

**School of Public Health**

**The Relationship Between High School Students' Liking  
of Elements in Alcohol Advertising and Advertising Effectiveness**

**Lynda Jane Fielder**

**This thesis is presented for the Degree of  
Master of Public Health  
of  
Curtin University**

**September 2011**

## **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.**

**Signed: .....**

**Date: .....**

## **ACKNOWLEDGEMENTS**

My sincere thanks to Professor Rob Donovan not only for his kind and patient support, guidance and professional leadership in supervising this thesis, but also for his gracious support in fostering my skills as a new researcher.

I would like to thank Dr Robyn Ouschan for providing supervisory support and encouragement throughout the study and this thesis. Thanks are also extended to Mr Geoffrey Jalleh for his support and assistance.

My gratitude is extended to the staff and teachers of the secondary schools who participated in the study and to the students who provided their valuable time to make the study possible.

Finally, I would like to extend a personal thank you to my family and close friends for their support and patience throughout the process. My love and thanks to my husband Richard for his constant support and encouragement throughout and to my children Bianca, Daniel and Kylie for their gracious understanding during my many absent hours spent dedicated to this thesis.

## **ABSTRACT**

The increasing level of alcohol consumption among youth and related harms is an issue of international public health concern (Hingson, Heeren, Winter, & Wechsler, 2005; Jernigan & Mosher, 2005; Jernigan, Ostroff, & Ross, 2005; Mosher, 2006; Room, Babor, & Rehm, 2005; World Health Organization, 2004a). Many factors influence youth alcohol consumption, including social, individual, structural and marketing factors (Donovan, 1997). Research shows that alcohol advertising reinforces positive attitudes toward youth drinking and plays a significant role in their decision to drink, as well as level of consumption (Anson, 2010; Babor et al., 2003; Hurtz, Henriksen, Wang, Feighery, & Fortmann, 2007; Jernigan et al., 2005).

A number of countries follow a regulatory code of advertising in relation to alcohol. Self-regulatory codes are used to prohibit marketing that targets underage youth (Distilled Spirits Industry Council of Australia Inc., 2010). However, the effectiveness of these codes and self-regulation in general has been questioned in the literature (Jones & Donovan, 2002; Jones & Jernigan, 2010; US Department of Health and Human Services, 2007; World Health Organization, 2009a, 2009b). In Australia, the Alcohol Beverages Advertising (and Packaging) Code (ABAC) is the specific code that regulates the content of alcohol advertising (The ABAC Scheme, 2011). While a few studies have assessed alcohol advertising content against these codes (Donovan, Donovan, Howat, & Weller, 2007; Jones & Donovan, 2002), to date, no studies have attempted to relate identified breaches of codes contained in alcohol advertisements and the subsequent impact on advertising effectiveness.

The aim of this study was to explore the relationship between high school students' liking of elements in alcohol advertising and advertising effectiveness. A total set of 25 alcohol advertisements was selected from advertisements frequently aired during the period November 2005 to October 2006 (15 beer advertisements; 9 spirits advertisements; 1 sparkling wine advertisement).



Content analysis of the 25 advertisements revealed that all contained at least one element with known appeal to children and underage youth, indicating that youth in Australia are being exposed to alcohol advertisements that would be in breach of the Alcohol Beverages Advertising Code (ABAC). These advertisements were exposed to a sample of 544 young people attending Years 8 to 10 in public secondary schools in the Perth metropolitan area. Each student was exposed to five of the alcohol television advertisements. Respondents' individual reactions to each alcohol advertisement were obtained using a confidential, self-completion questionnaire. This instrument was also used to record respondents' alcohol beverage preferences.

The attractiveness of specific execution elements in the advertisements significantly predicted advertising likeability, which in turn predicted advertising effectiveness. Advertisements for the most preferred brands were characterised by: music; animal/animation; visual appeal; special effects; and humour.

These findings support other studies in suggesting that the current Australian system of advertising self regulation is inadequate in protecting underage youth from exposure to alcohol advertising. Recommendations from the results of this study are that the current voluntary system should incorporate further restrictions in content and programming zones and that consideration be given to a mandatory system with substantial penalty powers.

# CONTENTS

	<b>Page</b>
<b>Declaration</b>	<b>i</b>
<b>Acknowledgements</b>	<b>ii</b>
<b>Abstract</b>	<b>iii</b>
<b>Table of contents</b>	<b>v</b>
 <b>CHAPTER 1: Introduction</b>	 <b>1</b>
1.1 Background	1
1.2 Alcohol marketing and youth consumption	3
1.3 Self-regulation of advertising	5
1.4 Aim	6
1.5 Research objectives	6
1.6 Benefits of the study	7
 <b>CHAPTER 2: Literature review</b>	 <b>8</b>
2.1 Introduction	8
2.2 Prevalence of alcohol consumption	8
2.2.1 Prevalence of alcohol consumption	10
2.2.2 Gender difference in consumption patterns	13
2.3 Alcohol consumption and related harms	16
2.3.1 Overall evidence and framework	16
2.3.2 Alcohol related harms among youth	19
<i>Social harms</i>	19
<i>Short term physical harms</i>	19
<i>Long term harms</i>	21
2.4 Societal costs of alcohol use	24
2.5 Tax policy on alcohol	25
2.6 Theoretical perspectives – youth alcohol consumption	26
2.7 Predictors of youth alcohol consumption	28
2.7.1 Overall models	28
2.7.2 Marketing factors	33
2.8 Level of youth exposure to alcohol advertising	35
2.8.1 Youth exposure to alcohol advertising on television in Australia	38

2.9	Alcohol advertising exposure – impact on youth	41
2.9.1	Econometric studies	42
2.9.2	Impact on initiation of alcohol consumption	45
2.9.3	Dose response effect	47
2.9.4	Branded merchandise	48
2.9.5	Receptivity to alcohol advertising	50
2.9.6	Alcohol advertising and sport	51
2.10	Alcohol advertising content – impact on youth	53
2.11	Elements that appeal to youth	54
2.11.1	Appealing elements in magazines	58
2.11.2	Appealing elements on Internet sites	59
2.12	Gender portrayals in alcohol advertising	60
2.13	Regulation of alcohol advertising	60
2.13.1	Advertising codes	61
2.13.2	Australian advertising codes	62
2.13.3	Limitations of the Alcohol Beverages Advertising (and Packaging) Code	65
2.14	Summary	68

### **CHAPTER 3: Methodology**

3.1	Introduction	70
3.2	Ethics	70
3.3	Selection of alcohol TVCs	71
3.4	Content analysis of advertisements	73
	<i>Elements coding (following Chen et al., 2005)</i>	78
	<i>Settings coding</i>	78
	<i>Actions coding</i>	78
	<i>Themes and appeals coding</i>	78
3.5	Alcohol Beverages Advertising (and Packaging) Code (ABAC) - code breaches	83
3.5.1	Coding questionnaire	83
3.6	Sample recruitment	86
3.6.1	School sample	86
3.7	Questionnaire	89
3.7.1	Instrument validity	89
3.7.2	Section A: Items measured for each TVC	91
3.7.2.1	TVC liking	91
3.7.2.2	Element liking	91
3.7.2.3	Intention to try advertised brand	91
3.7.2.4	Brand preference	91
3.7.2.5	Perceived age of TVC target audience	92
3.7.2.6	Previous exposure to the TVC	92
3.7.2.7	Perceived message in the TVC	92

3.7.3	Section B: Items asked after viewing all TVCs	92
3.7.3.1	TVC salience	92
3.7.3.2	TVC perceived most effective for their age group	93
3.7.3.3	Previous trial or regular consumption by beverage type	93
3.7.3.4	Brand recognition and trial	93
3.8	Data cleaning and analysis	93
3.9	Field procedure	94
3.9.1	TVC stimulus sample	94
3.9.2	Data collection	96
3.10	Observation/field notes	98
	<i>Recruitment</i>	98
	<i>Field data collection</i>	99
	<i>Teacher presence</i>	99
	<i>Slideshow presentation tool</i>	99
3.11	Summary	100

## CHAPTER 4: Results

4.1	Introduction	101
4.2	Sample	101
4.3	Sample characteristics	101
4.3.1	School year and gender distribution	101
4.3.2	Drinking status of respondents	102
4.3.3	Previous exposure to advertisements	105
4.4	Advertising liking and advertising effectiveness	107
4.4.1	Overall liking of alcohol advertisements	107
4.4.2	Liking of specific theme elements and advertisement liking	109
4.4.3	Advertisement liking and 'like to try' the advertised brand	113
4.4.4	Advertisement liking and brand attitudes	115
4.4.5	Summary of mean ratings for advertisement liking, brand attitude and 'like to try'	117
4.5	Advertisement that stood out the most	118
4.6	Advertisement perceived most effective in getting young people to drink	120
4.7	Structural Equation Modelling	122
4.7.1	The structural equation model	122
4.7.2	Explaining advertising likeability and effectiveness	122
4.8	Alcohol Beverages Advertising (and Packaging) Code (ABAC) – identified breaches	124
4.8.1	Specific ABAC articles breached by alcohol advertisements	125
4.9	Summary	128

## **CHAPTER 5: Discussion**

5.1	Introduction	130
5.2	Youth exposure to alcohol advertising	131
5.3	Alcohol advertising likeability and effectiveness	133
5.3.1	Advertising likeability	133
5.3.2	Advertising effectiveness	136
5.3.3	Structural Equation Modelling	136
5.4	Alcohol Beverages Advertising (and Packaging) Code (ABAC)	137
5.4.1	ABAC – Identified breaches	137
5.4.2	Previous advertisement breaches	139
5.5	Recommendations	142
5.6	Limitations of the study	144
5.6.1	Sample selection	144
5.6.2	Peer influence on responding	144
5.6.3	Media exposure and youth	145
5.7	Future research	145
5.8	Conclusion	146

<b>REFERENCES</b>	148
-------------------	-----

## **APPENDIXES**

1	The Alcoholic Beverages Advertising (and Packaging) Code	171
2	Literature review summary	176
3	Fielder et al. (2009) paper and copyright approval	177
4	Letter to Principal and Principal consent form	189
5	Letter to parent/guardian inviting student participation	191
6	Active, written parent/guardian consent form	192
7	Active, written student consent form	193
8	Information sheet sent to students and parents	194
9	Calculation example target audience ratings points (TARPs)	195
10	Coding frame – Elements, Setting, Actions, Themes	196
11	ABAC coding frame	198
12	Self-completion student questionnaire	199
13	DVD rotational order	224
14	Description of filler advertisements	225
15	Powerpoint slideshow presented to student respondents	226
16	Student handout – <i>‘Deconstructing a television alcohol advertisement’</i>	233
17	Student handout – <i>Factsheet</i>	235
18	Student handout – <i>Alcohol and adolescent development</i>	237
19	Candidate observational field notes	239

## TABLES

1	Alcohol drinking status: proportion of the Australian population aged 12 years or older, by age and sex, 2007	13
2	Drink types most commonly consumed by those who drank Alcohol in the past week in Australia, 2005.	14
3	Alcohol consumption as short and long term risk of harm by age and sex	15
4	Top five causes of alcohol attributable to death and hospitalisation (%), males and females	21
5	Weekly alcohol advertising TARPs and average number of advertisements exposed by age group	39
6	TARPs and relative exposure ratios for four age groups by capital city market November 2005 to October 2006	40
7	Beer TVCs	75
8	Spirit TVCs	77
9	Wine TVC77	77
10	Content analysis: Elements	79
11	Content analysis: Settings	80
12	Content analysis: Actions	81
13	Content analysis: Themes and appeals	82
14	Sample year and gender by school and school SEI decile rank	88
15	TVC sets and advertisement time distribution	95
16	Advertisement placement order	96
17	School year and gender distribution	102
18	Proportion of respondents who have 'ever tried' and 'mostly drink' one or more alcoholic products	103
19	Proportion of respondents who 'have tried' one or more alcoholic beverage products by year group	104
20	Proportion of respondents who 'mostly drink' one or more alcoholic beverage products by year group	105
21	Previous exposure to alcohol advertisements	106
22	Advertisement liking by year: mean scores	108
23	Mean scores for liking for specific elements contained in each advertisement	110
24	Correlation between overall advertisement liking and overall liking of specific elements	111
25	Correlation between overall advertisement liking and overall liking of specific elements for each advertisement	112
26	Mean ratings for 'like to try' the advertised brand for each advertisement for each year group	114
27	Mean ratings for brand attitude for each advertisement for each year group	116
28	Advertisements that 'stood out the most' to respondents from other advertisements in the set	119

29	Advertisement most effective in getting people their age to try the advertised drink	121
30	Structural equation model: Mode of fit indices	123
31	ABAC codes breached by advertisement	126

## FIGURES

1	Conceptual model of alcohol consumption, intermediate mechanisms and long term consequences	18
2	MRI scans of the right anterior and left posterior hippocampus in a subject with adolescent-onset alcohol use disorder compared to a healthy comparison	23
3	Model of alcohol use	28
4	External predictors of youth drinking	30
5	Most common sources of alcohol supply among youth aged 12 to 17 yrs in the previous week	32
6	Proportion of respondents that 'have tried' and 'mostly drink' types of alcohol beverages	103
7	Mean ratings for 'like to try' advertised brand by advertisement liking	115
8	Advertisement liking by brand attitude ratings	117
9	Overall means for advertisement liking, brand attitude and 'like to try' the advertised brand	118
10	Structural Equation Model: Explaining advertising likeability and effectiveness	123
11	Advertisements assessed as breaching one or more ABAC codes	125
12	Code articles considered breached	127

## **CHAPTER 1**

### **Introduction**

#### **1.1 Background**

Alcohol is ranked among the 10 leading risk factors for death worldwide accounting for approximately 2.3 million deaths per year. As the third leading global risk for disease burden, alcohol contributes 4.5% of total measured disability-adjusted life years (DALYs) worldwide, higher than both tobacco (3.7%) and illicit drugs (0.9%) (World Health Organization, 2009c, 2010b). Globally, alcohol is consumed by approximately 2 billion people. Among these, around 76.3 million suffer diagnosable disorders attributable to alcohol use (World Health Organization, 2004a).

According to the World Health Organisation (2004a), a causal relationship exists between alcohol and 60 different disorders including disease and injury, numerous chronic and acute health effects, and negative social, mental and emotional health consequences (Rehm et al., 2003; World Health Organization, 2004b, 2007a). Whilst others suggest that alcohol is related to nearer 40 disorders (e.g. Chikritzhs et al., 2003), it is clear that alcohol is an intoxicant with harm relating factors including the lifetime volume consumed, frequency of use and volume per use (Rehm et al., 2003; World Health Organization, 2010a).

There is growing international concern regarding youth alcohol use and misuse, and subsequent susceptibility to short term social harms and long term harmful physiological effects (Chikritzhs et al., 2004; Jernigan, 2001;



National Research Council and Institute of Medicine, 2004; US Department of Health and Human Services, 2007). Acute short term harms include injury and death resulting from motor vehicle crashes, suicide, violence, risky sexual behaviour, substance abuse and criminal behaviour (Chikritzhs et al., 2004; Hingson & Kenkel, 2004; Rehm et al., 2003; World Health Organization, 2010a). Longer term harms include chronic disease, loss of memory and neurological damage (Brown & Tapert, 2004; Chandran, 2003; National Research Council and Institute of Medicine, 2004; Pechmann, Levine, Loughlin, & Leslie, 2005).

Alcohol consumption may be considered by youth as a 'rite of passage' into adulthood (Australian Department of Health and Ageing, 2002), supporting a culture of acceptance of heavy or risky drinking. National statistics reported in 2007 that an estimated 20% of Australian youth aged 12 to 17 years consumed alcohol weekly (Australian Institute of Health & Welfare, 2008). An estimated 501 deaths among young people aged 14 to 17 years were attributed to alcohol disease and injury in Australia from 1993-2002 (Chikritzhs et al., 2004). The most common causes of death related to risky or high risk drinking among 14 to 17 year olds included non-pedestrian road injury (e.g. passenger or driver of a motor vehicle), with the second most common cause of death being suicide (Chikritzhs et al., 2004).

The legal drinking age in Australia is 18 years. Survey data suggests that many youth commence drinking at around 17 years. However, some youth initiate alcohol use from the age of 12 years (Australian Institute of Health & Welfare, 2008; White & Hayman, 2006). Age of initiation is an important factor linked to the beginning of a patterned trend of risky consumption that

continues into young adulthood (Bonomo, Bowes, Coffey, Carlin, & Patton, 2004; LaBrie, Rodrigues, Schiffman, & Tawalbeh, 2008). Hence, identifying factors that influence youth alcohol consumption is important in informing effective harm prevention strategies.

## **1.2 Alcohol marketing and youth consumption**

Alcohol marketing relies heavily on a promotional mix of mainly television advertising, supported by radio and print advertising, direct mail, sponsorships, and increasingly, electronic marketing (Clow & Baack, 2004; Constantinides, 2006; Duncan, 2005; Rossiter & Bellman, 2005). Recent reviews of longitudinal studies confirm a strong association between alcohol advertising and other marketing exposures and the drinking intentions and drinking behaviour of young people (Andersen, Holstein, & Due, 2007; Smith & Geller, 2009).

Alcohol advertising contains elements that appeal to and influence drinking behaviours of underage audiences (Chen, Grube, Bersamin, Waiters, & Keefe, 2005). Exposure to alcohol advertising normalises alcohol, thus making youth feel more comfortable with consuming alcohol (Lynch & Bonnie, 1994). Studies associate exposure to alcohol advertising with initiation of drinking (Hanewinkel & Sargent, 2009; Sargent, Wills, Stoolmiller, Gibson, & Gibbons, 2006), intention to drink (Pasch, Komro, Perry, Hearst, & Farbakhsh, 2007), maintenance of drinking (Collins, Ellickson, McCaffrey, & Hambarsoomians, 2007; Ellickson, Collins, Hambarsoomians, & McCaffrey, 2005), and increased drinking (Snyder, Milici, Sun, & Strizhakova, 2006).

Studies of cumulative effects of media exposure have found that youth with greater exposure to alcohol advertising, consumed more alcohol in the long term than youth exposed to lesser levels (Snyder et al., 2006). In Australia, recent studies have shown that underage youth are exposed to high levels of alcohol advertising (Fielder, Donovan, & Ouschan, 2009; King, Taylor, & Carroll, 2005; Winter, Donovan, Ouschan, & Fielder, 2008). For example, Fielder et al. (2009) analysed Australian exposure data (Target Audience Ratings Points) on free-to-air television for four age groups (*children* 0-12 years; *underage teens* 13-17 years; *young adults* 18-24 years; *mature adults* over 25 years) in five mainland capital city markets: Adelaide; Brisbane; Melbourne; Perth; and Sydney. Results showed that in each of the five markets, *mature adults* were most exposed to alcohol advertising. However, *children* were exposed to one third the level of *mature adults*, and *underage teens* were exposed to approximately the same level as *young adults* (Fielder et al., 2009). Exposure of alcohol advertising is regulated by the Australian Communications and Media Authority to minimise children's exposure to alcohol advertising. However, these data show that in spite of restrictions, children and underage youth are exposed to unacceptable levels of alcohol advertising, identifying a major gap in the current self-regulatory system of alcohol advertising in Australia.

Several studies have focussed on the impact of alcohol advertising content on youth attitudes, beliefs and intentions with respect to alcohol (Ellickson et al., 2005; Fleming, Thorson, & Atkin, 2004; Saffer, 2002; Snyder et al., 2006). These studies have yielded consistent results supporting the conclusion that alcohol advertising has a direct influence on youth consumption behaviours (Hastings, Anderson, Cooke, & Gordon, 2005). Other studies confirm that alcohol advertisements predict purchase intention and/or consumption, primarily through likeability (Miller & Mizerski,

2005). However, only one study, conducted by Chen et al. (2005) in the USA, has attempted to identify specific elements that predict overall advertising effectiveness (i.e. purchase and/or consumption intentions) (Chen et al., 2005).

This study replicates and extends the study by Chen and colleagues (2005) to strengthen the evidence of association between youth liking of execution elements used in alcohol advertising and advertising effectiveness in relation to promoting youth consumption of alcohol. Secondary school children were exposed to 25 frequently aired alcohol advertisements and asked to rate the appeal of specific elements contained in the advertisements and their impact on their desire to try the product or brand. Trained coders' ratings were used to identify and assess specific ABAC code of practice breaches in this sample of 25 alcohol advertisements.

### **1.3 Self-regulation of advertising**

In many developed countries, alcohol marketing and advertising are subject to a system of self-regulation operated by representatives of the advertising, media and alcohol industries (World Health Organization, 2008, 2009b). Self-regulatory codes are used to prohibit marketing that targets underage youth (Distilled Spirits Industry Council of Australia Inc., 2010). However, the effectiveness of these codes has been questioned in Australia and elsewhere (Jones & Donovan, 2002; Jones & Jernigan, 2010; US Department of Health and Human Services, 2007; World Health Organization, 2009a, 2009d). At the same time, evidence that alcohol advertising exposure influences underage youth consumption highlights the need for more stringent codes (Chung et al., 2010; Jones, Hall, & Munro, 2008).

In Australia, the Alcohol Beverages Advertising (and Packaging) Code (ABAC) (Appendix 1) is the specific code that regulates the content of alcohol advertising. While a few studies have assessed alcohol advertising content against the codes (Donovan et al., 2007; Jones & Donovan, 2002), none have done so for a large sample of television advertisements aired over an extended time period on Australian free-to-air television.

#### **1.4 Aim**

The aim of this thesis is to explore the relationship between high school students' liking of elements in alcohol advertising and advertising effectiveness.

#### **1.5 Research objectives**

This thesis has four research objectives:

##### *Objective 1*

To identify the specific execution and theme elements of alcohol advertising that predict positive attitudes to alcohol advertising among youth.

##### *Objective 2*

To model the relationship between specific elements of alcohol advertising and advertising effectiveness.

##### *Objective 3*

To identify and assess specific ABAC code of practice breaches of frequently aired alcohol advertisements.

##### *Objective 4*

To draw on the results to make recommendations for alcohol advertising self-regulation codes.

## **1.6 Benefits of the study**

Youth alcohol consumption is a major public health concern. Initiation of alcohol often occurs at early to mid adolescence, thus increasing vulnerability to harm. Evidence of factors that influence underage drinking is important in informing a comprehensive national strategy that aims to prevent and minimise alcohol related harm in Australia (Ministerial Council on Drug Strategy, 2006).

A challenge currently facing health advocates is the apparent weakness of the self-regulatory system of alcohol advertising (Donovan et al., 2007; Jones & Donovan, 2002; Jones & Jernigan, 2010) and the failure of this system to prevent exposure of alcohol advertising to underage youth (Fielder et al., 2009). This study will provide evidence of the appeal to an underage audience of specific elements in a sample of alcohol advertisements that were aired on Australian television from November 2005 to October 2006. This evidence has the potential to improve the efficacy of advertising self-regulation codes by stating more specifically what should be excluded from alcohol advertising to which children and underage youth may be exposed.

## **CHAPTER 2**

### **Literature review**

#### **2.1 Introduction**

This review consists of three main sections. The first section describes the epidemiological evidence with respect to global and Australian prevalence rates of alcohol intake and associated harms. The second section summarises the theoretical perspectives with respect to factors that influence youth consumption including a specific focus on the role of advertising as an influencing factor on consumption and consumption intentions of youth. Finally, this review describes the current system of self-regulation of alcohol advertising in Australia and discusses evidence of this system's ineffectiveness in protecting underage youth (see Appendix 2).

#### **2.2 Prevalence of alcohol consumption**

Historically, alcohol has played an important role in various functions of society from its symbolic use in religion and worship, to its pharmacological properties including sanitising, antiseptic and analgesic properties (Charters, 2006; Hansen, 1997). In modern society, alcohol is often considered in many cultures to facilitate positive qualities such as social enhancement, enjoyment of life, and reducing inhibitions. On the other hand, alcohol consumption is a major avoidable risk factor of disease burden.

The global average of alcohol intake is 6.2 litres of pure alcohol per year. Highest levels of consumption occur in some Eastern European countries (around 2.5 higher than the global average), with lowest intakes in Africa and the Eastern Mediterranean (World Health Organization, 2009c).

As with many other countries, alcohol plays a significant role in Australian culture and social acceptance of consumption is high. Alcohol is the most widely accepted drug of use in Australia. In 2007, 52% of males and 39% of females aged 14 years and over, approved of the regular consumption of alcohol by Australian adults (Australian Institute of Health & Welfare, 2008). Approval of alcohol consumption was highest among those of highest socio-economic status. This acceptance of alcohol contributes to the high prevalence of consumption, and the normalisation of high volume consumption that is of most concern.

According to the World Health Organisation (2011), a large variation among countries exists in regard to global adult (15+) per capita alcohol consumption (APC). Australia is ranked among the highest countries in the developed world with an average of 10.0 litres of pure alcohol consumed by adults per capita from 2003 to 2005 compared to an average of 6.3 per capita for the WHO Western Pacific region. Beer was the main beverage preference in Australia with an adult per capita consumption of 46% litres of pure alcohol followed by wine 32% and spirits 22%.

Population estimates for 2007 indicate approximately 1.4 million Australians consumed alcohol on a daily basis and a further 7.1 million on a weekly basis (Australian Institute of Health & Welfare, 2008). The National Drug Strategy Household Survey (2008) found that in 2007, consumption for persons aged 15 years and over was 10 litres per capita. In the same year, 90% of Australians over 14 years had consumed alcohol in their lifetime. Around one in ten aged 14 years and over (8.6%) drank at levels considered risky or high risk to health (e.g. seven or more standard drinks on any one day for males and five or more standard drinks on any one day for females) (Australian Institute of Health & Welfare, 2008).



At the time these data were collected, for adult males, consuming 7 to 10 standard drinks on a single occasion was considered 'risky' and 11 or more per occasion 'high-risk' drinking for short term harm. For adult females, 5 to 6 standard drinks per occasion were considered 'risky' and 7 or more per day 'high risk'. Drinking at a level of 'low risk' for males was considered to be a level of up to 6 standard drinks on a drinking occasion and for females up to 4 standard drinks on any single occasion (Australian Institute of Health & Welfare, 2008). For adult males, drinking 43 or more per week is considered 'high risk', 29 to 42 standard drinks per week 'risky', and up to 28 drinks per week 'low risk'. For adult females, consumption of 29 or more per week is considered 'high risk', 15 to 28 standard drinks per week 'risky', and up to 14 standard drinks per week 'low risk' (Australian Institute of Health & Welfare, 2008).

The Australian Government has since revised these guidelines recommending a single universal guideline of two standard drinks or less on any one day for Australian adults. Australian law prohibits the sale of alcohol to persons under 18 years of age, and nil consumption is the recommended guideline for this age group (National Health and Medical Research Council, 2007).

### **2.2.1 Prevalence of youth alcohol consumption**

The increasing level of alcohol consumption among youth is an issue of international public health concern (Hingson et al., 2005; Jernigan & Mosher, 2005; Jernigan et al., 2005; Mosher, 2006; Room et al., 2005; World Health Organization, 2004a). Evidence suggests the trend of a heavy drinking culture among youth in developed countries is spreading throughout developing countries with convergence toward this drinking pattern more likely to occur in urban areas and areas of increasing affluence (Jernigan, 2001).

In 2007, the United States (US) Surgeon General issued *A Call to Action to Prevent and Reduce Underage Drinking* highlighting the increasing problem of alcohol consumption among youth in the USA and the growing level of cultural acceptance of youth consumption. Six goals were set to facilitate societal change in the USA through a collaborative effort involving parents, police officers, colleges and communities. Alcohol marketing practices were identified as an important influencing factor for underage consumption (Australian Department of Health and Ageing, 2002; US Department of Health and Human Services, 2007).

Many youth consider alcohol a form of recreation and drink with the deliberate intention of becoming intoxicated (Shand, Gates, & Fawcett, 2003). Episodic sessions of heavy drinking are a common pattern of youth alcohol consumption, identified in the literature as ‘binge drinking’ (Jernigan, 2001). The World Health Organization (WHO) defines binge drinking as consumption leading to intoxication (World Health Organization, 2004a). The consumption of five or more standard drinks on a single occasion is typically considered to be binge drinking (Australian Institute of Health & Welfare, 2008; Miller, Naimi, Brewer, & Jones, 2007; World Health Organization, 2004a). However, the definition of ‘binge drinking’ is often ambivalent and research suggests that despite consuming at levels defined as such, young people do not classify themselves as binge drinkers (World Health Organization, 2004a, Coleman & Cater, 2007).

The 2007 National Drug Strategy Household Survey (NDSHS) showed that 17.8% of young people aged 16-17 years were consuming alcohol weekly. This proportion more than doubled for 18-19 year olds (41.1%). Among 12–15 year olds, higher proportions of females than males consumed alcohol daily and weekly. For all other age groups, the proportion of consumption

among males was higher than that for females. Caution is warranted when interpreting figures for younger age groups due to smaller sample size.

Nevertheless, these data raise concern regarding the consumption levels of youth, particularly considering the legal drinking age in Australia is 18 years.

Australian males initiate drinking at an earlier age than females, drinking their first full glass of alcohol at around 16.3 years compared to 17.1 years for females (Australian Institute of Health & Welfare, 2008). White and Hayman (White & Hayman, 2006) suggest the majority of youth begin experimenting around 14 to 15 years of age. However, other data show that some Australian youth are starting to drink at a much younger age with national surveys collecting consumption data from youth aged as young as 12 years (Australian Institute of Health & Welfare, 2008). The early initiation of alcohol consumption is an important factor as it is often the beginning of a trend of a pattern of risky drinking that continues into young adulthood (Bonomo et al., 2004; LaBrie et al., 2008). Given evidence linking early alcohol consumption and short term acute harms and long term harms (Hingson et al., 2005), it is important to address factors that influence consumption of alcohol at a young age. Table 1 shows the alcohol drinking status for the Australian population in 2007.

The percentage of young people consuming alcohol in 2007, shown in Table 1, increased from around 30% of 12 to 15 year olds to around 75% of 16 to 17 year olds and more than 90% of 18 to 19 year olds. The proportion of young people consuming alcohol daily or weekly, increased substantially as age increased. This shows a significant age related trend of increased consumption of alcohol, particularly during the transition from 15 to 16 years (Australian Institute of Health & Welfare, 2008).

