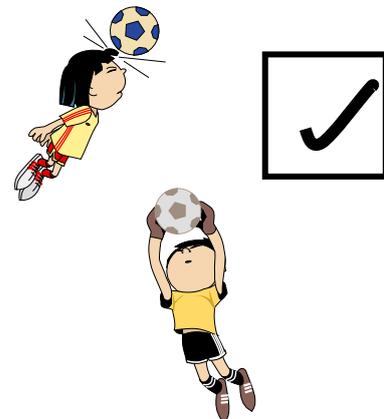
1. Bounce the ball off my head
2. Kick the ball straight
3. Be able to run 6 laps of the oval
4. Learn all about my position
5. Watch some world cup reruns

TRACK progress

Weekly record of my training and study of the game

ACHIEVE targets

Tick off targets as I reach them



REWARD yourself

Reward myself at each target

SEEK new targets

Write up my next set of targets to get to my Goal.

MY STARS PLAN

SET goals

TRACK progress

ACHIEVE targets

REWARD yourself

SEED new challenges

Image area: _____

S	ET GOAL
----------	----------------

S ET TARGETS		Tick when achieved
1		✓
2		
3		
4		
5		

R EWARDS

STARS PLAN RECORD



<u>DATE</u>	TARGET RECORD What did I do?	IMPROVEMENTS Or SUCCESSES	HOW DO I FEEL?	SIGNED
MONDAY				
TUESDAY				
WEDNESDAY				
THURSDAY				
FRIDAY				
WEEKEND				

<u>DATE</u>	TARGET RECORD What did I do?	IMPROVEMENTS Or SUCCESSES	HOW DO I FEEL?	SIGNED
MONDAY				
TUESDAY				
WEDNESDAY				
THURSDAY				
FRIDAY				
WEEKEND				

STARS SESSION 7

REACH FOR THE STARS PROJECT



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Identifying the factors involved in taking on challenges or 'having-a-go'.
- Describing the process of facing new challenges and learning through making mistakes and taking considered obstacles.

Attitudes and values:

- Appreciating the value of trying new things and challenges as a part of learning.

Self-management skills:

- Assessing the obstacles involved in moving outside their comfort zone.

Interpersonal skills:

- Communicating effectively in the group setting to understand the feelings of young people taking obstacles and facing challenges.

PURPOSE

This activity will provide an opportunity for students to:

- Understand the process of moving from their comfort zone to take on new challenges.
- Recognise the obstacles and fears they have when trying new things.
- Dealing with obstacles and mistakes as an important part of the learning process.

STARS MESSAGE

Reach for the Stars

We learn by taking challenges and having-a-go. Mistakes and obstacles are part of the process of reaching your goals. Setting goals helps you to plan for new challenges and achieve your goals.

PREPARATION

- 'The John Naber Story' from Example Sheet 7.1
- Large sheet of paper for 6-7 groups for the 'Challenge Envoy Activity'
- STARS Student Activity Manuals
 - Activity Sheet 7.1
 - Resource Sheet 7.1
- Home Activity Sheet – photocopy for each student to take home and complete with family

PROCEDURE

Review the last Stars Session on goal setting and read 'The John Naber Story' from Example Sheet 7.1



Ask students to open their STARS Student Activity Manual to Resource Sheet 7.1 Challenges : Having –a-go. Look at the model together and discuss.

1. Challenges : 'Having-a-go'.

Discuss the following with students:

To achieve any goal there are always obstacles involved. This is a challenge. This law of nature makes sure that we are always pushing ourselves a bit further and keeping our bodies and minds active and always learning new things.

When you were little you stood up and took your first steps as you began to master the art of walking.

Ask students to think about how they started to walk and when they took their first steps. Write their thoughts in the space in their STARS Student Activity Manual. Suggest students ask their parents if they are not sure of the details.

Explain that if they hadn't taken the challenge and tried to walk they would not be walking and running now.

Ask students to write down some other things that you can do now because you had-a-go when you were younger.

2. Use it or lose it

Discuss

Our body has a "use it or lose it principle". If you decided to sit in a wheel chair for three years and not use your legs because you liked sitting down, after three years you would not be able to walk. If you don't use your legs they won't work.

The same is true for any other part of your body including your brain. If you don't use your brain cells your body thinks they are not needed and they don't work anymore. This also applies to skills we learn. If we don't keep using them or practising them, we gradually lose them. For example you learnt to read in the early years in school, but if

you hadn't read another thing from Year 2 on, you would probably not be able to read much now.

Ask students to think of examples of some skills that you might learn and then lose if you don't keep using them?

Discuss

How can we prevent our skills from becoming lost?

Discuss

The good news is that when we use our body we keep it in shape and in fact make it stronger.

We learn by taking challenges and having-a-go, but somehow between the age of two and the age of twenty people have a change of attitude. Many people become worried about taking challenges and prefer not to have-a-go.

3. Mistakes

Discuss the following

When we are two years old we don't think about mistakes or failure we just think about having-a-go. When we started to walk we didn't worry that we might look funny staggering around and falling down, we just wanted to get up there and walk. When we grabbed hold of the pram to pull ourselves up, and it rolled away leaving us flat on our faces on the ground, we said to ourselves, "OK the pram is not so good for standing up" and we found the coffee table that worked last time.

Mistakes are feedback on how we are doing. When you are trying something new your mistakes will guide you as to what to do next and what to work on.

The story of inventor Thomas Edison is a fine example of this. When Edison was asked how it felt to have failed so many times in his efforts to produce the light bulb, Edison replied that he had not failed at all but rather he had successfully found thousands of ways how not to make a light bulb! With this kind of healthy attitude Edison went on to make history with his inventions that changed the world.

Some people make a mistake and give up, missing out on great opportunities to learn. Winners make far more mistakes than losers because they have-a-go. That is why they are winners. If explorer Christopher Columbus had not made a mistake when he went out looking for a quicker route to sail to India he might not have found America.

4. The Comfort Zone

Your comfort zone is where you feel most comfortable. Like being on a big pillow on which are all the things you feel comfortable about doing. When you are on your pillow you feel safe and secure and there are no obstacles.

Off your comfort zone pillow are all the things you are not sure about. Things that you may feel uneasy or nervous about like: meeting new people, learning a new skill, trying something you have never done before. Explain that sometimes there are image areas in which we don't feel comfortable.

Comfort Zone Activity

Ask students to write all the things they can think of that they are comfortable doing on their comfort pillow in their STARS Student Activity Manual Activity Sheet 7.1. Discuss some of the responses. Then ask students to write outside the pillow things that they can think of that would be more challenging.

5. Challenge Envoy Activity

Prepare a large sheet of paper for each group. On each group's sheet write a situation that the students might feel is outside their comfort zone. Try to use the Image areas for situations.

For example:

- Going on a game show and having to answer questions e.g. It's Academic
- Playing in a sport in front of a crowd
- Having photographs taken for a magazine
- Promoting themselves in a speech for House Captain
- Dancing in front of other students on stage at a disco.

Arrange students in small groups and give each group one of the large sheets of paper you have prepared. Describe the envoy process. Explain that you will give each group 2 minutes to read the situation on top of the page and then write what they think are the obstacles involved in this situation e.g. embarrassment, making mistakes, etc on the page. At the end of two minutes each group's 'envoy' takes their sheet to the next group in a clockwise direction. The envoy explains the situation on the new sheet and the previous groups comments. The envoy then seeks further ideas from this new group. The process continues until each group has written on every sheet.

Ask each group to provide feedback on the responses on the sheet they have at the end of the rotations. Compile a list of the obstacles the students worry about the most. Discuss these worries and assess how they may help us to develop further.

DISCUSSION TIME

Ask students to look at the list of obstacles that young people worry about when they try new challenges. Ask the students to discuss the following:

- Why do you think children worry about these things more as they get older?
- Do you think adults would worry about the same things? Give reasons for answer.
- Do you think it is possible to overcome our fears of the obstacles? How?



JOHN NABER STORY



ARTICLE FROM
JOHN NABER
OLYMPIC 100m BACKSTROKE
GOLD MEDALIST – 1976

In 1972, Mark Spitz won seven gold medals, breaking seven world records. I was at home in my living room watching him on T.V. and I said to myself at the time, “wouldn’t it be nice to be able to win a gold medal, to be able to be a world champion in Olympic Competition.” So right then it became a goal.

I was already a good swimmer with a personal best time in the 100 metres backstroke of 59.5 seconds. Roland Matthes, who won the backstroke event for the second time at an Olympics, swam 56.3 seconds in 1972.

I worked out, from Rolands improvements at the past three Olympics, that by the next Olympics in 1976, 55.5 seconds would be the time needed to win. That was what I figured I would have to do. So I was four seconds off the time needed to be in with a chance at the next Olympic 100m backstroke event in 1976.

That was a lot of time to cut off my personal best. But I made it my goal and then figured out how I could attack the task. I had four years to do it in. I was watching TV in 1972 and now I have four years to train. So that worked out to be an improvement of one second each year. That was still a lot.

I worked out that swimmers trained ten or eleven months a year, so it was about a tenth of a second a month, taking into account missed workout days. I figured that I train six days a week, so that worked out as only an improvement of $1/300^{\text{th}}$ of a second a day. I trained from 6-8 o’clock in the morning and from 4 until 6 o’clock at night, so it was really only about $1/1200^{\text{th}}$ of a second every hour.

Do you know how short a 1200^{th} of a second is? When you blink, from the time your eyelids start to close until they touch, five 1200^{th} of a second have passed. For me to stand on the pool deck and say, “during the next 60 seconds I’m going to improve that much (blink).” That was a believable dream. I could believe in myself.

It was hard at first to believe that I could drop 4 seconds off my time by the next Olympics, but I could believe that by reaching each of my targets I could get faster and faster.

In 1976 John Naber won gold and swam 55.49 seconds





Challenges : Having -a-go.

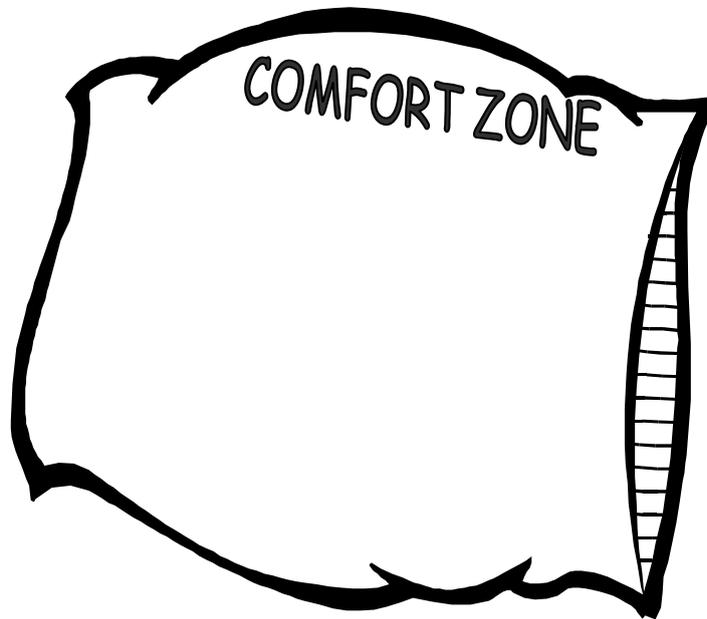
Ask your parents about how you started to walk and when you took your first steps.

Write down some other things that you can do now because you had-a-go when you were younger.

Can you think of examples of some skills that you might learn and then lose if you don't keep using them?

How can we prevent our skills from becoming lost?

THE COMFORT ZONE





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STARS SESSION 8 KNOW YOUR VALUES



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Recognising the way we judge ourselves according to the set of values we believe in.

Attitudes and values:

- Recognising and clarifying their personal values.
- Recognising and appreciating the values of others.

Self-management skills:

- Demonstrating an understanding of the importance of our values in our decision making.

Interpersonal skills:

- Communicating their values and beliefs to other people in a group and a whole class setting.

PURPOSE

This activity will provide an opportunity for students to:

- Understand how we develop and use our personal values to make decisions.
- Demonstrate the use of our values to contribute to discussions and activities.
- Clarify their values and beliefs in common situations experienced by young people.

STARS MESSAGE

Know you Your Values

We use our 'values' to judge our self-image. We value some areas of our life as more important than others, and what we value changes over time. We also decide what is important by how we think other people value us, in the different areas of our life.

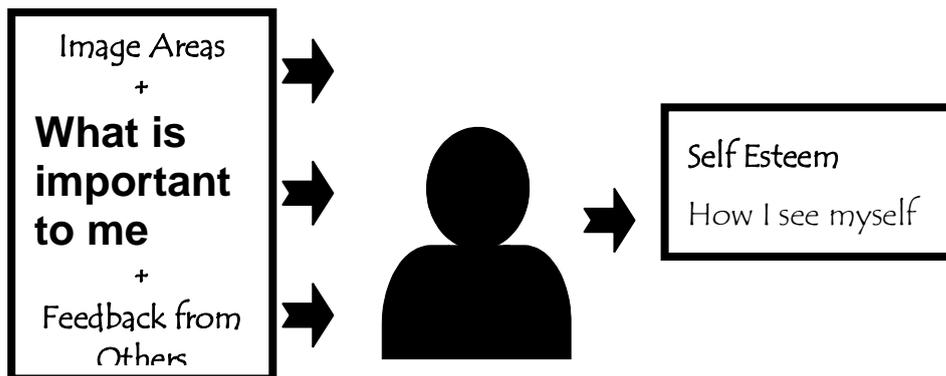
PREPARATION

- Photocopy Resource Sheet 8.1 cut up situation cards for each group
- STARS Student Activity Manuals
 - Activity Sheets 8.1(a) & (b) 'What do I Value?'
 - Reflection Sheet 8.1

PROCEDURE

1. Review of Self-esteem Model

Review the self-esteem model and where the 'What is important to me' section fits into the model. Students can review model on Page 4 of their STARS Student Activity Manual



2. What is important to you?

We use our 'values' to judge our self-image. We value some areas of our life as more important than others, and what we value changes over time. For example when you start high school you may value friendships more than the academic area of your life – because you need to make friends at your new school. But when you move into Years 11 and 12 you may place more value on academic work because you want to be able to get good jobs when you leave school. We also decide what is important by how we think other people value us, in the different areas of our life.

Once you know what is important to you, you can stand up for yourself and make your own decisions about what you want to do. Another way of saying, "what's important to me" is to say, "I value....", or "one of my values is..."

Let's find out your values (what is important to you) so you can make decisions and set goals you will be happy with.

Each person has different values that are important to him or her and it's OK to be different.

Some common values are:

- Physical Appearance – Health, Personal appearance, Personal respect.
- Social Acceptance - Friendship, Family, Respect, Generosity, Trust, Love.
- Athletic Ability – Sport, Fitness, Physical strength, Commitment.
- Academic Ability – School, Knowledge, Learning, Career
- Behaviour – Responsibility, Confidence, Courtesy, Compassion.
-

Ask students to look at **Activity Sheet 8.1(a) & (b) 'What do I Value?'** in their **STARS Student Activity Manual** and read the instructions together. Ask the students to write their responses onto the activity sheet as directed. Ask the students to share their responses with their group and discuss the differences and the values that were common among the group.