**Table 1: Alcohol drinking status of the Australian population aged 12 years or older, by age and sex, 2007**

Drinking status	Age group			
	12-15	16-17	18-19	12-19
<b>Males (%)</b>				
Daily	-	1.7	2.6	1.1
Weekly	1.0	20.0	46.7	17.3
Less than weekly	28.8	50.9	40.9	37.4
Ex-drinker	2.7	5.2	1.5	3.1
Never a full serve of alcohol	67.5	22.1	8.3	41.2
<b>Females (%)</b>				
Daily	0.5	-	0.7	0.4
Weekly	3.2	15.4	35.3	14.4
Less than weekly	26.8	63.2	51.9	42.3
Ex-drinker	2.1	3.0	1.9	2.3
Never a full serve of alcohol	67.5	20.3	9.2	40.9
<b>Persons (%)</b>				
Daily	0.2	0.8	1.6	0.7
Weekly	2.1	17.8	41.1	15.9
Less than weekly	27.8	57.0	46.3	39.8
Ex-drinker	2.4	4.2	1.7	2.7
Never a full serve of alcohol	67.5	20.3	9.2	40.9

Adapted from: Australian Institute of Health and Welfare (2008) p.21

### 2.2.2 Gender differences in consumption patterns

Research shows that males and females consume alcohol in different patterns, with the alcohol attributed proportion of overall burden for men being four times that of women (World Health Organization, 2007b). However, among young people, females are more likely to consume at high risk levels compared to males (Jernigan, 2001).

The Australian Secondary School Alcohol and Drug (ASSAD) survey (Table 2) found that in 2008, 32% of drinkers drank premixed spirits (or ‘alcopops’) and 31% indicated that they consumed spirits that were not in premixed containers. Premixed spirits were by far the more common beverage consumed by young female drinkers: total 12-17 years (females 50% vs males 16%). Males were more likely than females to consume beer (total 35% vs 5%, respectively) and spirits (total 35% vs 26%, respectively) (White & Hayman, 2009).

**Table 2: Drink types most commonly consumed by those who drank alcohol in the past week, in Australia, 2008**

	12-15 years			16-17 years			12-17 years		
	Male %	Female %	Total %	Male %	Female %	Total %	Male %	Female %	Total %
Beer (ordinary)	29	7	19	41	4	23	35	5	21
Wine	7	7	7	3	5	4	5	6	6
Premixed spirits	16	47	31	16	54	34	16	50	32
Spirits	36	26	31	35	27	31	35	26	31

\* percentages of total in each age and gender category;

+ percentages exclude responses from students who gave more than one type of drink.

# percentages do not add to 100 as only the most frequent responses are listed.

Adapted from: White and Hayman (2009) p.39

Table 2 shows that whilst not of legal age to purchase alcohol from licensed premises, youth have clearly defined alcohol beverage preferences that differ for males and females. Advertising has been found to play a role in youth alcohol preferences through brand identity and brand allegiance (Casswell & Zhang, 1998). For example, alcopops are designed for a youth market (Jernigan, 2001) and many target young females (Stark, 2007). Studies on tobacco have found similar results associating advertising with brand sensitivity and choice among youth (Aitken, Leather, Scott, & Squair, 1987; Osaki et al., 2006).

National statistics show that Australian youth are consuming alcohol at levels placing them at increased risk of short term and term risk of harm (see Table 3).

**Table 3: Alcohol consumption as short and long term risk of harm by age and sex, 2007**

	Age group					
Type of risk	12-15	16-17	18-19	20-29	30-39	40+
<b>Males (%)</b>						
Abstainer	70.2	27.4	9.8	11.1	10.9	13.1
Short term risk weekly						
Low risk	29.3	64.9	72.7	71.7	79.2	80.1
Risky	0.3	5.1	8.1	8.6	6.6	4.7
High risk	0.2	2.6	9.4	8.6	3.4	2.0
Short term risk monthly						
Low risk	26.9	48.8	46.6	45.1	61.7	71.0
Risky	2.1	11.5	18.0	14.5	13.9	10.1
High risk	0.9	12.4	25.7	29.6	13.6	5.8
Long term risk						
Low risk	29.0	65.3	77.5	73.3	79.2	77.7
Risky	0.6	3.6	8.4	9.3	6.2	5.6
High risk	0.2	3.3	4.3	6.2	3.7	3.6
<b>Females (%)</b>						
Abstainer	69.5	21.4	12.1	14.8	13.5	22.3
Short term risk weekly						
Low risk	28.1	71.8	70.5	73.0	79.7	74.0
Risky	0.5	3.0	8.1	5.1	4.0	2.3
High risk	1.9	3.7	9.3	7.1	2.8	1.4
Short term risk monthly						
Low risk	24.3	51.3	41.9	49.9	66.4	68.6
Risky	2.3	12.8	18.6	13.2	9.3	5.6
High risk	4.0	14.5	27.4	22.1	10.8	3.5
Long term risk monthly						
Low risk	28.1	70.0	68.8	68.8	75.7	69.0
Risky	1.3	4.9	13.2	11.0	7.7	6.7
High risk	1.0	3.7	5.9	5.4	3.0	1.9

Adapted from Australian Institute of Health and Welfare (2008) p.113

Table 3 shows that many underage Australian youth are consuming alcohol at levels risking short and long term harm. In particular, other than data for ‘short term risk weekly’ for the 18-19 year age group, these data show that more females aged 12-15, 16-17 years and 18-19 years drank at a ‘high risk’ level than males for each risk category. For example, for females aged 16-17 years, the proportions drinking at ‘high risk’ were 3.7% for ‘short term risk weekly’, 14.5% for ‘monthly short term risk’, and 3.7% for ‘long term risk monthly’. The corresponding proportions for 16-17 year old males were 2.6%, 12.4% and 3.3% respectively.

### **2.3 Alcohol consumption and related harms**

The consumption of alcohol has long been recognised as a significant source of harm. Harmful use of alcohol is a significant contributor to the burden of disease and injury, chronic and acute health effects, and negative social, mental and emotional health consequences (Rehm et al., 2003; World Health Organization, 2002, 2004a). Youth in particular are vulnerable to short term and long term harm associated with alcohol use and misuse (Bonomo, 2005; Center on Alcohol Marketing and Youth, 2005; Chikritzhs, et al., 2004; Jernigan, 2001; Miller, Levy, Spicer, & Taylor, 2006)

#### **2.3.1 Overall evidence and framework**

A causal relationship exists between alcohol and 40-60 types of short term and long term health effects including: peri-natal disorders; cancers (mouth and oropharynx, oesophageal, colon and rectal, liver, breast, and other neoplasms); diabetes mellitus; unipolar depressive disorders; epilepsy; heart disease (hypertensive and ischaemic); stroke (haemorrhagic and ischaemic); cirrhosis of the liver; injury and death (road traffic injuries, falls, drownings, poisonings, self-inflicted injuries, violence, and other unintentional injuries);

and negative social, mental and emotional health consequences (Rehm et al., 2009; Rehm et al., 2003; World Health Organization, 2004a).

European data report an exponential increase of lifetime risk of dying from an alcohol-related injury or disease for daily consumption over 10 grams of alcohol per day across the total population over 15 years of age. Men have a slightly greater risk than women with an annual risk of dying from an alcohol-related disease at just under 9% at a consumption of 60g/day compared to women who have an 8% risk (World Health Organization, 2010a).

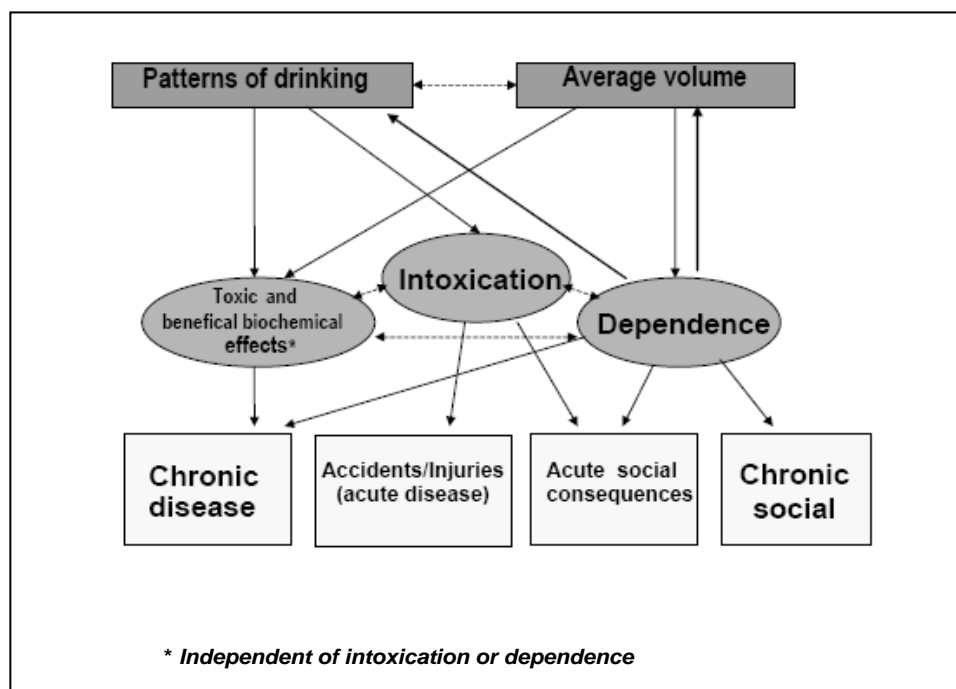
In Australia, alcohol is the second largest cause of drug-related deaths and hospitalisations, second only to tobacco. From 1990 to 2001 more than 5,000 deaths each year and a further 19 years of life lost prematurely, were attributable to alcohol (Chikritzhs et al., 2003). The economic cost of alcohol-attributed hospital separations in 2004-05 was \$662.2 million (Collins & Lapsley, 2008).

The causality of disease, injury and social consequences relate to the volume of consumption and pattern of alcohol use. The relationships are complex and multi-dimensional. In a study conducted by Rehm et al. (2003), the average volume of consumption of alcohol was found to increase the risk of major chronic diseases such as mouth and oropharyngeal cancer, breast cancer, liver cancer, hypertensive disease, hemorrhagic stroke, unipolar major depression, epilepsy, alcohol use disorders and cirrhosis of the liver. Patterns of consumption were associated with coronary heart disease (CHD) and unintentional and intentional injuries (Rehm et al., 2003).



Rhem and colleagues (2003) propose a conceptual model that identifies the main causal pathways contributing to intermediate mechanisms and long term consequences (see Figure 1) (Rehm et al., 2003). Figure 1 shows that *Patterns of drinking* and *Average volume* are mediated by *Intoxication*, *Toxic and beneficial biochemical effects* and *Dependence*, leading to long term and short term consequences. However, a limitation of this model is the exclusion of indirect consequences of alcohol use, such as social costs and the loss of employment/income as a result of a motor vehicle crash caused by drunk driving (Rehm et al., 2003). Indirect consequences including related social consequences associated with alcohol consumption are most common among youth.

**Figure 1: Conceptual model of alcohol consumption, intermediate mechanisms and long term consequences**



Adapted from: Rhem et al. (2003) p.1210

### **2.3.2 Alcohol related harms among youth**

Youth alcohol use has been described as ‘a paediatric concern’ due to the occurrence of early initiation from pre-adolescence and the associated serious short term and long term effects (Committee on Substance Abuse, 2010).

#### ***Social harms***

Youth are particularly susceptible to social harms from alcohol misuse (Bonomo, 2005; Center on Alcohol Marketing and Youth, 2005; Chikritzhs et al., 2004; Jernigan, 2001; Miller, Levy, Spicer, & Taylor, 2006). Recent literature has identified often ignored social harms suffered by youth, their families and others. Social harms are directly linked to excessive drinking including property damage, unplanned pregnancies, increased criminal behaviour (Collins & Lapsley, 2002; McBride, Farrington, & Milford, 2000; White & Hayman, 2006), increased conflict with parents (Best, Manning, Gossop, Gross, & Strang, 2006; Pechmann et al., 2005; Weschler, Dowdall, Maenner, Gledhill-Hoyt, & Lee, 1998), and strained personal relationships (McBride et al., 2000). Consequences related to secondary parties also impact on youth and society such as harm to those in other vehicles involved in motor vehicle accidents, victims of violence (physical, verbal and sexual), and family and friends of the binge-drinker (Jernigan, 2001). Youth excessive drinking also impacts negatively on school attendance and educational attainment leading to possible depressed future earnings (Best et al., 2006; Renna, 2007).

#### ***Short term physical harms***

The pattern and volume of alcohol consumption is strongly associated with a wide range of health risks and physical harms (Rehm et al., 2003). For example, consuming alcohol at risky levels has been directly related to

increased risks of mortality and morbidity from aggressive behaviour, violence, depression, suicide, homicide, eating disorders, substance abuse, 'date-rape', health-related problems relating to risky sexual behaviours, and reckless driving (Brown & Tapert, 2004; Garfield, Chung, & Rathouz, 2003; Hingson & Kenkel, 2004; Jernigan & Mosher, 2005; Miller et al., 2007; Miller et al., 2006; Pechmann et al., 2005; White & Hayman, 2006).

Australian youth mortality and morbidity statistics relating to alcohol highlight a public health concern. National hospital morbidity data recorded increased rates for acute alcohol intoxication among young people aged 15 to 24 years and almost 3,000 hospital separations among young people aged 15-24 years due to acute intoxication in 2005-06 (Australian Bureau of Statistics, 2008). Among young men the rate increased from 66 to 107 per 100,000, and among young women, the rate doubled over this time from 46 to 99 separations per 100,000 (Australian Bureau of Statistics, 2008).

In 2005-06, male and female teenagers aged 15-19 years had the highest hospital separation rates for acute intoxication from alcohol among all age groups (124 and 126 per 100,000). Men and women aged 20-24 years had the next highest rates (89 and 74 per 100,000) (Australian Bureau of Statistics, 2008). Mortality statistics reveal that between 1993-2002, an estimated 501 deaths among young people aged 14 to 17 years were attributable to alcohol related disease and injury. This represented 13% of all deaths among these age groups. The top five causes of hospitalisation and death among young people (aged 14 to 17 years) attributable to alcohol, from 1993 to 2002 and 1993/94 to 1999/2000 respectively, are presented in Table 4 (Chikritzhs et al., 2004).

**Table 4: Top five causes of alcohol attributable to death and hospitalisation (%), males and females**

Deaths (%)			Hospitalisations (%)		
Males			Males		
1	Road injury	56	Falls		26
2	Suicide	13	Assault		22
3	Pedestrian Road Injury (RI)	11	Alcohol abuse		18
4	Assault	7	Road injury		16
5	Drowning	5	Pedestrian Road Injury (RI)		3
Females			Females		
1	Road injury	43	Alcohol abuse		37
2	Suicide	21	Suicide		18
3	Assault	12	Assault		11
4	Pedestrian Road Injury (RI)	9	Falls		12
5	Drowning/Fire	7	Alcohol poisoning		6

Based on aggregate of all episodes from 1993-2002 and 1993/94-1999/00

Adapted from: Chikritzhs et al. (2004) p.3

The most common causes of death related to risky or high risk drinking among 14 to 17 year olds included non-pedestrian road injury (e.g. passenger or driver of a motor vehicle). The second most common cause of death was suicide. The top five causes of injury above accounted for over 90% of all deaths attributable to alcohol consumption (Chikritzhs et al., 2004). The rate of alcohol attributed death among 14 to 17 year olds who live outside of metropolitan areas is approximately 1.7 times greater than for city dwelling youth of the same age.

### ***Long term harms***

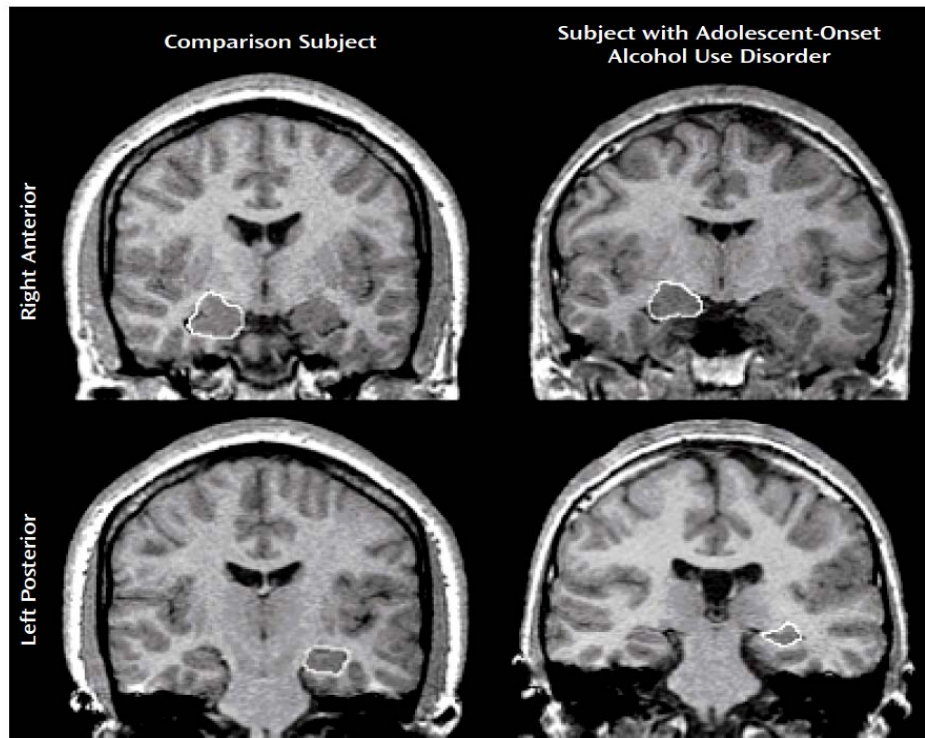
Alcohol use by youth and adolescents places them at risk of long term chronic disease and illness. Adolescents who abuse alcohol have been found to suffer greater loss of memory (Jernigan et al., 2005; McBride et al.,

2000), neurological damage (Pechmann et al., 2005) and alcohol addiction (Grant & Dawson, 1997). Recent neuroscience substantiates the harmful effects of alcohol on adolescent brain functioning including memory, attention and spatial operations (Brown, Tapert, Granholm, & Delis, 2000; National Research Council and Institute of Medicine, 2004; Tapert, Granholm, Leedy, & Brown, 2002).

Adolescence is a period of refinement of neurological processes such as myelination and synaptic responses. These two processes are important to neurological maturation. Myelination continues during adolescence in the frontal and pre-frontal lobes of the cortex that control functions such as organising, planning and impulse control. Synaptic refinement continues through childhood and adolescence until around the age of 16 years. The ability to think, interpret sensory information and co-ordinate motor skills become more efficient as do the functioning of the brain's neurotransmitters (Brown et al., 2000; National Research Council and Institute of Medicine, 2004; Tapert et al., 2002).

The prefrontal cortex and hippocampus are actively developing during adolescence (De Bellis, Clark, Beers, & Soloff, 2000; Spear, 2002a). Youth with adolescent-onset alcohol use disorders have been found to have significantly smaller left and right hippocampal volumes than healthy youth (De Bellis et al., 2000), and to perform worse on memory tests than non-drinkers (Tapert, McCarthy, Aarons, Schweinsburg, & Brown, 2003). Research conducted by De Bellis et al. (2000) examined hippocampal volumes of healthy adolescents and young adults with those of adolescents and young adults with alcohol use disorders. Figure 2 compares MRI scans of the right anterior and left posterior hippocampus of a subject with adolescent-onset alcohol use disorder and a healthy comparison (De Bellis et al., 2000).

**Figure 2: MRI scans of the right anterior and left posterior hippocampus in a subject with adolescent-onset alcohol use disorder compared to a healthy comparison**



Adapted from: De Bellis et al. (2000) p.740

The MRI scan shows a smaller hippocampal volume in the brain of the subject with Adolescent-Onset Alcohol Use Disorder compared to the MRI scan of the comparison subject (indicated by the white outline). This is particularly noticeable when comparing scans of the *Left posterior*. This indicates a direct physical effect of alcohol on the developing hippocampus of an adolescent.

In response to growing evidence of alcohol related harm on youth and neuroscience findings on the negative effect of alcohol on the adolescent brain, the American Academy of Paediatricians recently issued a policy statement recommending strategies for reducing underage drinking. These included increased knowledge and awareness of youth alcohol and other substance abuse among paediatricians, school and community based

prevention programs, and responsible media representation of alcohol (e.g. realistic consequences) (Committee on Substance Abuse, 2010).

## **2.4 Societal costs of alcohol use**

The causal relationship of early consumption among youth and subsequent problematic adult drinking highlights the long term impact of alcohol on society (Chikritzhs et al., 2003; Chikritzhs & Pascal, 2004; DeWit, Adlaf, Offord, & Ogborne, 2000; Jernigan, 2001; McBride et al., 2000; Miller et al., 2006; Mosher, 2006; National Research Council and Institute of Medicine, 2004; Rehm et al., 2003; Room, Graham, Rehm, Jernigan, & Monteiro, 2003; Spear, 2002b). Although the absolute costs of alcohol consumption and its impact are difficult to quantify, translating the social burden of disease and disability into a monetary cost has become standard practice. However, for many countries, estimating the costs of alcohol use is problematic (Baumberg, 2006).

Some studies have estimated the global cost of alcohol to be between \$210-\$665 billion (Baumberg, 2006). Miller et al. (2006) estimated alcohol attributable costs in the USA to be \$61.9 billion in 2001, including medical costs at \$5.4 billion, property losses and other resource costs \$7.8 billion, and other costs \$7.1 billion (Miller et al., 2006). Alcohol-attributed violence and traffic crashes represented the majority of these costs with an estimated loss of 368,000 quality adjusted life years (QALY) valued at \$5.4 billion. Miller et al. (2006) estimated that in the USA in 2001, underage drinkers accounted for at least 16.2% of alcohol sales resulting in an estimated 3,170 youth deaths and approximately 2.6 million injuries and events (Miller et al., 2006).

Australian data indicate the total social costs of drug abuse in 2004/05 were \$55.2 billion of which \$15.3 billion (27.3%) were attributable to alcohol.

Collins and Lapsley (2008) included costs related to crime and violence, health care costs, loss of productivity and premature death, with the economic burden resulting from loss of productivity due to premature death and health costs attributed to alcohol amounting to \$3.5 billion (Collins & Lapsley, 2008).

## **2.5 Tax policy on alcohol**

There is strong evidence from a range of countries to suggest increasing the price of alcohol reduces the amount consumed (Chaloupka, Grossman, & Saffer, 2002; Hertzua, Mäkelä, & Martikainen, 2008). Tax policies imposing price increases on alcoholic beverages are shown to be consistently effective in reducing consumption and alcohol related harms among the general population and vulnerable groups including young people (Chaloupka et al., 2002; Chikritzhs et al., 2009; Hertzua et al., 2008). However, the contribution of such policies in reducing overall youth consumption is an issue of contention both in Australia and other countries, particularly in the case of ready-to-drink (RTD) spirits-based alcoholic beverages known as ‘alcopops’ (Müller, Piontek, Pabst, Baumeister, & Kraus, 2010).

In Australia, following the government’s imposed excise tax increase on RTDs in 2008, the alcohol beverages industry and others criticised the strategy (Doran & Shakeshaft, 2008; Shanahan, 2009), arguing that price elasticity with respect to alcohol choice will nullify the impact the tax has on young drinkers (Doran & Shakeshaft, 2008). Prominent researchers have countered this argument citing evidence that consumption reduction is likely because the demand for alcohol by young people is indeed, elastic. They also debate the suggestion that youth will simply switch preference to another alcoholic product (in particular, spirits), which was the result in Germany following the introduction of an ‘alcopops’ tax (Müller et al., 2010).



Early commentary on the imposed tax cited a reduction of ‘alcopops’ consumption based on available national statistics. The Australian Bureau of Statistics reported consumption of ready-to-drink (pre-mixed) beverages between 2007-08 and 2008-09 reduced from 18.7 million to approximately 13.1 million litres of alcohol per capita among people aged 15 years and older. Consumption per capita for spirits increased in the same period, although this increase was not substantial enough to offset the reduction of ready-to-drink beverages (Australian Bureau of Statistics, 2010).

In contrast, a recent school survey has challenged the claimed success of the alcopops tax. The survey conducted by the Cancer Council of Victoria consisted of a sample of 4224 private, Catholic and government school students. Findings suggested that the tax increase had little impact on current alcohol preferences and had not changed teenage preferences for alcopops. Continued levels of risky drinking among underage youth were observed. However a positive finding was that the number of 12 to 15 year old ‘current drinkers’ had reduced from 23% in 2005 to 15% in 2008 and there was a significant reduction among 16 to 17 year old current drinkers to 44% of boys and 36% of girls. Overall, levels of consumption among underage youth were at their lowest in 2008 compared to studies conducted in previous years (Smith, 2009).

## **2.6 Theoretical perspectives – youth alcohol consumption**

Theoretical models from Social Psychology and Communication have been applied to a broad range of attitudinal and behavioural outcomes of marketing and advertising (Atkin, 1990). Several such models have been applied to the effects of alcohol marketing and advertising on youth attitudes and behaviour.

Ajzen & Fishbein's (1980) Theory of Reasoned Action posits that a person's behaviour is determined by his or her intention to perform the behaviour which, in turn, is a function of his or her attitudes toward and perceived subjective norms about the behaviour (Ajzen & Fishbein, 1980; Nutbeam & Harris, 2004). Intention is the cognitive representation of a person's readiness to perform a given behaviour and is considered to be the immediate antecedent of behaviour. Intention is determined by attitude toward a specific behaviour, subjective norms and perceived behavioural control. Further, the Theory of Planned Behaviour holds that only specific attitudes toward the behaviour in question can be expected to predict that behaviour (Ajzen & Fishbein, 1980). Research consistently links intentions to drink alcohol and actual drinking behaviour with exposure to alcohol marketing and advertising (Aitken, Eadie, Leather, McNeill, & Scott, 1988a; Thomsen & Rekve, 2006; Wyllie, Zhang, & Casswell, 1998a, 1998b).

Social learning theory (Bandura, 1977) suggests that both environmental and personal factors (i.e. beliefs, attitudes and perceptions) influence behaviour. This model applied to alcohol advertising suggests that behaviours and values portrayed and rewarded in advertising can become normalised or aspired to. Hence, advertising can have potentially negative effects on youth where risky or unhealthy behaviours (such as heavy alcohol consumption) are being positively reinforced and shown without any negative effects (Nelson, 2005; Rhen, Room, & Edwards, 2001). That is, an advertisement that portrays drinking alcohol in a positive context may encourage positive attitudes toward or intention to consume the advertised brand (Smith & Foxcroft, 2009) (Anderson, de Bruijn, Angus, Gordon, & Hastings, 2009).

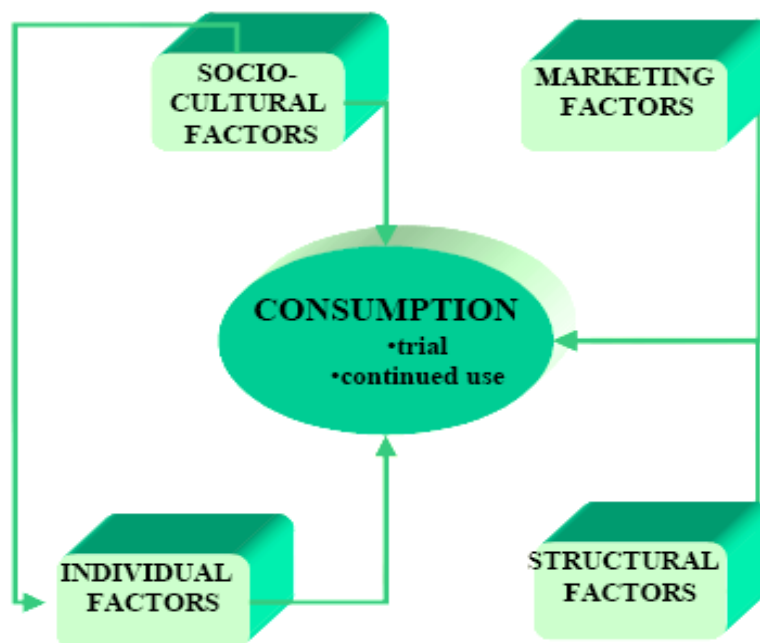
## 2.7 Predictors of youth alcohol consumption

Models predicting youth alcohol consumption identify marketing as one of several influencing factors.

### 2.7.1 Overall models

Donovan (Donovan, 1997; Pettigrew & Donovan, 2003) proposed a model of alcohol use identifying four major groups of influencing factors underlying underage drinking: marketing strategies; individual beliefs, attitudes and dispositions; socio-cultural factors; and structural factors (see Figure 3 below) (Donovan, 1997; Pettigrew & Donovan, 2003).

**Figure 3: Model of alcohol use**

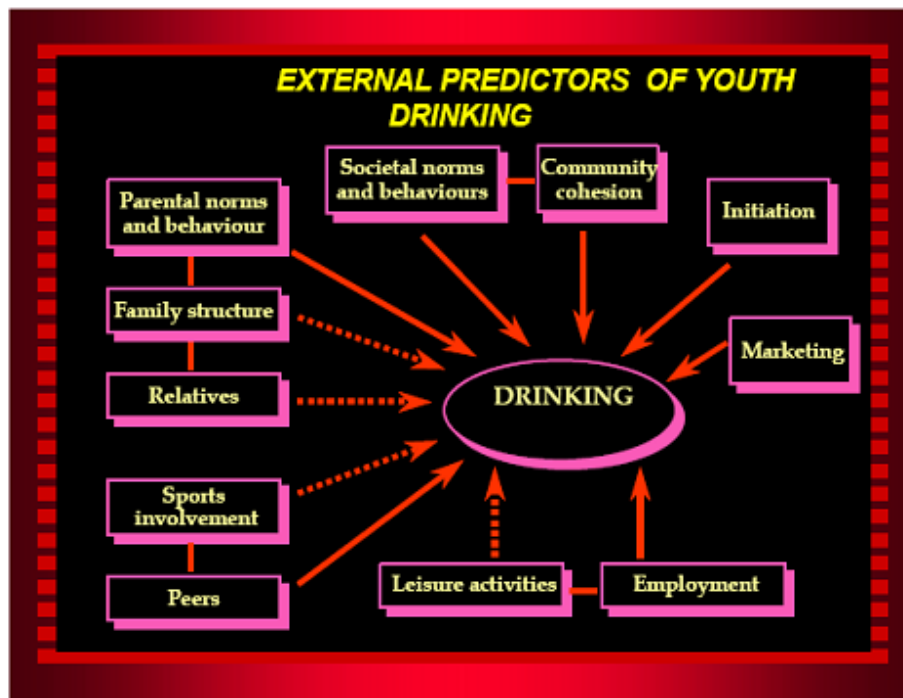


Adapted from: Pettigrew and Donovan (2003) p.10

Donovan (1997) classifies these as factors as ‘Internal’ predicting factors and ‘External’ predicting factors. Internal factors relate to individual beliefs (expectations), attitudes, values, personality factors, life experiences and morality. External factors include physical and structural environmental factors (Donovan, 1997). External and internal factors mutually interact to facilitate underage drinking.