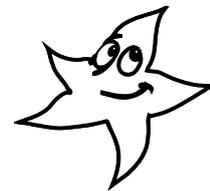
3. Why is Knowing Your Values Important?

Arrange the students into small groups. Ask one person to record the responses. Ask the students to think about and discuss why knowing your values is important. Ask each group to record the most important reasons and feedback to the whole class. Collate a class list and add on any that you think are also important.

e.g.

Knowing your values will help you:

- Make decisions about what you want to do in life
- Choose goals that are right for you
- Take responsibility for yourself
- Stand up for yourself
- Understand other people with different values



Explain the following:

Knowing your values will help you when you have difficult decisions to make.

What happens if you make a decision that goes against your values? For example, you are in a group and they are teasing someone about the way they look. Your friends are important to you, but so is behaving well with other people. How would you feel if you joined in with the teasing or even if you said nothing and just watched? How would you feel about yourself?

If you would feel guilty this tells you that kindness or acceptance of peoples differences is a strong value for you.

Peer pressure can be strong too and the importance you put on friendships. This can make it difficult to not just go along with the group.

What if you had made the decision to stand by your values and stick up for the person being teased? The other students might jeer at you or get angry with you but you will know you did what is right for you. Happiness and self-esteem come from making decisions and acting in a way that is true to your values.

4. Situation Cards

Give each group a set of situations cards **Resource Sheet 8.1**. Ask the students to take turns to pick up a situation card, read it aloud and then verbalise their response to the group. Ask each group to discuss the situation and ask questions of the person answering.

Explain to the students that the 'How would you feel?' question is important because if the feeling is very strong then this will indicate how important this area is to you. If the feeling is not very strong then this is not an important area to you.

Ask each group to feedback and discuss their feelings about the situations. Were there areas they found they felt more strongly about than others?

5. Reviewing Goal Setting Activity

Ask students to look back at their Star Plan goal-setting page on **Activity Sheet 6.2 'My Star Plan'** in their **STARS Student Activity Manual**. Ask students to think about why this goal is important and complete their Stars Plan Review **Activity Sheet 8.2 in their STARS Student Activity Manual**.

Please Note

Some students may decide at this point that their original Stars Plan needs alterations so you may wish to have spare photocopies of the on **Activity Sheet 6.2 'My STARS Plan'** ready for students to write a new goal.

DISCUSSION TIME

Ask the students to discuss the following:

- Do you think it is better to have one image area that is really important to you or to have a balance of importance across the image areas?
- Do you think that people who are successful just concentrate all their energies on one image area or try to get a balance?



WHAT DO I VALUE?

ACTIVITY SHEET

Do this activity on the next page:

1. Think about an area in your life that is really important to you e.g. friends family, sports, school, behaviour, how you look etc.

Write in Star 1:

- (a) The area in your life that is really important to you; and
- (b) Something you are really good at in this area of your life.

2. Think about an area in your life that is really important to you but you believe that you are not doing so well e.g. friends family, sports, school, behaviour, how you look etc.

Write in Star 2:

- (a) The area in your life that is really important to you; and
- (b) Something you would like to do better in this area.

3. If you could be anything in the world think about what would it be.

Write in Star 3- If you could be anything in the world what would it be?

4. Think about your friends and your family.

Write in Star 4-

- (a) 1 thing you value in your friends; and
- (b) 1 thing you appreciate about your family

5. Think about what your friends, family and school expect from you

Write in Star 5-

- (a) 1 thing your friends expect from you;
- (b) 1 thing your family expects from you; and
- (c) 1 thing your school expects from you

6. Think about yourself

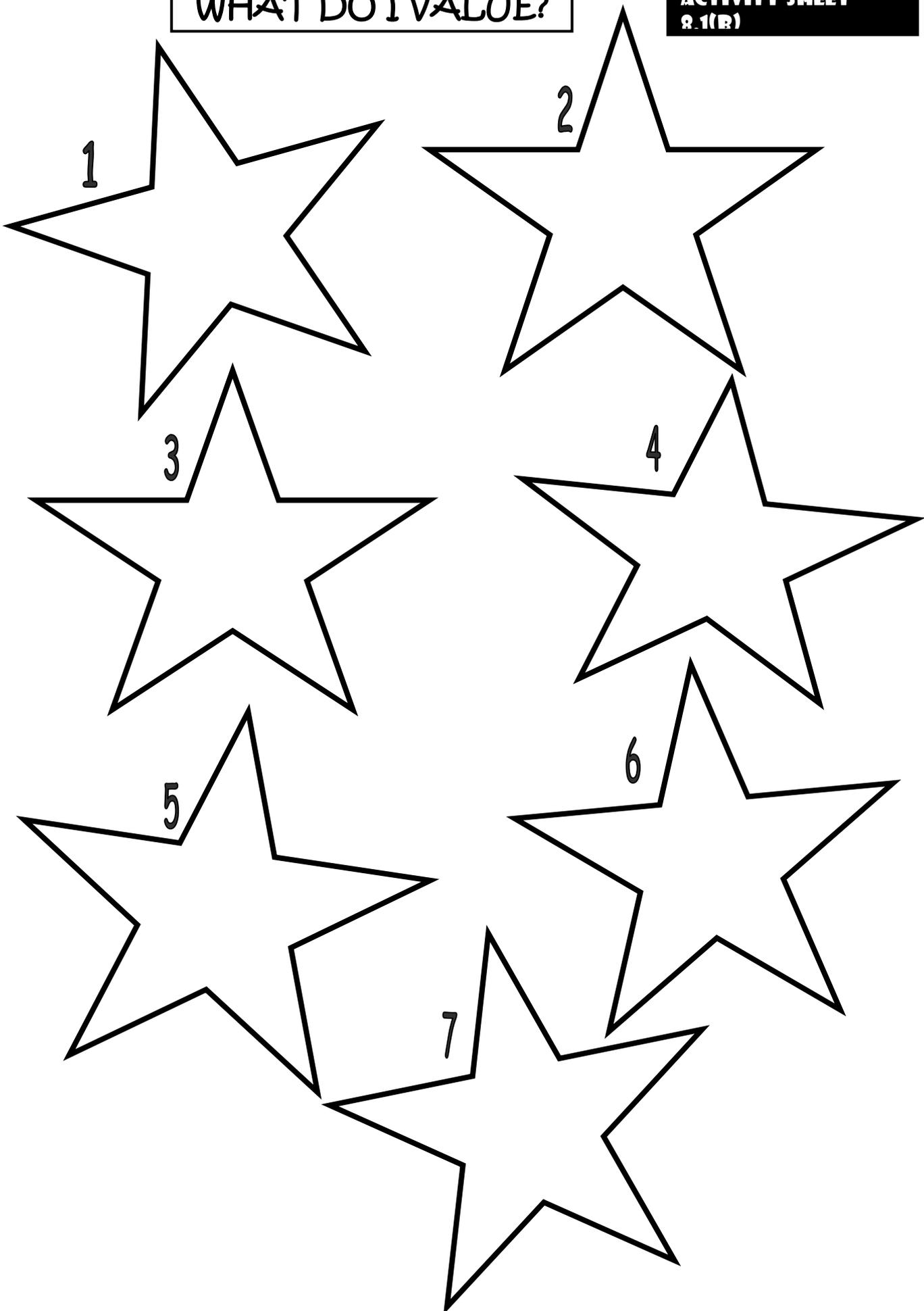
Write in Star 6- Write one thing you value most about yourself.

7. Think about your future

Write in Star 7- What do you think will be important to you as you start high school and move into your teenage years.

WHAT DO I VALUE?

ACTIVITY SHEET
8.1(B)



SITUATION CARDS - Values

RESOURCE SHEET 8.1

<p>You have a homework project to be completed by the next day and your friend has tickets to the basketball.</p> <p style="text-align: center;">How would you feel? What would you do?</p>	<p>Your friends have started wearing other clothes to school and ask you why you are still wearing school uniform.</p> <p style="text-align: center;">How would you feel? What would you do?</p>
<p>As you are about to hand in your maths test you see another student's answer sheet and realise you have got one of the answers wrong.</p> <p style="text-align: center;">How would you feel? What would you do?</p>	<p>A student starts making comments about another Year 7 student's changing body shape.</p> <p style="text-align: center;">How would you feel? What would you do?</p>
<p>You sit next to a new student but your friends tell you not to sit next to him/her.</p> <p style="text-align: center;">How would you feel? What would you do?</p>	<p>Your parents won't let you go to the movies with your friends because they say they don't trust you</p> <p style="text-align: center;">How would you feel? What would you do?</p>
<p>A boy in your class gets into trouble for something you did but doesn't tell the teacher.</p> <p style="text-align: center;">How would you feel? What would you do?</p>	<p>Your team goes from first place to last when you drop the ball in the leaderball at the school sports.</p> <p style="text-align: center;">How would you feel? What would you do?</p>
<p>You are a boy who is really good at sport. Your friends all play football but you really want to keep doing your ballet.</p> <p style="text-align: center;">How would you feel? What would you do?</p>	<p>You are a girl who is picked for the interschool footy team. You love footy but all your friends are playing netball.</p> <p style="text-align: center;">How would you feel? What would you do?</p>

STARS PLAN REVIEW

Is the image area you chose to work on important to you? _____
Why/Why not?

Is achieving the goal you chose to work on important to you? _____
Why/Why not?

Now that you have learnt more about what is important to you, you think this goal is still important to you? _____
Why/Why not?

Do you think what is important to you now will still be important to you when you are in high school?
Why/Why not?

STARS SESSION 9 TAMING TEASING



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Know and understand what teasing is and the effect it has on people.

Attitudes and values:

- Recognise the value of positive communication and friendship.

Self-management skills:

- Demonstrate strategies to deal with teasing situations.

Interpersonal skills:

- Demonstrate assertive communication skills

PURPOSE

This activity will provide an opportunity for students to:

- Understand what teasing is and how it affects people.
- Recognise the difference between friendly teasing and unkind teasing.
- Demonstrate strategies to respond to teasing.

STARS MESSAGES

Taming Teasing

Teasing is a problem if the person being teased is hurt by it and cannot stop it from happening. You don't have to put up with teasing.

PREPARATION

- Photocopy Cards for Three Card role Play Resource Sheet 9.2. Cut up one set for each group.
- STARS Student Activity Manual
 - Example Sheet 9.1
 - Resource Sheet 9.1 'Taking the Sting out of Teasing'

PROCEDURE

1. What is Teasing?

As we have seen from our study of self-esteem, everyone wants to be popular and feel good about themselves. Sometimes people tease to make themselves look good to others. They try to make themselves look stronger and more powerful by picking on someone who they believe is less powerful than they are. They think that this makes them look good in the eyes of those around them.

A person is teasing when they provoke (stir up) someone, either in a playful or in an unkind way. Sometimes people tease in a fun way where they don't hurt anyone's feelings. Other times people tease in a mean way that upsets or hurts the feelings of the other person and we call this bullying.

Teasing is a problem if the person being teased is hurt by it and cannot stop it from happening.

Arrange students into groups and ask one student in each group to be the recorder. Ask each group to brainstorm the most common things people their age are teased about. Ask the students to rank the image areas from 1 – 5 in order of which image area they think people are teased about the most.

Discuss the result from each group and collate a class list. Ask the students to think about why the list is like this.

Some years ago many children were bullied about wearing braces on their teeth, but now wearing braces is far more common and even quite fashionable for teenagers.

We have learnt now that many of our ideas about self-image and what is fashionable is created by the media and advertising, so it is important for us not to judge others based on these images. We have also learnt that everyone is different. People have different body shapes and sizes, different values, different self images, different abilities etc.

2. Are you sure you are only joking?

Ask the students to look at **Example Sheet 9.1 'Are you only joking?'**

We often communicate by having fun and joking with each other. We do this as a way of being friendly among people we know well. For example, a man greeted his brother at the bus with "G'day Shortie". The brother laughed and pushed his taller brother playfully. It was clear from this situation that this was a way of being friendly towards one another.

Look at the first cartoon and discuss.

However, if the teasing is hurting the feelings of the other person then it is no longer fun and friendly. For example a boy was upset because his friend at school kept calling him 'carrot top' because he had red hair. His friend was having fun but he wasn't. Look at second cartoon.

In the third cartoon the girls are being mean and deliberately hurting the other girl.

3. Taking the sting out of being teased

Ask the students to think about and discuss how the boy in the second cartoon could take the sting out of the teasing. (What could he do?)

Add these in if they are not mentioned:

The boy has two choices:

- (a) He can tell his friend that he doesn't like being called carrot top and ask him to stop; or
- (b) He can make a joke of it and say "Carrot tops are green" and I haven't got green hair so stop calling me that.

Either way his friend would realise that he didn't want to be called that name and stop doing it. If his friend really was a good friend he would stop.

People who tease to make us feel miserable rely on us getting upset or getting angry and fighting back. This is the reaction they are looking for and this is what will keep them going. To take the 'sting out' of their teasing try using humorous responses. When we say something unexpected back the person teasing is often caught off guard and doesn't know what to say next. Then they become embarrassed and back off.

4. Let's try some humorous responses

Give students an example of a teasing comment followed by one or two examples of a response. Then ask the students to try to come up with some responses of their own.

Strategy: Agree with them

Teacher Example: "Your hair is disgusting".

- Thank you, that is very kind of you to notice.
- Yeah, I try my best..
- Only on special days.
- Yeah, I did it just for you.
- Yes, I know. I like it like that.

Strategy: Disagree with them

Teacher Example: "You're so fat"

- No, I'm just cuddly.
- I'm well padded.
- No, I am getting ready for a long winter.

Strategy: Be Nice

Teacher Example: "Your shirt is revolting"

- I'm sorry you don't like it. I wish I had yours.
- I like your shoes.
- Yeah, I like it like that.

Strategy: Explain the situation

Teacher Example: "You're a Meat Head"

- Well I guess you could say that. But technically my head is made up of many more things than just meat.
- Could you explain to me what it is that you are actually trying to tell me.

Strategy: Change the subject

Teacher Example: "You are an idiot"

- Thank you. Yes I am having a nice day. How about you?
- No I was watching the footy yesterday so I didn't hear that one.
- Get your facts right

Strategy: Beat around the bush

Teacher Example: "You're an idiot"

- You think so?. You should have seen me last week.
- I always try to please.
- Thanks for noticing. I aim to please.

Strategy: Say something that means nothing

- I'm hearing you
- Yeah?
- Big deal
- Is that all?
- Anything else?
- Really
- Define that for me

Strategy: Be thankful

Teacher Example: "Your are an idiot"

- Thank you for sharing that with me.
- Thanks for the feedback. I'll keep it in mind.

Strategy: Do nothing: Smile and walk away

Read through the tips on **Resource Sheet 9.1 Taking the Sting out of Teasing in students STARS Student Activity Manual**

Discuss how your responses may differ depending on who is teasing you. Sometimes not responding and saying nothing is the best way. If a friend or family member teased you it might be better to tell them how you feel and ask them not to do it.

5. Three Card Role Play

Ask the students in their groups to play Three-Card Role play to role-play some responses to teasing.

Give each group a set of 'Comment cards', 'Who said it cards?' and 'Why they said it' cards. Ask each group to put the cards into three piles and to shuffle each pile, then turn each pile face down.

To play, the first student picks up the top card from each of the three piles and reads them out to the group. That student must then think of an appropriate response for that situation. The group discusses briefly the response keeping in mind the tips in Resource Sheet 9.1. Then cards are returned to the bottom of the piles and the next student has a turn. And so on.

DISCUSSION TIME

Ask the students to discuss the following:

- What do you think about teasing? Is it acceptable?
- How did your responses to teasing change according to the situation in the Three Card Role Play?
- How can we help to stop teasing in our school?
- What could we write in a school policy on teasing?

Hey! Come and meet my mate
Chicken legs.
He's fast but he's got the
skinniest legs.



Hey Carrot
Top!
You want mashed
potato with that
head.



Oh My Gosh.
Did you see
what she
wore to the
disco last
night?



TAKING THE STING OUT OF TEASING

1. BE COOL:

Stand up straight, speak clearly and look confident even if you aren't. Make the person teasing think they are not bothering you and they are wasting their time trying to tease you.



2. STAY CALM AND NICE:

Be in control and don't get nasty. If you are nasty to them you will be doing what they are doing and this will only make matters worse. By being nice you are not responding the way they want you to and this may make them think twice about saying anything back.

3. DON'T SAY TOO MUCH:

Keep your responses short..



4. SPEAK AND MOVE ON:

Say your piece and then walk away. The person teasing you will want to have the last word. Don't allow this. Move away and ignore any other comments.

5. KNOW WHEN TO WALK AWAY:

If you find you are getting upset or scared then it is better to say nothing and simply walk away when the person teases you. This way the person will not see any reaction and you can try again another time.



THREE CARD ROLE PLAY

RESOURCE SHEET 9.2

<p>Comment</p> <p>You're an idiot</p>	<p>Comment</p> <p>You look terrible</p>	<p>Comment</p> <p>You're a loser</p>
<p>Comment</p> <p>You're so fat</p>	<p>Comment</p> <p>Your hair is a mess</p>	<p>Comment</p> <p>You're an idiot</p>
<p>Who said it?</p> <p>Friend</p>	<p>Who said it?</p> <p>Parent</p>	<p>Who said it?</p> <p>Brother/ Sister</p>
<p>Who said it?</p> <p>A student who you know</p>	<p>Who said it?</p> <p>Classmate</p>	<p>Who said it?</p> <p>Someone you don't know</p>
<p>Why they said it</p> <p>Joking</p>	<p>Why they said it</p> <p>To be mean</p>	<p>Why they said it</p> <p>To embarrass you</p>
<p>Why they said it</p> <p>They thought it was true</p>	<p>Why they said it</p> <p>Because they were angry with you</p>	<p>Why they said it</p> <p>To hurt your feelings</p>



STARS SESSION 10

STARS SELF-ESTEEM



Links to the Curriculum Framework

Students may demonstrate the achievement of the Health and Physical Education Learning Area Outcomes from the Curriculum Framework by:

Knowledge and understandings:

- Understanding the importance of good self-esteem and how they can develop it for themselves
- Recognising the needs of their body both physically and mentally.

Attitudes and values:

- Demonstrating their understanding of the importance of valuing themselves.

Self-management skills:

- Setting goals to improve the health and well being of their bodies both physically and mentally.

Interpersonal skills:

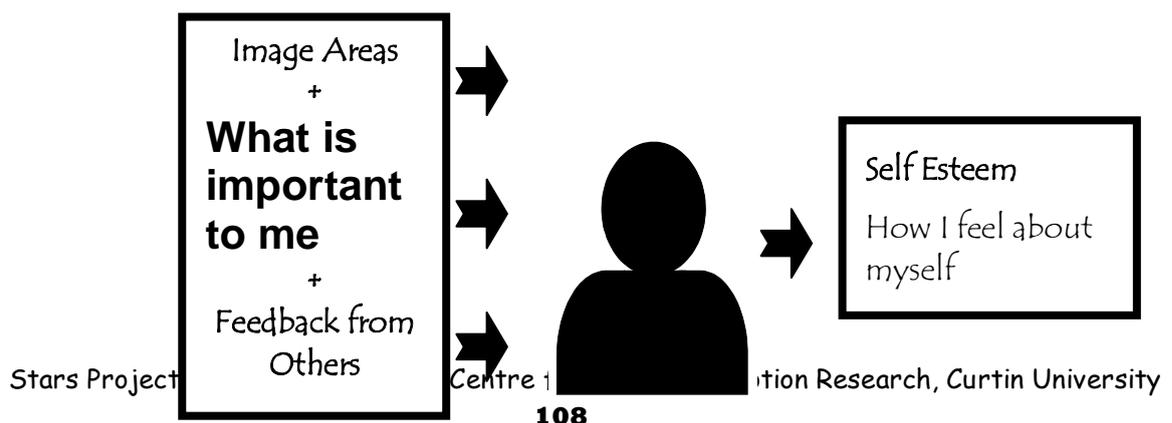
PURPOSE

This activity will provide an opportunity for students to:

- Understand the importance of caring for themselves
- Explore what their bodies need to make them healthy and happy.
- Develop a plan to work towards their goals for a healthy body both mentally and physically.

STARS FOCUS

Review of the STARS sessions and student reflection on their own self-esteem



PREPARATION

Students' STARS Student Activity Manuals

- Resource sheet 10.1
- Activity Sheet 10.1
- Activity Sheet 10.2

PROCEDURE

1. Reviewing the STARS Sessions

Ask the students to help you to review the stars sessions. Write the main points onto the board and discuss.

Refer to **Resource Sheet 10.1** for more information on the key points of each session.

2. Reviewing the Self-esteem Scale

Explain to students that they are now going to fill in the Self-esteem Scale that they completed in the first session of the STARS Project.

Ask students to open their **STARS Student Activity Manual to Activity Sheet 10.1 'The Self-esteem and review the instructions.**

Explain that the self-esteem form asks them to think about how they see themselves in each of the Image Areas.

Begin by asking each student to fill in the 'statements about me' section in the first Image Area: Physical appearance (What do I look like?) e.g. I am shorter than my friends, my hair is scruffy, I have strong legs, I have nice eyes.

Instruct the students to move through each Image Area completing the 'statements about me' sections. Explain to the students that the self-esteem scale is a personal document and that they need to try to be honest when filling in the form.

Ask students to think about how they see themselves now in each area and circle the number on the Image Area scale that they think shows how they feel about themselves on a scale of 1 – 5 where 5 = the best that I can be, in that Area.

Now ask them to think about how important this image area is to them and circle the number on the 'How important is this area of my life to me' scale of 1-5 where 5 = very important.

3. Self-esteem Reflection

Ask students to open their **STARS Student Activity Manual to Activity Sheet 10.2 'The Self-esteem Reflection Sheet'** and answer the questions on the sheet.

Discuss

Ask students to turn to **Resource Sheet 10.1 'Self-esteem Boosters'** in their **STARS Student Activity Manual** and read together and discuss.

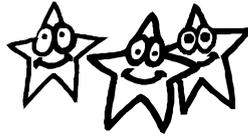
3. Advertising A Star

Explain to the students that they are going to write a marketing campaign to advertise themselves for the role of Councillor, House Captain, Project Officer, Debating Team member, Dolly Cover girl or whatever role they would like to see themselves in. They are to identify and promote their personal qualities that will help them succeed in this role.

The advertisements can be published in poster form or using computer technology to promote the message.

Display advertisements in the classroom.

STAR MESSAGES



1. Self-esteem

Self-esteem is the way we feel about ourselves. We compare how we see ourselves in all areas of our life with what is important to us, and the feedback we get from others. Healthy self-esteem is about accepting yourself as you are and feeling comfortable with yourself.

2. Self-image

The self-image is the collection of thoughts we have about who we are and what we can do. We build our self-image by discovering as much about ourselves as possible. We gather this information by looking at our features and abilities in all our Image Areas, by using the feedback other people give us and by judging what is important to us.

3. Self-image and the Media

The importance we place on an image area can be out of balance. Our self-image can be tricked by feedback from outside (e.g. media) so that our image is unrealistic.

4. Body Image

We admire people for many reasons but often focus more heavily on the way people look and what we see in media images than what is real. People who are successful in life and achieve their goals have many different qualities.

5. Self-talk

Self-talk affects the way we feel and how we behave. Challenge the negative 'pest' thoughts with more realistic and positive self-talk.

6. Loving Ourselves from the Inside Out

It is very important to show yourself love and care. When we nurture our bodies on the inside we feel and look healthier and happier on the outside.

7. Reach for the Stars

We learn by taking challenges and having-a-go. Mistakes and obstacles are part of the process of reaching your goals. Setting goals helps you to plan for new challenges and achieve your goals.

8. Know your Values

We use our 'values' to judge our self-image. We value some areas of our life as more important than others, and what we value changes over time. We also decide what is important by how we think other people value us, in the different areas of our life.

9. Taming Teasing

Teasing is a problem if the person being teased is hurt by it and cannot stop it from happening. You don't have to put up with teasing.

MY SELF-IMAGE SCALE

ACTIVITY SHEET 10.1

1. What do I look like? Statements about me

Image Area Scale					How important is this area of my life to me?				
1	2	3	4	5	1	2	3	4	5

2. Am I Liked and Accepted by Others? Statements about me

Image Area Scale					How important is this area of my life to me?				
1	2	3	4	5	1	2	3	4	5

3. What are my Academic Skills and Abilities? Statements about me

Image Area Scale					How important is this area of my life to me?				
1	2	3	4	5	1	2	3	4	5

4. What are my Athletic Skills and Abilities? Statements about me

Image Area Scale					How important is this area of my life to me?				
1	2	3	4	5	1	2	3	4	5

5. How do I Behave or Act? Statements about me

Image Area Scale					How important is this area of my life to me?				
1	2	3	4	5	1	2	3	4	5

SELF-ESTEEM REFLECTION SHEET

Did your thoughts on the Self-esteem Scale Sheet change at all since the beginning of the Stars Project? If yes, how?

Now that you have completed your Self-esteem Scale, how do you feel? Is your self-esteem good or is it low? Explain

What could you do if your self-esteem was low?

What are the most important messages you have learned from the STARS Project?

How can this help you in the future?



SELF-ESTEEM BOOSTERS

1. Stop comparing yourself with other people. There will always be some people who have more than you and some who have less. Love yourself for who you are.
2. Use positive talk. Don't put yourself down. You can't feel good about yourself if you are constantly saying negative things in your head.
3. Find positive stories and messages to read and watch on TV and movies. Don't get caught up in the media trap. Don't be fooled.
4. Be positive to people around you and they will be the same to you.
5. Look for the silver lining in every cloud. Look for the good in every situation and have-a-go at new things.
6. Don't worry about making mistakes. Everyone makes mistakes but only the clever ones learn from them and move on.
7. Don't put bad, poisonous things into your body. You only get one body don't ruin it and it will last you a life-time.
8. Love your body and treat it well and it will reward you with good feelings, lots of energy and a healthy glow.



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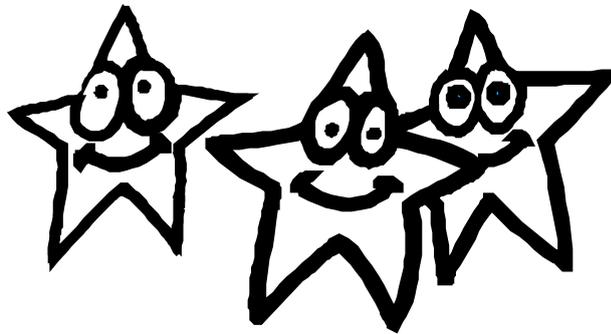
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APPENDIX G

The STARS Student Activity Manual

STARS



STRAIGHT TALKING ABOUT RESILIENCE & SELF ESTEEM

STUDENT ACTIVITY MANUAL

NAME _____

CLASS _____

SCHOOL _____

TEACHER _____

What is Resilience?

(Our ability to cope with difficult situations)

Resilience is our ability to cope with change and challenge and to bounce back in difficult times.



Skills to cope

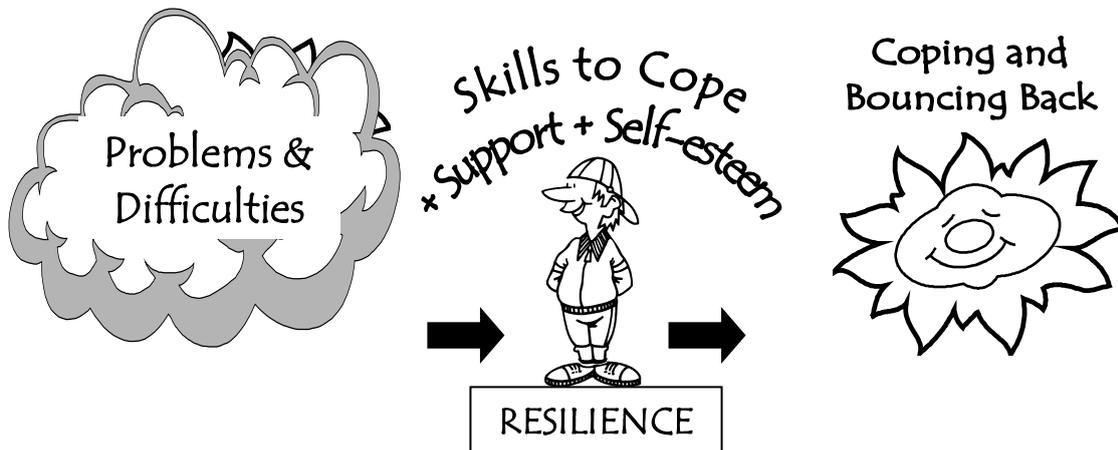
Resilient people have confidence in themselves; when in difficult situations, they think about what could go wrong and to prepare ahead of time. They have ways to cope with stress and they feel good about themselves and how they cope with life. They are good problem solvers and can think through situations, and decide on the best action.

Support

Resilient people have at least one caring adult, friends or other good role models in their lives. They get support and ideas about how to cope from their friends, their family and the role models in their life.

Self-esteem

Resilient people feel good about themselves and how they cope with life. They take responsibility for their actions and think positively about themselves. They know that even in the worst situations there can be opportunities to develop strength and understanding. They can survive and grow.



STARS MESSAGES

Resilient people have:

- ☆ **Skills**
Skills to cope with stress and challenges
- ☆ **Support**
Good Role Models - at least one caring adult

☆ **Self-esteem**

Feel good about themselves

What is Self Esteem?