Some facilitating internal factors include personality, personal needs, sense of purpose, knowledge of own health effects, disposable income, value of achievement and social/coping skills. For example, youth are motivated to consume alcohol for social effect. Motivation for social enhancement (e.g. to feel good, be part of a social network) as well as social coping (e.g. to avoid social rejection, bad feelings) (Kuntsche, Knibbe, Gmel, & Engels, 2005, 2006; Palmqvist, Martikainen, & von Wright, 2003) are significantly correlated with alcohol consumption (Abbey, Scott, & Smith, 1993; Jackson, Hastings, Wheeler, Eadie, & Mackintosh, 2000).

Physical or structural environments as well as the socio-cultural environment are external factors that predict youth drinking (see Figure 4) (Donovan, 1997). Influencing factors within the physical or structural environment include for example, density of alcohol outlets, drinking environment, legal restrictions and climate. The socio-cultural environment includes alcohol marketing, media and promotion (e.g. advertising, special price deals, venue promotions such as ‘happy hour’), sub-cultural groups, family, peers and other group memberships (Donovan, 1997).

**Figure 4: External predictors of youth drinking**

Adapted from: Pettigrew & Donovan (2003) p.13

Alcohol plays a definitive role in the formation of youth identity. It serves a role in the social realm of peer acceptance and symbolises the transition into adulthood (Andersen, Holstein, & Due, 2006; Biehl, Natsuaki, & Ge, 2007; Bonomo, 2005; Clark & Loheac, 2007; Dworkin, 2005; Jackson et al., 2000; Kuntsche et al., 2006; McCreanor, Greenaway, Barnes, Borell, & Gregory, 2005; Miller & Plant, 1996). Perceived acceptance or approval of alcohol consumption by peers is a key component in drinking behaviour (Borsari & Carey, 2001; Parra, Krull, Sher, & Jackson, 2007), and appears true for girls and boys. For example, Palmqvist and colleagues (Palmqvist et al., 2003) investigated and compared motives for alcohol and narcotics use among two cohorts of Finnish adolescents. The first cohort consisted of adolescents aged 15 to 16 years (N=296) attending high school within 10 Finnish municipalities in 1984. The second cohort consisted of 14 to 16 year old adolescents (N=488) attending comprehensive schools within two municipalities in southern Finland in 1999. They found that whilst the use of

alcohol as a means of coping decreased among this group, positive motivations increased. A significant difference between the two groups over the 15 year gap included increased reference to fun as a perceived consequence of use. In contrast, the perception of alcohol's ability to relieve bad feelings decreased (Palmqvist et al., 2003).

Friends and family drinking are significantly associated with drinking among young people, particularly males (Biehl et al., 2007; Donovan, 1997; Gardner & Steinberg, 2005; McClure, Dal Cin, Gibson, & Sargent, 2006). Peer lifestyle and broader social influences become more important as adolescents get older and become financially and otherwise independent. Peers may serve as role models reinforcing attitudes towards drinking behaviour, such as social acceptability of alcohol use at potentially harmful levels and the expected psychological benefits of alcohol consumption (Jackson, 2002; Park, 2004).

Parental attitudes and behaviours in relation to alcohol are a major influence on at least early drinking habits, as is family structure with older siblings playing a role in establishing favourable norms such as perceived social benefits (Epstein, Griffin, & Botvin, 2008). For example, children of heavy drinkers have a higher risk of excessive drinking whereas children of parents who are abstainers or strictly prohibitive, may be influenced by defiance or reactance to authority (Jackson, 2002). On the other hand, children of heavy drinking parents may be influenced to deliberately avoid alcohol as a result of the awareness of experience of the negative effects of alcohol on the family (Donovan, 1997; Pettigrew & Donovan, 2003).

Similarly, in reviewing research relating to parental influence on adolescent alcohol use, Hayes et al.(2004) found consistent evidence of association between parenting behaviours or characteristics and a range of problems among children and adolescents (Hayes, 2004). In a cross-sectional study of

959 adolescents (Jackson, 2002), *authoritarian* parenting style was associated with rebelliousness among adolescents, which was also related to alcohol use (Jackson, 2002). However, the notion that *permissive* parenting styles support youth drinking is supported to a certain extent by statistics that reveal parents as a common source of alcohol supply to their underage children (Australian Institute of Health & Welfare, 2008; White & Hayman, 2009). Figure 5 shows the most common sources of alcohol among Australian youth aged 12 to 17 years.

**Figure 5: Most common source of alcohol supply among youth aged 12 to 17 yrs in the previous week**

	Age								
	12–15 year olds			16–17 year olds			Total		
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)
<b>Did not buy, supplied by:</b>									
Parents	36.1	34.3	35.3	30.5	33.5	31.9	33.4	34.0	33.7
Siblings	11.8	8.2	10.1	7.3	6.4	6.9	9.6	7.4	8.6
Took from home	8.3	7.8	8.1	2.4	1.3	1.9	5.5	4.7	5.1
Friends	22.0	24.6	23.2	22.4	20.7	21.6	22.1	22.8	22.4
Someone else bought	13.4	18.0	15.6	22.3	28.3	25.2	17.7	22.9	20.2
<b>Bought from:</b>									
Liquor store/supermarket	0.8	0.6	0.7	6.3	2.4	4.4	3.4	1.4	2.5
Bottle shop	0.7	0.1	0.4	2.3	1.1	1.7	1.5	0.5	1.0
Drive-in bottle shop	0.5	0.2	0.3	1.4	1.1	1.3	1.0	0.6	0.8
Bar/Pub/RSL	0.4	0.2	0.3	1.4	1.6	1.5	0.9	0.9	0.9

\* Percentages of total in each age and gender category.

\* Additional sources of alcohol were included in the survey. As only the most common sources are shown, percentages do not add to 100%.

Adapted from: White and Hayman (2009) p.40

According to research conducted by White & Hayman (2009), Australian school students aged 12 to 17 who had consumed alcohol in the previous week, 34% indicated that they had been supplied the alcohol by parents and

22% supplied by friends. Further, 3% of 12 to 15 year olds and 10% of 16 to 17 year olds had purchased their last alcoholic drink themselves (White & Hayman, 2009). These data identify the need for more parent education on the effects of underage drinking and tighter restrictions on supply to underage youth.

Parenting style is also an important factor in relation to media influence. Parental mediation, where parents positively reinforce or criticise or question advertising messages, can enhance children's understanding of persuasive advertising, serving to counter negative effects. Expectancies or beliefs about the benefits of drinking alcohol are influenced by perceptions of media messages (Austin, Pinkleton, & Fujioka, 2000). Research suggests that children and adolescents learn most about alcohol products through television exposure and therefore receive an unbalanced view of the positive and negative aspects of alcohol consumption (Austin & Nach-Ferguson B., 1995; Wallack, Cassady, & Grube, 1990).

### **2.7.2 Marketing factors**

Marketing factors have been found to influence youth consumption of alcohol (Adlaf & Kohn, 1989; Austin, Chen, & Grube, 2006; Casswell & Zhang, 1998; Gentile, Walsh, Bloomgren, Atti, & Norman, 2001; Jernigan & O'Hara, 2004; Miller & Mizerski, 2005; Pettigrew & Donovan, 2003; Villani, 2001). Alcohol marketing is a growing global industry. The commercial imperatives operating within this industry often compromise the health and social wellbeing of consumers as well as contradict public health strategies. One common objective of alcohol marketers is to attract new customers. Henriksen and colleagues (2008) point out that marketing strategies for both alcohol and cigarettes include increasing the likelihood of trial among those who have never used these products (Henriksen, Feighery, Schleicher, & Fortmann, 2008)



Marketing factors include product innovation, packaging, market segmentation and targeting, product availability, product discounting and advertising and sales promotion campaigns (Cowan & Mosher, 1985; Jernigan & O'Hara, 2004). Alcohol marketing relies heavily on a promotional mix of mainly television advertising, supported by radio and print advertising, direct mail, sponsorships and, increasingly, electronic marketing (Clow & Baack, 2004; Constantinides, 2006; Duncan, 2005; Rossiter & Bellman, 2005). Although, not reviewed as part of this thesis, it is worth noting the emergence of a broader spectrum of modalities through which marketing is attempting to penetrate the youth market (for example, sponsorship of school materials [e.g., Apple computers and Kraft]; product placement in motion pictures, television programs, books and video games and advergames [e.g. Microsoft, Coca-cola, Subway], and popular music or music videos (Beder, 2010; Beder, Varney, & Gosden, 2009).

Alcohol marketers continually adapt to the challenges of advertising (e.g. regulatory restrictions) and maintain an ubiquitous presence by promoting their products through media such as television, radio, mobile phones, the internet, films, music, and branded merchandise, outdoor advertising, point of sale promotions, sponsorship activities and product placements (Babor et al., 2003; Beder, 2010; Beder et al., 2009; Casswell, 2004; McCreanor et al., 2005; Zwarun, 2006).

The World Health Organization acknowledges the role of marketing in the globalisation of patterns of alcohol use among young people. Young people have been identified as a critical market to global businesses who adapt to keep up with changing subcultures within this group (Casswell, 2004; Jernigan, 2001). For example, the recent wave of flavoured alcoholic beverages, generally referred to as 'alcopops', were designed to appeal to

the youth market with their enhanced flavours, colouring and attractive packaging (Jernigan, 2001).

## **2.8 Level of youth exposure to alcohol advertising**

Alcohol is among the most heavily advertised products worldwide (Endicott, 2005) and has been shown to result in substantial exposure to children and underage youth (Center on Alcohol Marketing and Youth, 2008). In United States markets, from 2001 to 2006, alcohol advertising spending on television increased from US\$779 million to US\$992 million, with the number of advertisements growing by 33% (Center on Alcohol Marketing and Youth, 2007).

Estimated expenditure of alcohol advertising on mainstream Australian media exceeds A\$100 million per annum with metropolitan television representing more than 45% (King et al., 2005). In 2007, total advertising expenditure was reported to be \$128 million. This figure was considered conservative given that it did not include expenditure related to advertising of alcohol outlets, sponsorship or internet advertising (National Preventative Health Taskforce, 2009). Global marketers are among the highest spending marketers with the majority of their advertising spending invested in commercial television (38%) and outdoor advertising (32%). In 2007, the highest purchaser of alcohol advertising was Diageo (\$19.1 million) followed by Carlton United Beverages (\$14.4 million). Beer was the most advertised beverage category (47%) followed by spirits (26%), wine (21%) and premix/cider (6%) (National Preventative Health Taskforce, 2009).

High level advertising spend results in high level advertising exposure. Studies in Australia and other countries have identified that children and underage youth are exposed to high levels of alcohol advertising. Further, it has been suggested that this exposure may be directly targeted to younger

audiences, and not just incidental (Center on Alcohol Marketing and Youth, 2007; Fielder et al., 2009; Jernigan, Ostroff, Ross, & O'Hara, 2004; Jernigan & Ross, 2010; King et al., 2005; Winter et al., 2008).

Television is the most prominent medium for advertising (Strasburger & Donnerstein, 2000) and research has established that incidental or targeted exposure to underage youth is increasing (Center on Alcohol Marketing and Youth, 2007). A recent USA report found that youth were more likely on a per capita basis to see 66,218 more alcohol advertisements than adults in 2002 (Jernigan & O'Hara, 2004). In 2007, CAMY reported that between 2001 and 2006 in the USA, the number of television alcohol advertisements exposed to youth increased by 30%. They noted however that during this period youth exposure to alcohol advertising in national magazines fell by 50%, indicating that alcohol companies are increasingly shifting the advertising of their products from magazines to television and the internet or other media (Center on Alcohol Marketing and Youth, 2007).

A recent study by Chung and colleagues (2010) examined whether alcohol advertising on cable television was associated with adolescent viewership (percentage of the audience aged 12 - 20 years). Data for every national cable alcohol advertisement were obtained from 2001 to 2006, a total of 608,591 advertisements. Results showed that almost all alcohol advertisements appeared in a timeslot with a proportion of 30% (USA industry voluntary standard of youth audience composition) or less underage viewers. However, each 1% increase in adolescent viewership was associated with more advertisements for beer (7%), spirits (15%) and alcopops (or low alcohol refresher) (22%). Fewer advertisements appeared for wine (-8%). A stronger association was observed for spirits and alcopops among adolescent girls than boys (each  $P < 0.001$ ) (Chung et al., 2010).

Several studies report high levels of exposure of alcohol advertising in magazines and the effects of such exposure on the attitudes and behaviour of adolescents. For example, Garfield and colleagues (2003) examined exposure of alcohol advertising to youth in 35 major US magazines published between 1997 and 2001. They found 60% greater advertising for beer and distilled spirits compared to other alcoholic beverages for every magazine's youth readership of one million (Garfield et al., 2003). With regard to product advertising, the Center on Alcohol Marketing and Youth (CAMY) found that youth aged 12 to 20 years were exposed to 60% more alcopops (low alcohol refreshments), 45% more beer and ale advertising, and 27% more distilled spirits advertising than adults aged 21 years and over (Center on Alcohol Marketing and Youth, 2002).

Jernigan and colleagues (Jernigan et al., 2004) showed that from 2001 to 2002, exposure to low alcohol refresher (e.g. alcopops) advertising increased by 216% for girls aged 12 to 20 years and by 46% for boys. Overall, girls were more likely to be exposed to beer, ale and low alcohol product advertising than women aged 21 years and older (Jernigan et al., 2004). Demographic differences have been identified in alcohol advertising exposure through various media. Ringel et al. (2006) examined trends in exposure to girls and boys aged 6 to 17 years. Using television ratings data from September 1998 to February 2002, patterned differences across genders were identified with boys exposed more than girls to alcohol advertising on television. Further, this exposure was relatively consistent. A more recent study by Chung et al. (2010) also identified differential exposure by gender on cable television. They found that alcohol advertisements for spirits and alcopops were associated with higher viewership among underage girls (12 to 20 years) than underage boys. Time slots where viewing audiences were 55% adolescent females had 48% more spirits ads and 58% more alcopop ads than timeslots where viewing audiences were 45% females (Chung et al., 2010). Jernigan et al. (2004)

confirmed the same differential targeting in alcohol advertisements appearing in magazines. Girls aged 12 to 20 years were exposed to beer, ale and low-alcohol refresher drinks increasing by 216% from 2001 to 2002, compared to boys with increased exposure of 46% over the same period (Jernigan et al., 2004).

### **2.8.1 Youth exposure to alcohol advertising on television in Australia**

In Australia, studies have found evidence of high levels of alcohol advertising exposure to underage youth on free to air television (Fielder et al., 2009; King et al., 2005; Winter et al., 2008). Winter and colleagues (Winter et al., 2008) obtained exposure levels from weekly Target Audience Rating Points (TARPs) used for commercial media monitoring. TARPs are a measure of advertising weight. In general, the greater the TARPs for an advertisement, the greater the proportion of the target audience exposed to the advertisement and the more often members of the target audience are exposed to it. The TARPs figure for an advertisement is calculated from the number of target audience individuals exposed to the advertisement as a proportion of the total target audience, multiplied by 100.

Winter et al. (2008) suggest that alcohol marketers may be deliberately targeting underage adolescents. Exposure levels were obtained for 156 different alcohol advertisements for 50 alcohol brands exposed on free-to-air television in Sydney, during the period March 2005 to February 2006 for four age groups: up to 12 years; 13-17 years; 18-24 years; and 25 years and older. The data showed that underage youth in Sydney aged 13-17 were exposed to almost identical levels of alcohol advertising as young adults aged 18-24 years, and that children aged under 13 years, were exposed to around one in every three alcohol advertisements seen by mature adults. This is presented in Table 5 (Winter et al., 2008).

**Table 5: Weekly alcohol advertising TARPs and average number of advertisements exposed by age group**

<b>Audience demographic</b>	<b>Children 0-12 yrs</b>	<b>Underage Teenagers 13-17 yrs</b>	<b>Young Adults 18-24 yrs</b>	<b>Mature Adults 25+ yrs</b>
Annual TARPs for alcohol advertising	10902	22143	22316	34259
Weekly TARPS for alcohol advertising	210	426	429	659
Number of alcohol advertisements seen on average per week	2.1	4.3	4.3	6.6

Adapted from: Winter et al. (2008) p.680

In order to identify the stimulus sample of alcohol advertisements for the present study, Fielder and colleagues (2009) (see Appendix 3) repeated Winter's methodology. However, they extended the sample to include Australian mainland capital city markets: Adelaide; Brisbane; Melbourne; Perth; and Sydney. TARPs data for four age groups (*children* 0-12 years; *underage teens* 13-17 years; *young adults* 18-24 years; and *mature adults* 25 years and over) were obtained from Nielsen Media Research for the period November 2005 to October 2006. The TVCs with the highest exposure to 13 to 17 year olds during the 12-month period were identified, 25 of which formed the stimulus sample of alcohol advertisements used in this thesis (Fielder et al., 2009).

Results showed that in each of the five metropolitan markets, *mature adults* were most exposed to alcohol advertising. *Children* were exposed to one third the level of mature adults and underage teens to approximately the same level as young adults.

Table 6 shows a simple average of the number of alcohol advertisements that the average member of each age group is exposed to per week. Given that 100% exposure of the target audience is rarely obtained in practice, these figures substantially underestimate the number of advertisements that heavier television viewers are exposed to.

**Table 6: TARPs and relative exposure ratios for four age groups by capital city market: November 2005 to October 2006**

<b>Audience demographic</b>	<b>Children 0-12 years</b>	<b>Underage Teenagers 13-17 years</b>	<b>Young Adults 18-24 years</b>	<b>Mature Adults 25+ years</b>
<b>Market</b>				
Sydney	9947	20222	23063	35287
Brisbane	11763	18402	25529	36435
Adelaide	20322	28215	32012	45470
Melbourne	11258	21049	21244	30775
Perth	12703	25237	27920	40789
<b>Relative exposure within each market*</b>				
Sydney	0.43	0.88	<b>1.0</b>	1.53
Brisbane	0.46	0.72	<b>1.0</b>	1.43
Adelaide	0.63	0.88	<b>1.0</b>	1.42
Melbourne	0.53	0.99	<b>1.0</b>	1.45
Perth	0.45	0.90	<b>1.0</b>	1.46
* Young adults = 1.0				
<b>Simple average ad exposure (per week)*</b>				
Sydney	1.9	3.9	4.4	6.8
Brisbane	2.3	3.5	4.9	7.0
Adelaide	3.9	5.4	6.2	8.7
Melbourne	2.2	4.0	4.1	5.9
Perth	2.4	4.9	5.4	7.8
* Based on 100% exposure				

Adapted from: Fielder et al. (2009) p. 1160.

Fielder and colleagues (2009) reported considerable variation in alcohol advertising weight between the five capital city markets, with Adelaide residents of all age groups receiving more alcohol advertising exposure than all other capital city residents. In each capital city market, *mature adults* (25 years plus) were most exposed to alcohol advertising on free-to-air television, but *underage teens* (13-17 year olds) were exposed to almost as much alcohol advertising as were *young adults* (18-24 years), with *children* exposed to half the amount as *young adults*. It is clear that the alcohol marketers' media schedules not only deliver adult audiences but also reach underage audiences – particularly 13-17 year olds.

Fielder et al.'s (2009) study provides evidence of heavy exposure of alcohol advertising to children and underage youth on Australian television at a national level. These findings warrant stricter regulatory enforcement of age restrictions. Jernigan (2009) suggested in published commentary, that the study conducted by Fielder et al. (2009), provided a service to Australians and should inform routine government operations in relation to regulation of alcohol advertising (Jernigan, 2009).

## **2.9 Alcohol advertising exposure – impact on youth**

Alcohol advertising has the power to shape attitudes and perceptions, particularly among young people, resulting in positive attitudes toward consuming alcohol. This is achieved through pervasive advertising designed to promote alcohol in a positive context that normalises alcohol consumption. Increased frequency of exposure to alcohol advertising results in youth becoming more comfortable with consuming alcohol through a process of desensitising them to the potential harms associated with alcohol (Lynch & Bonnie, 1994).



A growing body of literature provides evidence of a causal association between exposure to alcohol advertising and youth drinking. This association has been found for a variety of sources of alcohol advertising such as: television (Center on Alcohol Marketing and Youth, 2007; Chung et al., 2010; Fielder et al., 2009; Grube, 1993; Grube, 1995; Winter et al., 2008), including sports programming (Center on Alcohol Marketing and Youth, 2004a; Jones, Phillipson, & Barrie, 2010; Phillipson & Jones, 2007; Zwarun, 2006); magazines (Center on Alcohol Marketing and Youth, 2002, 2007; Donovan et al., 2007; Hill, Thomsen, Page, & Parrott, 2005; Sanchez, Sanchez, Goldberg, & Goldberg, 2000); outdoor advertising (Collins et al., 2007; Hackbarth et al., 2001; Pasch et al., 2007); and the Internet (Carroll & Donovan, 2002; Carroll, Stewart, King, & Taylor, 2005; Center for Media Education, 1998; Center on Alcohol Marketing and Youth, 2004b). Further, increased sophistication of electronic technology has prompted the emergence of diverse modes of target advertising which penetrate the world of technology embraced by youth, for example, mobile phones (McCreanor et al., 2005).

### **2.9.1 Econometric studies**

The influence of alcohol marketing on youth drinking behaviour is well established in the literature (Anderson et al., 2009; Smith & Foxcroft, 2009). However, debate on this issue between the alcohol industry and public health researchers and advocates continues. The alcohol industry maintains that the purpose of alcohol advertising is to retain product loyalty or induce consumers to switch brands rather than to attract new consumers (Beaver, 1997). The industry consistently draws on the findings of econometric studies of aggregate expenditure, of which almost all conclude that advertising has little or no effect on aggregate consumption (Gangadharbatla & Wilcox, 2005a; Nelson, 2005). The reliability of such studies has been questioned given their simplistic methodology which aggregates

consumption of all ages and neglects to consider creative content of advertising and consumer involvement (Gordon, Hastings, & Moodie, 2010; Winter, 2006).

Of the marketing mix elements, advertising is the most pervasive and is particularly efficient in reaching children and youth (Committee on Communications, 2006; Pechmann et al., 2005; Strasburger & Wilson, 2002). The impact of alcohol advertising on youth consumption behaviour has been an issue of considerable debate (Gordon et al., 2010; International Centre for Alcohol Policy (ICAP), 2003; Jones & Jernigan, 2010; Smith & Geller, 2009). For example, the industry-supported International Center for Alcohol Policy (ICAP) claimed in a 2003 report to the World Health Organization that evidence did not support an association between alcohol advertising awareness and increased consumption among youth (International Centre for Alcohol Policy (ICAP), 2003).

The alcohol industry uses aggregate data and market-response econometric studies to claim that alcohol advertising has no impact on youth alcohol consumption (Duffy, 1989; Franke & Wilcox, 1987; Gangadharbatla & Wilcox, 2005b; Waterson, 1989). However, major methodological weaknesses have been identified with such econometric studies. For example, confounding effects influencing drinking behaviour are not considered in an econometric model that reports cross-sectional population aggregate data, almost always based on an adult population, thus limiting the generalisability of this research (Saffer, 1996; Smith & Geller, 2009). Time series studies are another industry-level impact measure. These studies measure advertising effects using cross-sectional data gathered from local markets. Similar to econometric studies, time-series studies are based on population data rather than individual level data and therefore are not considered appropriate measures for advertising effect, particular in the case

of alcohol and tobacco (Gordon et al., 2010; Saffer, 2004; Smith & Foxcroft, 2009).

Several cross-sectional studies have looked specifically at the drinking behaviour of young people. These studies measure associations using one-period-in-time, cross-sectional surveys. A limitation of cross-sectional studies is that they do not measure alcohol use prior to the exposure. For example, these studies do not consider the effect of reverse causality, where existing consumption may pre-dispose receptivity to alcohol advertising (Smith & Geller, 2009). However, Aitken et al. (1988a) propose that paying attention to advertising theoretically assumes viewer reward (benefit from viewing) which is appropriate for alcohol advertising that is specifically designed to provide audience reward (e.g. alcohol is always shown in a positive context). Hence, cross-sectional data are considered a useful contribution to literature on youth alcohol consumption (Aitken, Eadie, Leather, McNeill, & Scott, 1988a). Recent reviews of longitudinal studies confirmed a strong association between alcohol advertising and other marketing influences and the drinking intentions or drinking behaviour of young people (Andersen et al., 2007; Smith & Geller, 2009).

Using data from the National Longitudinal Survey of Youth 1997, Saffer and Dave (2006) found that reducing alcohol advertising by 28%, would result in reductions in adolescent drinking from 25% to between 24%-21% and binge participation would reduce from an estimated 12% to between 11%-8% (Saffer & Dave, 2006). Further, Snyder et al. (2006) found that in the USA, for young people aged less than 21 years, each additional dollar spent per capita on alcohol advertisements increased the number of drinks consumed in the previous month by 2.8% (event rate ratio = 1.028, 95% CI: 1.002-1.056) (Snyder et al., 2006).

Hollingworth et al. (2006) calculated that a tax increase and advertising ban would effectively reduce alcohol mortality. Using national survey data, they estimated that a complete ban on alcohol advertising in the USA would reduce deaths from harmful drinking by 7,609 and decrease alcohol related life-years lost by 16.4%. A partial ban on alcohol advertising would result in an estimated 4% reduction (Hollingworth et al., 2006).

### **2.9.2 Impact on initiation of alcohol consumption**

Several studies have confirmed that exposure to multiple sources of alcohol advertising strongly predicts onset or initiation of alcohol by youth. For example, Robinson, Chen & Killen (1998), investigated the impact of media exposure (including television, music video, videotape viewing and computer or video games) on initiation and maintenance of alcohol use among high school students. The sample consisted of 1533 14-15 year olds from six public high schools in California, USA. A non-randomised prospective survey was used to measure media impact. During the 18 month follow-up, 36% (N = 325) of the sample initiated drinking and 51% (N = 322) continued drinking. Risk of initiation during the prospective 18 months increased with time spent viewing television. For each additional hour of television viewed per day, increased risk was 9% (OR = 1.09, 95% CI: 1.01-1.18), and for each additional hour viewing music video, the increased risk was 31% (OR = 1.31, 95% CI: 1.17-1.47). No significant association was found between computer and video games and initiation of drinking. Lower risks of association between maintenance of drinking and additional viewing were observed for television, music videos, videos and computer or video games (Robinson, Chen, & Killen, 1998).

Ellickson and colleagues (2005) analysed the impact of different forms of exposure to alcohol advertising and subsequent alcohol initiation and frequency among 3111 USA youth aged 12–13 years. Further, they

assessed whether exposure to an alcohol and drug prevention program mitigates such an effect. They found that exposure to in-store beer displays to 7<sup>th</sup> graders predicted onset of alcohol drinking by 9<sup>th</sup> grade. Bivariate relationships found a significant impact of all types of alcohol advertisement exposure on initiation of drinking. The analysis controlled for exposure to each different type of advertising (television, magazines, beer concession stands, in-store advertisement displays) as well as the impact of the prevention program (*ALERT*). Exposure to beer concession stands at sports or music events predicted drinking onset for non-drinkers in the previous 12 months (OR=1.42,  $p<0.05$ ). Of 1905 grade 7 drinkers, 77% consumed alcohol in the previous year at grade 9. Further, controlling for exposure to all different types of advertising and the impact of the prevention programme, exposure to beer concession stands at sports or music events predicted frequency of drinking amongst existing drinkers in the previous 12 months (coefficient=0.09,  $p<0.05$ ). This was the same for exposure to alcohol advertisements in magazines (coefficient =0.10,  $p<0.05$ ) (Ellickson et al., 2005).

Similar findings have been found elsewhere. For example, Collins and colleagues (2007) conducted a longitudinal study that assessed the impact of exposure to multiple sources of alcohol marketing. They measured the effect of exposure to alcohol advertising on beer use one year later among 1786 grade 6 students across 39 schools in South Dakota. At 12 month follow-up, 17% reported drinking alcohol in the past year. The joint effect of exposure to advertisements from all sources (24hr sports related programming on cable television, other sports beer ads, other TV beer ads, magazines, radio, beer concessions, in-store beer displays and beer promotional items) was significant,  $F(8, 28) = 8.36$ ,  $p<.001$ . Further, 20% of youth in the 75th percentile of alcohol marketing exposure at grade 6 reported past year beer drinking at grade 7 follow-up, compared with 13% in the 25th percentile (Collins et al., 2007).

### 2.9.3 Dose response effect

Research has shown a dose response effect with respect to alcohol advertising exposure. Snyder et al. (2006) investigated the impact of alcohol advertising expenditures and the level of exposure among 15 – 26 year olds to alcohol advertisements on television, radio, outdoor advertising and magazines in the USA. Using tracked media exposure data, local geographical markets were systematically selected from the top 75 media markets in the USA (79% of the population). The frequency of viewing alcohol advertisements, that is, seeing more or fewer advertisement than typically seen by an individual predicted drinking (Snyder et al., 2006). Significant sample attrition was reported from 1,872 at *wave 1* to a sample of 588 at final *wave 4*. In response to criticism, Snyder and Slater (2006) reported in a later publication that attrition in this study was greatest amongst heaviest drinkers therefore suggesting under-estimation in their findings (Snyder & Slater, 2006). Further criticism of this study was that the authors suggested that correlation inferred causality (Schultz, 2006; Smart, 2006).

Stacy et al. (2004) conducted a randomised prospective study that investigated the impact of television alcohol advertisements on youth alcohol consumption in a sample of 2250 school students aged 12-13 years in California, USA. Baseline data collected at Grade 7 revealed that 16% of the sample reported drinking beer in the past month, 15% reported drinking wine in the past month and 8% reported three drinking episodes in the past month. Follow-up data collected at Grade 8 revealed an increased prevalence in drinking in the past month with 18% reported for beer, 20% for wine, and 12% reporting three or more drink episodes. At 12 month follow-up, logistic regression analysis predicted that for each one standard deviation, beer drinking was associated with a risk of 44% (OR = 1.44,

95% CI: 1.27-1.61), a 34% increase in the odds of drinking wine or hard liquor (OR = 1.34, 95% CI: 1.17 – 1.54), and a 26% increase in the odds of three or more drink episodes (OR = 1.25, 95% CI: 1.08 – 1.48) (Stacy, Zogg, Unger, & Dent, 2004).

Connolly and colleagues (1994) surveyed a sample of 667 New Zealand youth at age 13 years and 15 years and their subsequent alcohol use at 18 years. The number of alcohol advertisements recalled by males at 15 years was significantly associated with maximum beer consumption at age 18 years ( $p = .008$ ). Greater recall of advertisements correlated with maximum amount of beer consumed. For females, the number of alcohol advertisements recalled at 13 years but not 15 years predicted the frequency of beer consumption at age 18 years ( $P = 0.031$ ) (Connolly, Casswell, Zhang, & Silva, 1994).

#### **2.9.4 Branded merchandise**

Alcohol branded merchandise has been identified as a passive form of exposure to advertising (Nova Scotia Department of Health Promotion and Protection, 2009). Prevalence of alcohol brand merchandise ownership among teenagers has been linked to the increased likelihood of alcohol initiation (Hurtz et al., 2007; McClure et al., 2006). Several longitudinal studies have demonstrated an association between youth ownership of alcohol branded merchandise and initiation of drinking among never drinkers and increased levels of consumption among young drinkers (Casswell & Zhang, 1998; Collins et al., 2007; Fisher, Miles, Austin, Camargo, & Colditz, 2007; Henriksen et al., 2008).

Fisher and colleagues (2007) conducted a non-random, prospective cohort study which assessed the effect of ownership (or willingness to own) an alcohol branded item on initiation of consumption and binge drinking.

Binge drinking was defined as five or more alcohol drinks over a few hours at least once in the previous year. Results showed that between 1998 and 1999, 19% of girls and 17% of boys had initiated alcohol use. Among these, 24% of girls and 29% of boys engaged in binge drinking. Positive attitudes toward alcohol, underage sibling drinking, and possession of (or willingness to possess) alcohol promotional items were associated with binge drinking (Fisher et al., 2007).

Two longitudinal studies by McClure and colleagues (2006) investigated the effect of youth ownership of alcohol branded merchandise and subsequent drinking behaviour among youth (McClure et al., 2006; McClure, Stoolmiller, Tanski, Worth, & Sargent, 2009). Their first study investigated the impact of ownership of alcohol branded merchandise on initiation of teen drinking. The longitudinal baseline sample comprised 2406, 10 to 14 year olds who were 'never-drinkers' in a 1999 school-based survey which examined the impact of exposure to movie smoking and adolescent smoking among adolescents in New Hampshire and Vermont, USA. This survey collected data on ownership of alcohol branded merchandise and initiation of drinking at one to two years follow-up by telephone survey. Results showed that among the sample of baseline never-drinkers, 15% had initiated alcohol use and 14% owned an alcohol branded merchandise product including primarily clothing (t-shirts, hats). At follow-up, owners of alcohol branded merchandise had higher rates of alcohol initiation compared with non-owners (25.5% vs 13.1%,  $p < .001$ ) (McClure et al., 2006).

More recently, McClure and colleagues (2009) investigated the association between ownership of alcohol branded merchandise and drinking attitudes among USA adolescents. A three-wave longitudinal study collected data from 6522 adolescents aged 10 to 14 years. Computer-assisted telephone interviews were conducted every 8 months over four waves retaining 5503 at 8 months and 4575 at 24 months. Results revealed an independent



association of ownership of alcohol branded merchandise and susceptibility to, and initiation of, alcohol consumption. Prevalence of ownership ranged from 11% after 8 months to 20% at 24 months. McClure et al. extrapolated these proportions to 2.1 to 3.1 million USA adolescents (McClure et al., 2009).

### **2.9.5 Receptivity to alcohol advertising**

Receptivity to alcohol advertising has been compared to receptivity to tobacco marketing and its influence on positive affect toward cigarette advertising and promotions (Choi, Ahluwalia, Harris, & Okuyemi, 2002). Psychological factors such as novelty seeking in relation to adolescent smoking are mediated by receptivity to tobacco marketing (Audrain-McGovern et al., 2006). Henriksen et al. (2008) suggest this process may apply to adolescent drinking. Their study investigated the influence of receptivity of alcohol advertising and promotions on initiation of drinking among a sample of 1,080 students. A non-randomised self-administered questionnaire was administered to students in Grades 6-8 at baseline and in Grades 7-9 at follow-up (2004) in California, USA. Measures included alcohol marketing receptivity, brand recall and brand recognition. At follow-up, approximately 29% of adolescents reported any alcohol use and 13% reported drinking on at least one or two days in the previous month. Never drinkers at baseline who reported high receptivity to alcohol marketing were 77% more likely to initiate alcohol consumption by follow-up than those not receptive. No significant difference was found between moderate and minimal receptivity. The odds of initiating alcohol consumption at follow-up increased by 15% for each recognised alcohol brand and 16% for each brand they recalled at baseline (Henriksen et al., 2008).

### 2.9.6 Alcohol advertising and sport

The alcohol industry continues to market alcoholic beverages through televised sport and sports sponsorship (Hoek, 2004; Zwarun, 2006). In 2006, Zwarun (2006) investigated the types of promotion and frequency of alcohol (and tobacco) products in sports programming in the USA. Content analysis was conducted on more than 83 hours of televised sports programming appearing from 2000 to 2002, recording advertisements as well as methods such as stadium signs, announcer voiceovers, etc. Results showed that both tobacco and alcohol marketers cleverly adapt their advertising as required. For alcohol, certain types of advertising had decreased, but strategic placement in other media had in fact increased audience exposure. Zwarun (2006) also identified a new marketing trend of placing alcohol (and tobacco) brand names in advertisements for other products.

In Australia, cultural tradition supports a common association between alcohol, sport and sport sponsorship (Munro, 2000; Phillipson & Jones, 2007). Alcohol brand sponsorship is prevalent in Australia at a national level through cricket, tennis, golf, car racing, horse racing, surfing, and football (rugby union, rugby league and Australian football league) (Munro & de Wever, 2008).

Jones et al. (2010) recently investigated the extent and nature of alcohol advertising during sporting telecasts and reviewed the efficacy of current Australian advertising regulations in protecting children and young people from potential negative effects resulting from such exposure. Using mixed methods, two small scale studies assessed the frequency and nature of alcohol advertising and children's recognition and liking of alcohol advertisements. Both studies were based on alcohol advertisements appearing during the finals series of two popular Australian sporting codes (*One Day Cricket* finals and *Australian Open tennis* finals) (Jones et al.,

2010). The first study assessed frequency and content of alcohol advertising. Despite a six hour broadcast duration deficit, the cricket broadcast contained 110 more advertisements and 12 more minutes of advertising than the tennis broadcast. Alcohol was prominently advertised during both telecasts with approximately 3.5 alcohol advertisements per hour over 18 hours of cricket telecast and less than one alcohol advertisement per hour over 24 hours of tennis. Content analysis of the alcohol advertisements revealed that six of 13 advertisements contained features known to appeal to children, six advertisements were judged to be in violation of the ABAC with respect to consumption and sporting success, one advertisement appeared to breach the ABAC by encouraging excessive consumption, and six of the 13 advertisements breached broadcasting codes with respect to appropriate viewing times for children (Jones et al., 2010). The second study investigated children's recognition and liking of alcohol advertisements through six friendship group interviews (three pairs of boys; three pairs of girls). Data revealed a high awareness of alcohol products and brands advertised during the cricket amongst grade 5 and 6 (10 to 12 years old) children. Moreover, an association was found between advertisement liking and features (e.g. humour, music and mascots) (Jones et al., 2010).

Alcohol sponsorship of sport is often includes branded merchandise such as team jerseys bearing the alcohol brand name. A longitudinal study conducted by Casswell et al. (1998) measured the effect of televised alcohol advertising and allegiance to specific brands of beer and subsequent consumption among a cohort of 630 beer drinkers at ages 18 and 21 years. Results showed that those who had established a relationship with a brand of beer by the age of 18 years were found to be heavier drinkers and more likely to self report alcohol-related aggressive behaviour at 21 years (Casswell & Zhang, 1998).

### **2.10 Alcohol advertising content – impact on youth**

It has been suggested that the appeal of the advertisement may be as important as the amount of exposure on youth drinking (Austin & Hust, 2005). A substantial literature confirms the influence of advertising on the attitudes of children and young people (Casswell & Zhang, 1998; Moore & Lutz, 2000; Valkenburg, 2000; Villani, 2001; Wright, Friestat, & Boush, 2005) and the subsequent impact of these attitudes on social norms and behaviours (Snyder et al., 2006). Persuasive appeals, such as emotional appeals, can affect the viewer's cognitive processes in relation to attitudes and intentions (Hall, 2002; Jones, Gregory, & Munro, 2009; La Barbera, Weingard, & Yorkston, 1998; Ruiz & Sicilia, 2004). Although children and young people have some awareness of advertising themes and techniques, their vulnerability lies in their limited ability to cope with the complex execution elements and their associated emotions and appeals (Moses & Baldwin, 2005; Story & French, 2004; Wolburg, 2005).

Alcohol advertising influences adolescent drinking by promoting positive associations with alcohol and linking alcohol consumption with attractive symbols, role models and outcomes (Atkin, 1990; Carroll & Donovan, 2002; Chen et al., 2005; Grube, 1993). Further, it promotes familiarity, making youth feel comfortable with consuming alcohol (Walsh & Gentile, 2005), and the content of alcohol advertising creates certain 'alcohol expectancies' (Dunn & Yniguez, 1999; Fleming et al., 2004; Grube, 1995). These are subjective, anticipated beliefs about the effects of alcohol and include both positive and negative effects (Leiberman & Orlandi, 1987; Leigh & Stacy, 2003; McNally & Palfai, 2001). However, negative consequences or portrayals are rarely present in alcohol advertising (Grube & Waiters, 2005). Therefore children and youth exposed to alcohol advertising in a context suggesting positive psychological effects are unlikely to associate undesirable effects with drinking (Dunn & Yniguez,

1999; Jones & Donovan, 2001; Jones et al., 2008). Expectancies are an important factor when considering the impact of alcohol advertising content as they are predictive of the level and frequency of alcohol consumed by youth (Dunn & Yniguez, 1999; Martin et al., 2002; Zogg, Ma, Dent, & Stacy, 2004).

Media effects on children and underage youth are enhanced by appealing advertising. Beliefs and desires developed by as young as third grade may have a priming effect on the future drinking decisions of children. Austin and Knaus (Austin & Knaus, 2000) conducted a cross-sectional study which assessed behavioural outcomes associated with media effects as a precursor to drinking among 273 children who had never consumed alcohol, from third, sixth and ninth grade at two Washington state schools. Liking of advertisement portrayals was found to predict identification with models, risky behaviour and pre-drinking behaviour. Positive expectancies increased from sixth grade to ninth grade (Austin & Knaus, 2000).

### **2.11 Elements that appeal to youth**

The literature demonstrates that alcohol advertising content appeals to and appears to be targeting underage youth (Carroll & Donovan, 2002; Casswell & Zhang, 1998; Center on Alcohol Marketing and Youth, 2004a; Jones & Donovan, 2001; Jones et al., 2010). Previous tobacco advertising has been shown to contain many of the elements common to alcohol advertising that specifically appeal to children and youth such as humour, music, cartoons and animated characters (Elders, 1997; Gruber, Thau, Hill, Fisher, & Grube, 2005). While some studies reviewed above have identified elements appealing to youth in alcohol advertisements, few have closely examined the appeal of specific content elements and the impact of these elements on alcohol advertising effectiveness. Chen et al. (2005) investigated the

affective responses of youth toward specific elements featured in alcohol advertisements such as humour, music, story, people characters and animal characters. They found that liking of these elements significantly contributed to overall likeability of the advertisements and purchase intent for the advertised brand or product (Chen et al., 2005). The study described in the thesis extends that of Chen et al. (2005) by examining an extended list of creative elements used in alcohol advertisements that youth find appealing.

Youth liking of various advertising elements (e.g. humour, music, cartoons, animals/animal characters, sexual appeal, storyline, special effects) has been empirically supported. Whilst humour has been shown to appeal to most audiences, research has shown that various techniques appeal to different age groups. For example, slapstick and clownish humour are particularly appealing to children (Buijzen & Valkenberg, 2004) and adolescents. However, adolescents also enjoy more ‘sophisticated’ forms of humour such as sarcasm, irony and sexual allusion (Acuff & Reiher, 1997). Hastings et al. (1994) found this to be true of tobacco advertising. They examined the appeal of the Imperial Tobacco campaign based on humour and featuring a character named ‘Reg’. Qualitative results from interviews with 5451 children aged 11 to 15 years revealed that whilst children were familiar with the ‘Reg’ campaign, the humour was only understood and appreciated by those children who were older and smoked. Following this research, the advertisement was found by the UK Advertising Standards Board to appeal to children and was subsequently withdrawn (Hastings, Ryan, Teer, & MacKintosh, 1994).

Popular music is a commodity that is available to be bought and sold within a commercial system, hence it has become a pervasive element in advertising. Liking of the music in an advertisement has been identified as influencing effectiveness amongst youth (Chen et al., 2005)

With respect to storyline, beer advertisements containing an engaging storyline have been found to be more attractive to youth than those without (Austin et al., 2006; Chen et al., 2005; Miller & Mizerski, 2005).

There is considerable evidence, both anecdotal and empirical, that cartoon and animal characters hold special appeal to children (Waiters, Treno, & Grube, 2001). Animals have been found to be a favoured topic of TV shows amongst children (Chen et al., 2005; Garitaonandia, Juaristi, & Oleagaa, 2001; Waiters et al., 2001), and youth pay greater attention when television advertisements feature animation and cute animals (Gentile et al., 2001; Waiters et al., 2001). Animal characters in particular have been used by marketers to target children and youth for a range of products – including tobacco and alcohol. For example, an early study by Fischer et al. (1991) investigated product logo recognition in a convenience sample of preschool children aged 3 to 6 years. Approximately 30% of 3 year old children correctly matched the R.J. Reynolds cartoon camel character ‘Old Joe’ with a picture of a cigarette. Recognition increased with age to 91% among 6 year old children (DesRoches, 1994; Fischer, Schwartz, Richards, Goldstein, & Rojas, 1991). Similarly, one year after the ‘Bud Frogs’ advertising campaign began, recall of the Budweiser frogs amongst children 9 to 11 years was higher than for other commercial animal icons, even for products explicitly aimed at children, such as ‘Tony the Tiger’ for Frosted Flakes breakfast cereal (Leiber, 1996). Overall, given the susceptibility of children and youth to the appeal of animal characters, it is likely that alcohol advertisements featuring animal characters would have substantial influence on advertisement liking.

Sexual appeal has been identified as a common mainstream element in consumer advertising (Reichert & Ramirez, 2000). Early research on tobacco advertising suggested that advertisements promoting smokers as attractive, young, sexy, healthy, well-dressed and having fun served to

reinforce and enhance a positive image of teenage smoking (Ho, 1994). Similarly for alcohol advertising, Waiters et al. (2001) suggest that the main messages in alcohol advertisements often associate a relationship between the product and sexual attractiveness, social success or popularity (Waiters et al., 2001).

Special effects are popular within youth culture and are particularly appealing to boys (Hanley, 2000). For example, research conducted in the United Kingdom by Hanley (2000) found that computer games containing special effects were particularly popular among children and adolescents due to enhanced entertainment value. The same study found that many parents considered advertising including cartoon characters, animals, 'catchy' tunes and phrases, colour, dynamic special effects and other appealing elements, to have significant power to influence their children (Hanley, 2000).

Qualitative studies have investigated how youth interpret and respond to themes and appeals portrayed in alcohol advertising and the subsequent effect on the youth drinking environment. According to Waiters et al. (2001) youth enjoyed most alcohol advertisements, with those containing humour, animated animals and music, the most attractive overall. They conducted focus groups with 97 students aged between 9 and 15 years recruited from six schools in Northern California who discussed six pre-selected alcohol advertisements shown during the session. The majority of participants suggested that the advertisements portrayed drinkers as 'cool', 'inventive', 'sly' and 'people that love to party'. Participants also related sexual attractiveness, social success and popularity with the advertised brand. Sexual undertones were identified with participants believing that drinkers in the advertisements would find love, happiness and sexual partners. Young males perceived happiness and love as an outcome of the



advertisements, whereas females were more likely to describe drinkers in the advertisements as particular types of people (Waiters et al., 2001).

Similar findings have been reported by McCreanor et al. (2005) in New Zealand who describe the marketing of alcohol as creating and maintaining an ‘intoxigenic’ social environment; that is, an environment conducive or supportive of the normalisation of alcohol with unhealthy expectancies influencing behaviour. They conducted a total of 70 interviews over three time periods with 24 groups (12 Maori, 12 Pakeha) of youth aged 14 to 17 years plus 29 individual recorded data sessions with opportunistic independent samples of groups of friends. The data showed evidence of strong appeal in alcohol advertising of thematic elements of fun and cool, identity and culture. Positive marketing messages were observed to support a normalised culture of intoxication.

### **2.11.1 Appealing elements in magazines**

Several studies have looked at the content of alcohol advertisements in magazines, particularly publications that are popular among youth. Most have found that this medium exposes underage youth to alcohol advertisements with specific appeal to this audience (Austin & Hust, 2005; Garfield et al., 2003; Hill et al., 2005). Austin and Hust (2005) explored settings, themes and actions in advertisements for both non-alcoholic and alcoholic beverages exposed to youth in popular magazines and television. Trained coders analysed 757 alcohol beverage advertisements appearing during November 1999 to April 2000. Results showed that one of every six magazine alcohol advertisements and one of every 14 television advertisement appeared to target teenagers. Alcohol advertisements appeared more frequently than non-alcoholic beverage advertisements in magazines (513 vs 129) and in television advertisements (78 vs 37), with many emphasising positive sexual and social stereotypes. Results suggested

that youth receptivity to alcohol advertisements may be enhanced by the use of the same themes present in non-alcoholic beverage advertisements that have strong youth appeal (Austin & Hust, 2005).

### **2.11.2 Appealing elements on Internet sites**

The Internet has provided an innovative marketing vehicle increasingly utilised by tobacco and alcohol companies (Alcohol and Other Drugs Council of Australia, 2005; Carroll & Donovan, 2002; Ribisl, Lee, Henriksen, & Haladjian, 2003). Studies conducted in the USA examining the content of Internet sites accessible by underage youth confirm that alcohol sites contain elements that appeal to young people. These elements included cartoons, language, music or branded merchandise, contests, interactive games, online magazines (e-zines aimed at youth), virtual communities or chat rooms, and sponsorship of youth oriented music and sporting events. In a 1998 review of Internet sites, the Center for Media Education (CME) found that 62% of 77 sites contained at least one of these elements and most featured around three elements (Center for Media Education, 1998).

A later review of alcohol Web sites by the Center on Alcohol Marketing and Youth (CAMY) found that 67% of beer sites; 37% of spirits sites and 33% of alternative alcohol product sites (e.g. alcopops, alcoholic flavoured malt drinks) contained high proportions of elements appealing to youth including various games, high-tech interactive animation, downloadable customised music, instant messaging accessories, cartoon figures and computer-generated graphics (Center on Alcohol Marketing and Youth, 2004b).

### **2.12 Gender portrayal in alcohol advertising**

Several studies have measured the prevalence and frequency of gender portrayals in alcohol advertisements (Austin & Hust, 2005; Finn & Strickland, 1982; Mazzella, Durkin, Cerini, & Buralli, 1992). Such studies examined the content of alcohol advertisements within the context of gender stereotyping, highlighting for example, the portrayal of male dominance (Austin & Hust, 2005; Finn & Strickland, 1982), sexism (Ferguson, Hardy, & Williams, 2003), and, more recently, female stereotypes coinciding with a current rise of a phenomenon described by Jones et al. (2009) as ‘raunch culture’, that is, advertising exuding sexual power and confidence.

Jones et al. (2009) investigated the relationship between types of sexual imagery and attitude toward the advertisement. Participants were 286 Australian university students who were shown three alcohol advertisements that regularly aired on television during the time of the study and featuring male and female characters of Caucasian appearance. An unexpected finding of their research was that the new stereotype was liked less overall by females than an advertisement using the traditionally portrayed passive, demeaning/sex object stereotype.

### **2.13 Regulation of alcohol advertising**

Given the acknowledged effects of alcohol advertising on children and youth, many developed countries have adopted a self-regulatory code with considerable overlap in areas covered by these codes. A recent inventory of alcohol marketing regulations in 23 European countries shows a total of 71 regulations, of which 45 were (partly) statutory and 26 were self-regulatory (Rhen et al., 2001).

### 2.13.1 Advertising Codes

The European Advertising Standards Alliance (EASA) represents the collaboration between advertising industry organisations and national advertising self-regulatory organisations (SROs) (European Advertising Standards Alliance, 2004). Their Code principles are based on a socially responsible approach to alcohol advertising based on principles of fairness and good faith. These are supported by detailed rules referring to various unacceptable alcohol advertising practices such as: misuse by encouraging excessive or irresponsible consumption, or dangerous or anti-social behaviour; directed at minors or showing minors consuming alcohol; associations with driving a motor vehicle; associations with operating machinery; suggesting that alcohol can prevent, treat or cure human disease; strength of alcoholic drinks; and implying that alcohol may enhance mental or physical performance (Office of Communications, 2007).

The United Kingdom (UK) supplements these principles with more specific standards regulated by the Office of Communications (Ofcom) such that advertisements for alcoholic drinks should not be targeted at people under 18 years of age and should not imply, condone or encourage immoderate, irresponsible or anti-social drinking. Changes to the Code were implemented on 1 September 2010 with the intent to strengthen the code. Stricter restrictions were applied to the following: general appeal of alcohol advertisements to underage drinkers; linking alcohol with sex, sexual activity or sexual success; linking alcohol with aggressive or anti-social behaviour; and the depiction of irresponsible handling or serving of alcohol (Office of Communications, 2010).

France is an exception to the European alliance. In 1991 the French parliament passed alcohol policy law, the Loi Evin. This law prescribes

strict regulation of alcohol advertising in France. An alcoholic beverage is defined as any beverage over 1.2% by volume alcohol content. Restrictions are imposed on advertising media including television and cinema, and cultural and sport sponsorships. No advertising should target young people. The law permits advertising for adults in press, on billboards and radio, however strict controls on content apply. For example, messages and images must only refer to qualities of the product and a health message must also be included (Rigaud & Craplet, 2004). A recent amendment to the Loi Evin law allows alcohol advertising on the internet. However, alcohol advertising is not permitted on websites aimed at young people and advertisements are subject to the same product advertising restrictions as press and radio (Anson, 2010).

In the United States the USA Federal Trade Commission (FTC) protects public interest by monitoring responsible advertising. Industry groups (e.g. Beer Institute, Wine Institute, Distilled Spirits Council of the USA) have developed self-regulation guidelines that describe unacceptable content and exposure markets (Babor, Xuan, & Damon, 2010). However, the effectiveness of these guidelines has been questioned. A recent study by Babor et al. (2010) identified weaknesses in the revised 2006 beer Code that could influence vulnerable populations. These results raised questions regarding the effectiveness of the industry's self regulated approach to alcohol advertising content in the USA.

### **2.13.2 Australian advertising codes**

The Australian system of self-regulation has been questioned regarding its effectiveness in protecting children and underage youth from exposure to alcohol advertising (Donovan et al., 2007; Fielder et al., 2009; Jones & Lynch, 2007; Jones et al., 2008; Winter et al., 2008). The Australian system

has been described as one of ‘co-regulation’, whereby both government and industry play a role in regulating advertising on commercial free-to-air television. The government’s function is exercised through the Australian Communications and Media Authority (ACMA) enforcing Children’s Television Standards (CTS) (Australian Communications and Media Authority, 2005) under the requirements of the Australian Broadcasting Services Act 1992 (Commonwealth of Australia, 1992). The CTS serves to protect children from possible harmful effects of television by ensuring quality programming (including advertising) and by imposing content restrictions on commercial free-to-air television. Restrictions focus on regulation of programming content and advertising as a whole.

The Commercial Television Code of Practice (Australian Broadcasting Authority, 2004) regulates the content of free-to-air commercial television, program and advertising time on television. This code is registered with the Australian Communications and Media Authority (ACMA) and is the only form of legislative control over what is televised and when it is televised (Free TV Australia, 2007). The CTICP (Australian Broadcasting Authority, 2004) stipulates that alcohol advertising be limited to between 12.00 noon and 3.00 pm (school days), and from 8.30pm to 5.00am weekdays (school days and school holiday periods). However, despite a recent review of the CTICP, effective 1 January 2010, advertisements for alcoholic drinks are still permitted in daytime hours during live broadcasting of sporting events on weekends and public holidays.

Participation in leisure time sport plays a significant role in the lives of most Australian children including Indigenous children with around 1.6 million children aged 5-14 years participating in sport each year. This interest in sport and the televised sporting events code exemption ensure substantial exposure by children to alcohol brands (Australian Bureau of Statistics,

2006; National Committee for the Review of Alcohol Advertising, 2005). Advertising sponsorship in the form of signage and clothing is also exposed to children during these times with nearly every major sporting competition in Australia sponsored (at least in part) by the alcohol industry (Alcohol and Other Drugs Council of Australia, 2005). Hence, the current system is not effective in protecting underage youth from exposure to inappropriate messages. Given the impact of alcohol on youth, researchers have called for more restriction on alcohol advertising during sporting telecasts (Jones et al., 2010).

The voluntary Alcoholic Beverages Advertising Code (ABAC) (Appendix 1) outlines the standards for alcohol advertising in Australia. Provisions and sub-provisions of the Code are used in adjudication of advertisements that are the subject of public complaint. The Code is administered by the ABAC Management Committee which consists of a Commonwealth Department of Health representative, alcohol industry representatives and advertising representatives. This code has a number of restrictions regarding the content of alcohol advertising. Most notably, Article B states that alcohol advertising *must not have strong or evident appeal to children or adolescents* (see Appendix 1). Guidance notes are also available to assist with interpreting the Code (The ABAC Scheme, 2011). All complaints relating to alcohol advertisements are received by the Advertising Standards Board (ASB). These are referred on to and reviewed by the Chief Adjudicator under The ABAC Scheme. Some complaints may be referred on to the full Alcohol Beverages Advertising Adjudication Panel for adjudication (Advertising Standards Bureau, 2011)

In 2003, a formal review of the ABAC system prompted a revised code which was operational as of 2004 (National Committee for the Review of Alcohol Advertising, 2003). The ABAC Scheme proclaimed this revised Code would dramatically reduce the number of advertisements attracting

complaints (Management Committee of the ABAC Scheme, 2007). However, the system has remained 'reactive' and the level of complaints received remains fairly consistent in real figures. For example, in 2006, 53 complaints referring to 26 alcohol advertisements were received compared to 105 referring to 29 in 2005. However, a further 29 complaints lodged in 2006 were not heard due to administrative delays occurring between the Advertising Standards Board receiving the complaints and the subsequent forwarding to the ABAC Scheme Management Committee (Management Committee of the ABAC Scheme, 2007).

Consistent evidence indicates that the ABAC is continually breached. The system's failure to efficiently apply the articles of the Code highlights its failure to efficiently protect the community from inappropriate advertising, particularly vulnerable groups such as children and underage youth (Fielder et al., 2009; Jones et al., 2008; Kontominas, 2007).

### **2.13.3 Limitations of the Alcohol Beverages Advertising (and Packaging) Code**

Studies have generally found that while much alcohol advertising content contravenes the ABAC, most complaints tend to be dismissed (Jones & Donovan, 2002; Jones et al., 2008). For example, of a total of 20 complaints against alcohol television advertisements received by the ASB between October 2007 and November 2008, only one complaint was upheld whilst 19 were dismissed (Advertising Standards Bureau, 2008).

Prior to the 2004 revision of the ABAC, Jones and Donovan (2001) identified weaknesses in the sensitivity of the Code which allowed radio advertisements for ready-to-drink beverages to be aired despite appearing to breach the Code. They tested their hypothesis on two convenience samples of 44 high school students aged 15 to 16 years and 43 university students aged 19 to 21 years.



Respondents were exposed to three radio advertisements for ready-to-drink products that were considered to contain messages that would appeal to young people and hence contravene the ABAC. Results showed that based on respondents' reactions to the advertisements, breaches of at least two Code articles were identified relating to contributing to significant changes in mood and social or sexual success. Further, one in four 15 to 16 year olds reported that they considered the advertisements to be aimed at people their age, while almost half of the sample of 19 to 21 year olds thought the advertisements were aimed at people younger or much younger than their age group (Jones & Donovan, 2001).

In a further study, Jones and Donovan (2002) used expert and non-expert judges to assess advertisements against the ABAC code articles. Nine advertisements that had been the subject of complaint were presented to a group of eight marketing academics ('expert' judges) and a group of second year university marketing students ('student' judges). Seven of the nine advertisements were considered by a clear majority of expert judges as breaching the Code, while the vast majority of student judges considered that all nine advertisements breached at least one or more of the Code articles. However, for only one of these advertisements was the complaint upheld. Given the unbiased position of the expert judges and student judges with regard to the advertisements and advertising, the results of this study raised questions regarding the objectivity of the ASB in its interpretation of Code articles.

Carroll and Donovan (Carroll & Donovan, 2002) assessed whether 77 Internet sites for alcohol beverages promoted in Australia were consistent with or in breach of the ABAC at that time. They found that 82% of 28 beer sites, 72% of 29 spirits sites, and 10% of 20 wine sites contained at least one element considered to be appealing to youth (e.g. cartoons or motion video; branded merchandise; games or contests; youth-oriented language; and, downloadable sound). At the time of the study, the ABAC code articles did not cover the

Internet which was added to a revised ABAC on 31 March 2004 (see ABAC code, Appendix 1). Following the code revision, in 2005, Carroll and colleagues (Carroll et al., 2005) conducted a study of Internet Web sites for alcohol beverages promoted in Australia. Results showed that a number of web sites contained elements inconsistent with the ABAC, for example depiction of young people under the age of 25 years and a range of elements that would appeal to children and adolescents on many sites (e.g. interactive games, music mixing software, cartoon animation, links to sports, Rugby League, Rugby Union and surfing, wallpaper and screensaver downloads, and promotional merchandise) (Carroll et al., 2005).