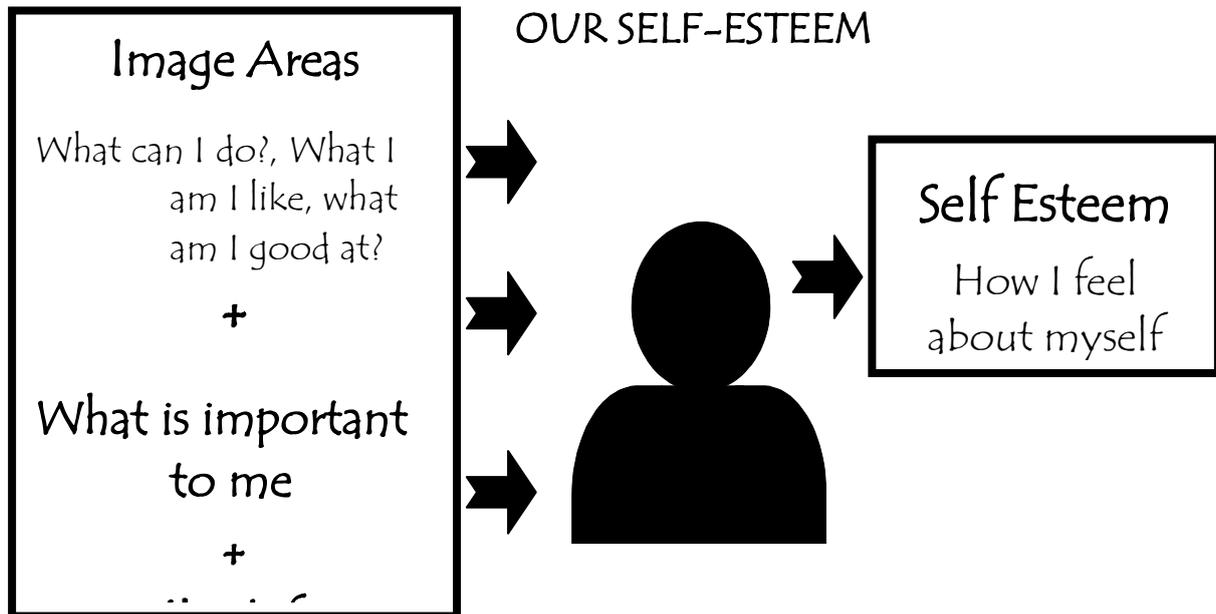


(How we feel about ourselves)

Self-esteem is the way we feel about ourselves. We compare how we see ourselves in all areas of our life with what is important to us.

- Healthy self-esteem is about accepting yourself as you are and feeling comfortable with yourself.
- Low self-esteem is about wishing you were different or wishing you were someone else.

HOW WE DEVELOP OUR SELF-ESTEEM



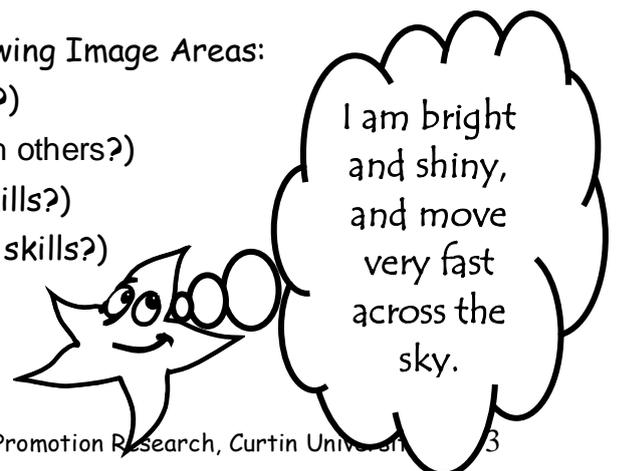
Self-Image

(How you see yourself now)

The image we have of ourselves is the thoughts we have about who we are and what we can do and in all areas of our life. We build our self-image by discovering as much about ourselves as possible. We gather this information by looking at our features, our abilities and our talents.

We look at our talents and abilities in the following Image Areas:

- Physical appearance (What do I look like?)
- Social acceptance (How do I get along with others?)
- Athletic ability (What are my athletic skills?)
- Academic ability (What are my academic skills?)
- Behaviour (How do I behave or act?)



What is important to you?

Some areas of our life are more important than others. We use our 'values' to judge what areas are important to us. For example, you may value friendship and loyalty more than you value athletic achievement. Or you may think that both of these areas are really important.

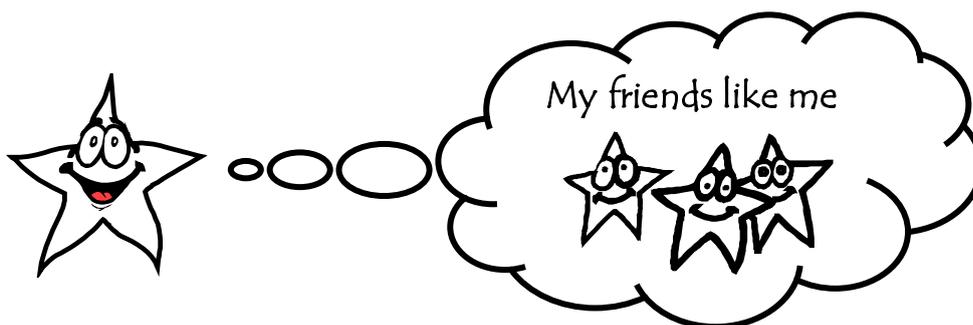


Feedback from Others

We all have people in our lives that we feel are important. These people are usually:

- Family members;
- Friends;
- Peers (other people our age);
- Teachers; and
- Anyone else that we feel is important in our lives.

When we are thinking about our self-image we get feedback from these people about what kind of a person we are and how we are doing in life.



Information about our Image Areas, What is important to us, and feedback from others all go together to develop our Self Esteem.



MY SELF-ESTEEM SCALE

ACTIVITY SHEET 1.1

1. WHAT DO I LOOK LIKE?

Statements about me									
How important is this area of my life to me?					How do I rate myself in this area?				
1	2	3	4	5	1	2	3	4	5

2. HOW DO I GET ALONG WITH OTHERS?

Statements about me									
How important is this area of my life to me?					How do I rate myself in this area?				
1	2	3	4	5	1	2	3	4	5

3. WHAT ARE MY ACADEMIC SKILLS AND ABILITIES?

Statements about me									
How important is this area of my life to me?					How do I rate myself in this area?				
1	2	3	4	5	1	2	3	4	5

4. WHAT ARE MY ACADEMIC SKILLS AND ABILITIES?

Statements about me									
How important is this area of my life to me?					How do I rate myself in this area?				
1	2	3	4	5	1	2	3	4	5

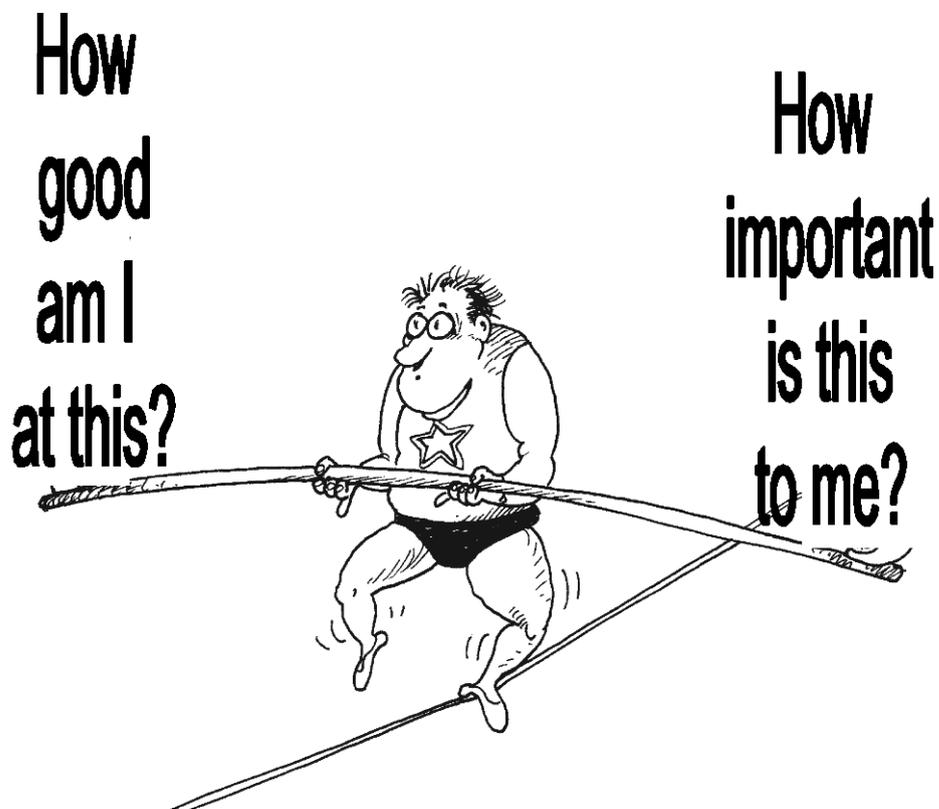
5. HOW DO I BEHAVE/ACT?

Statements about me									
How important is this area of my life to me?					How do I rate myself in this area?				
1	2	3	4	5	1	2	3	4	5

What is Self Image?

The self-image is a person's thoughts and ideas about how they see themselves now in different areas of their life. It is a person's ideas and beliefs about themselves.

We compare how we see ourselves in a particular Image area with what importance we place on this area. When there is a good balance between how we see ourselves and the importance we place on this particular area we feel good about ourselves.





A Sample of my Self Image

1. Choose an area in your life that is important to you e.g. how I look, sport, school, friends etc. (refer to image areas)

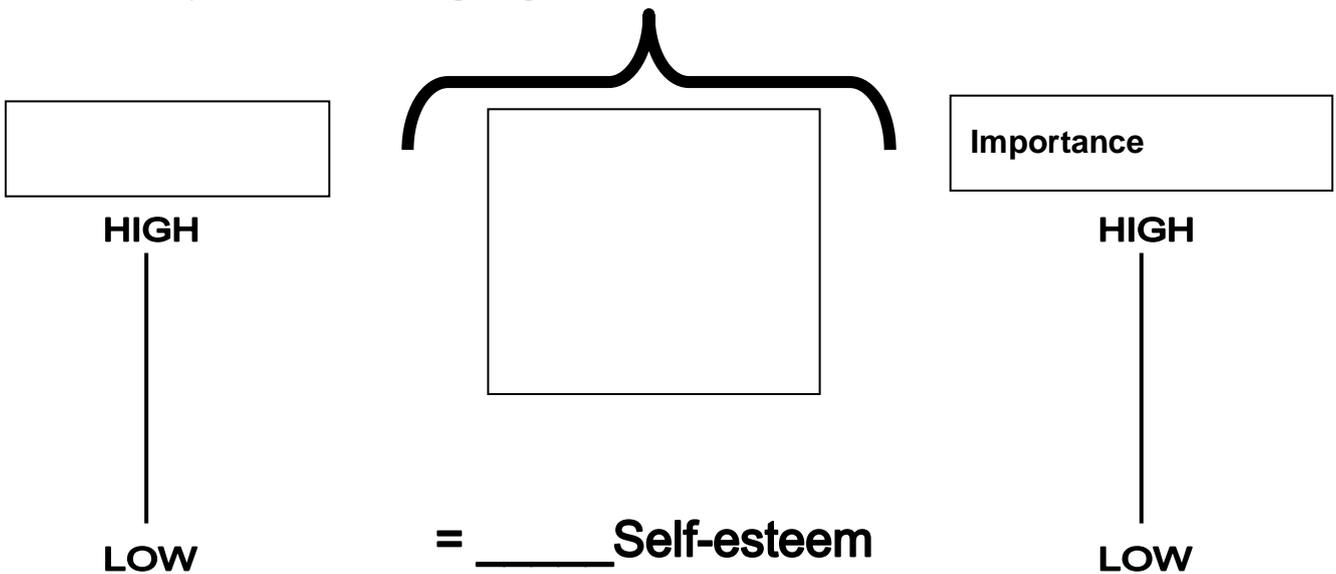
2. Write down the name of a person that gives you a lot of feedback in this area - or a person who influences you a lot in this area.

3. How does that person influence your self-image? (What messages do you get from that person?)

4. What you think about yourself in this area plus the feedback you get from others will influence how you feel about yourself

How do I rate myself in this important area?	1	2	3	4	5
How do others rate me in this area?	1	2	3	4	5
How do I feel about my self in this important area?	1	2	3	4	5

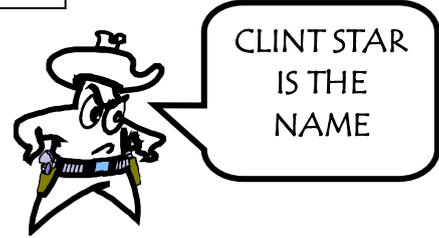
Now complete the following diagram.



MY SELF-IMAGE ROLE MODELS

ACTIVITY SHEET 3.1

Write down below some people you admire and would like to be like and explain why.



1. _____

Why? _____

2. _____

Why? _____

3. _____

Why? _____

4. _____

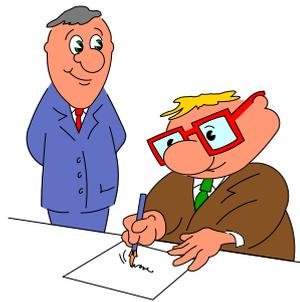
Why? _____

Qualities I admire

How does Advertising Work?

EXAMPLE SHEET 3.1

O.K. We want to sell the stuff to kids, but what message do we use?



We use advertising to persuade the kids that they need your product.

We convince them that they will be smarter, more attractive, thinner and more successful when they have your product.

I don't really understand this image thing.

How do you know what sort of image to give a product that you are trying to sell?

Well we use a market researcher to look at a whole lot of kids and see what they want from life.



I want to be grown up and cool.

I want to be big and strong and do exciting things.

I want to stand out from the crowd and be beautiful

I want to be popular and fit in with the group.

I want people to be friends with me.

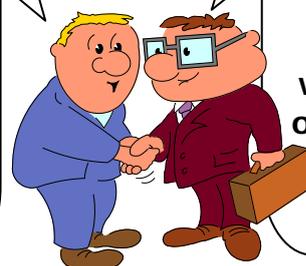


Then we design an 'Ad' that convinces the kids that the things and feelings they want are easy to get. They just need this product.

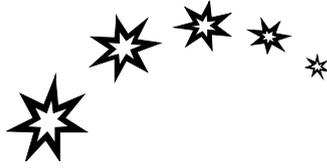


Gee. That sounds kind of sneaky. I don't know that my range of scratch and sniff socks are going to make kid's popular and successful in life.

Don't you worry about a thing we will have these kids believing their life is worthless without a pair of your scratch and sniff socks.



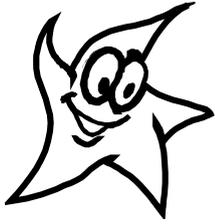
MARKETING PLAN OUTLINE SKETCH



MARKETING PLAN

Product Name	
What is the product?	
Target group	
Images my product will target	

Tricks of the trade	
----------------------------	--



LET'S LOOK AT STARS AND OTHER FAMOUS PEOPLE

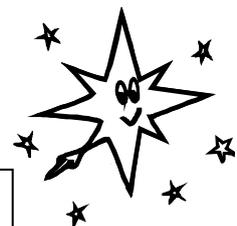
We all have people or characters we admire in life. When children are very young they might like Bob the Builder, Barbie or Spiderman. As we get older we often admire film stars, popstars and other people we see in the media e.g. Brittany Spears, Arnold Schwarznegger, Ian Thorpe or Cathy Freeman.