Alcohol advertisements in Australian magazines have been identified as clearly communicating positive expectancy messages about alcohol to young people. Donovan et al. (2007) assessed the frequency and content of a sample of alcohol beverage advertisements and sales promotions in magazines that were popular among youth. A sample of 93 magazines each contained at least one promotional item resulting in a total of 182 alcohol advertisement. Results showed that 52% of items appeared to contravene at least one section of the ABAC. Specifically, of major apparent breaches, 34% related to section B (*not have strong or evident appeal to children or adolescents*) and 28% to section C (*not contribute to a significant change in mood or environment*). Other apparent breaches related to themes of social, sexual and psychological expectancies related to consumption. Apparent breaches within promotional items were found to be as common as in advertisements. This study shows that magazines popular among youth are a targeted medium by industry and that careful surveillance is warranted.

Fielder and colleagues found that of the 30 brands most exposed to underage teens on free-to-air television during November 2005 to October 2006, all contained at least one element known to appeal to children or underage

youth (e.g. humour, popular music, engaging storyline, animals/animation, special effects) (Fielder et al., 2009).

Overall, studies assessing the content of alcohol advertising against the ABAC question the efficacy of self-regulation of alcohol advertisements (Donovan et al., 2007; Fielder et al., 2009; Jones & Donovan, 2001, 2002; Jones et al., 2008). These studies highlight the failure of the ABAC Scheme to effectively monitor inappropriate alcohol advertising. In many cases it appears that the Scheme's code articles are subjective or not specific enough and thus allow alcohol advertisers to act outside the intended spirit of the ABAC Scheme. In short, there is common agreement among researchers that the ABAC Scheme is ineffective in protecting underage youth from exposure to alcohol advertising that they find appealing (Donovan et al., 2007; Fielder et al., 2009; Jones et al., 2008; Winter et al., 2008).

## **2.14 Summary**

There is substantial evidence of alcohol related harm to youth along with evidence from neuroscience research on the negative effect of alcohol on the adolescent brain. Multiple factors contribute to youth alcohol consumption. However, evidence identifies exposure to alcohol advertising as a strong predictor of alcohol initiation and maintenance of drinking (Anderson et al., 2009; Fisher et al., 2007; LaBrie et al., 2008; McClure et al., 2006).

The current system of self-regulation purports to protect underage youth from alcohol advertising. However, studies reviewing the effectiveness of this system in Australia have found that children and underage youth are being exposed to alcohol advertising containing elements of specific appeal to youth.

Many studies presented in this review provide evidence that much alcohol advertising contains elements that appeal to underage youth. However, only one investigated the affective responses of youth toward specific elements contained in alcohol advertisements (Chen et al., 2005). The study reported in this thesis extends that study in an Australian context. Specific execution and theme elements of alcohol advertising that predict positive attitudes to alcohol among youth are investigated, and the relationship between specific elements of alcohol advertising that predict overall advertising effectiveness are modelled. The study also identifies breaches of the ABAC in frequently aired alcohol advertisements in Australia.

## CHAPTER 3

### METHODOLOGY

#### 3.1 Introduction

A total sample of 544 students from 31 government secondary schools located in metropolitan Perth, Western Australia were exposed to 25 alcohol advertisements that had aired on metropolitan free-to-air television during the period November 2005 to October 2006. The advertising industry refers to television advertisements as television commercials (TVCs). This term is used interchangeably throughout this chapter with 'alcohol advertisements'. The questionnaire and data analysis followed and extended that of Chen et al. (Chen et al., 2005).

#### 3.2 Ethics approval

Ethics approval (44/2007) was obtained from Curtin University Human Research Ethics Committee (HREC). All documentation including presentation materials contained the following disclosure:

*'This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR44/2007). Verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing [hrec@curtin.edu.au](mailto:hrec@curtin.edu.au).'*

The procedure for recruiting schools adhered to guidelines on conducting research on school sites set out by the Department of Education and

Training Western Australia (DETTWA) (Department of Education and Training Western Australia, 2007). This procedure requires:

1. DETWA approval of all study resources to be used;
2. Candidate to obtain a *Working With Children* clearance;
3. Letter to Principal describing the study and requesting written consent to proceed with the study in the school (Appendix 4);
4. Letter to parent/guardian inviting student participation (Appendix 5);
5. Active, written parent/guardian consent form (Appendix 6);
6. Active, written participant consent form including a clause permitting participant to voluntarily cease involvement at any stage of the study (Appendix 7);
7. Information sheet describing the study (Appendix 8).

Active written parental consent and participant consent were received from each respondent before data collection.

### **3.3 Selection of alcohol TVCs**

Nielsen Media Research is the primary industry source in Australia of market information including standard measures of audience composition. They provide a wide range of marketing information for use by the marketing industry to plan and develop strategies. Nielsen Media Research is contracted by OzTAM as the supplier of television audience measurement services for Australian metropolitan markets.

Target Audience Rating Points (TARPs), derived from weekly audience measurement and scheduling data, provide a tool for advertisers to monitor

their exposure and for media planners to maximise the level of exposure to defined target audiences (Australian Television Audience Measurement (OzTAM), 2005). TARPs are a measure of advertising weight. In general, the greater the TARPs for an advertisement, the greater the proportion of the target audience exposed to the advertisement and the more often members of the target audience are exposed to it. The TARPs figure for an advertisement is calculated from the number of target audience individuals exposed to the advertisement as a proportion of the total target audience, multiplied by 100. Therefore, if an advertisement is aired in a particular program that has a viewing audience of 15,000 13-17 year olds, and the total population of 13-17 year olds is 60,000, then that exposure equates to 25 TARPs for the target audience of 13-17 year olds. If the advertisement is aired three times during that program, it equates to 75 TARPs (see Appendix 9; Example of TARPs calculation).

TARPs were obtained for all alcohol television commercials (TVCs) screened on the three national free-to-air television channels from November 2005 through to October 2006 in the capital city markets of the five mainland states: Sydney, New South Wales; Brisbane, Queensland; Adelaide, South Australia; Melbourne, Victoria; and Perth, Western Australia. Between them, these five metropolitan markets account for 60% of the Australian population. Subscription television was not included in this study due to low audience penetration (approximately 24%) (Research and markets, 2008), and because many subscription channels do not carry advertising.

TARPs data for 2,162 individual alcohol TVCs promoting 79 different brands were obtained for four target audiences: children (0-12 years); underage teens (13-17 years); young adults (18-24 years); and mature adults aged 25 years and over. Age groupings were based on separating underage teenagers from children, as from age 13 years a substantial increase in

experimentation with alcohol occurs (Jernigan, 2001). The separation of young adults (18-24 years) and adults over 25 years coincides with the distinction in the ABAC specifying that all models in alcohol television commercials should be over 25 years of age.

Copies of 100 alcohol TVCs that had the highest TARPs based on the youth audience of 13 to 17 year olds were purchased from Nielsen Media Research. As the study focus was on advertising that could be classified as 'brand positioning' (e.g. brand image; brand attitude), TVCs that were primarily related to promotion of a special event or sport sponsorship, brand merchandise or retail advertisements were eliminated along with variations of the same TVC (e.g. 30 second and 60 second versions). This reduced the stimulus sample to 50 TVCs which were then coded for content elements.

### **3.4 Content analysis of advertisements**

The TVCs were content analysed for elements known to appeal (although not exclusively) to children and underage youth. Based on related literature, *a priori* categories of elements with known appeal to children and youth were included. This study coded for the same elements identified by Chen et al. (2005) including humour, music, story, people characters and animal characters, and extended the list to include sexual appeal and special technological effects. Further coding followed Austin and Hust (2005) to include: settings (outdoors; bar; restaurant; home; work); actions (working; relaxing; flirting; romancing; partying/dancing; celebrating; recreation/sport; drinking shown; special event; spectating); and themes and appeals (relaxation; humour; masculinity; friendship; conformity; sex/romance; quality; success; factual information [product attributes; price; availability]; health or therapeutic/medicinal benefits) (Austin & Hust, 2005).



The coding procedure followed that used by Finn & Strickland (1982) who used trained coders to assess the presence or absence of themes contained in a sample of alcohol advertisements. Three coders were trained by the candidate and her supervisor to content analyse the alcohol TVCs. Each was provided with a coding frame (Appendix 10) that listed elements, settings, actions, themes and appeals. To identify the presence of these items, coders recorded their decision by ticking 'yes', 'no', 'unsure' or 'N/A' (not applicable). Where differences occurred, coders compared and came to agreement on elements present in each TVC.

The candidate and her supervisor used the coding results of the 50 TVCs to select the final 25 TVCs for use in this study. Each independently scored each advertisement for content of elements, settings, themes and appeal. The inter-rater reliability coefficient is calculated as the proportion of coding for which there exists unanimous agreement amongst coders (Rundle-Thiele & Wymer, 2010). The coefficient threshold should be greater than 0.70 (70%) (Harris, 2001). The proportion of coded elements for this study on which there was unanimous agreement resulted in an inter-rater reliability score of 0.92 (92%). Where disagreement occurred, discussion and collaborative interpretation of content was used to arrive at a consensus for the sample of 25 advertisements. The final stimulus sample of 25 TVCs consisted of 15 beer advertisements, 9 spirits advertisements and 1 sparkling wine advertisement. The higher number of beer and spirit TVCs compared to wine reflected the proportions of product exposure in the TARP data. For example, beer was the predominant beverage advertised followed by spirits.

The final sample of TVCs is described in Tables 7, 8 and 9, for beer, spirit and wine advertisements respectively. It can be noted that several brands had more than one TVC in the final sample of 25 advertisements.

**Table 7: Beer TVCs**

Beer brand	Dur*	Description
Heineken Lager (1)	30	Central control tower technicians watch on screen as space robot lands on outer space planet, robot turns into a Heineken bar.
Hahn Premium Light	30	Man and glamorous woman on a gondola in Venice. Romantic music plays as man reels in a large fish which splashes water and hits the woman in the face. The man opens a bottle of Hahn Premium Light and says to the woman 'what?'.
Tooheys New Draught	60	Ingredients for beer plus two young women are hurled into sky on a giant catapult from the top of a high building. A stag appears from opening elevator doors. The stag is seen flying into sky – a brief pause and then scenes of raining beer.
Victoria Bitter (1)	30	Bush setting showing meat on the barbecue and kangaroo in the background. Voiceover refers to eating the Australian Coat of Arms on a flamin' grill.
Heineken Lager (2)	30	Landscape of city changes from modern day to the past as streets become cobbled stone and vintage cars. The character reaches a bar and orders Heineken. He tastes the drink and comments with surprise 'it's exactly the same'.
Cascade Premium	30	The Cascade Way – presented as old film footage. Story of the first beer can produced (30 gallons) and problems experienced by its size leading a convenient size can used today.
Boags Draught (1)	30	Boags factory workers testing the product by drinking under different conditions e.g. right-hand, left-hand, listening to country music, sharing tall stories around a camp fire.
Corona Extra	30	Four animated Corona beer bottles at a bar, lids are removed and a lime sliced up by overhead fan landing a lime wedge in the top of each animated bottle (Mexican theme).
Carlton Draught (1)	60	Two armies, one wearing maroon and the other yellow, charge each other while singing 'It's a big ad' to the tune of 'O Fortuna'. Aerial view shows one army form the shape of Carlton Draught beer glass and the other forms the shape of a human body. Song and sub-text end with 'this ad better sell some bloooooody beer'.

Castlemaine XXXX	30	Character Jacko and his mates playing beach cricket. Dog watches ball as it is hit in the air and hits a bottle of Castlemaine XXXX held by one of the men, the ball then hits the wickets. Jacko produces a hidden video camera from a drink cooler and declares the batsman 'not out'. Sandy faced batsman hugs the cooler and says 'I love you'.
Victoria Bitter (2)	30	Large cake wheeled into the lounge room of a man and his mate watching cricket. Cricketer David Boon emerges from the cake with a bottle of Victoria Bitter and takes a drink. Voiceover '...Boony is back for the Ashes up against his old mate Beefy Botham...' as Boony and Botham toys are shown. Scantly dressed girls enter the scene carrying signs promoting 'Battle of the Ashes' and 'Boonanza 2'.
Tooheys Extra Dry	30	Household appliances (vacuum cleaner, washing machine, pool cleaner) fight for bottle of Tooheys Extra Dry beer. Owner of appliances pulls bottle of Tooheys out of pool cleaner. Camera close up of the bottle.
Becks Beer LN1521	30	Rising bubbles in beer bottle. Voiceover 'each bubble in this bottle of Becks is....A. Precisely German engineered, B. Extra round for fuller flavour, or C. Extremely lucky' scene switches to silhouette of young woman drinking Becks).
Boags St George (2)	30	Girl enters a busy bar, approaches couch where her friends are sitting. Three guys pick up the large couch to move it back to allow the woman to sit down then move it forward again. Voiceover 'Boags St George...gallantry is back (guys move chair for girl)
Carlton Draught (2)	60	Kevin Cavendish applies for a job at Carlton Brewery. In a leotard, Kevin proceeds to perform a dance to the music from the popular movie <i>Flashdance</i> . Kevin emerges from the interview wearing a gold jacket and jumps punching the air in celebration of success.

\* Duration in seconds

**Table 8: Spirits TVCs**

Spirit brand	Dur*	Description
Bundaberg Rum (3)	30	Bundaberg Rum Fine Form Awards – Bundy Bear announces nominees and safe drinking awards.
Smirnoff Vodka (2)	30	Camera spans across 21 bottles of vodka. Voiceover describes Smirnoff as the winner of 21 different vodkas judged.
Bundaberg Rum (1)	30	Bundy Bear in the bath, mates ad red sock to the water. Bundy enters a party with pink fur, mates laugh and attractive girl approaches Bundy Bear.
Jim Beam (2)	30	Three different men walking down busy streetscape at night. They all reach the same bar. Voice over ‘the bourbon’.
Absolute Cut Vodka	30	Absolute Cut bottles spinning. Spans out to bottle, sub-text on screen is Absolute vodka....sparkling water .natural citrus...together in spirit.
Bundaberg Rum (2)	30	Bundy Bear arrives at the door of a house holding an invitation ‘Macca's Party’. The wrong house, Bundy enters and joins a girls only pre-wedding celebration. Bundy is mistaken for a stripper as the bride-to-be yells ‘take your top off’. Bundy answers ‘sure’ and takes the lid off a large bottle of Bundaberg rum.
Cougar Bourbon	30	Continues the series of <i>Barry Dawson is the cougar</i> . The cougar is drinking in a bar when he receives a phone call from his girlfriend. Demonstrating the art of invisibleness he enters his house and bed. Voiceover: ‘enter the cougar’.
Smirnoff Ice (1)	15	Large block of ice in a metal vice. Ice smashed and bottle of Smirnoff Ice remains. Voiceover ‘Smirnoff Ice, the sharper refreshing bite’.
Jim Beam (1)	30	Can of Jim Beam rotating, turns into a barrel shape. Subtext ‘now drink straight from the barrel...new barrel shaped can’.

\* Duration in seconds

**Table 9: Wine TVC**

Wine brand	Dur*	Description
Orlando Jacobs Creek	15	Slowly camera zooms into a glass of pink sparkling wine. Sub-text ‘say when’, voiceover ‘one taste and you’re tickled pink’.

\* Duration in seconds

Results of the content analysis for each of the 25 TVCs are presented separately for elements, settings, actions, themes and appeals in Tables 10, 11, 12 and 13 respectively.

#### ***Elements coding (following Chen et al., 2005)***

Table 10 shows that *slogan* was the most common element present in each of the 25 TVCs. *Music* and *sound effects* were present in 24 of the TVCs, followed by *storyline* (N=20), *people* (N=19) and *humour* (N=18). *Animals* were present in seven of the TVCs and *Cartoon/animated* characters were present in four, three of which were individual TVCs for the same brand (Bundaberg Rum).

#### ***Settings coding***

Table 11 shows that the most common settings were outdoors (N=17) and bar/nightclub or party setting (N=10). Some overlap between settings occurred for some brands. For example 15 TVCs were coded to contain multiple settings and also coded for specific settings such as home and bar/nightclub/party. Six TVCs were coded as a neutral setting as they did not contain a specific background setting. These consisted mainly of product shots or other activities against a plain colour background.

#### ***Actions coding***

Table 12 shows the action of drinking was shown in 18 and relaxing shown in 13 of the 25 TVCs. Five TVCs (Smirnoff Ice (1), Orlando Jacobs Creek, Smirnoff Vodka (2), Absolut Cut Vodka, Jim Beam Bourbon & Cola (1), contained none of these actions. These TVCs had a product focus and contained less elements overall.

#### ***Themes and appeals coding***

Table 13 shows quality/superiority of the brand was shown in 21 of the 25 TVCs. Masculinity was present in 10 TVCs and therapeutic benefits were shown in six TVCs. No TVCs were coded as showing conformity/social norm.

It should be noted that only the dominant theme or appeal in the advertisement was coded – not all themes and appeals present.

**Table 10: Content analysis: Elements**

	Brand	Elements										
		Slogan	Music	Sound effects	Storyline	People	Humour	Special Effects	Sexual appeal	Animals (real)	Animated characters (animated char/cartoon)	Total elements
1	Bundaberg Rum (1)	✓	✓	✓	✓	✓	✓	-	✓	-	✓	8
2	Bundaberg Rum (2)	✓	✓	✓	✓	✓	✓	-	✓	-	✓	8
3	Cascade Premium Lager	✓	✓	✓	✓	✓	✓	✓	-	✓	-	8
4	Hahn Premium Light	✓	✓	✓	✓	✓	✓	-	✓	✓	-	8
5	Heineken Lager (1)	✓	✓	✓	✓	✓	✓	✓	-	-	-	7
6	Tooheys New Draught	✓	✓	✓	✓	✓	✓	✓	-	✓	-	8
7	Becks Beer	✓	✓	✓	✓	✓	✓	-	✓	-	-	7
8	Boags St George (2)	✓	✓	✓	✓	✓	✓	-	✓	-	-	7
9	Bundaberg Rum (3)	✓	✓	✓	✓	✓	✓	-	✓	-	✓	7
10	Heineken Lager (2)	✓	✓	✓	✓	✓	-	✓	-	✓	-	7
11	Boags Draught (1)	✓	✓	✓	✓	✓	✓	-	-	-	-	6
12	Carlton Draught (1)	✓	✓	✓	✓	✓	✓	✓	-	✓	-	8
13	Carlton Draught (2)	✓	✓	✓	✓	✓	✓	-	-	-	-	6
14	Castlemaine XXXX	✓		✓	✓	✓	✓	-	-	✓	-	6
15	Cougar Bourbon	✓	✓	✓	✓	✓	✓	-	-	-	-	6
16	Tooheys Extra Dry	✓	✓	✓	✓	✓	✓	✓	-	-	-	7
17	Corona Extra Beer	✓	✓	✓	-	-	✓	-	-	-	✓	5
18	Jim Beam Bourbn (2)	✓	✓	✓	✓	✓	-	-	✓	-	-	6
19	Victoria Bitter (1)	✓	✓	✓	✓	✓	✓	-	-	✓	-	7
20	Victoria Bitter (2)	✓	✓	✓	✓	✓	✓	-	✓	-	-	7
21	Jim Beam Brbon (1)	✓	✓	✓	-	-	-	✓	-	-	-	4
22	Smirnoff Ice (1)	✓	✓	✓	-	-	-	✓	-	-	-	4
23	Smirnoff Vodka (2)	✓	✓	-	✓	-	-	✓	-	-	-	4
24	Absolut Cut Vodka	✓	✓	✓	-	-	-	✓	-	-	-	4
25	Orlando Jacobs Creek	✓	✓	✓	-	-	-	-	-	-	-	3
	<b>Total</b>	<b>25</b>	<b>24</b>	<b>24</b>	<b>20</b>	<b>19</b>	<b>18</b>	<b>10</b>	<b>8</b>	<b>7</b>	<b>4</b>	<b>159</b>

Note: ‘-’ indicates element not present

**Table 11: Content analysis: Settings**

	Brand	Settings (background)							Total
		Outdoors	Multiple	Bar/nightc lub/party	Home	Workplace	Restaurant	Neutral background	
1	Tooheys New Draught	✓	✓	✓	✓	✓	-	-	5
2	Bundaberg Rum (1)	✓	✓	✓	✓	-	-	-	4
3	Bundaberg Rum (3)	✓	✓	✓	-	-	✓	-	4
4	Cougar Bourbon	✓	✓	✓	✓	-	-	-	4
5	Heineken Lager (2)	✓	✓	✓	✓	-	-	-	4
6	Jim Beam Bourbon (2)	✓	✓	✓	✓	-	-	-	4
7	Boags Draught (1)	✓	✓	-	-	✓	-	-	3
8	Bundaberg Rum(2)		✓	✓	✓				3
9	Carlton Draught (2)	✓	✓	-	-	✓	-	-	3
10	Cascade Premium Lager	✓	✓	-	-	✓	-	-	3
11	Heineken Lager (1)	✓	✓	-	-	✓	-	-	3
12	Tooheys Extra Dry	✓		✓	✓				3
13	Victoria Bitter	✓	✓	-	✓	-	-	-	3
14	Victoria Bitter (1)	✓	✓	-	-	✓	-	-	3
15	Corona Extra	✓	-	✓	-	-	-	-	2
16	Boags St George	-	-	✓	-	-	-	-	1
17	Carlton Draught (1)	✓	-	-	-	-	-	-	1
18	Castlemaine XXXX Gold	✓	-	-	-	-	-	-	1
19	Hahn Premium Light	✓	-	-	-	-	-	-	1
20	Absolut Cut Vodka	-	-	-	-	-	-	✓	1
21	Becks Beer	-	-	-	-	-	-	✓	1
22	Jim Beam Brbon (1)	-	-	-	-	-	-	✓	1
23	Orlando Jacobs Creek	-	-	-	-	-	-	✓	1
24	Smirnoff Ice (1)	-	-	-	-	-	-	✓	1
25	Smirnoff Vodka (2)	-	-	-	-	-	-	✓	1
<b>Total</b>		<b>17</b>	<b>13</b>	<b>10</b>	<b>8</b>	<b>6</b>	<b>1</b>	<b>6</b>	<b>74</b>

*Note:* ‘-’ indicates element not present

**Table 12: Content analysis: Actions**

	Brand	Actions										
		Drinking shown	Relaxing	Working	Recreation/activit y/ sport	Partying/dancing	Celebrating	Special event	Spectating - entertainment	Dining	Spectating - sport	Total actions
1	Bundaberg Rum (3)	✓	✓	✓	-		✓	✓	✓	-	-	7
2	Bundaberg Rum(2)	✓	✓	-	-	✓	✓	✓	-	-	-	6
3	Victoria Bitter	✓	✓	-	✓	-	-	-	-	-	✓	5
4	Bundaberg Rum (1)	✓	✓	-	-	✓	-	-	-	-	--	4
5	Carlton Draught (2)	✓	-	✓	-	✓	✓	-	-	-	-	4
6	Hahn Premium Light	✓	✓	-	✓	-	-	-	-	-	-	4
7	Jim Beam Bourbn (2)	✓	✓	-	✓	-	-	-	-	-	-	4
8	Tooheys New Draught	✓		✓	-	-	✓	-	✓	-	-	4
9	Victoria Bitter (1)	✓	✓	✓	-	-	-	-	-	✓	-	4
10	Boags St George	✓	✓		-	-	-	-	-	-	-	3
11	Cascade Premium Lager	✓	-	✓	✓	-	-	-	-	-	-	3
12	Castlemaine XXXX	✓	✓	-	✓	-	-	-	-	-	-	3
13	Cougar Bourbon	✓	✓	-	✓	-	-	-	-	-	-	3
14	Tooheys Extra Dry	✓	✓	-	-	✓	-	-	-	-	-	3
15	Boags Draught (1)	✓	-	✓	-	-	-	-	-	-	-	2
16	Corona Extra	-	✓	-	-	✓	-	-	-	-	-	2
17	Heineken Lager (2)	✓	✓	-	-	-	-	-	-	-	-	2
18	Becks Beer	✓	-	-	-	-	-	-	-	-	-	1
19	Carlton Draught (1)	✓	-	-	-	-	-	-	-	-	-	1
20	Heineken Lager (1)	-	-	-	-	-	✓	-	-	-	-	1
	<b>Total</b>	<b>18</b>	<b>13</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>66</b>

*Note:* ‘-’ indicates element not present



**Table 13: Content analysis: Themes and appeals**

	Brand										
		Quality superiority	Masculinity	Therapeutic benefits	Friendship/ mateship	Success – social	Relaxation	Success – sporting	Success – occupational	Conformity/ social norm	Total
1	Victoria Bitter Beer	✓	✓	-	-	✓	✓	✓	-	-	5
2	Boags St George Beer	✓	✓	-	✓	-	✓	-	-	-	3
3	Bundaberg Rum (1)	-	✓	-	✓	✓	-	-	-	-	3
4	Bundaberg Rum (3)	✓	✓	✓	-	✓	-	-	-	-	4
5	Jim Beam (2)	✓	✓	-	-	✓	-	-	-	-	3
6	Victoria Bitter (1)	✓	✓	-	✓	-	✓	-	-	-	4
7	Becks Beer	✓	-	✓	-	-	-	-	-	-	2
8	Bundaberg Rum (2)	-	-	✓	✓	✓	-	-	-	-	2
9	Castlemaine XXXX	✓	✓	✓	✓	-	-	-	-	-	3
10	Corona Extra Beer	✓	-	✓	-	-	✓	-	-	-	3
11	Cougar Bourbon	✓	✓	✓	-	-	-	-	-	-	3
12	Hahn Premium Light	✓	✓	-	-	-	-	-	-	-	2
13	Boags Draught (1)	✓	✓	-	-	-	-	-	-	-	2
14	Absolut Cut Vodka	✓	-	-	-	-	-	-	-	-	1
15	Carlton Draught (1)	✓	-	-	-	-	-	-	-	-	1
16	Carlton Draught (2)	✓	-	-	-	-	-	-	-	-	1
17	Cascade Premium	✓	-	-	-	-	-	-	-	-	1
18	Heineken Lager (1)		-	-	-	-	-	-	✓	-	1
19	Heineken Lager (2)	✓	-	-	-	-	-	-	-	-	1
20	Jim Beam (1)	✓	-	-	-	-	-	-	-	-	1
21	Smirnoff Ice (1)	✓	-	-	-	-	-	-	-	-	1
22	Smirnoff Vodka (2)	✓	-	-	-	-	-	-	-	-	1
23	Tooheys Extra Dry	✓	-	-	-	-	-	-	-	-	1
24	Tooheys New	✓	-	-	-	-	-	-	-	-	1
25	Orlando Jacobs Creek	✓	-	-	-	-	-	-	-	-	1
	<b>Total</b>	<b>21</b>	<b>10</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>

*Note:* ‘-’ indicates element not present

### **3.5 Alcohol Beverages Advertising (and Packaging) Code (ABAC) – coded breaches**

Two trained coders were used to judge whether or not breaches of the ABAC (Appendix 1) were present in the final 25 TVCs. The candidate also coded the advertisements. Each of the two coders was provided with a compact disk containing 50 alcohol advertisements, including the 25 used in the study. Coders were blinded to the knowledge of the final sample of 25 among the 50. Each coder was located in a separate room and provided with a computer, compact disk, a copy of the ABAC and a coding questionnaire (Appendix 11). Coders viewed each advertisement individually and indicated on the coding questionnaire whether or not they perceived the advertisement to breach any of the specific code articles. Scores were recorded for each Code and results compared. Collaborative agreement was reached between the two coders where judgement differences occurred resulting in a final coded set of advertisements (set 1).

The candidate's independent coded set (set 2) was then compared to the coders' (set 1). The proportion between the two sets for which there was unanimous agreement resulted in an inter-rater reliability score of 0.80 (80%) which was greater than recommended threshold of 70% (Harris, 2001). The candidate and her Supervisor then discussed and reached collaborative agreement on differences. The results of this analysis are presented in Chapter 4.

#### **3.5.1 Coding questionnaire**

The articles in the ABAC are as follows:

‘Advertisements for alcohol beverages must –

A: present a mature, balanced and responsible approach to the consumption of alcohol beverages and, accordingly –

- i) must not encourage excessive consumption or abuse of alcohol;

- ii) must not encourage under-age drinking;
- iii) must not promote offensive behaviour, or the excessive consumption, misuse or abuse of alcohol beverages;
- iv) must only depict the responsible and moderate consumption of alcohol beverages;

B: not have a strong or evident appeal to children or adolescents and, accordingly –

- i) adults appearing in advertisements must be over 25 years of age and be clearly depicted as adults;
- ii) children and adolescents may only appear in advertisements in natural situations (eg family barbecue, licensed family restaurant) and where there is no implication that the depicted children and adolescents will consume or serve alcohol beverages; and
- iii) adults under the age of 25 years may only appear as part of a natural crowd or background scene;

C: not suggest that the consumption or presence of alcohol beverages may create or contribute to a significant change in mood or environment and, accordingly –

- i) must not depict the consumption or presence of alcohol beverages as a cause of or contributing to the achievement of personal, business, social, sporting, sexual or other success;
- ii) if alcohol beverages are depicted as part of a celebration, must not imply or suggest that the beverage was a cause of or contributed to success or achievement; and
- iii) must not suggest that the consumption of alcohol beverages offers any therapeutic benefit or is a necessary aid to relaxation;

D: not depict any direct association between the consumption of alcohol beverages, other than low alcohol beverages, and the operation of a motor vehicle, boat or aircraft or the engagement

in any sport (including swimming and water sports) or potentially hazardous activity and, accordingly –

- i) any depiction of the consumption of alcohol beverages in connection with the above activities must not be represented as having taken place before or during engagement of the activity in question and must in all cases portray safe practices; and
- ii) any claim concerning safe consumption of low alcohol beverages must be demonstrably accurate;

E: not challenge or dare people to drink or sample a particular alcohol beverage, other than low alcohol beverages, and must not contain any inducement to prefer an alcohol beverage because of its higher alcohol content.’ (ABAC, 2009, p. 1-2).