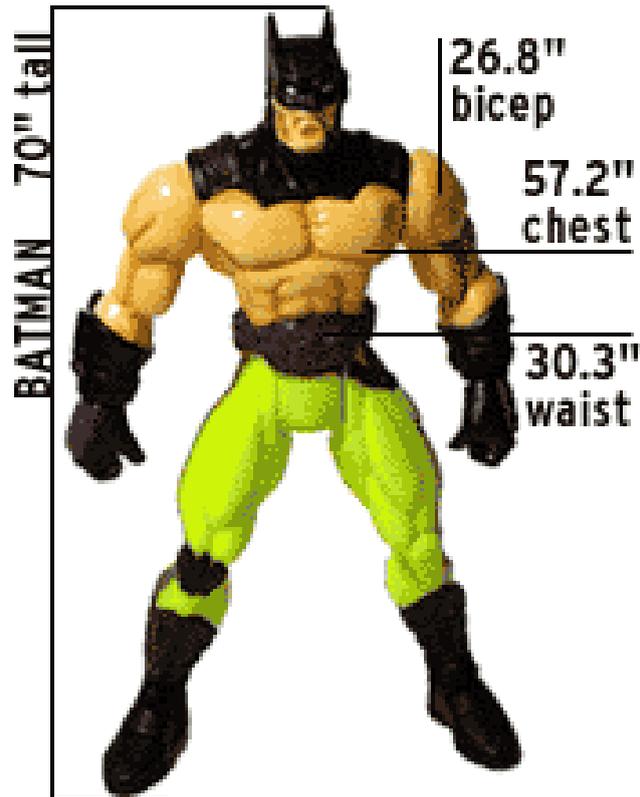
We usually admire these people for many reasons but often focus more heavily on the way they look and what we see in media images rather than on what is really true. When we see images of these people in the media they appear to be perfect and have perfect lives.



DID YOU KNOW THAT?

In the world today, there are three billion women who don't look like super models and only 8 who do.





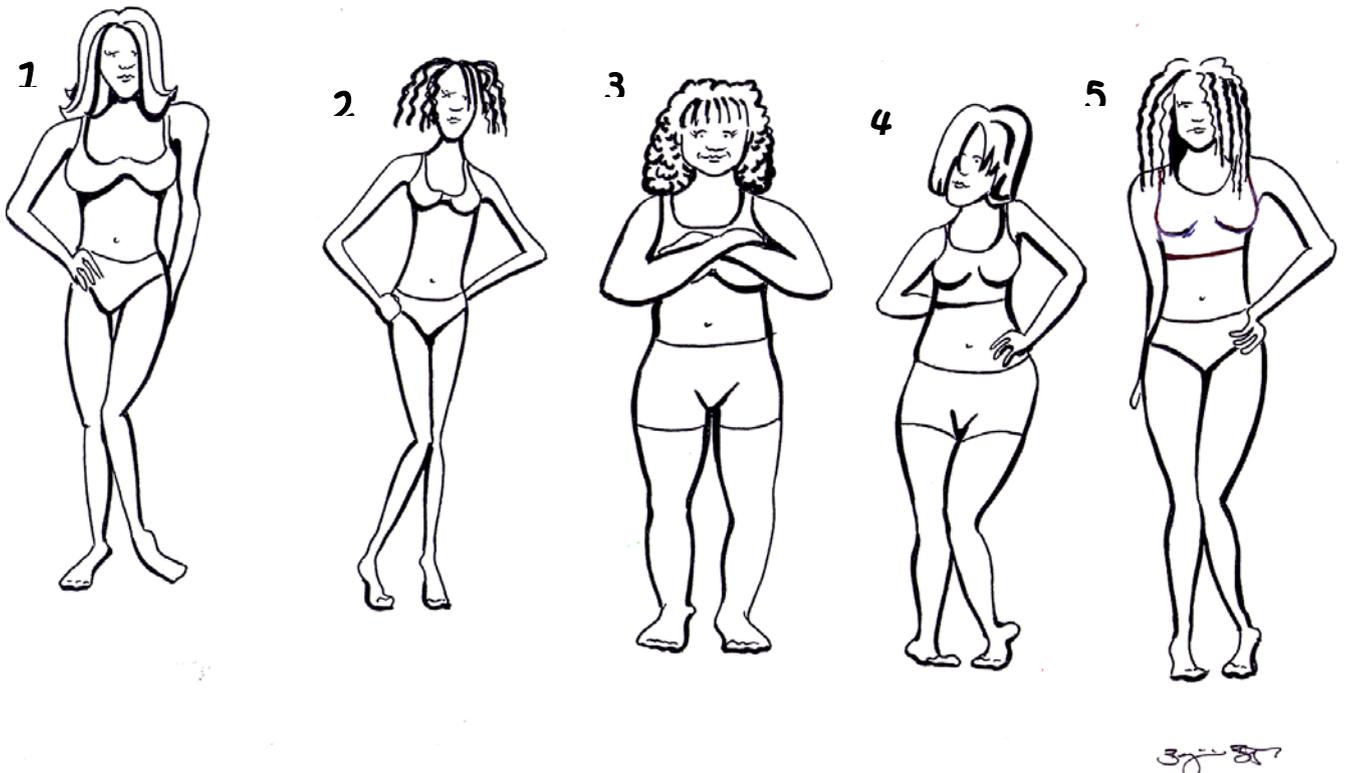
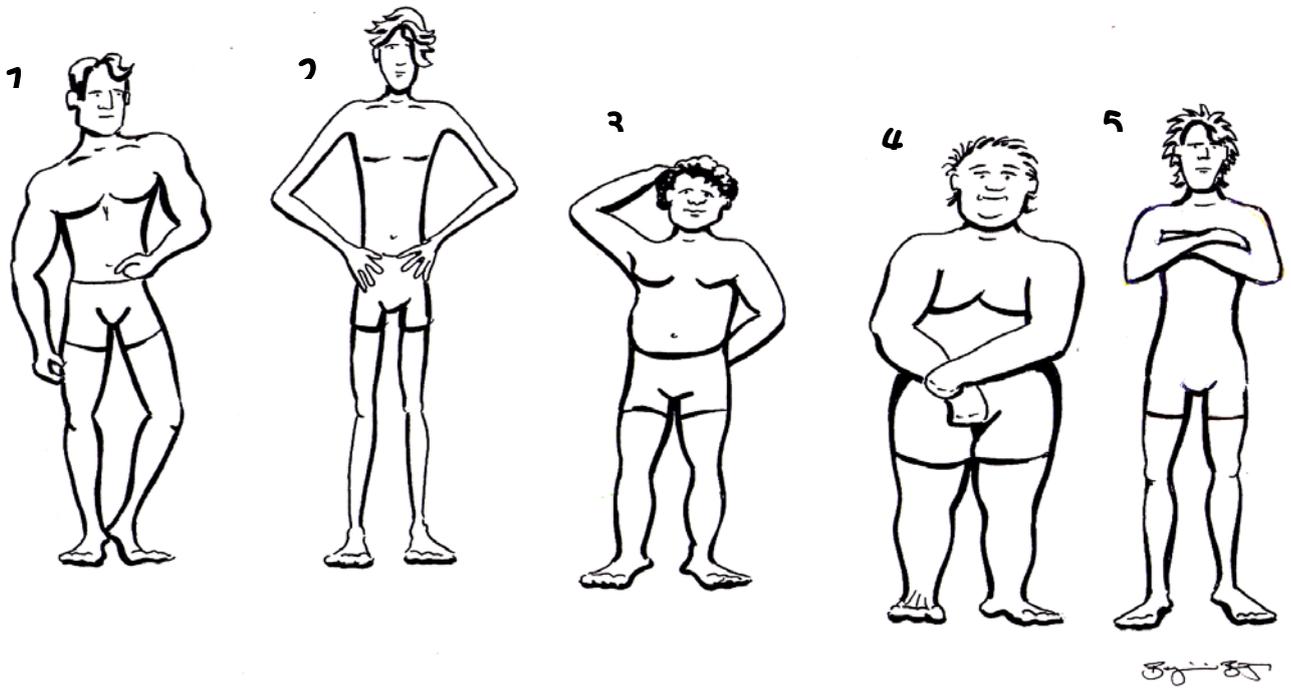
In the real world, even most professional bodybuilders don't have muscles like this image of Batman.

A perfect example is *Star Wars*. While these action figures are not as muscled as some others on the toy shelves, they have been made to look more muscled since their first release. The Action figures of Luke Skywalker and Han Solo, from the first release in 1978, had normal-looking bodies. But when figures of the same two characters hit the shelves 20 years later, they were much thicker through the arms and chest. The movie's characters didn't change at all, but their toy images did.

The same thing happened to *G.I. Joe*. In the mid-1960s, Joe's pectoral muscles barely registered and his stomach was smooth. Today's Joe has a chest so huge he can barely keep his arms at his sides. And his abdominal muscles are as rippled as a washboard.

BODY PICTURES

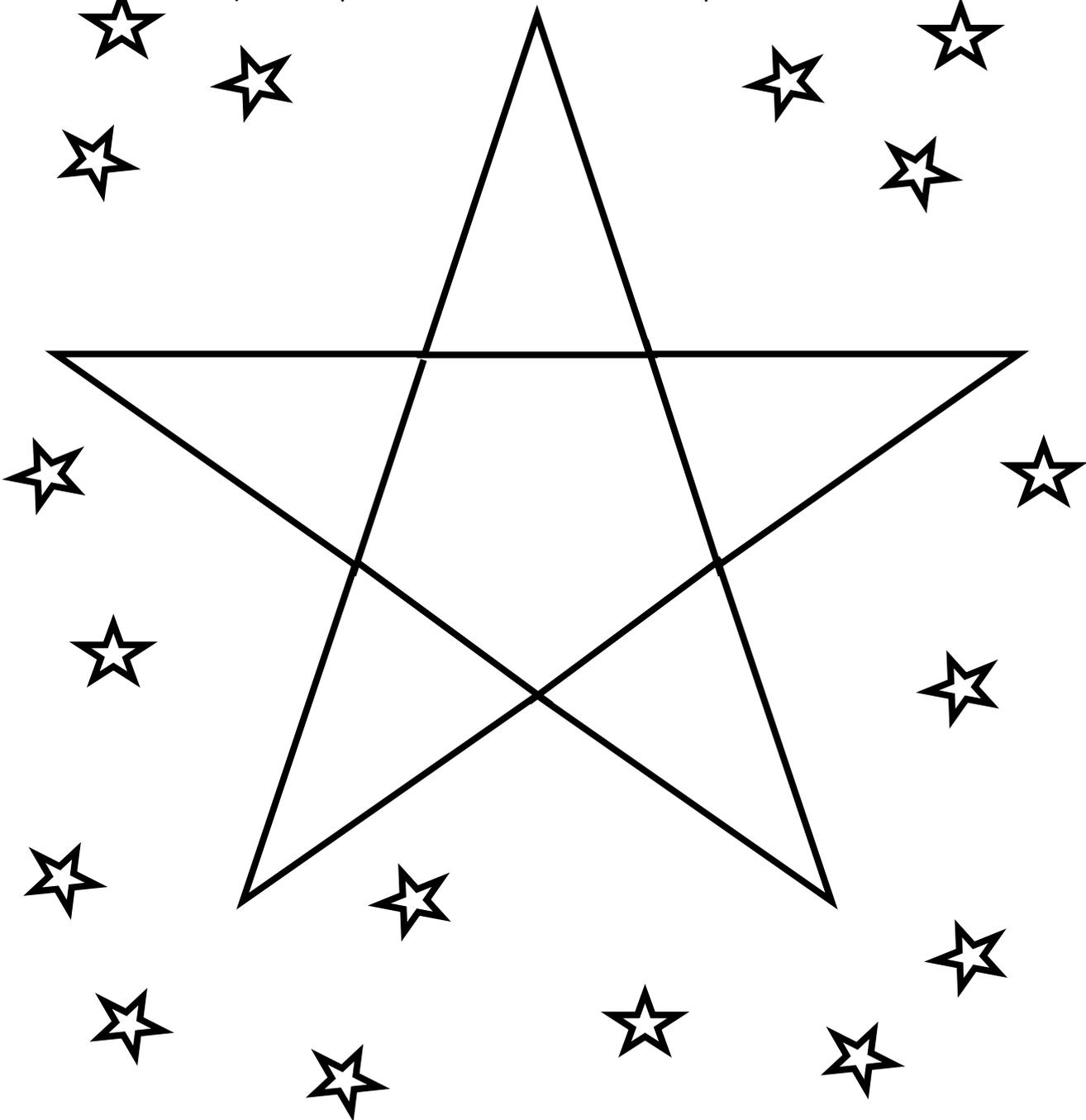
EXAMPLE SHEET 4.1(b)



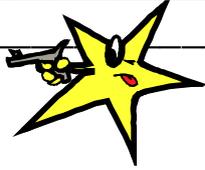
Illustrations by Ben Bryant (Teacher-Upper Swan Primary School)

STAR QUALITIES

Write the qualities you believe to be the most important for success in life.



Which of these qualities do you think you are developing, as you grow older?



PEST EXTERMINATION

A Personal Example.

ACTIVITY SHEET 5.1

Part A: In the space below, write about a challenge that you have been faced with recently.

Challenge

Write down any self talk that comes to your mind when you think about this challenge:

Thoughts

How do these thoughts make you feel?



Part B: Now that you have challenged your pests write some more positive thoughts below.

Positive Thoughts



THE SELF-TALK WALL

ACTIVITY SHEET 5.2

First Jump: _____

Positive Talk:

Second Jump _____

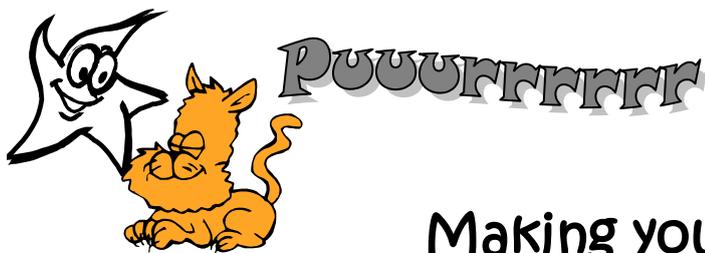
What happened? :

What do you think this result might be telling you? :

Why do you think it is important to have-a-go at trying to do just that little bit more in life?

REACH FOR THE STARS





Making your body Puuurrrrr!

Have you ever patted a cat and heard it start to purr. This is its way of showing us how much it likes being loved and cared for. When you treat your body well and show it love and attention it responds by producing feel-good hormones and reactions. The body has many ways of showing how it feels inside. For example:

FOOD and DRINK

Love food. Food is not the enemy. Allow yourself to enjoy all kinds of food, but remember: Everything in moderation. When we eat well our body produces energy and proteins to grow, build strength and repair damaged parts.

EXERCISE

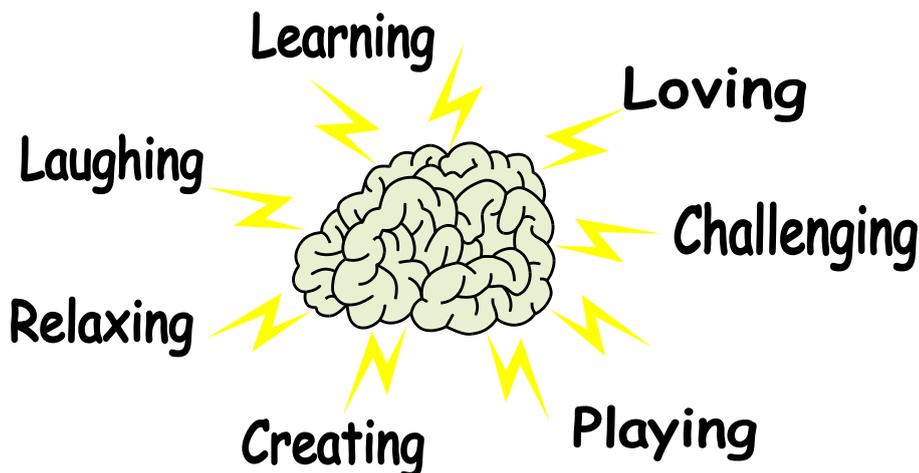
Exercise brings a rush of feel-good hormones to your brain and helps make you feel great about yourself. Exercise also helps the blood to circulate through the body to help make you feel warm and energised.

REST AND RELAXATION

When we take time to relax our bodies rest and repair and in return they give us a feeling of calm and wellbeing.

POSITIVE SELF-TALK

Positive self-talk helps you to feel confident and happy and this also stimulates the brain to bring on feel- good hormones. These hormones can make you feel relaxed, happy and calm or stimulated, exited and ready for action.





Loving Yourself From The Inside Out

Draw an outline picture of yourself and show how you can work on yourself from the inside out and what the results can be.

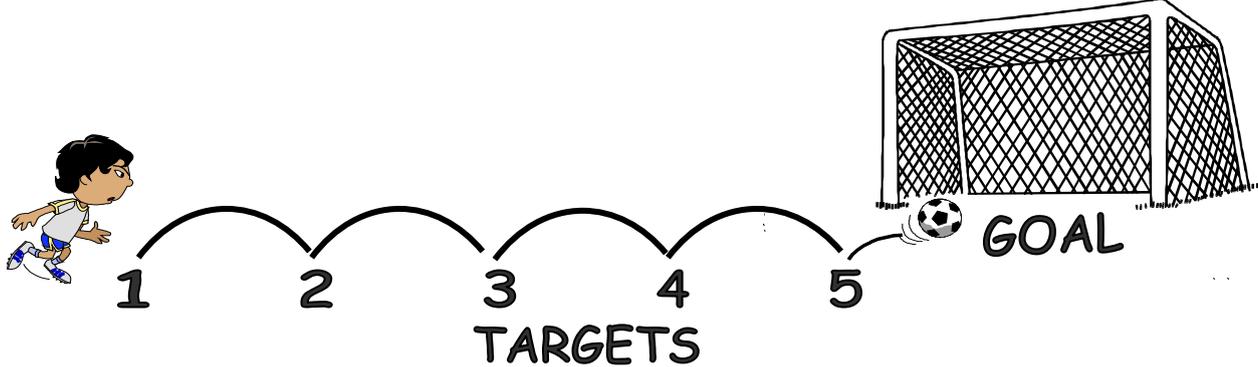
What is a goal?

A goal is something you want to get, or be, or achieve in the future. Often you have to challenge yourself and learn new things to achieve your goal. The journey towards a goal includes many smaller steps or targets.

SET goals and targets

Think about what is important to me.

To make the Soccer Team



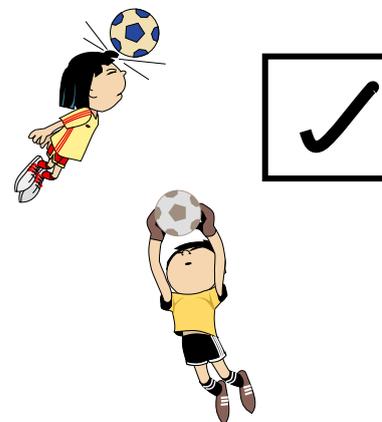
1. Bounce the ball off my head
2. Kick the ball straight
3. Be able to run 6 laps of the oval
4. Learn all about my position
5. Watch some world cup re-runs

TRACK progress

Weekly record of my training and study of the game

ACHIEVE targets

Tick off targets as I reach them



REWARD yourself

Reward myself at each target

SEEK new targets

Write up my next set of targets to get to my goals

- S**ET goals
- T**RACK progress
- A**CHIEVE targets
- R**EWARD yourself
- S**EEL new challenges



Image area: _____

SET GOAL

S ET TARGETS		Tick when achieved	✓
1			
2			
3			
4			
5			

REWARDS

STARS PLAN RECORD



<u>DATE</u>	TARGET RECORD What did I do?	IMPROVEMENTS Or SUCCESSES	HOW DO I FEEL?	SIGNED
MONDAY				
TUESDAY				
WEDNESDAY				
THURSDAY				
FRIDAY				
WEEKEND				

<u>DATE</u>	TARGET RECORD What did I do?	IMPROVEMENTS Or SUCCESSES	HOW DO I FEEL?	SIGNED
MONDAY				
TUESDAY				
WEDNESDAY				
THURSDAY				
FRIDAY				
WEEKEND				



Challenges: Having -a-go.

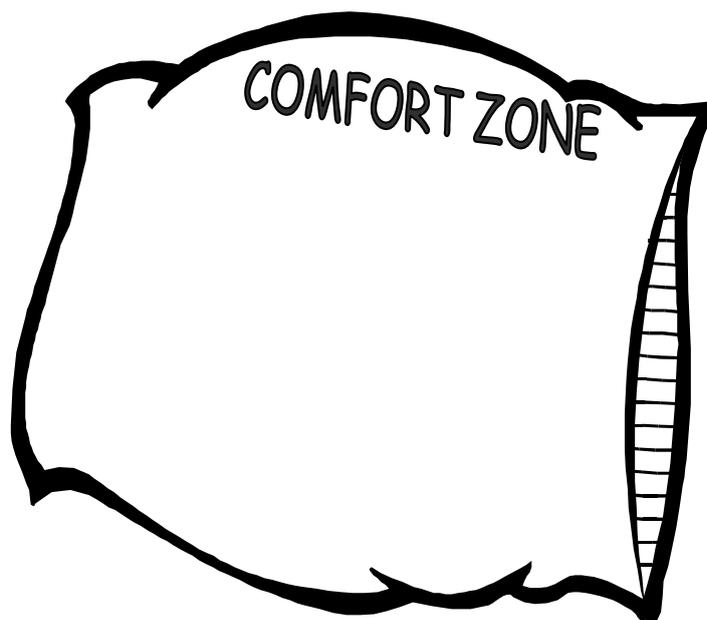
Ask your parents about how you started to walk and when you took your first steps.

Write down some other things that you can do now because you had-a-go when you were younger.

Can you think of examples of some skills that you might learn and then lose if you don't keep using them?

How can we prevent our skills from becoming lost?

THE COMFORT ZONE







WHAT DO I VALUE?

ACTIVITY SHEET 8.1(a)

Do this activity on the next page:

1. Think about an area in your life that is really important to you e.g. friends family, sports, school, behaviour, how you look etc.

Write in Star 1:

- (a) The area in your life that is really important to you; and
- (b) Something you are really good at in this area of your life.

2. Think about an area in your life that is really important to you but you believe that you are not doing so well e.g. friends family, sports, school, behaviour, how you look etc.

Write in Star 2:

- (a) The area in your life that is really important to you; and
- (b) Something you would like to do better in this area.

3. If you could be anything in the world think about what would it be.

Write in Star 3- If you could be anything in the world what would it be?

4. Think about your friends and your family.

Write in Star 4-

- (a) 1 thing you value in your friends; and
- (b) 1 thing you appreciate about your family.

5. Think about what your friends, family and school expect from you

Write in Star 5-

- (a) 1 thing your friends expect from you;
- (b) 1 thing your family expects from you; and
- (c) 1 thing your school expects from you.

6. Think about yourself

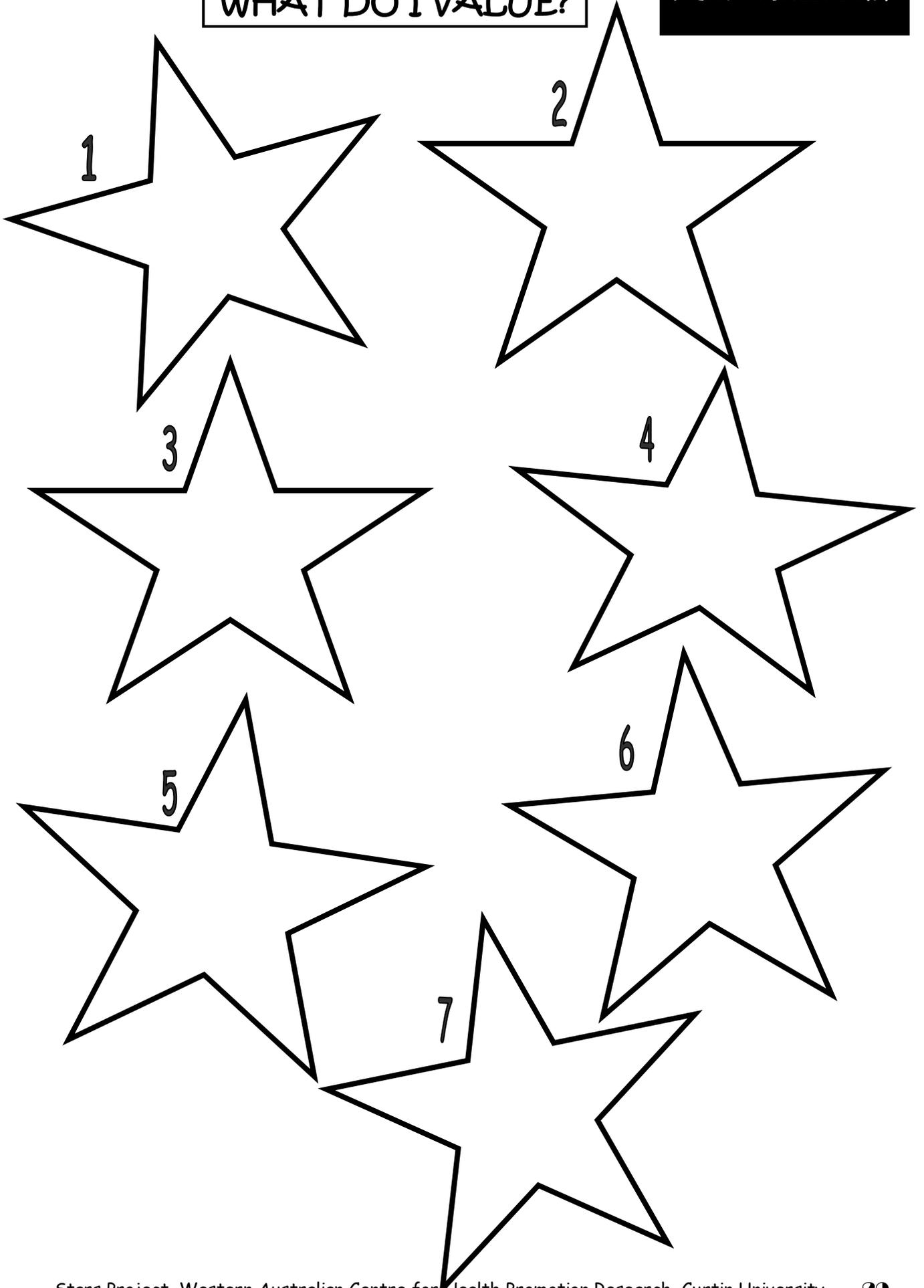
Write in Star 6- Write one thing you value most about yourself.

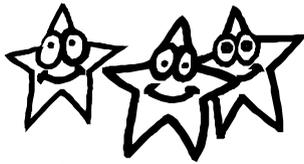
7. Think about your future

Write in Star 7- What do you think will be important to you as you start high school and move into your teenage years.

WHAT DO I VALUE?

ACTIVITY SHEET 8.1(b)





STARS PLAN REVIEW

Is the image area you chose to work on important to you? _____
Why/Why not?

Is achieving the goal you chose to work on important to you? _____
Why/Why not?

Now that you have learnt more about what is important to you, do you think this goal is still important to you? _____
Why/Why not?

Do you think what is important to you now will still be important to you when you are in high school?
Why/Why not

Hey! Come and meet my mate Chicken legs. He's fast but he's got the skinniest legs.



Hey Carrot Top! You want mashed potato with that head?



Oh My Gosh. Did you see what she wore to the disco last ...





TAMING TEASING

TAKING THE STING OUT OF TEASING

1. BE COOL:

Stand up straight, speak clearly and look confident even if you aren't. Make the person teasing think they are not bothering you and they are wasting their time trying to tease you.



2. STAY CALM AND NICE:

Be in control and don't get nasty. If you are nasty to them you will be doing what they are doing and this will only make matters worse. By being nice you are not responding the way they want you to and this may make them think twice about saying anything back.

3. DON'T SAY TOO MUCH:

Keep your responses short.



4. SPEAK AND MOVE ON:

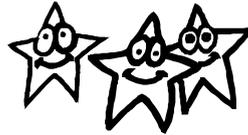
Say your piece and then walk away. The person teasing you will want to have the last word. Don't allow this. Move away and ignore any other comments.

5. KNOW WHEN TO WALK AWAY:

If you find you are getting upset or scared then it is better to say nothing and simply walk away when the person teases you. This way the person will not see any reaction and you can try again another time.



STARS MESSAGES



1. Self-esteem

Self-esteem is the way we feel about ourselves. We compare how we see ourselves in all areas of our life with what is important to us. Healthy self-esteem is about accepting yourself as you are and feeling comfortable with yourself.

2. Self Image

The self-image is the collection of thoughts we have about who we are and what we can do. We build our self-image by discovering as much about ourselves as possible. We gather this information by looking at our features and abilities in certain areas (Image Areas), by using the feedback other people give us and by judging what is important to us.

3. Self Image and the Media

The importance we place on an image area can be out of balance. Our self-image can be tricked by feedback from outside (e.g. media) so that our image is unrealistic.

4. Body Image

We admire people for many reasons but often focus more heavily on the way people look and what we see in media images than what is real. People who are successful in life and achieve their goals have many different qualities.

5. Self Talk

Self-Talk can affect the way we feel about ourselves and how we behave. We know that we need to challenge the negative 'pest' thoughts with more realistic and positive self-talk.

6. Loving Ourselves from the Inside Out

It is very important to show yourself love and care. When we nurture our bodies on the inside we feel and look healthier and happier on the outside.