Three articles included in the ABAC (articles: ‘F’; ‘G’; and ‘H’) were not included in the coding questionnaire as they were not considered relevant for this study.

Coders were asked to indicate whether or not they considered the advertisement breached each code article and sub-article, by ticking: ‘yes’; ‘no’; ‘unsure’; or ‘N/A’ (not applicable).

The instrument designed for this coding presented text replicating that in the ABAC document. However, for the purpose of avoiding unwarranted confusion, wording for each code article was presented in a positive direction as recommended by Oppenheim (2005). For example, the ABAC states that alcohol advertisements must ‘not have a strong or evident appeal to children or adolescents’. The coding questionnaire presented this statement as ‘Has strong or evident appeal to children or adolescents’ and so on for each of the specific code articles. The questionnaire was constructed to closely follow the original ABAC document with identical order of presentation of code articles and sub-articles (e.g. articles A through to E). The coders’

ratings were compared to determine inter-rater reliability. The inter-rater co-efficient

### **3.6 Sample recruitment**

The sample consisted of N=440 students in Years 8, 9 and 10, recruited from 10 metropolitan Government secondary schools located in Perth, Western Australia in 2007/2008, and N=104 students (representing 21 Government secondary schools) recruited via a research database.

Typically, students attending Years 8, 9 and 10 are aged 12 to 16 years. The selected target group was considered appropriate for this study as they are the next generation of legal drinkers and a possible targeted demographic for alcohol marketers. The National Drug Household Survey (Australian Institute of Health & Welfare, 2008) reports drinking status data for 12 to 17 year olds.

#### **3.6.1 School sample**

The following selection criteria were set for eligibility for participation in the study. Schools were required to be Government secondary schools with Year 8 to 12 enrolments located in the metropolitan area of Perth, Western Australia (as defined by DETWA). The decision to include Government schools only centred on maintaining sample homogeneity. Government schools follow the public curriculum and health is covered as a discrete subject. In contrast, some independent schools combine health with other subjects (such as religious studies). Hence, issues such as alcohol and other drugs may be discussed very differently to the public curriculum model leading to a bias between school populations.

A data file listing all Perth metropolitan Government schools was obtained from DETWA. With the exclusion of primary schools and non-metropolitan secondary schools, 51 schools were eligible to participate in the study.

Considering attrition, it was estimated that around 50 students from 13 schools would be a reasonable sample to achieve a total of 500 respondents.

A systematic interval sampling technique was employed. Schools were ordered according to Socio-Economic Index for Schools (SEI) decile rankings. These rankings are based on the Department of Education and Training's Socio-Economic Index for Schools which is derived from ABS census data. The SEI score for each school is ranked into 10 equal groups. A decile ranking of 1 indicates the highest SEI ranking (e.g. the least disadvantaged). A decile ranking of 10 indicates the lowest SEI (e.g. the most disadvantaged). A school from each ranking was selected and invited to participate in a process that continued until all 51 schools were invited to participate in the study.

Upon receipt of approval by DETWA, School Principals were the first point of contact for each school. Each Principal was contacted by telephone to discuss the study with a confirmation letter (Appendix 4) and copies of study resources emailed or posted on request. This was followed by either a negative reply or acceptance to participate in the form of a returned, signed 'Principal Consent' form. A teacher contact was then advised as a contact for co-ordination of data collection with the candidate. A contact record for communications with each school was kept in an Excel data file from the first attempted contact of the Principal until the last contact with the co-ordinating teacher. From the 51 schools contacted, 10 schools agreed to participate.

In accordance with DETWA guidelines, active parental consent and respondent consent was obtained in the form of signed letters. The requirement for active parental consent prohibited a random sample for each school, therefore subjecting this study to the limitation of selection bias (further discussed in chapter 5). For example, students were required to take notes home for parents to read, sign (active parental consent form) and return to the school. Generally, students who conform to such requirements are the more diligent, responsible students.

Table 14 shows the sample obtained by year and gender, school attended and the school's SEI decile rank. This served as a proxy measure of socio-economic status level for individuals.

**Table 14: Sample year and gender by school and school SEI decile rank**

School	Decile Rank	Year 8		Year 9		Year 10		Total
		M	F	M	F	M	F	
Applecross SHS	1	21	37	18	30	0	0	106
Carine SHS	1	30	13	9	13	13	16	94
Leeming SHS	1	14	13	0	0	9	5	41
Greenwood SHS	3	13	7	5	4	7	2	38
Mirraboooka SHS	9	9	14	2	2	7	2	36
Balcatta SHS	6	0	1	5	8	12	8	34
Beldridge SHS	5	7	9	4	9	0	0	29
Armadale SHS	7	0	9	1	0	7	10	27
Como Secondary College	2	4	9	1	2	6	4	26
Canning Vale College	2	0	0	0	0	11	14	25
Kelmscott SHS	7	1	0	5	4	0	1	11
Wanneroo SHS	6	0	0	0	0	1	4	5
Ocean Reef SHS	2	0	0	1	0	0	0	1
Willetton SHS*	2	0	0	5	12	4	8	29
Lynwood SHS*	5	3	0	4	0	0	0	7
Shenton College*	1	2	0	0	1	0	1	4
South Fremantle SHS*	7	0	0	1	0	3	0	4
Duncraig SHS*	2	0	0	0	3	0	0	3
Ellenbrook SHS*	6	0	3	0	0	0	0	3
John Curtin*	3	0	0	2	0	1	0	3
Padbury SHS*	3	0	0	0	0	1	2	3
Woodvale SHS*	2	0	0	3	0	0	0	3
Churchlands SHS*	1	0	0	0	1	0	1	2
Governor Stirling SHS*	7	1	0	0	0	1	0	2
Thornlie SHS*	5	0	0	2	0	0	0	2
Gilmore College*	9	1	0	0	0	0	0	1
Hampton SHS*	6	0	0	1	0	0	0	1
Kent Street SHS*	4	0	0	0	1	0	0	1
Safety Bay SHS*	7	0	0	1	0	0	0	1
Southern River SHS*	8	0	0	1	0	0	0	1
Swan View SHS*	8	1	0	0	0	0	0	1
<b>Total</b>		<b>107</b>	<b>115</b>	<b>71</b>	<b>90</b>	<b>83</b>	<b>78</b>	<b>544</b>

\* Indicates schools represented by students recruited by database

A total of 440 students participated on school premises. In order to fulfil quota requirements, a further 104 respondents (representing a further 21 schools) were recruited from a research database and through a snowball technique. These respondents participated in group sessions at the Curtin Health Research campus located in Shenton Park, Perth. An incentive of \$20.00 was paid to each of these respondents to cover travelling costs of parents/guardians.

### **3.7 Questionnaire**

A confidential self-completion questionnaire (Appendix 12) was used to record responses to the presented TVCs. The questionnaire was divided into two parts: A and B. Section A contained items to be answered with respect to each specific TVC. Section B consisted of a set of items referring to all TVCs viewed plus self reported consumption frequency and brand recognition and trial.

Section A contained typical advertising copy testing items that measured advertisement liking, elements liking, advertisement effectiveness, brand preference and intentions, and perceived main message for each viewed TVC. After viewing all TVCs respondents completed Section B which measured overall recall and impact of the alcohol advertisements, along with alcohol product brand recognition and previous trial or regular consumption of alcoholic beverages. The question items are presented in detail later in this section.

#### **3.7.1 Instrument validity**

This study used several previously validated items to measure overall



advertisement liking, intentions to try and liking of specific (coded) elements. Advertisement liking and intentions were measured using items adapted from standard advertising measurement procedures (Rossiter & Percy, 1987). Items measuring liking of specific elements items were adapted from Chen et al. (2005), but with the response scale changed from a 5-point scale to an 11-point scale). Scales with 11-point response categories have been shown to demonstrate more discriminating power (Preston & Colman, 2000). Alcohol consumption items were adapted from the Australian Secondary Students alcohol and Drug survey 2005 (ASSAD) (White & Hayman, 2006).

Pilot testing of the survey instrument was conducted with a convenience sample of five adolescent subjects aged 13 to 16 years. Minor issues were identified with the questions but the length of the survey (approximately 45 to 50 minutes including showing the advertisements) was identified as a possible negative. Further pilot testing was conducted with 30 Year 8 students (youngest school group cohort) in the school classroom setting. No problems were observed by the candidate or identified by the students regarding the survey instrument. Timing (50 minutes) was found to be reasonable given that the duration of an average class sessions was 60 minutes. Students were exposed to eight advertisements (5 alcohol advertisements and 3 non-alcohol advertisements). However no fatigue or loss of attention was observed by the candidate or reported by the students. This is consistent with Wakefield and colleagues (2002) in their research with teenagers and anti-tobacco advertising. They found that up to 10 advertisements were appropriate for rating in a single session before fatigue or lack of attention was observed (Wakefield et al., 2002).

### **3.7.2 Section A: Items measured for each TVC**

#### **3.7.2.1 TVC liking**

Respondents were asked to indicate how much they liked or disliked the TVC by circling one number on an 11-point scale from 0 to 10 and labelled at each end: 0 = disliked a lot; 10 = liked a lot. This measure was obtained for each of the eight advertisements.

#### **3.7.2.2 Elements liking**

Respondents were presented with a list of twelve elements: settings; humour; music or jingle; actors; animated or cartoon characters; animals; story; special effects; visual appeal sound effects; slogan; and sexual appeal. They were asked to indicate how much they liked each element by circling one number as per the above scale labelled at each end: 0 = didn't like at all; 10 = liked a lot. 'N/A' (not applicable) was included as an option for instances when respondents perceived that the element did not exist in the advertisement.

#### **3.7.2.3 Intention to try advertised brand**

For each advertisement, respondents were asked, 'How much do you feel you would like to try the brand advertised?' and provided with an 11-point scale from 0 to 10 and labelled: 0 = not at all; 10 = a lot.

#### **3.7.2.4 Brand preference**

Respondents were asked to indicate their likelihood of choosing the advertised brand over other brands, using an 11-point scale from 0 to 11: 0 = not at all likely; 10 = very likely.

### **3.7.2.5 Perceived age of TVC target audience**

Respondents were asked to indicate whether the brand's advertising was aimed at: (i) people much older; (ii) slightly older; (iii) the same age; (iv) slighter younger; or (v) much younger than their own age. A 'Don't know/Not sure' option was provided.

### **3.7.2.6 Previous exposure to the TVC**

Respondents were asked whether or not they had previously seen each advertisement. Those respondents who answered 'yes' were asked to indicate how often they had seen the TVC by circling one number on a 4-point scale: 1 = once or twice; 2 = a few times; (3-5 times); 3 = many times (more than 5 times); or don't know/not sure.

### **3.7.2.7 Perceived message in the TVC**

Respondents were asked the open-ended question: 'Apart from 'buy the product' what was the ad telling you? Please describe the key messages in a few words'.

## **3.7.3 Section B: Items asked after viewing all TVCs**

### **3.7.3.1 TVC Salience**

After viewing all eight advertisements, respondents were asked to identify which of the five alcohol advertisements they had watched 'now stands out most in your mind?' They were then asked to explain in a few words, 'What was it that made that advertisement stand out for you?'

### **3.7.3.2 TVC perceived most effective for their age group**

Respondents were asked to indicate which of the five alcohol TVCs would be ‘most effective in getting people their age to try that drink’. They were then asked if they thought that any of the five alcohol advertisements ‘would not be effective’. Those who indicated ‘Yes’ were asked which advertisement(s) they thought would not be effective in getting people their age to drink.

### **3.7.3.3 Previous trial or regular consumption by beverage type**

Questions relating to previous trial and/or consumption were based on measures used in the Australian School Students Alcohol and Drug Survey (ASSAD) (White & Hayman, 2006). Respondents were presented with a list of 10 alcoholic beverage types (regular beer, low or mid strength beer, wine, wine cooler, champagne or sparkling wine, cider, spirits, pre-mixed spirits, alcoholic sodas, liqueurs) and asked to indicate which they had ‘tried’ or ‘not tried’ by circling ‘Yes’ or ‘No’, or to indicate if they did ‘not drink at all’. Those who answered ‘Yes’ to any of these were then asked to indicate which of the 10 alcoholic beverages they ‘mostly drink’.

### **3.7.3.4 Brand recognition and trial**

Respondents were presented with a list of 21 alcohol brands and were asked whether they had heard of each brand and whether they had tried each brand.

## **3.8 Data cleaning and analysis**

Initial analyses were conducted to ensure accurate data entry and coding. Following data entry, an initial manual check of data input accuracy was performed by random selection and review of 50 paper questionnaires. Section A attracted almost 100% response rates from students, but the

response rate was less for Section B. Section A contained seven scales and one only open-ended question for each TVC, whereas Section B comprised five open ended questions and several multiple item questions.

Frequencies were examined to confirm that responses were recorded within the range of possible values and to identify incorrect entries. For each identified error, the original questionnaire was checked and where a coding error was evident, the value was corrected. Where an undeterminable or indistinct answer was provided, a missing value was coded. Data cleaning identified 11 questionnaires as unusable due to missing or misleading/questionable responses, resulting in a final sample of 533 questionnaires.

Analysis of the data was conducted using SPSS for Windows (*version 17.0*) and SPSS Amos (*version 17.0*) statistical software (SPSS Inc., 2009). Descriptive analysis included means and standard deviations calculated on major variables along with cross tabulation for correlations between variables. Structural Equation Modelling was used to explore the latent effects of element liking on advertising likeability and effectiveness.

### **3.9 Field procedure**

This section describes the field procedure used for data collection. The candidate conducted each session at participating schools and Curtin University. A standardised approach was used for each session using a timed procedure including a standard PowerPoint presentation.

#### **3.9.1 TVC stimulus sample**

Each alcohol TVC was allocated to one of five sets of five TVCs (sets 1 to 5, see Table 15). Notably, two of the 25 alcohol advertisements chosen for the study were 15-second advertisements and three were 60-second

advertisements. For the purpose of even distribution of respondent time exposure, 60 second advertisements were placed in sets that included a 15-second advertisement. To allow for potential order effects, each set of five alcohol advertisements was rotated four times resulting in 20 independent sets (Appendix 13). Table 15 shows the five advertisement sets and their total time exposure.

**Table 15: TVC sets and advertisement time distribution**

<b>TVCs SET 1 (ORDER x4)</b>	<b>TVCs SET 2 (ORDER x4)</b>	<b>TVCs SET 3 (ORDER x 4)</b>	<b>TVCs SET 4 (ORDER x4)</b>	<b>TVCs SET 5 (ORDER x4)</b>
Heineken Lager Beer HEN121830 <i>30 sec</i>	Victoria Bitter Beer CN9220 <i>30 sec</i>	Boags Draught Beer BOAG034330BA <i>30 sec</i>	Castlemaine XXXX Gold LNA927630 <i>30 sec</i>	Becks Beer LN1521 <i>30 sec</i>
Bundaberg Rum DDB5051B <i>30 sec</i>	Bundaberg Rum & Cola DDB5012 <i>30 sec</i>	Orlando Jacobs Creek Sparkling OJC3663B <i>15 sec</i>	Bundaberg Rum DDB5011 <i>30 sec</i>	Smirnoff Ice UDV10298K2 <i>15 sec</i>
Hahn Premium Light LHL590730R <i>30 sec</i>	Heineken Lager Beer HEN1174A30 <i>30 sec</i>	Corona Extra Beer (16) CS3180 <i>30 sec</i>	Victoria Bitter Beer (19) MFOA0348 <i>30 sec</i>	Boags St George Beer (10) BOAG0238C30 <i>30 sec</i>
Smirnoff Vodka DDS0026R <i>15 sec</i>	Jim Beam Bourbon- white JB014430RF <i>30 sec</i>	Absolute Cut Vodka IEAB5105R <i>15 sec</i>	Cougar Bourbon MCOU0025 <i>30 sec</i>	Jim Beam Bourbon & Cola JB0094TV30 <i>30 sec</i>
Tooheys New Draught Beer LTN206 <i>60 sec</i>	Cascade Premium Lager CCD3016 <i>30 sec</i>	Carlton Draught CNN3057 <i>60 sec</i>	Tooheys Extra Dry Beer LNA772330 <i>30 sec</i>	Carlton Draught Beer MFOA0057 <i>60 sec</i>
<b>3 beer; 2 spirit <i>165 seconds</i></b>	<b>3 beer; 2 spirit <i>150 seconds</i></b>	<b>3 beer; 1 wine; 1 spirit <i>150 seconds</i></b>	<b>3 beer; 2 spirit <i>150 seconds</i></b>	<b>3 beer; 2 spirit <i>165 secs</i></b>

During the session, each student was exposed to five alcohol TVCs plus three filler advertisements. Filler advertisements were non-alcohol products, purposely placed in an attempt to minimise cumulative effects resulting

from exposure to the alcohol TVCs (see Appendix 14 for description of filler advertisements). Table 16 shows the placement of the filler advertisements in each set of five alcohol TVCs.

**Table 16: Advertisement placement order**

<i>Ad 1</i>	<i>Ad 2</i>	<i>Ad 3</i>	<i>Ad 4</i>	<i>Ad 5</i>	<i>Ad 6</i>	<i>Ad 7</i>	<i>Ad 8</i>
<i>A</i>	<i>F</i>	<i>A</i>	<i>A</i>	<i>F</i>	<i>A</i>	<i>A</i>	<i>F</i>

A = Alcohol advertisement

F = Filler advertisement

### 3.9.2 Data collection

The candidate visited each participating school on a pre-scheduled date to conduct the study. The date and time of the session was made at the discretion of each school. All sessions conducted in the school setting were carried out in a classroom on school grounds. The candidate attended a nominated classroom where students who had provided informed parental consent and participant consent were present.

Each data collection session followed the same procedure regardless of group size. Consent forms were checked before administering the questionnaires. The self-administered questionnaire was then distributed to each student and its confidentiality explained. To maintain confidentiality, no names were recorded on questionnaires.

Following the session, a unique identification was assigned to each questionnaire. For some sessions, teachers remained in the room but most left after introducing the candidate and returned at the end of the session. Those teachers who remained in the classroom were asked to stay at the front of the classroom to avoid the natural occupational practice of

wandering around the classroom and looking at students' work. This reassured students of the confidentiality of the questionnaire and reduced the likelihood of students providing false answers in fear of the teacher reading their responses.

The session content included a PowerPoint slideshow (see example; Appendix 15) which assisted delivery of the presentation of advertisements to each group with controlled intervals for completing the questionnaire. The slideshow tool served several purposes. First, and most importantly, it ensured consistency and standardisation of the method of delivery. Second, it provided an easy and reliable method of playing the advertisements and avoided play order error as each separate slideshow was created with a different set order combination for the alcohol advertisements. Third, it assisted in maintaining respondents' attention to the task. The slides were designed to be creatively appealing to a young audience, for example by including cartoons/pictures.

The presentation followed an ordered procedure beginning with a brief introduction to the aims and objectives of the study, followed by examples of questions which were explained by the candidate. For example, one of the questions referred to the 'elements' in the ad, therefore a slide providing examples of the different elements was shown and explained.

Eight television advertisements were played during each session. Each group proceeded together to the next advertisement only when all respondents were ready. After the fourth advertisement, a brief rest break allowed respondents who were a little slower in answering, to catch up. This process continued through until advertisement eight after which respondents went straight onto Section B of the questionnaire.



At the completion of the session, the candidate presented a brief talk on ‘Deconstructing an alcohol advertisement’ (Appendix 16) and disseminated two Health Department information sheets: ‘How alcohol affects teenagers’ (Appendix 17); and ‘Alcohol and adolescent brain development (Appendix 18). The purpose of this was to minimise any potential harm as a result of viewing the alcohol advertisements and to educate respondents about the negative health and other effects of alcohol.

### **3.10 Observation/field notes**

The candidate recorded observations and field notes as a personal learning tool for future research in the school setting (see Appendix 19). The notes identified barriers and enablers relating to the experience of data collection in the public secondary school setting. These notes were a method of post-evaluation of project processes and procedures relating to contact with the schools, school recruitment and participation, and data collection procedure. The candidate also used the notes as a valuable tool for reflection for informing future projects in the same setting. The following summarises observations made throughout the project.

#### ***Recruitment***

The most efficient contact method for recruiting schools into the study was an initial telephone contact with the Principal and a follow-up telephone contact with any referred staff member. This method proved more effective than initial contact through mail and/or electronic mail.

Control of student recruitment was impeded by strict consent protocols. Active parental consent requirements resulted in relying on students to remember to take consent forms and information sheets (provided to schools in confidential envelopes for distribution) home to parents for signing, then

returning them to school. Regular contact with the nominated teacher assisted with this process.

### ***Field data collection***

Punctuality was an important factor. Preparation for possible delays was countered by confirming attendance a day prior and the candidate arriving at the school at least 30 minutes before the scheduled data collection session.

Negative student attitudes toward the research activity after the teacher left the room were observed at some schools. This behaviour was countered using an authoritative classroom management approach. However, this situation was limited to only a few sessions and did not impact the data collection process.

### ***Teacher presence***

The option of remaining or leaving the room during the data collection session was left to the discretion of individual teachers. Among those who remained, it was observed in the first sessions that some teachers tended to wander around the room looking at students work. This was negated quickly by the candidate asking the teacher to remain at the front of the classroom and reasons of confidentiality explained. After the first sessions, this request was made of teachers before the session began.

### ***Slideshow presentation tool***

Example questions were visually displayed in the introduction of the slideshow. It was observed that this was an important process which allowed the opportunity for questions and explanations regarding questionnaire format.

It was observed that whilst the data collection sessions were standardised, time flexibility was required due to variation between students groups. For example, some student groups took longer to answer questions than others depending on factors such as age and literacy level. The break scheduled between sections of the questionnaire was observed to be a good opportunity for slower students to catch up. Students were advised when to take a short break both in the questionnaire and in the slideshow.

The questionnaire contained an age-relevant comic strip inserted between sections A and B. This coincided with a slide that showed a sleeping puppy advising a short break. It was observed that these were positively received by students and together, kept faster students occupied whilst other students worked to catch-up.

Section A contained closed-ended scales while Section B contained a mix of open-ended and closed-ended questions. It was observed that closed-ended questions achieved an almost 100% response rate whereas some open-ended questions achieved 60% to 70% on average.

### **3.11 Summary**

A sample of 544 secondary school students were each exposed to a set of five alcohol advertisements which previously aired on metropolitan free-to-air television from November 2005 to October 2006. Each advertisement was coded for elements including setting, humour, music, story, people/actors, animals, animal characters, story, sexual appeal, special effects, visual appeal and sound effects. The advertisements were also coded for perceived breaches of the ABAC. This chapter described the process of obtaining the student sample and the characteristics of the sample, data collection procedure and the questionnaire used which followed and extended that of Chen et al. (2005).

## **CHAPTER 4**

### **RESULTS**

#### **4.1 Introduction**

This chapter presents the results of analyses investigating the relationship between liking of specific alcohol brand advertising elements, advertising likeability and advertising effectiveness. Prior to reporting these results, the chapter describes the sample in terms of gender and school year, drinking status, and prior exposure to the advertisements.

#### **4.2 Sample**

After data cleaning, only 11 of the 544 questionnaires collected were unusable, suggesting a high degree of engagement of respondents in the study. The final sample consisted of 533 students from a total of 31 government secondary schools in the Perth metropolitan area.

#### **4.3 Sample characteristics**

##### **4.3.1 School year and gender distribution**

Table 17 shows the gender distribution of the sample by school year. There were approximately equal proportions of males and females in each year group. However, whilst every effort was made to obtain an evenly distributed sample for each school year, respondents attending Year 8 were the highest represented with a total of 215 respondents compared with 160 in Year 9 and 158 in Year 10. It may well be that the higher Year 8 representation reflects a generally more flexible timetable for lower grades than for higher grades.

**Table 17: School year and gender distribution**

<b>School Year</b> <i>(Typical age range - years)</i>	<b>Male</b>		<b>Female</b>		<b>Total</b>	
	N	%	N	%	N	%
<b>Year 8</b> <i>(12 to 13 years)</i>	102	19	113	21	215	40
<b>Year 9</b> <i>(13 to 14 years)</i>	72	14	88	16	160	30
<b>Year 10</b> <i>(14 to 15 years)</i>	80	15	78	15	158	30
Total	254	48	279	52	533	100

School decile rankings based on Department of Education's SEI (Socio-Economic Index) were used to define the socio economic status (SES) of students participating. Rankings for participating schools ranged from 1 to 9 with a greater number of higher ranking schools willing to participate in the study, hence 62% (N=333) of students ranked 1 or 2, 23% (N=121) ranked 3 to 6, and 15% (N=79) ranked 7 to 9.

#### **4.3.2 Drinking status of respondents**

Respondents were presented with a list of alcoholic beverages and asked to indicate whether or not they had 'tried' each one. Of the total sample, 88% indicated that they had tried one or more alcoholic beverages. There was little variation by year on this measure: 86% of Year 8 students, 91% of Year 9 students and 89% of Year 10 students had tried one or more alcoholic beverages.

Respondents were asked to indicate which one or more beverages they 'mostly' drank as an indicator of current drinking status. There was a direct relationship with school year on this measure: 39% of Year 8 students; 47%

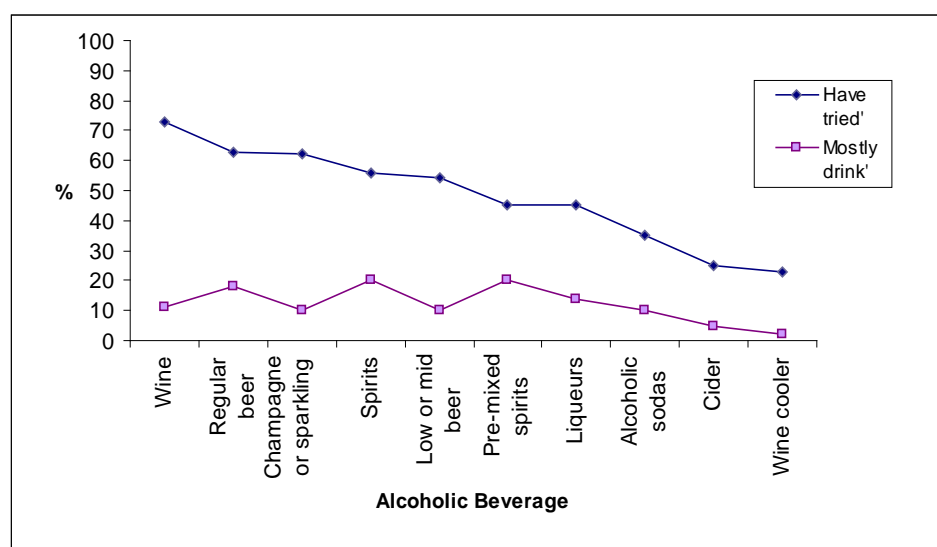
of Year 9 students; and 59% of Year 10 students indicated that they mostly drank one or more alcoholic beverages. Table 18 shows the proportion of respondents who had 'ever tried' and 'mostly drink' one or more alcoholic product by year group. There were no significant differences by gender on these measures.

**Table 18: Proportion of respondents who have 'ever tried' and 'mostly drink' one or more alcoholic products**

Drinking status	Year 8 (N=215)	Year 9 (N=160)	Year 10 (N=158)
	% (N)	% (N)	% (N)
Ever tried one or more alcoholic beverage	<b>86</b> (185)	<b>91</b> (145)	<b>89</b> (140)
Mostly drink one or more alcoholic products	<b>39</b> (83)	<b>47</b> (75)	<b>59</b> (94)
Total	<b>100</b> (215)	<b>100</b> (160)	<b>100</b> (158)

The proportion of respondents that 'have tried' and 'mostly drink' the different types of alcoholic beverages are shown in Figure 6.

**Figure 6. Proportion of respondents that 'have tried' and 'mostly drink' types of alcoholic beverages**



Wine was the most frequently reported beverage ‘tried’ by respondents (N=389, 73%), followed by regular beer (63%, N=338), champagne or sparkling wine (62%, N=330). For alcoholic beverages they ‘mostly’ drink, pre-mixed spirits and spirits were most frequently mentioned (both 20%, N=109), followed by regular beer (18%, N=98).

Table 19 shows the proportion of respondents who ‘have tried’ the specific alcoholic beverage products by year (these are presented in order of the beverage with the highest proportion). There were no significant differences by gender.

**Table 19: Proportion of respondents who ‘have tried’ one or more alcoholic beverage products by year group**

Product ‘have tried’	Total N=533	Year 8 N=215	Year 9 N=160	Year 10 N=158
	%	%	%	%
Wine	73	72	80	72
Beer (regular)	63	60	67	69
Champagne or sparkling wine	62	56*	73*	64
Spirits^	57	49	59	67
Beer (low or mid)	56	47 <sup>+</sup>	60**	63 <sup>++</sup>
Pre-mix spirits	47	33* <sup>+</sup>	55 <sup>*</sup>	57 <sup>+</sup>
Liqueurs	46	35* <sup>+</sup>	52*	56 <sup>+</sup>
Alcoholic sodas	36	36	41	31
Cider	26	20 <sup>+</sup>	25	34 <sup>+</sup>
Wine cooler	24	50	35	36

\*  $\chi^2$  significant at  $p < .001$  (Yr 8 and 9), \*\*  $\chi^2$  significant at  $p < .05$  (Yr 8 and 10)

<sup>+</sup>  $\chi^2$  significant at  $p < .05$  (Yr 8 and 9), <sup>++</sup>  $\chi^2$  significant at  $p < .001$  (Yr 8 and 10)

There was little difference by year in the two beverages most frequently tried: wine and regular beer. However, for most other beverages, there was a substantial and significant increase from Year 8 to Year 9, followed by a smaller, usually non significant increase in Year 10.

The proportion of respondents nominating alcoholic beverage/s that they ‘mostly drink’ is shown by year group in Table 20. The proportions of responses to this question were too small to assess the significance of year changes. However, it can be seen that spirits show a progressive substantial increase across year groups.

**Table 20: Proportion of respondents who ‘mostly drink’ one or more alcoholic beverage products by year group**

Product ‘mostly drink’	Total	Year 8 (N=215)	Year 9 (N=160)	Year 10 (N=158)
	%	%	%	%
Pre-mix spirits	20	13	21	30
Spirits	20	10	15	39
Beer (regular)	18	15	19	22
Liqueurs	14	10	16	19
Wine	11	14	10	8
Beer (low or mid)	10	10	9	12
Alcoholic sodas	10	9	9	11
Champagne or sparkling wine	10	9	11	8
Cider	5	3	6	7
Wine cooler	2	2	2	1

Of those respondents who ‘mostly’ drink one or more type of alcoholic beverage, the highest proportions (20%) were recorded for premixed spirits (Year 8 = 13%, Year 9 = 21%, Year 10 = 30%) and spirits (Year 8 = 10%, Year 9 = 15%, Year 10 = 39%), followed by beer (18%). Substantial increases from Years 8 to 10 are shown for pre-mix spirits, spirits, beer (regular) and liqueurs. A higher proportion of females than males reported that they ‘mostly’ consumed premix spirits.

#### **4.3.3 Previous exposure to advertisements**

All 25 advertisements had previously screened on commercial free-to-air television from November 2005 until October 2006. After viewing each advertisement, respondents were asked to report if they had seen the advertisement before. Table 21 shows the number of respondents who



viewed each advertisement and the proportion of those respondents who indicated previous exposure to the advertisements and frequency of that exposure.

**Table 21: Previous exposure to alcohol advertisements**

Product	Number viewing each ad	% Seen ad before	Exposure Frequency			
			1-2	3-5	>5	Not Sure
		%	%	%	%	%
Carlton Draught (1)	124	82	11	20	67	2
Tooheys New Draught	119	80	7	28	63	1
Carlton Draught (2)	100	79	18	29	49	4
Castlemaine XXXX	94	77	14	34	49	3
Tooheys Extra Dry	94	75	6	31	59	4
Heineken Lager (2)	96	72	16	30	49	4
Bundaberg Rum (1)	96	65	15	31	53	2
Victoria Bitter (1)	96	48	20	37	41	2
Bundaberg Rum (2)	94	47	42	28	26	5
Boags Draught (1)	124	45	32	36	29	4
Hahn Premium Light	119	44	28	45	25	2
Bundaberg Rum (3)	119	43	33	35	29	2
Smirnoff Ice Vodka(1)	100	41	29	29	41	0
Cougar Bourbon	94	37	34	31	31	3
Heineken Lager (1)	119	33	49	28	21	3
Becks Beer	100	31	32	32	32	3
Smirnoff Vodka (2)	119	30	47	28	25	0
Victoria Bitter (2)	94	29	63	11	26	0
Corona Extra Beer	124	23	21	36	39	4
Boags St George	100	23	39	43	17	0
Jim Beam (2)	96	18	53	18	24	6
Cascade Premium	96	17	38	13	44	6
Orlando Jacobs Creek	124	13	63	19	13	6
Jim Beam (1)	100	10	40	40	20	0
Absolut Cut Vodka	124	6	38	50	13	0

Of the 25 alcohol advertisements used in this study, approximately two thirds or more of the relevant viewing samples reported previous exposure to seven of the advertisements, of which 49% to 67% had been previously exposed to the advertisement more than five times. Just under half reported prior exposure for a further six of the advertisements (41% to 48%). Overall, for 15 of the 25 advertisements at least one third of those exposed to the advertisement in this study had seen the advertisement before.

#### **4.4 Advertising liking and advertising effectiveness**

##### **4.4.1 Overall liking of alcohol advertisements**

After viewing each advertisement, respondents were asked to indicate how much they liked the advertisement by circling one number on a scale from 0 to 10 (0 = Didn't like at all, 10 = Liked a lot). Table 22 shows the mean liking by year group for those exposed to each advertisement.

**Table 22: Advertisement liking by year: mean scores**

Product	N	Total Mean	SD	Year 8	Year 9	Year 10
				Mean	Mean	Mean
Carlton Draught Beer (1)	123	8.8	1.8	8.8	8.5	9.2
Tooheys New Draught	118	8.5	1.6	9.0	8.4	8.2
Carlton Draught Beer (2)	99	8.4	1.7	8.0	8.6	8.4
Hahn Premium Light	118	7.7	2.0	7.7	7.3	7.8
Bundaberg Rum (1)	96	7.5	2.3	6.6 <sup>a</sup>	7.7	8.3 <sup>a</sup>
Bundaberg Rum (2)	92	7.0	2.6	6.4 <sup>a</sup>	8.2 <sup>a</sup>	6.7
Corona Extra Beer	124	7.0	2.1	7.1	6.7	6.3
Tooheys Extra Dry Beer	93	6.9	2.2	6.3	7.4	7.3
Heineken Lager Beer (1)	119	6.5	2.2	7.3	6.0	6.5
Heineken Lager Beer (2)	96	6.3	2.5	4.6 <sup>a</sup>	6.2 <sup>a</sup>	8.2 <sup>a</sup>
Cascade Premium Lager	95	6.3	2.6	4.7 <sup>a,b</sup>	6.9 <sup>a</sup>	6.8 <sup>b</sup>
Castlemaine XXXX Gold	93	6.3	2.2	6.1	6.9	6.1
Cougar Bourbon	94	6.2	2.6	5.6	6.4	7.1
Bundaberg Rum (3)	118	6.0	2.4	7.1 <sup>a</sup>	5.0 <sup>a</sup>	6.1
Smirnoff Ice Vodka(1)	99	5.9	2.3	5.3	6.0	5.9
Boags Draught Beer (1)	124	5.7	2.5	5.5 <sup>a</sup>	5.7	7.4 <sup>a</sup>
Victoria Bitter Beer (1)	95	5.4	2.9	5.2	5.0	6.3
Jim Beam Bourbon (1)	99	5.4	2.5	5.6	5.1	5.6
Boags St George Beer (2)	99	5.1	1.8	5.0	5.3	4.9
Becks Beer	100	4.8	2.5	4.0 <sup>a</sup>	4.7	5.6 <sup>a</sup>
Victoria Bitter Beer (2)	93	4.8	2.6	4.4	5.4	5.1
Smirnoff Vodka (2)	118	4.7	2.5	4.0	4.6	5.1
Jim Beam Brbon& Cola (2)	95	4.3	3.0	3.9	4.0	5.5
Orlando Jacobs Creek Spkg	124	4.1	2.7	3.8	4.9	5.1
Absolut Cut Vodka	123	4.0	2.5	3.9	4.2	4.4

<sup>a,b</sup> Same letter indicates significantly different at  $p < .05$  level

There is considerable variation between the 25 alcohol advertisements with respect to mean liking, ranging from a low of 4.0 to a high of 8.8. However, 16 of the 25 advertisements rated above 5.5 with 14 rating 6 or over. No

advertisement had a mean rating less than 4. These results indicate that the majority of the advertisements were liked by this underage student sample. Of the ten most liked advertisements, eight advertised beer and two advertised the same spirit product (Bundaberg Rum). Carlton Draught Beer (1) rated highest overall as the advertisement most liked (mean = 8.8).

There was a tendency for Year 10 students to be more positive overall, although there was no systematic pattern by year for most advertisements. For Year 10, 20 advertisements rated 5.5 or more and 16 rated 6.0 or over (compared with 16 and 14 respectively for years 8 and 9).

#### **4.4.2 Liking of specific theme elements and advertisement liking**

Respondents were presented with 12 execution elements that may or may not have been present in each advertisement. For those elements they identified as present in each advertisement, they were asked to indicate how much they liked or disliked the element by circling one number on a scale of 0 to 10: 0 = Didn't like at all, 10 = Liked a lot. There was variation between the numbers of those who responded to this question for each advertisement. This was due to some respondents' non-recognition of the element being in the advertisement. Some elements were indeed subtle inclusions in some advertisements and hence went unnoticed. For example, only 23% recognised the inclusion of horses in Heineken Lager 2.

Table 23 shows the mean liking scores for each of the 12 elements across advertisements for those indicating the element was present.

**Table 23: Mean scores for liking for specific elements contained in each advertisement**

Element	N	Mean (scale 0-10)	Std. Deviation
Animated or cartoon characters	80	7.2	2.4
Humour	361	6.7	3
Animals	79	5.9	3.1
Special effects	186	5.9	2.9
Visual appeal	520	5.6	2.9
Settings (background)	512	5.4	2.8
Story	163	5.4	3.2
Sound effects	436	5.3	2.9
People/Actors	158	5.2	2.9
Music or jingle	491	5.2	3
Slogan	477	4.9	3
Sexual appeal	99	4.4	3.6

The element ‘animated or cartoon characters’ was the most liked element (when present) with a mean rating of 7.2. Humour was the next most liked (mean = 6.7); followed by ‘animals’ (mean = 5.9); and ‘special effects’ (mean = 5.9). Two elements were rated less than 5 on the liking scale: ‘slogan’ (mean = 4.9); and ‘sexual appeal’ (mean = 4.4). No element scored less than 4 on the liking scale.

Overall, apart from ‘animated or cartoon characters’ and ‘humour’, there was only moderate liking of these elements. However, the standard deviations suggest that there were wide individual differences in liking of

these elements. Table 24 shows the Pearson correlations between advertisement liking and liking of specific elements.

**Table 24: Correlation between overall advertisement liking and overall liking of specific elements**

Element	<i>r</i>
Humour	.78*
Story	.73*
Settings (background)	.72*
Visual appeal	.71*
People/Actors	.68*
Music or jingle	.68*
Slogan	.66*
Sound effects	.64*
Special effects	.63*
Animated or cartoon characters	.59*
Sexual appeal	.49*
Animals	.31*

\* Correlations are significant at  $p < .01$  level (2-tail)

There was a strong positive relationship between advertisement liking and liking for each of the elements with the exception of ‘animals’ and ‘sex appeal’ ( $r < .50$ ), for which moderate associations were found. That is, the more respondents ‘liked’ these elements in the advertisement, the more they ‘liked’ the advertisement overall. The strongest association was found between the element of humour and advertisement liking ( $r = .78$ ,  $N = 361$ ). Correlations between overall advertisement liking and liking of specific elements are shown in Table 25 for each advertisement.

**Table 25: Correlation between overall advertisement liking and liking of specific elements for each advertisement**

Ad	Number viewed ad	Humour	Setting	Visual Appeal	Slogan	Music	Animated/ cartoons	Animals (real)	Sex appeal	People/actors	Special effects	Story	Sound effects
	<b><i>r</i></b> <b>(N)</b>												
Carlton Draught (1)	124	.67	.63	.62	.58	.57	-	.29*	-	.57	.53	.62	.53
		120	120	117	111	120	-	26	-	119	70	98	109
Tooheys New Draught	119	.65	.60	.44	.41	.44	-	.36	-	.57	.42	.52	.46
		115	117	117	104	115	-	107	-	116	110	109	113
Carlton Draught (2)	100	.74	.59	.56	.48	.47	-	-	-	.61		.48	.44
		98	98	98	86	97	-	-	-	96		92	78
Hahn Premium Light	119	.69	.46	.66	.40	.43	-	.63	.52	.70	-	.71	.56
		117	118	118	112	116	-	61	89	118	-	111	106
Bundaberg Rum & Cola (1)	96	.78	.70	.67	.68	.68	.59	-	.33	.66	-	.76	.64
		96	96	91	81	88	61	-	52	95	-	91	84
Bundaberg Rum (2)	94	.68	.72	.48	.46	.57	.61	-	.45	.62	-	.62	.42
		91	103	92	83	87	39	-	81	91	-	87	77
Corona Extra Beer	124	.73	.69	.75	.63	.73	.67	-	-	-	-	-	.66
		122	124	123	119	123	119	-	-	-	-	-	120
Tooheys Extra Dry	94	.60	.63	.60	.45	.46	-	-	-	.44	.56	.62	.58
		89	93	91	85	93	-	-	-	93	89	89	85
Heineken Lager (1)*	119	.71	.65	.70	.43	.55	-	-	-	.50	.55	.58	.60
		116	119	118	106	118	-	-	-	118	118	111	116
Heineken Lager (2)	96	-	.77	.60	.63	.57	-	.70	-	.63	.50	.73	.53
		-	95	95	86	93	-	22	-	95	85	89	85
Cascade Premium Lager	96	.78	.80	.72	.73	.73	-	.30*	-	.58	.58	.78	.57
		92	95	91	84	95	-	35	-	93	66	86	85
Castlemaine XXXX Gold	94	.80	.58	.64	.72	-	-	.10*	-	.65	-	.66	.63
		92	92	89	77	-	-	56	-	90	-	86	80
Cougar Bourbon	94	.77	.74	.70	.61	.59	-	-	-	.63	-	.76	.58
		94	93	93	84	94	-	-	-	94	-	94	89
Bundaberg Rum (3)	119	.76	.70	.65	.69	.65	.58	-	.47	.63	-	.77	.70
		116	118	118	107	108	75	-	55	118	-	105	110

Smirnoff Ice Vodka (1)	100	-	.65 98	.65 100	.68 92	.69 91	-	-	-	-	.56 96	-	.70 98
Boags Draught (1)	124	.77 123	.71 123	.69 121	.67 116	.63 114	-	-	-	.67 121	-	.67 110	.60 109
Victoria Bitter Beer (1)	96	.75 92	.68 95	.61 93	.68 8/5	.67 95	-	.10* 87	-	.73 94	-	.62 86	.70 82
Jim Beam Bourbon (1)	100	-	.63 80	.67 99	.58 87	.60 84	-	-	-	-	.61 97	-	.63 97
Boags St George	100	.61 95	.67 98	.70 98	.58 92	.57 91	-	-	.40 38	.62 96	-	.70 87	.48 86
Becks Beer	100	.70 46	.64 99	.63 99	.69 95	.66 95	-	-	.57 56	.69 87	-	.61 68	.61 90
Victoria Bitter Beer (2)	94	.77 91	.72 93	.73 92	.66 89	.60 92	-	-	.53 77	.71 92	-	.67 82	.68 82
Smirnoff Vodka (2)	119	-	-	.69 117	.71 96	.64 114	-	-	-	-	.54 93	.69 77	-
Jim Beam Brbon& Cola (2)	96	-	.66 95	.56 91	.57 86	.63 94	-	-	.38 46	.64 95	-	.59 86	.52 84
Orlando Jacobs Creek Sparkling	124	-	-	.74 121	.70 119	.72 121	-	-	-	-	-	-	.71 105
Absolut Cut Vodka	124	-	.72 106	.71 119	.58 105	.66 121	-	-	-	.71 106	-	.64 116	-

*Note:* the symbol ‘-’ indicates element was not applicable  
 \* Correlation not significant (all other correlations were significant at  $p < .01$  level, 2-tail)

In general, the pattern of results in Table 25 is consistent with those in Table 24 across most of the advertisements. All correlations were significant ( $p < .01$ ) except ‘animals real’ for Cascade Premium Lager ( $r = .30$ ), Castlemaine XXXX ( $r = .10$ ), and Victoria Bitter (1) ( $r = .10$ ).

#### 4.4.3 Advertisement liking and ‘like to try’ the advertised brand

Respondents were asked how much they would ‘like to try’ the advertised brand. Responses were recorded on a scale from 0 (not at all) to 10 (a lot) for each advertisement. Mean scores for ‘like to try’ were calculated for each advertisement for each year group. Results are shown in Table 26.



**Table 26: Mean ratings for ‘like to try’ the advertised brand for each advertisement for each year group**

Product	N	Total Mean	SD	Year 8	Year 9	Year 10
				Mean	Mean	Mean
Carlton Draught (1)	123	5.8	3.6	5.5	6.7	6.9
Tooheys New Draught	118	5.5	2.9	5.8	4.9	5.6
Bundaberg Rum (1)	95	5.5	3.2	4.6	5.5	6.5
Corona Extra Beer	124	5.1	3.2	5.3	4.5	4.2
Carlton Draught (2)	99	5.0	3.0	4.2	5.8	4.7
Hahn Premium Light	118	4.8	2.9	4.2	5.0	4.9
Heineken Lager (2)	95	4.5	3.0	3.1	4.5	5.9
Heineken Lager (1)	119	4.4	2.7	5.1	4.1	4.2
Smirnoff Vodka (2)	118	4.4	3.2	4.1	4.0	4.8
Bundaberg Rum (3)	118	4.3	2.8	5.3	3.8	4.2
Smirnoff Ice (1)	99	4.3	2.9	3.5	4.8	4.3
Bundaberg Rum (2)	92	4.3	3.4	3.5	5.5	4.5
Tooheys Extra Dry	93	4.1	2.8	3.6	4.2	4.8
Boags Draught (1)	124	3.9	3.3	3.6	3.7	5.7
Cascade Premium	95	3.9	3.0	2.7	4.5	4.2
Victoria Bitter Beer (1)	94	3.9	3.2	3.2	3.9	4.5
Jim Beam Bourbon-(2)	94	3.9	3.2	3.6	3.3	5.1
Castlemaine XXXX	93	3.9	3.0	3.6	4.6	3.6
Cougar Bourbon	94	3.8	3.2	3.1	4.1	4.9
Jim Beam Bourbon (1)	99	3.7	3.1	3.9	3.3	3.9
Becks Beer	100	3.4	2.9	2.5	3.6	3.8
Orlando Jacobs Creek	123	3.2	2.9	3.0	3.5	4.2
Victoria Bitter (2)	93	3.2	2.7	3.0	3.2	3.4
Absolute Cut	123	3.0	2.6	2.8	3.8	3.4
Boags St George (2)	99	3.0	2.3	2.9	3.7	2.2

Overall, Table 26 shows a moderate effect on ‘like to try’ with only three brands rating 5.5 or more and a highest mean rating of only 5.8. There were no significant differences between males and females for any of these brands ( $p > .001$ ).

Combining across all advertisements, Pearson correlation analysis showed a strong positive relationship between respondent's liking of an advertisement and their desire to try the advertised product ( $r=.58$ ,  $p=.01$ ). Figure 7 shows the mean 'advertisement liking' and 'like to try' ratings.

**Figure 7: Mean ratings for 'like to try' advertised brand by advertisement liking**

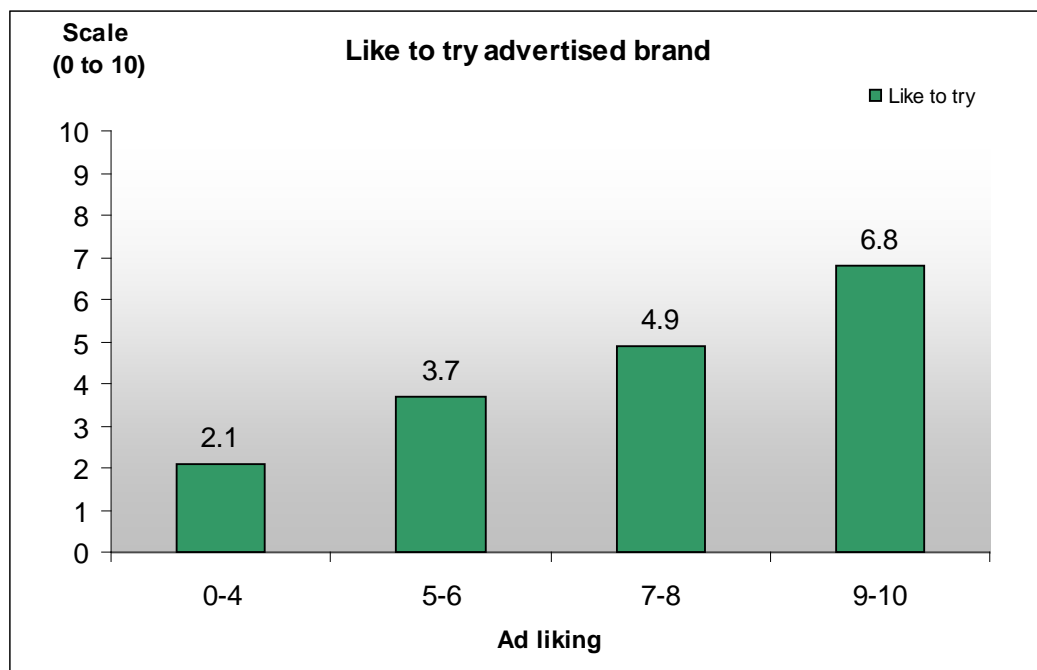


Figure 7 shows that advertisements rated 9 or 10 on the advertisement liking scale achieved a like to try mean score of 6.8 compared to advertisements rated 5 or 6 that received a mean score of 3.7 on the intention to try scale.

#### 4.4.4 Advertisement liking and brand attitudes

Respondents were asked to indicate on a scale from 0 (not at all) to 10 (a lot), how 'likely' it would be that they would choose the advertised brand over other brands. Table 27 shows the brand attitude mean ratings for each advertisement for year group.

**Table 27: Mean ratings for brand attitude for each advertisement for each year group**

Product	N	Total Mean	SD	Year 8	Year 9	Year 10
				Mean	Mean	Mean
Carlton Draught (1)	123	6.4	3.1	6.3	6.2	3.5
Tooheys New	118	5.7	2.6	6.1	6.2	5.4
Bundaberg Rum (1)	96	5.4	3.1	4.6	5.3	6.3
Carlton Draught (2)	99	5.4	2.8	4.4	6.3	4.9
Corona Extra	124	5.3	2.8	5.5	4.9	3.7
Hahn Premium Light	118	5.0	2.5	5.3	5.1	4.7
Smirnoff Vodka (2)	118	4.9	3.1	4.0	4.4	5.6
Heineken Lager (2)	96	4.7	2.9	3.1	4.8	5.2
Bundaberg Rum (2)	92	4.7	3.0	4.3	5.7	3.3
Smirnoff Ice Vodka(1)	99	4.5	2.9	3.7	5.0	2.4
Heineken Lager (1)	118	4.4	2.3	4.8	4.4	4.2
Bundaberg Rum (3)	118	4.4	2.3	5.1	4.0	4.2
Cougar Bourbon	94	4.3	3.2	3.9	4.4	4.6
Tooheys Extra Dry	93	4.3	2.6	4.2	4.1	4.1
Jim Beam (1)	98	4.1	2.9	4.4	3.7	4.9
Castlemaine XXXX	92	4.1	2.8	4.3	4.6	4.4
Cascade Premium	95	3.9	2.7	2.8	4.1	5.2
Boags Draught (1)	124	3.9	2.7	3.8	3.7	3.8
Victoria Bitter (1)	95	3.8	2.9	3.3	3.5	5.0
Jim Beam (2)	95	3.8	3.1	3.3	3.4	4.5
Becks Beer	100	3.5	2.6	2.4	3.6	4.3
Orlando Jacobs Creek	124	3.4	2.8	3.3	3.8	4.8
Absolut Cut Vodka	124	3.3	2.6	3.3	3.3	3.7
Victoria Bitter Beer (2)	93	3.3	2.6	3.4	3.2	4.8
Boags St George (2)	99	3.1	2.3	3.0	3.7	4.3

Overall Table 27 shows only a moderate effect on brand attitude with only two brands rating 5.5 or more with the highest rating 6.4. There were no significant differences between males and females for any of these brands ( $p > .001$ ).

Pearson correlation analysis showed a positive relationship between brand attitude and advertisement liking ( $r=.61$ ,  $p=.001$ ). Figure 8, shows the relationship between advertisement 'liking' and 'brand attitude'.

**Figure 8: Advertisement liking by brand attitude ratings**

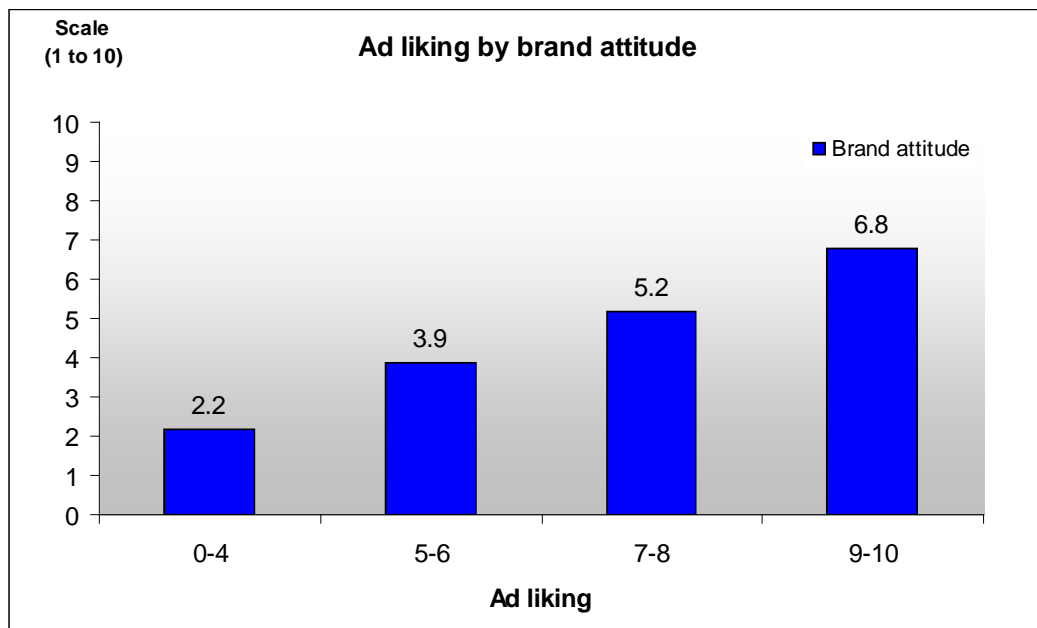


Figure 8 shows advertisements that rated 9-10 on advertisement liking achieved an average mean rating score of 6.8 on brand attitude. This compared to advertisements rated 5-6 on advertisement liking which received a brand attitude rating of 3.9 among respondents.

#### **4.4.5 Summary of mean ratings for advertisement liking, brand attitude and 'like to try'**

The mean ratings for advertisement liking, brand attitude and 'like to try' the advertised brand for each advertisement are shown in Figure 9.

**Figure 9: Overall means for advertisement liking, brand attitude and like to try the advertised brand**

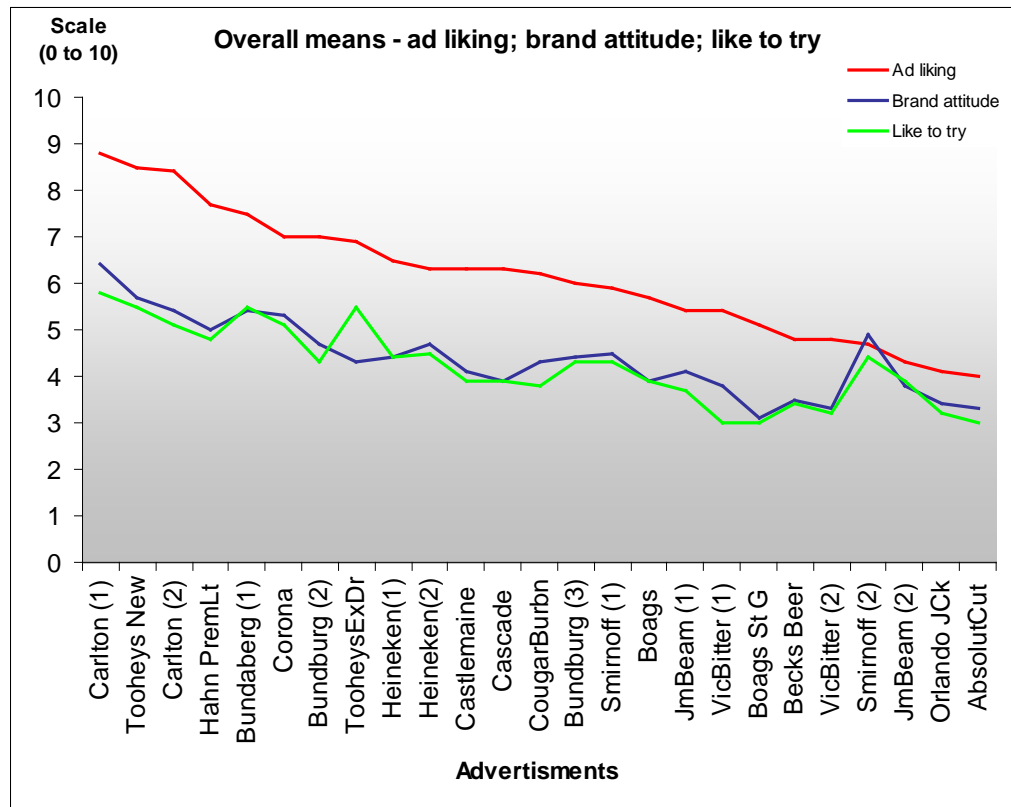


Figure 9 illustrates the relationship between advertisement liking and the measures of ad effectiveness: like to try and brand attitude.

#### 4.5 Advertisement that stood out most

Respondents were asked (unprompted) which of the five alcohol advertisements they had viewed during the session, stood out most in their mind. There was a high non-response rate in the first session (using Set A) which was reduced somewhat by the candidate reminding students in subsequent sessions to complete all questions. Nevertheless, the non-response rates for Sets B to E were around 25% to 33% for ‘stood out the most’ and 29% to 40% for perceived ‘most effective’. In spite of the non-response rates, these results are comparable with the overall likeability data. Table 28 shows the percentages nominating each advertisement in each of the five sets.

**Table 28: Advertisements that 'stood out the most' to respondents from other advertisements in the set**

<b>Advertisement</b>	<b>N</b>	<b>%</b>	<b>% Responses</b>
<b>Set A</b>			
Tooheys New Draught	31	26	53
Hahn Premium Light	12	10	21
Heineken Lager (1)	7	6	12
Smirnoff Vodka (2)	5	4	19
Bundaberg Rum (3)	3	3	5
<i>No response</i>	<i>61</i>	<i>51</i>	<i>-</i>
<b>Total</b>	<b>119</b>	<b>100</b>	<b>100</b>
<b>Set B</b>			
Cascade Premium Lager	17	18	26
Heineken Lager (2)	16	17	25
Victoria Bitter Beer (1)	14	15	22
Bundaberg Rum (1)	12	12	19
Jim Beam Bourbon (2)	5	5	8
<i>No response</i>	<i>32</i>	<i>33</i>	<i>-</i>
<b>Total</b>	<b>96</b>	<b>100</b>	<b>100</b>
<b>Set C</b>			
Carlton Draught (1)	71	57	76
Corona Extra Beer	16	13	17
Orlando Jacobs Creek	4	3	4
Boags Draught	1	1	2
Absolute Cut	1	1	1
<i>No response</i>	<i>31</i>	<i>25</i>	<i>-</i>
<b>Total</b>	<b>124</b>	<b>100</b>	<b>100</b>
<b>Set D</b>			
Tooheys Extra Dry	18	19	27
Bundaberg Rum (2)	17	18	25
Cougar Bourbon	15	16	22
Castlemaine XXXX	12	13	18
Victoria Bitter (2)	5	6	8
<i>No response</i>	<i>27</i>	<i>28</i>	<i>-</i>
<b>Total</b>	<b>94</b>	<b>100</b>	<b>100</b>
<b>Set E</b>			
Boags St George	28	28	46
Carlton Draught (2)	18	18	30
Becks Beer	8	8	13
Jim Beam Bourbon (1)	6	6	10
Smirnoff Ice (1)	1	1	1
<i>No response</i>	<i>39</i>	<i>39</i>	<i>-</i>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Across the five sets, the three most frequently nominated advertisements were Carlton Draught (1): 57% of those exposed to the advertisement (and 76% of responses); Tooheys New Draught: 26% (and 53% of responses); and Boags St George: 28% (and 46% of responses). All advertisements were nominated at least once.