7. Reach for the Stars

We learn by taking challenges and having –a go. Mistakes and obstacles are part of the process of reaching your goals. Setting goals helps you to plan for new challenges and achieve your goals.

8. Know your Values

We use our 'values' to judge our self-image. We value some areas of our life as more important than others, and what we value changes over time. We also decide what is important by how we think other people value us, in the different areas of our life.

9. Taming Teasing

A person is teasing when they provoke (stir up) someone, either in a playful or in an unkind way. Teasing is a problem if the person being teased is hurt by it and cannot stop it from happening.



MY SELF-ESTEEM SCALE

ACTIVITY SHEET 1.1

1. WHAT DO I LOOK LIKE?

Statements about me									
How important is this area of my life to me?					How do I rate myself in this area?				
1	2	3	4	5	1	2	3	4	5

2. HOW DO I GET ALONG WITH OTHERS?

Statements about me									
How important is this area of my life to me?					How do I rate myself in this area?				
1	2	3	4	5	1	2	3	4	5

3. WHAT ARE MY ACADEMIC SKILLS AND ABILITIES?

Statements about me									
How important is this area of my life to me?					How do I rate myself in this area?				
1	2	3	4	5	1	2	3	4	5

4. WHAT ARE MY ACADEMIC SKILLS AND ABILITIES?

Statements about me									
How important is this area of my life to me?					How do I rate myself in this area?				
1	2	3	4	5	1	2	3	4	5

5. HOW DO I BEHAVE/ACT?

Statements about me									
How important is this area of my life to me?					How do I rate myself in this area?				
1	2	3	4	5	1	2	3	4	5



SELF-ESTEEM REFLECTION SHEET

Did your thoughts on the Self-esteem Scale Sheet change at all since the beginning of the STARS Project? If yes, how?

Now that you have completed your Self-esteem Scale, how do you feel? Is your self-esteem good or is it low? Explain

What could you do if your self-esteem was low?

What are the most important messages you have learned from the STARS Project?

How can this help you in the future?

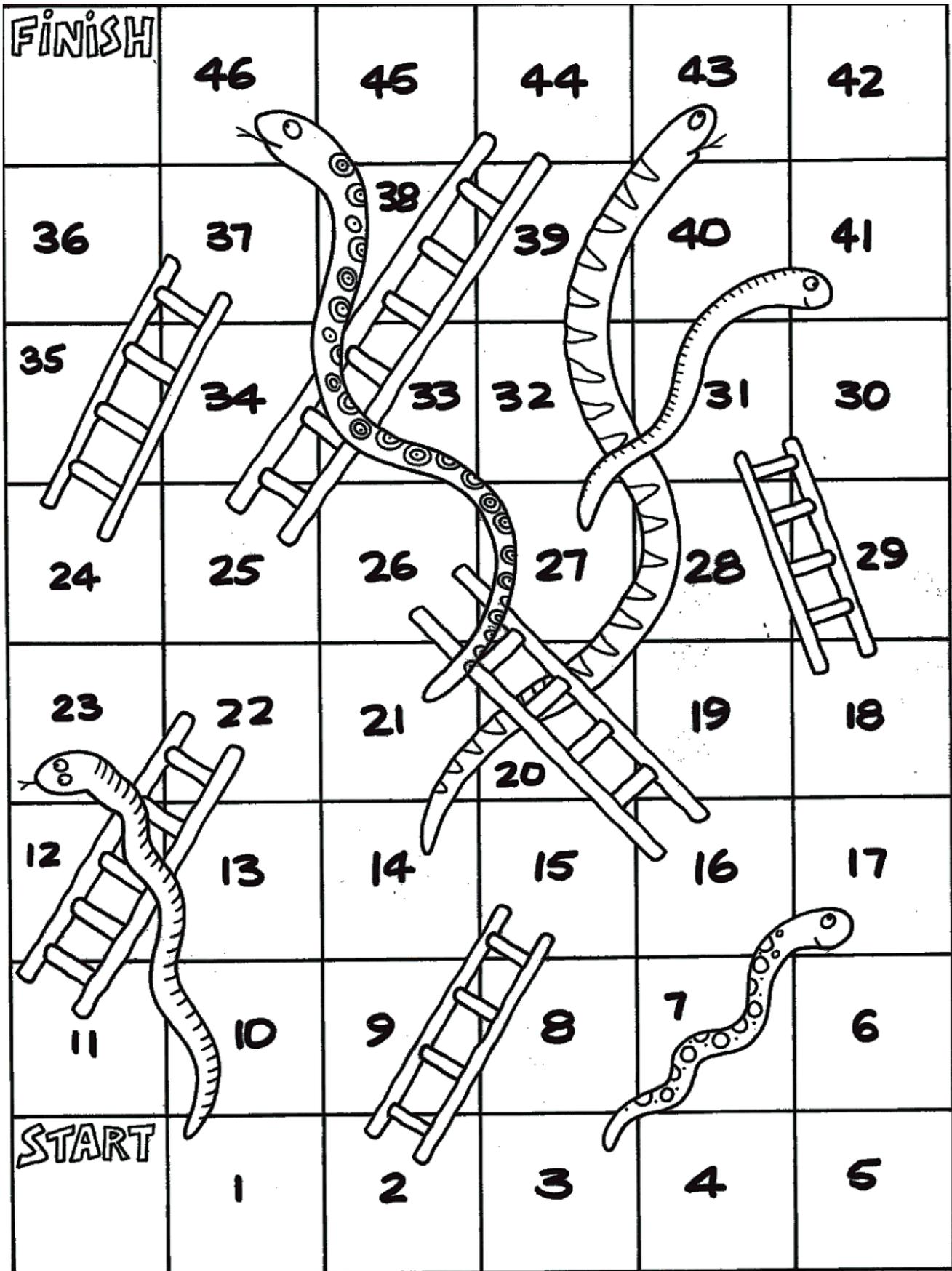




SELF-ESTEEM BOOSTERS

1. Stop comparing yourself with other people. There will always be some people who have more than you and some who have less. Love yourself for who you are.
2. Use positive talk. Don't put yourself down. You can't feel good about yourself if you are constantly saying negative things in your head.
3. Find positive stories and messages to read and watch on TV and movies. Don't get caught up in the media trap. Don't be fooled.
4. Be positive to people around you and they will be the same to you.
5. Look for the silver lining in every cloud. Look for the good in every situation and have-a-go at new things.
6. Don't worry about making mistakes. Everyone makes mistakes but only the clever ones learn from them and move on.
7. Don't put bad, poisonous things into your body. You only get one body don't ruin it and it will last you a lifetime.
8. Love your, treat it well and it will reward you with good feelings, lots of energy and a healthy glow.





APPENDIX H

The Parent Newsletter Items (Intervention Schools)

NEWSLETTER ITEM 1

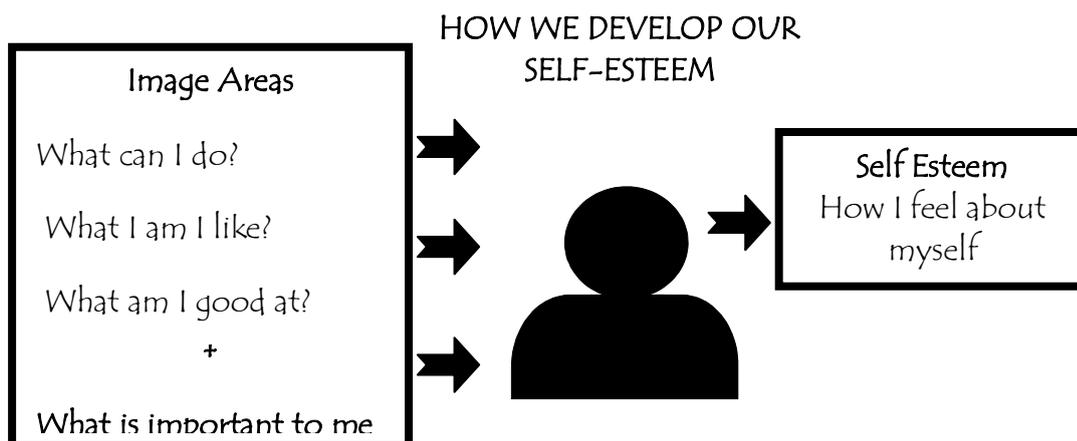


SELF-ESTEEM

Self-esteem is the way we feel about ourselves.

We compare how we see ourselves in all areas of our life with what is important to us.

- Healthy self-esteem is about accepting yourself as you are and feeling comfortable with yourself.
- Low self-esteem is about wishing you were different or wishing you were someone else.



What parents can do to help their children develop positive self-esteem:

- Encourage your children to value a wide range of abilities;
- Accept and acknowledge your children's weaknesses and limitations;
- Encourage your children's attempts to change;
- Support your children when they work hard;
- Praise your children's real successes;
- Encourage in your children a respect for others who excel in different areas;
- Encourage your children to rely on their own values;
- Encourage your children to think about images they see in magazines, TV and movies and evaluate the level of truth of these images; and
- Encourage children to establish realistic, achievable personal goals.

NEWSLETTER ITEM 2



SELF-TALK

A lot of people think that their feelings come from the problems they face. They think that the **problem causes** their feelings. But it is not just the things that happen to us, such as getting yelled at, that makes us feel bad. It is what we say to ourselves (self-talk) in the situation that is the most important step

Sometimes we tell ourselves helpful things and sometimes we tell ourselves things that are not helpful. To build your self-esteem you must work on getting rid of your negative thoughts and replacing them with more helpful thoughts.

Help you children to challenge their negative thoughts by:

- Asking themselves "is this true of me" or am I making it seem more than it is. E.g. "I am not that hopeless"
- Thinking of things that prove that this is not necessarily true. E.g. "I passed my last test and I did alright last term"
- Trying to come up with a more helpful thought or way of looking at the situation. E.g. "I will do my best because last time I did a test that was good enough to pass."

Parents can show children how to challenge their negative thoughts by talking through their own problems out loud and role modelling how to find more helpful and positive thoughts for the situation.



NEWSLETTER ITEM 3

TEASING

A person is teasing when they provoke (stir up) someone, either in a playful or in an unkind way. Sometimes people tease in a fun way where they don't hurt anyone's feelings. Other times people tease in a mean way that upsets or hurts the feelings of the other person and we call this bullying.

Teasing is a problem if the person being teased is hurt by it and cannot stop it from happening.

What can we advise children do if they are teased?

When you have a problem with someone teasing you:

- Try to stand up for yourself in a positive way.
- Try to talk with the person you are having a problem with.
- Walk away and ignore the person completely.
- Get help from a teacher or another person you trust
- Ignore the situation and keep playing or working.
- Talk to a friend to get some ideas to help you make a decision.
- Try coming to an agreement with the other person.
- If you find you are getting upset or scared then it is better to say nothing and simply walk away when the person teases you.

Be aware of comments you may make about peoples body shapes and sizes as this can have an effect on your children's developing attitudes about appearance.

Encourage your children to say positive things about people and model this yourself when you talk about others with or around your children



APPENDIX I

Teacher's Log (Intervention Schools)

STARS Project: Year 7 Teacher Log 2002

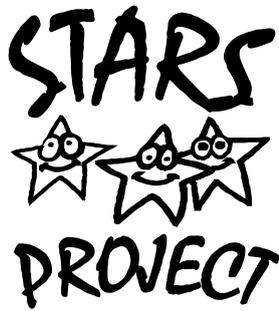
School: _____ Teacher: _____ Class: _____

Please indicate those parts of the education materials you used with your class.

Term & Week Date	Title of STARS Session	Did You Teach: (Circle the response) All Most Some None of the STARS session? Did you modify any part of this module ?	Comments For example: What did you like/dislike about the session? If you modified the session, what did you do? Reasons you were not able to teach all of the session.
Term ___ Week ___	STARS SESSION 1: Self-esteem	Did you teach All Most Some None	
Term ___ Week ___	STARS SESSION 2: Self-image	Did you teach All Most Some None	
Term ___ Week ___	STARS SESSION 3: Self-image and the Media	Did you teach All Most Some None	
Term ___ Week ___	STARS SESSION 4: Body Image	Did you teach All Most Some None	
Term ___ Week ___	STARS SESSION 5: Self Talk	Did you teach All Most Some None	
Term ___ Week ___	STARS SESSION 6: Loving Ourselves from the Inside Out	Did you teach All Most Some None	
Term ___ Week ___	STARS SESSION 7: Reach for the Stars	Did you teach All Most Some None	
Term ___ Week ___	STARS SESSION 8: Know your Values	Did you teach All Most Some None	
Term ___ Week ___	STARS SESSION 9: Taming Teasing	Did you teach All Most Some None	
Term ___ Week ___	STARS SESSION 10: STARS Self-esteem	Did you teach All Most Some None	

APPENDIX J

Teacher Interview Transcript (Intervention Schools)



Resource Evaluation Interview Transcription

School:

Teacher Name/s:

Interview Date/Time:

Interviewer:

Time Started:

Time Completed:

INTRODUCTION/BACKGROUND NOTES

1. Introduction

	Yes	No	Unsure
a. Did you read this section of the STARS manual?			
b. Do you recall covering this section at the teacher training?			
c. Was this information useful? (at training)			
d. Any additional comments			

2. Overview: STARS Project

	Yes	No	Unsure
a. Did you read this section of the STARS manual?			
b. Do you recall covering this section at the teacher training?			
c. Was this information useful?			
d. Was this information helpful when teaching the program?			
e. Any additional comments?			

3. STARS Project Materials

	Yes	No	Unsure
a. Did you read this section of the STARS manual?			
b. Do you recall covering this section at the teacher training?			
c. Was this information useful?			
d. Was this information helpful when teaching the program?			
e. Any additional comments?			

4. Session Layout

	Yes	No	Unsure
a. Did you read this section of the STARS manual?			
b. Do you recall covering this section at the teacher training?			
c. Was this information useful?			
d. Was this information helpful when teaching the program?			
e. Any additional comments?			

5. Monitoring Student Progress

	Yes	No	Unsure
a. Did you read this section of the STARS manual?			
b. Do you recall covering this section at the teacher training?			
c. Was this information useful?			
d. Was this information helpful when teaching the program?			
e. Any additional comments?			

6. Teacher's Notes

	Yes	No	Unsure
a. Did you read this section of the STARS manual?			
b. Do you recall covering this section at the teacher training?			
c. Was this information useful?			
d. Was this information helpful when teaching the program?			
e. Any additional comments?			

7. Health Promoting School Framework

	Yes	No	Unsure
a. Did you read this section of the STARS manual?			
b. Do you recall covering this section at the teacher training?			
c. Was this information useful?			
d. Was this information helpful when teaching the program?			

(e) **What do you think needs to be done at a whole-school level to address the issue of self-esteem in your school?**

- (f) **What are some strategies that you would incorporate to achieve this result?**
- (g) **What problems or difficulties do you think you would face when implementing these strategies in your school?**

8. Newsletter Items

- (a) **Did you read the three newsletter items you were given at the teacher training?**
- (b) **Did you like the three articles?**
- (c) **What did you like/didn't you like about these articles?**
- (d) **Which of the articles did you put into the school newsletter?**
- (e) **Why didn't you include all three of the newsletter articles?**
- (f) **What changes would you make to these articles?**
- (g) **Are there any other topics that could be included in these newsletter articles that may be useful for parents?**
- (h) **Have you received any feedback from parents or others in relation to these newsletter articles?**

STARS SESSIONS

Session One: Self-esteem

1. **Did you teach this session of the STARS manual?**
2. **Were the instructions for this section clear and easy to understand?**
3. **How could these instructions be made clearer?**
4. **What did you like about this session?**
5. **What didn't you like about this session?**
6. **Did you have any problems with the following activities/areas in session one (please comment):**
 - (a) **The amount of reading required by students?**
 - (b) **The Resilience model (p. 1) and Self-esteem model (p. 2)?**
 - (c) **The Self-esteem Scale activity (p. 22)?**
7. **How long did it take to teach this session?**
8. **What areas of session one would you consider removing to reduce the time taken to teach it?**
9. **How would you modify this session for future users of the STARS resource?**

10. Do you think that this session was developmentally appropriate for your Year 7 class?

Session Two: Self-image

1. Did you teach this session of the STARS manual?
2. Were the instructions for this section clear and easy to understand?
3. How could these instructions be made clearer?
4. What did you like about this session?
5. What didn't you like about this session?
6. Did you have any problems with the following activities/areas in session two (please comment):
 - (a) The amount of reading required by students?
 - (b) The Self-image scale (p. 25)?
 - (c) The Extension Activity (p. 27)?
7. How long did it take to teach this session?
8. How would you modify this session for future users of the STARS resource?
9. Do you think that this session was developmentally appropriate for your Year 7 class?

Session Three: Self-image and the Media

1. Did you teach this session of the STARS manual?
2. Were the instructions for this section clear and easy to understand?
3. How could these instructions be made clearer?
4. What did you like about this session?
5. What didn't you like about this session?
6. Did you have any problems with the following activities/areas in session three (please comment):
 - (a) The amount of reading required by students?
 - (b) The home activity 'Media Search' (p.34)?
 - (c) The Reading Research Activity "How Advertising Works" (p. 35)?
7. How long did it take to teach this session?
8. What areas of session three would you consider removing to reduce the time taken to teach it?
9. How would you modify this session for future users of the STARS resource?
10. Do you think that this session was developmentally appropriate for your Year 7 class?

Session Four: Body Image

- 1. Did you teach this session of the STARS manual?**

- 2. Were the instructions for this section clear and easy to understand?**

- 3. How could these instructions be made clearer?**

- 4. What did you like about this session?**

- 5. What didn't you like about this session?**

- 6. Did you have any problems with the following activities/areas in session four (please comment):**
 - (a) The amount of reading required by students?**
 - (b) The Extension Activity called 'Looking up at the stars' (p. 48)?**
 - (c) The Home activity (p. 48)?**

- 7. How long did it take to teach this session?**

- 8. What areas of session four would you consider removing to reduce the time taken to teach it?**

- 9. How would you modify this session for future users of the STARS resource?**

- 10. Do you think that this session was developmentally appropriate for your Year 7 class?**

Session Five: Self-talk

- 1. Did you teach this session of the STARS manual?**

- 2. Were the instructions for this section clear and easy to understand?**

- 3. How could these instructions be made clearer?**

- 4. What did you like about this session?**

- 5. What didn't you like about this session?**

- 6. Did you have any problems with the following activities/areas in session five (please comment):**
 - (a) The amount of reading required by students?**
 - (b) The Snakes and Ladders Game?**
 - (c) The Self-talk wall (p. 66)?**

- 7. How long did it take to teach this session?**

- 8. What areas of session five would you consider removing to reduce the time taken to teach it?**

- 9. How would you modify this session for future users of the STARS resource?**

- 10. Do you think that this session was developmentally appropriate for your Year 7 class?**

Session Six: Loving Ourselves From the Inside Out

- 1. Did you teach this session of the STARS manual?**
- 2. Were the instructions for this section clear and easy to understand?**
- 3. How could these instructions be made clearer?**
- 4. What did you like about this session?**
- 5. What didn't you like about this session?**
- 6. Did you have any problems with the amount of reading required by students in session six?**
- 7. Did you have any problems with students completing the STARS Plan Record Sheet (p. 79)**
- 8. How long did it take to teach this session?**
- 9. What areas of session six would you consider removing to reduce the time taken to teach it?**
- 10. How would you modify this session for future users of the STARS resource?**
- 11. Do you think that this session was developmentally appropriate for your Year 7 class?**

Session Seven: Reach for the Stars

- 1. Did you teach this session of the STARS manual?**

- 2. Were the instructions for this section clear and easy to understand?**

- 3. How could these instructions be made clearer?**

- 4. What did you like about this session?**

- 5. What didn't you like about this session?**

- 6. Did you have any problems with the following activities/areas in session seven (please comment):**
 - (a) The amount of reading required by students?**
 - (b) The home activity sheet titled 'My Milestones' (p. 87)?**

- 7. How long did it take to teach this session?**

- 8. What areas of session seven would you consider removing to reduce the time taken to teach it?**

- 9. How would you modify this session for future users of the STARS resource?**

- 10. Do you think that this session was developmentally appropriate for your Year 7 class?**

Session Eight: Know Your Values

1. Did you teach this session of the STARS manual?
2. Were the instructions for this section clear and easy to understand?
3. How could these instructions be made clearer?
4. What did you like about this session?
5. What didn't you like about this session?
6. Did you have any problems with the following activities/areas in session eight (please comment):
 - (a) The amount of reading required by students?
 - (b) The Situation card activity (p. 94)?
7. How long did it take to teach this session?
8. What areas of session eight would you consider removing to reduce the time taken to teach it?
9. How would you modify this session for future users of the STARS resource?
10. Do you think that this session was developmentally appropriate for your Year 7 class?

Session Nine: Taming Teasing

1. **Did you teach this session of the STARS manual?**

2. **Were the instructions for this section clear and easy to understand?**

3. **How could these instructions be made clearer?**

4. **What did you like about this session?**

5. **What didn't you like about this session?**

6. **Did you have any problems with the following activities/ areas in session nine (please comment):**
 - (a) **The amount of reading required by students?**
 - (b) **The Three Card Role-Play activity (p. 99)?**

7. **How long did it take to teach this session?**

8. **What areas of session nine would you consider removing to reduce the time taken to teach it?**

9. **How would you modify this session for future users of the STARS resource?**

10. **Do you think that this session was developmentally appropriate for your Year 7 class?**

Session Ten: STARS Self-esteem

1. **Did you teach this session of the STARS manual?**

2. **Were the instructions for this section clear and easy to understand?**

3. **How could these instructions be made clearer?**

3. **How could these instructions be made clearer?**

4. **What did you like about this session?**

5. **What didn't you like about this session?**

6. **Did you have any problems with the amount of reading required by students in session ten?**

7. **How long did it take to teach this session?**

8. **What areas of session ten would you consider removing to reduce the time taken to teach it?**

9. **How would you modify this session for future users of the STARS resource?**

10. **Do you think that this session was developmentally appropriate for your Year 7 class?**

OVERALL EVALUATION

- 1. Overall, how did you find the resource sheets, extension activities, home activities and classroom sessions?**
- 2. Including “discussion time” in the sessions had a two-fold aim of enhancing learning and in particular, providing opportunities for developing peer support. Do you think peer support was enhanced by these discussion times? If not, how do you think enhancing peer support could be achieved within the STARS programs?**
- 3. If you were teaching Year 7 again next year, would you teach the STARS Resource again?**
- 4. Did you discuss any issues related to the STARS resource with other teachers teaching the project?**
- 5. Are there any other comments you would like to make about the STARS Project?**

END OF INTERVIEW

APPENDIX K

Student Evaluation of the STARS Programme (Intervention Schools)

STARS 2002

Student Evaluation Form

The following statements give you a chance to tell us what you thought about the STARS Project that you have just completed.

Please circle a number ranging from 1 ("Not at all") to 5 ("Very much), to show how much you agree with each statement about the STARS Project.

Section A	Not at all		About Average		Very much
1. I looked forward to the lessons each week.	1	2	3	4	5
2. The lessons were easy to understand.	1	2	3	4	5
3. The student activity manual was easy to read.	1	2	3	4	5
4. The student activity manual was useful.	1	2	3	4	5
5. The STARS program was useful in my everyday life.	1	2	3	4	5
6. The STARS program helped me feel better about myself.	1	2	3	4	5
7. The STARS program helped me have confidence in myself.	1	2	3	4	5
8. The STARS program helped me to feel more positive about everyday life.	1	2	3	4	5
9. I talked about the STARS program to my friends.	1	2	3	4	5
10. My friends have commented on changes in me as a result of the STARS program.	1	2	3	4	5
11. I talked about the STARS program with my family.	1	2	3	4	5
12. My family has commented on changes in me as a result of the STARS program.	1	2	3	4	5
13. I would recommend the STARS program to my friends.	1	2	3	4	5

Section B	Not at all		About Average		Very much
1. Learning about how we develop our self-esteem was useful.	1	2	3	4	5
2. Learning about the self-image scale was useful.	1	2	3	4	5
3. Learning how advertising works was useful.	1	2	3	4	5
4. Learning that bodies come in all shapes and sizes and that you don't have to have a certain body to be successful was useful.	1	2	3	4	5
5. Learning how to listen to my self-talk was useful.	1	2	3	4	5
6. Learning how to make your body Puuurrr was useful.	1	2	3	4	5
7. Learning how to set goals and targets was useful.	1	2	3	4	5
8. Learning how to "have a go" was useful.	1	2	3	4	5
9. Learning what I value was useful.	1	2	3	4	5
10. Learning to take the sting out of teasing was useful.	1	2	3	4	5

Section C

The activities I enjoyed most were:

The activities I enjoyed least were:

The skills I use most from the STARS program are:

The STARS program would be improved by:

What other areas should we include in the STARS program:

APPENDIX L

Parent Consent Information

Enhancing Self-Esteem Project

Information Sheet for Parents

Dear Parent/Guardian

Your Year 7 child's school, Curtin University's School of Psychology and W.A Centre for Health Promotion Research are conducting a research project aimed at enhancing the self-esteem and body image of Year 7 students. We are inviting all Year 7 students and their parents to participate in this project. As a parent or carer of a Year 7 student we are sending you this letter to tell you about the project, to ask your permission for your child to participate in this project and to complete a short survey. Below are some answers to question you may have about this study.

Who is conducting the research?

The study is being conducted by Marianne Poller as part of a Doctor of Philosophy research project in the School of Psychology at Curtin University of Technology, under the supervision of Dr Clare Roberts (School of Psychology) and Associate Professor Donna Cross (W.A. Centre for Health Promotion Research).

What is the aim of this study?

How children feel about themselves and their body is very important. It can affect many aspects of their lives including schooling, peer and family relationships and psychological well-being. The main aim of this study is to enhance self-esteem and reduce the risk of body dissatisfaction and eating disturbances.

Who is participating in the study?

Grade 7 students in your child's primary school will be asked to participated in this study. Participation in this study is entirely voluntary and if you wish to withdraw your child from the study, you may do so at any time without any negative consequences. However, we encourage parents and children to stay with us for the follow up period.

What will the project involve?

The project involves the participation of Year 7 students as part of their Language Education lessons in Term 3 and 4, 2002. Students and their parents will be asked to fill in questionnaires. Half of the schools will receive their usual Health and Language Education lessons and half will receive the **Enhancing Self-Esteem Project**.

The **Enhancing Self-Esteem Project** is a skills based program that has been designed to meet the student outcome statements for the Health and Physical Education and Language learning areas of the Curriculum Framework. Classroom teachers will teach the program during Term 3 and 4. The program involves students' building a positive sense of self and personal competencies.

How will the information be collected and stored?

To see how effective the **Enhancing Self-Esteem Project** is you and your child will be asked to complete questionnaires before and after the program, and in the High School year 8. In order that we are able to contact you in the High School follow-up we have asked you to provide your address and phone number plus the names, addresses and contact numbers of two friends or relatives that could be contacted in case you move. The questionnaires takes the children an hour to complete and will be given at school. Your questionnaire takes approximately 5 minutes to complete and is enclosed within.

The information you and your child provide will be treated **strictly confidentially**. Individual answer sheets will have numerical codes instead of names. These will be stored separately from identifying information and no individual results will be released with your permission.

The Curtin University Human Research Ethics committee has approved this project. If at any time during the project, the questionnaire results alert us to difficulties your child may be experiencing, you will be notified with appropriate management and advice given.

Who do I contact if I have any further questions?

Further information can be obtained from Marianne Poller on (08) 9266 3446, or Dr Clare Roberts on (08) 9266 7992. Alternatively, if you would like to talk to someone who is not directly involved in the present study, you can contact Dr. Lyndall Steed on (08) 9266 7182. Your call is welcome.

Next Steps

- If you **agree** to your child responding to the student questionnaire, you do not need to take any further steps.
- If you **object** to your child responding to the questionnaire, please complete the attached Non-consent form and return it to your child's teacher before **12th August 2002**. Your child will be provided with an alternative activity to complete while the questionnaire is being administered.

Yours sincerely.

Marianne Poller
Project Coordinator
Enhancing Self-Esteem Project

Clare Roberts
Supervisor
Enhancing Self-Esteem Project

Enhancing Self-Esteem Project

Non- Consent Form

NOTE: Only complete if you **DO NOT** want your child to respond to the Enhancing Self-Esteem Project questionnaire.

I **DO NOT** want _____ (your child's name)
to respond to the Enhancing Self-Esteem Project questionnaire.

Parent/Guardian Name: _____

Parent/Guardian Signature: _____ Date: _____

Please return this form to your child's teacher before (insert date).

APPENDIX M

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INCORPORATED

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LUTZ, FLORIDA 33549
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Fax: 813.968.2598
www.parinc.com

Sent Via Email: M.Poller@curtin.edu.au

November 14, 2008

Marianne Poller

Dear Ms. Poller:

In response to your recent request, permission is hereby granted to you to include up to a total of three (3) sample items from the Eating Disorder Inventory-2 (EDI-2) in your dissertation titled, *The Prevention of Eating Disturbances: The Impact of a Self-esteem Enhancement Programme*.

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ACCEPTED AND AGREED:

BY: *M. Poller*
MARIANNE POLLER

DATE: 17/11/08

ACCEPTED AND AGREED:

BY: *V. Mark*
VICKI MARK

DATE: November 19, 2008

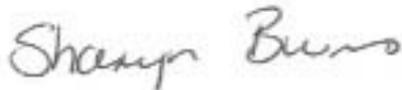
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Straight Talking About Resilience and Self-esteem ISBN: 1 74067 1287

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Signed:

A handwritten signature in cursive script that reads "Sharyn Burns".

Name: Dr Sharyn Burns

Position: Director Health Promotion and Sexology, School of Public Health
Co-Director Western Australian Centre for Health Promotion Research

Date: 27 November 2008