#### **4.6 Advertisement perceived most effective in getting young people to drink**

Respondents were asked which alcohol advertisement they thought would be ‘most effective’ in getting people their age to try that drink. All advertisements were nominated at least once.

Carlton Draught (1) attracted far more nominations (47% of those exposed; 66% of responses) than any of the other advertisement, followed by Tooheys Extra Dry (27% and 43%), Boags St George (20% and 32%) and Tooheys New (17 and 42%).

In general, advertisements perceived to be most effective were also more likely to be nominated as ‘standing out the most’: Carlton Draught (1) 57% and 47% of these exposed respectively; Tooheys Extra Dry 19% and 27%; Bundaberg Rum (1) 12% and 25%; Bundaberg Rum (2) 18% and 19%; and Carlton Draught (2) 18% and 15%.

Table 29 shows the percentages of respondents that nominated each advertisement in each of the five sets.

**Table 29: Advertisement most effective in getting people their age to try the advertised drink**

Advertisement	N	%	% Responses
<b>Set A</b>			
Tooheys New Draught	20	17	42
Smirnoff Vodka (2)	11	9	23
Hahn Premium Light	9	8	19
Heineken Lager (1)	5	4	10
Bundaberg Rum (3)	3	2	6
<i>No response</i>	71	60	-
<b>Total</b>	<b>119</b>	<b>100</b>	<b>100</b>
<b>Set B</b>			
Jim Beam Bourbon (2)	11	12	31
Cascade Premium Lager	8	8	23
Victoria Bitter Beer (1)	7	7	20
Heineken Lager (2)	7	7	20
Bundaberg Rum (1)	2	25	6
<i>No response</i>	39	41	-
<b>Total</b>	<b>74</b>	<b>100</b>	<b>100</b>
<b>Set C</b>			
Carlton Draught (1)	58	47	66
Corona Extra Beer	17	13	19
Boags Draught (1)	6	5	7
Absolute Cut	6	5	7
Orlando Jacobs Creek	1	1	1
<i>No response</i>	36	29	-
<b>Total</b>	<b>124</b>	<b>100</b>	<b>100</b>
<b>Set D</b>			
Tooheys Extra Dry	25	27	43
Bundaberg Rum (2)	18	19	3
Castlemaine XXXX	5	5	9
Victoria Bitter (2)	5	5	9
Cougar Bourbon	5	5	9
<i>No response</i>	36	39	-
<b>Total</b>	<b>94</b>	<b>100</b>	<b>100</b>
<b>SET E</b>			
Boags St George (2)	20	20	32
Becks Beer	16	16	26
Carlton Draught (2)	15	15	24
Jim Beam Bourbon (1)	8	8	13
Smirnoff Ice (1)	3	3	5
<i>No response</i>	38	38	-
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>



## 4.7 Structural Equation Modelling

This section reports the structural equation modelling which assessed the relationship between liking of the specific elements of the advertisements, advertisement likeability, and advertising effectiveness. The modelling also measured the impact of gender, year level and previous exposure to the alcohol advertisements on that relationship. *SPSS Amos (version 17.0)* statistical software (SPSS Inc., 2009) was used to conduct the structural equation modelling.

### 4.7.1 The structural equation model

The structural equation model shown in Figure 10 contains two latent factors: Ad attractiveness and Ad effectiveness. Ad attractiveness was specified in terms of the appeal of eight individual advertising elements: setting; humour; music; story; special effects; visual appeal; sound effects; and slogan. The elements of sexual appeal, animals, cartoon characters, and actors could not be included in this analysis as too few advertisements contained these elements.

Ad effectiveness was specified in terms of two variables: Intention to try and Brand attitude (preference). Ad likeability was treated as an observed variable, as were Gender, Year level, and Previous exposure to the ad. Advertising likability was represented as the single item measuring the extent to which the advertisement was liked or disliked.

### 4.7.2 Explaining advertising likeability and effectiveness

Gender and year level were included in the model as exogenous background variables. Data were not normally distributed, therefore goodness-of-fit measures were used: Bollen-Stine index of fit: Chi Squared = 1018.5,  $df = 76$ ,  $p < .001$  and RMSEA .088 with 90% confidence intervals of .083 and .092. RMR was .500, GFI was .911, AGFI was .877, CFI was .939, IFI was

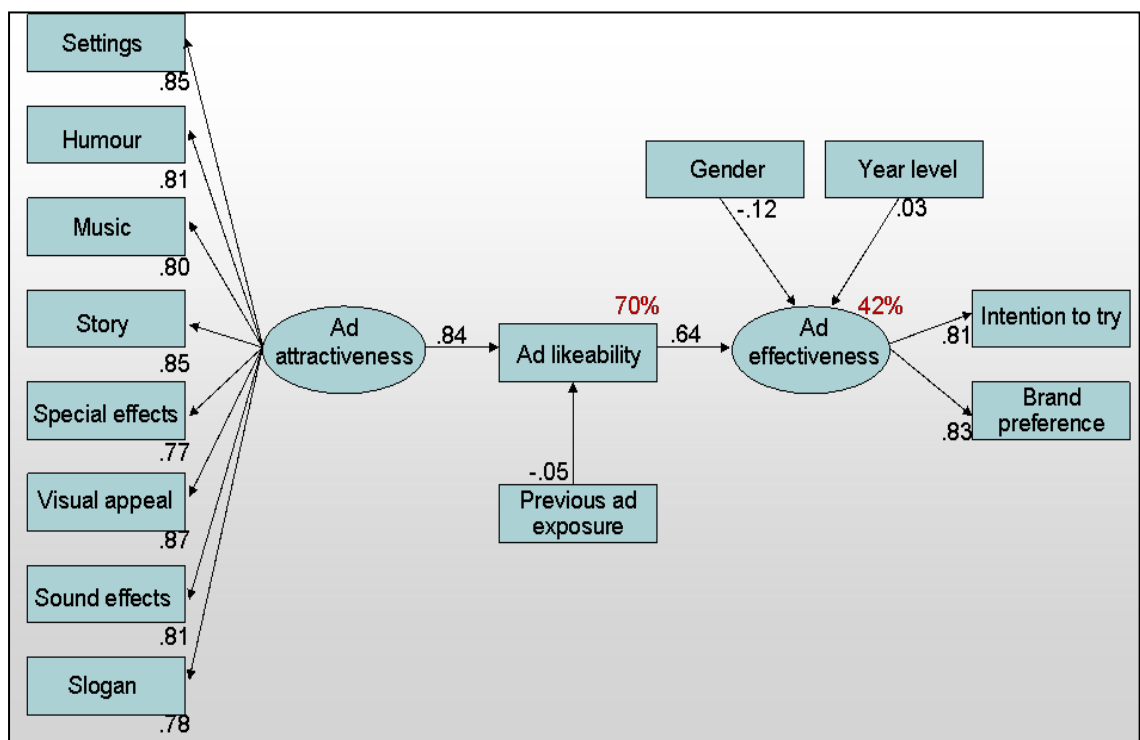
.939, and TLI was .927 (Bollen & Stine, 1992). The model fit indices offer support for the SEM model. Garver & Mertz (1999) cite CFI values of 0.9 or greater and RMSEA values falling between 0.05 and 0.08, as acceptable. Table 30 presents the model of fit indices.

**Table 30: Structural equation model: Model of fit indices**

Chi Square $\chi^2$	df	$\chi^2/df$	GFI	CFI	TLI	NFI
1018.524	76	13.402	0.911	0.939	0.927	0.934

The model presented in Figure 11 hypothesised that ad attractiveness (defined as liking of the advertising elements) would explain overall advertisement liking, which would in turn explain advertisement effectiveness. This was tested by examining the parameters ( $\beta$  coefficients) between ad attractiveness and ad liking, and ad liking and ad effectiveness.

**Figure 10: Structural Equation Model: Explaining advertising likeability and effectiveness**



*Note:* Variables in circles are latent variables and variables in squares are measured variables

The standardised parameter estimates ( $\lambda$ ) for each of the eight elements specifying Ad attractiveness significantly explained overall likeability of alcohol advertisements at  $p=0.001$  level. The standardised parameter estimates for Ad attractiveness ranged from .77 to .87; thus all were of an acceptable value. The two standardised parameter estimates ( $\lambda$ ) for Ad effectiveness ('Intention to try' and 'Brand preference'), significantly explained overall Ad effectiveness at  $p=0.001$  level. The standardised parameter estimates for Ad effectiveness were .81 and .83 respectively and thus both were of an acceptable value. Advertisement attractiveness significantly explained Ad likeability ( $\beta = .84$ , C.R. = 43.468,  $p=0.001$ ). Further, Ad likeability significantly explained Ad effectiveness ( $\beta = .64$ , C.R. = 28.466,  $p=0.001$ ).

The SEM results also show that Gender had a small but significant impact on Ad effectiveness (parameter estimate = -.12, C.R. = -5.647,  $p=0.001$ ), but Year level did not (parameter estimate = -.03, C.R. = 1.328, not sig). Previous exposure to an advertisement did not significantly explained Ad likeability (parameter estimate = -.05, C.R. = -3.659, not sig.).

Overall, the above data show that alcohol advertising in general is likeable, and that likeability is related to liking specific elements within the advertisements. Moreover, liking of the advertisement explains advertising effectiveness in terms of brand attitude and 'likely to try' the alcohol brand. The next section analyses the results of coders' perceived breaches of the ABAC in this set of advertisements.

#### **4.8 Alcohol Beverages Advertising (and Packaging) Code (ABAC) - identified breaches**

The number of articles perceived to be breached in each advertisement is shown in Figure 11 for the 22 TVCs perceived to contain at least one

breach. Only three advertisements (Absolute Cut; Heineken Lager 2; and Smirnoff Vodka 2) attracted no breaches.

**Figure 11: Advertisements assessed as breaching one or more ABAC Codes**

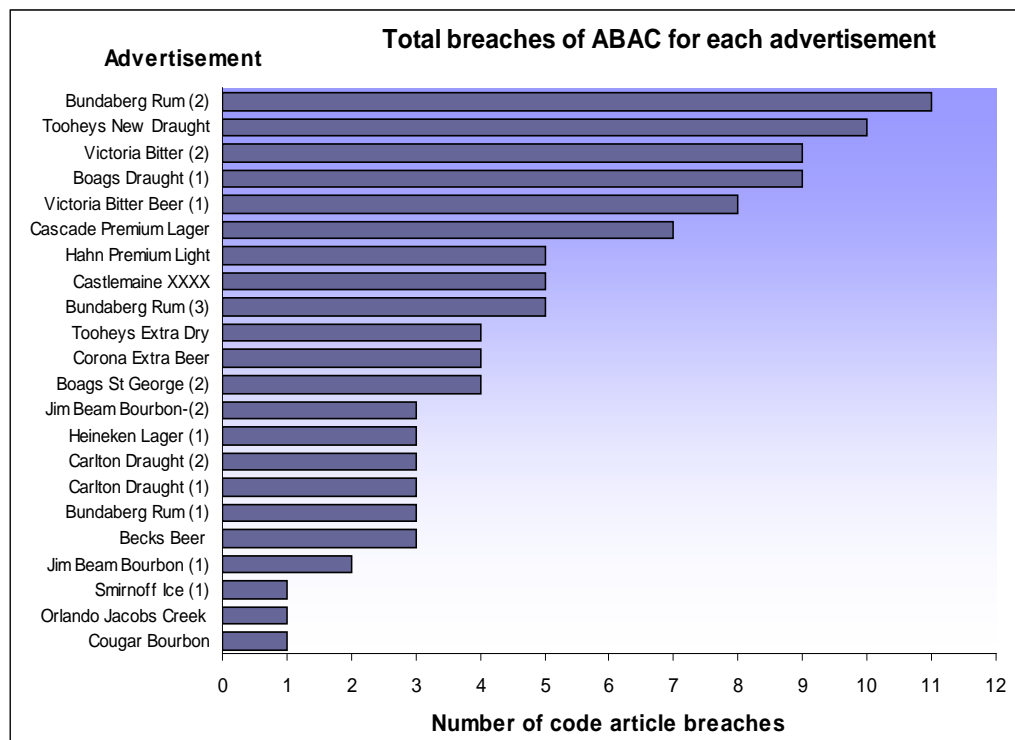


Figure 11 shows that among the 22 advertisements considered to breach the ABAC, the vast majority of these (19 of 22) were seen to contain multiple breaches. Bundaberg Rum (2) contained the most article breaches overall (N=11), followed by Tooheys New Draught (N=10), Victoria Bitter (2) (N=9), and Boags Draught (1) (N=9).

#### 4.8.1 Specific ABAC articles breached by alcohol advertisements

Table 31 shows the number of articles that were considered to be breached in each of the code article categories in A to E for each alcohol advertisement.

**Table 31: ABAC codes breached by advertisement**

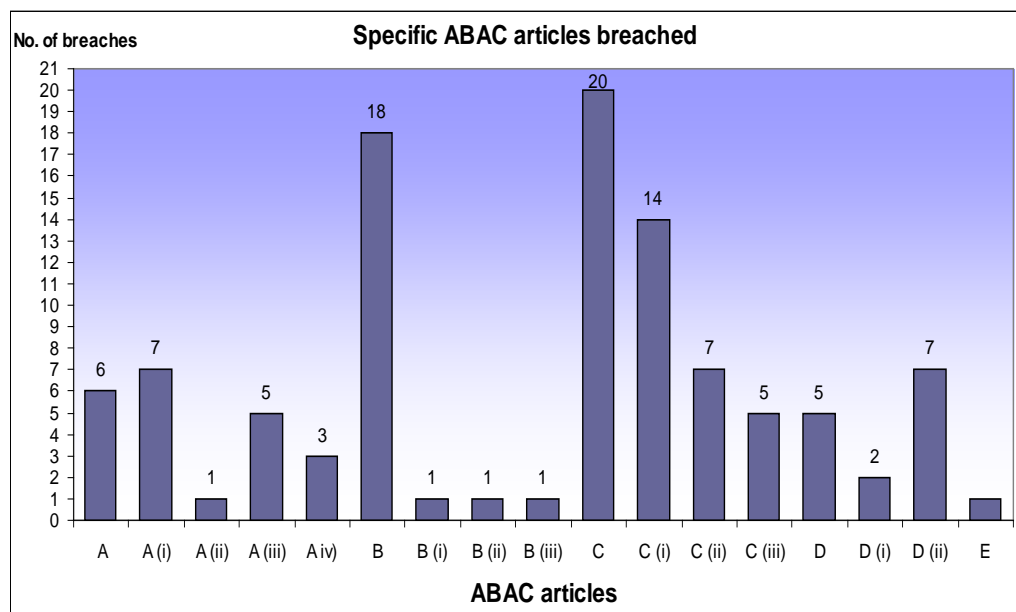
Ad	ABAC overall codes breached					
	Total breaches	A	B	C	D	E
Bundaberg Rum (2)	11	4	1	4	1	1
Tooheys New Draught	10	4	1	3	2	0
Boags Draught (1)	9	3	1	2	3	0
Victoria Bitter (2)	9	3	1	4	1	0
Victoria Bitter Beer (1)	8	1	4	1	2	0
Cascade Premium Lager	7	4	0	3	0	0
Bundaberg Rum (3)	5	0	1	3	1	0
Hahn Premium Light	5	0	1	3	1	0
Castlemaine XXXX	5	0	1	2	2	0
Corona Extra Beer	4	0	1	3	0	0
Tooheys Extra Dry	4	0	1	2	1	0
Boags St George (2)	4	0	1	3	0	0
Heineken Lager (1)	3	0	1	2	0	0
Bundaberg Rum (1)	3	0	1	2	0	0
Jim Beam Bourbon-(2)	3	2	0	1	0	0
Carlton Draught (1)	3	0	1	2	0	0
Becks Beer	3	0	1	2	0	0
Carlton Draught (2)	3	0	1	2	0	0
Jim Beam Bourbon (1)	2	1	1	0	0	0
Orlando Jacobs Creek	1	0	0	1	0	0
Cougar Bourbon	1	0	0	1	0	0
Smirnoff Ice (1)	1	0	1	0	0	0
<b>Total</b>	<b>104</b>	<b>22</b>	<b>21</b>	<b>46</b>	<b>14</b>	<b>1</b>

Code ‘C’ articles (*change in mood or environment*) were the most frequently breached with 46 breaches of the individual articles. This was followed by code ‘A’ articles (*mature, balanced and approach to consumption*) with 22 specific breaches and ‘B’ articles (*no strong or evident appeal to children and adolescents*) with 21 specific breaches. Code ‘D’ articles (*no association between alcohol and sport or hazardous activity*) attracted 14 breaches and only one breach was found for article ‘E’ (*not dare or challenge people to drink*).

Overall, 20 advertisements breached one or more code ‘C’ articles, 18 breached one or more code ‘B’ articles, 9 breached one or more code ‘D’ article, 8 breached one or more code ‘A’ articles.

Figure 12 shows the distribution of perceived breaches for each of the individual code articles within the ‘A’ to ‘E’ categories.

**Figure 12: Code articles considered breached**



Within code ‘A’ articles, the three most frequently found breaches related to: ‘A(i)’ (*not encourage excessive use or abuse of alcohol*) and ‘A(ii)’ (*not encourage underage drinking*). Breaches within the ‘B’ articles were largely related to the overall article. Within the ‘C’ articles, 20 breaches related to the main article, 14 breaches related to article ‘C(i)’ (*not depicted as contribution to success*), seven related to ‘C(ii)’ (*celebration must not imply contributed to success or achievement*) and five related to ‘C(iii)’ (*not suggest therapeutic benefit*). For article ‘D’ the most frequently found breaches were related to ‘D(ii)’ (*not depict drinking taking place before or during activity*).

## 4.9 Summary

This chapter presented data with respect to students' liking of specific advertisement elements, liking of the advertisement, intentions to try the advertised brand, and attitude toward the advertised brand (brand preference). Correlation analysis and structural equation modelling examined the relationship between liking of advertising elements and advertisement likeability (advertisement liking) and advertisement effectiveness (like to try and brand attitude). Further analyses examined the content of the alcohol advertisements against the ABAC and identified possible breaches.

The structural equation model showed that for this sample of alcohol advertisements, liking of specific elements contained in alcohol advertising predicted advertising attractiveness, which predicted advertising likability, which in turn, predicted advertising effectiveness.

Respondent ratings for 'advertisement liking' varied considerably across the sample of alcohol advertisements. Carlton Draught (1) and Tooheys New Draught rated highest among the advertised brands. Advertisements rated lowest were Orlando Jacobs Creek and Absolute Cut. Previous exposure to the sample of alcohol advertisements was reported highest for Carlton Draught (1), Tooheys New Draught, and Carlton Draught (2). In terms of content elements, both Carlton Draught (1) and Tooheys New Draught, contained 10 elements that, with exception of 'animals (real)', were strongly associated with advertisement liking. These elements were: humour; setting; visual appeal; slogan; music; animals (real); people/actors; special effects; and sound effects.

Carlton Draught (1) followed by Tooheys New Draught were also the most effective advertisements, rating highest by respondents as the brands they would 'like to try' and brands preferred over other advertised brands.

To put the importance of quantifying the influence of elements contained in alcohol advertising and their impact on advertising effectiveness among underage youth in Australia into context, advertisements used in this study were coded against the ABAC. Of the 25 advertisements, 22 were considered to contain one or more breaches of the ABAC, with the majority containing multiple breaches. Bundaberg Rum (2) contained the most article breaches, followed by Tooheys New Draught, Victoria Bitter (2), and Boags Draught (1). Only three advertisements (Absolute Cut; Heineken Lager 2; and Smirnoff Vodka 2) attracted no breaches.

Code article 'C' refers to content suggesting that the consumption or presence of alcohol may create or contribute to mood or environment change. This article constituted the highest number of perceived breaches and 20 of the 25 advertisements breached this code. The second highest article breached was Article 'B' which refers to strong or evident appeal to children or adolescents. Eighteen of the 25 advertisements breached this code.

Overall, these results support the hypothesis that ad attractiveness predicts overall advertisement liking, which in turn predicts advertisement effectiveness. Further, they show that despite a system of self-regulation and a specific code (ABAC) for regulating alcohol advertising, Australian underage youth are exposed to alcohol advertisements that they find attractive and that are seen to breach the ABAC.



## **CHAPTER 5**

### **DISCUSSION**

#### **5.1 Introduction**

The results of this study add to the findings of previous research on the impact of alcohol advertising on youth (Chen et al., 2005; Ellickson et al., 2005; Saffer, 2002; Saffer & Dave, 2006; Snyder et al., 2006). Specifically, this study followed and extended that of Chen and colleagues (2006) by examining the specific execution and theme elements of alcohol advertising that youth find appealing (advertisement attractiveness) leading to advertisement likeability, and its effect on underage viewers' attitudes and consumption intentions (advertisement effectiveness). This study strengthens the body of current research that suggests alcohol marketers target a youth audience to promote their products through appealing content (Chung et al., 2010; Jones & Donovan, 2001; Slater et al., 1996).

The alcohol advertisements used in this study were coded according to specific code articles of the ABAC which includes restrictions on content that appeals to children and adolescents. Of the 25 alcohol advertisements, 22 were considered to contain one or more breaches of the ABAC with the majority containing multiple breaches. Twenty of the advertisements were perceived to breach the code on the grounds of suggesting that the consumption or presence of alcohol may create or contribute to a change in mood or environment and 18 of the 25 were coded as breaching the code that prohibits strong or evident appeal to children or adolescents.

This chapter first reviews the data with respect to reported previous exposure to these advertisements. The relationship between liking of advertising elements, advertisement liking and advertising effectiveness is

discussed, followed by a review of the data on perceived breaches of the ABAC Code. The discussion concludes with recommendations for alcohol regulation, the limitations of the study and suggested future research.

## **5.2 Youth exposure to alcohol advertising**

The findings of this study support the proposition that alcohol marketers in Australia target underage youth. TARPs data used to identify alcohol advertisements for use in this study showed high exposure rates of alcohol advertising among children and underage audiences in Australia. The results of this analysis were reported in Fielder et al. (2009) (Appendix 3) and are consistent with the findings of previous studies using smaller market data (e.g. Winter et al. 2006 and King et al. 2005).

The 25 alcohol advertisements used in this study were selected from a larger sample of alcohol advertisements with the highest TARPs rating among 13 to 17 year olds in Australia. The 25 advertisements consisted of 15 beer advertisements, 9 spirits advertisements and 1 sparkling wine advertisement. The proportions of brands and alcohol types reported in the advertisement sample represent the distribution of product and brand exposure in the TARPs data.

With respect to reported prior exposure, six beer advertisements (Carlton Draught 1; Tooheys New Draught; Carlton Draught 2; Castlemaine XXX Gold; Tooheys Extra Dry; Heineken Lager) had been seen previously by more than 70% of the student sample, with 49% to 67% of those students indicating that they had seen the advertisement more than five times. Bundaberg Rum advertisements (featuring Bundy Bear) also featured prominently with previous exposure to all three of the advertisements for this brand reported by 43% to 47% of the student sample.

The high level of exposure reported in this study is concerning given the level of evidence linking exposure to alcohol consumption. A number of longitudinal studies have linked alcohol advertising exposure to initiation of drinking (Hanewinkel & Sargent, 2009; Sargent et al., 2006), intention to drink (Pasch et al., 2007), maintenance of drinking (Collins et al., 2007; Ellickson et al., 2005), and increased drinking (Snyder et al., 2006). Snyder et al. (2006) also found evidence of cumulative effects of media exposure where youth with greater exposure to alcohol advertising consumed more alcohol in the long term than youth exposed to lower levels (Chen et al., 2005; Ellickson et al., 2005; Saffer, 2002; Saffer & Dave, 2006; Snyder et al., 2006).

Alcohol advertising has been shown to have a cumulative influence on drinking initiation and the reinforcement of positive youths' perceptions of drinking alcohol (Anderson et al., 2009; Babor et al., 2003; Hastings et al., 2005; Jernigan & Mosher, 2005), and that heavy exposure can lead to an increased likelihood of heavier drinking (Babor et al., 2003). Casswell and Zhang (1998) found that young people who had established a relationship with a brand of beer by the age of 18 were heavier drinkers by the age of 21 and self-reported aggressive behaviour as a result of drinking (Casswell & Zhang, 1998). This cumulative effect has prompted the imposition of stringent regulatory codes restricting alcohol advertising in other countries, such as the Loi Evin law (Rigaud & Craplet, 2004).

Currently, Australia adopts a 'co-regulation' system of alcohol advertising where the CTICP prohibits advertising of alcoholic products on television during particular children viewing time slots. However analyses of TARPs data and self-reports of prior exposure, show that children and underage youth receive high levels of exposure to alcohol advertising on Australian free-to-air television. This high exposure includes concentration on specific brands resulting in cumulative brand exposure. This evidence of exposure

supports the proposition that alcohol marketers intentionally target underage youth audiences as a future consumer market (Chung et al., 2010; Fielder et al., 2009; Jones & Donovan, 2001; Slater et al., 1996; Winter et al., 2008).

It is worth noting that three of the advertisements most seen previously (Carlton Draught 1, Tooheys New Draught, Carlton Draught 2) by the student sample were also rated highest on overall liking and as the advertisements that ‘stood out’ most.

Further, it is important to consider that these advertisements screened on free-to-air television from November 2005 to October 2006. Although some of these advertisements continued to run after that period, it is likely that much exposure occurred when students were at least two years younger (e.g. age range 10 to 11 years through to 13 to 14 years). Overall, the exposure data highlight the weakness of the CTICP in protecting youth from exposure to alcohol advertising.

### **5.3 Alcohol advertising likeability and effectiveness**

The main objectives of this study were to identify specific execution and theme elements of alcohol advertising that predict youth’s positive attitudes to the advertisement, advertised brand and alcohol consumption intentions (advertising effectiveness), and to model the relationship between specific elements and advertising effectiveness. Results showed that underage youths’ liking of alcohol advertisements is related to youths’ liking of specific elements that are contained in the advertisement.

#### **5.3.1 Advertising likeability**

The majority of the advertisements were clearly liked by the student sample. Of note was the finding that older youth in the sample (Year 10, aged 15-16

years) generally gave higher ratings for advertisements that were liked least overall by the total sample. This finding is disturbing in the context of the legal age of drinking in Australia (18 years) as it suggests that as youth approach the legal drinking age, the content of alcohol advertisements increases in likeability and thus advertising effectiveness also increases.

With respect to liking of specific elements, the majority of elements (10 out of 12) scored an average liking rating higher than 5. The highest rated elements were: 'animated/cartoon characters' (mean = 7.2), 'humour' (mean = 6.7), 'animals' (mean 5.9) and 'special effects' (mean = 5.9). Four advertisements contained an 'animated or cartoon character': Corona Extra, featuring cartoon beer bottles, and the three Bundaberg Rum advertisements featured the life-like animated *Bundy Bear*.

Advertisement attractiveness (liking of specific elements) predicted advertisement likeability. The seven highest rating advertisements for advertisement liking contained elements that also recorded high mean liking. All seven contained 'humour', three contained 'animated/cartoon characters', three contained 'animals', and two contained 'special effects'. When elements were correlated with advertisement liking, strong positive associations ( $r > .60$ ,  $p < .01$ ) were found between advertisement liking and the following elements: 'humour'; 'story'; 'settings'; 'visual appeal'; 'people/actors'; 'music or jingle'; 'sound effects'; 'special effects'; 'animated or cartoon characters'; and 'sexual appeal'. These findings are similar to that of Chen et al. (2006).

Of the five alcohol advertisements rated highest for liking, three were also identified unprompted by the students, as standing out amongst other alcohol advertisements (Carlton Draught 1, Tooheys New, Carlton Draught 2). Bundaberg Rum (2) featuring the *Bundy Bear* character was also frequently nominated.

Eighteen of the 25 alcohol advertisements contained humour. The appeal of humour to youth in its various forms (e.g. slapstick, sarcastic, irony, sexual illusion and clownish) has been strongly demonstrated in the literature as effectively mediating youth purchase requests (Buijzen & Valkenberg, 2004; Valkenburg, 2000). Of the 18 advertisements that contained humour, 16 recorded a mean of over of 5.0 on the liking scale and two rated 4.8.

Animals were used in three of the top five preferred advertisements. One advertisement in the top five contained an animated character, *Bundy Bear*. There is considerable evidence that animated and animal characters hold special appeal to children, especially younger children and animals have been a favoured topic of television programs targeting children (Acuff & Reiher, 1997; Australian Communications and Media Authority, 2007; Garitaonandia et al., 2001; Gentile et al., 2001), and animal characters in particular have been used by marketers to target children and youth for a range of products – including tobacco and alcohol. Fielder et al. (2009) make the point that whilst some use of animals in advertising appears to be innocuous, others could be interpreted as deliberately targeting children and underage youth.

Regardless of intent, given the universal appeal to children of bear characters (e.g., *Humphrey B. Bear* in Australia; *Fozzie Bear* of *Muppets* fame; and the USA forests icon *Smokey the Bear* (Pennsylvania Department of Conservation and Natural Resources, 2007), it is likely that *Bundy Bear*, the life size polar bear used as the main character in Bundaberg Rum advertisements, would have considerable appeal to children (Fielder et al., 2009).

### 5.3.2 Advertising effectiveness

Alcohol advertisements rated highest for advertisement liking by the student sample were also rated highly on ‘like to try’. These findings are consistent with Chen et al. (2005) who found a strong association between advertising likeability of beer advertisements among youth and advertising effectiveness.

Four of the top five ‘preferred brand’ advertisements were also in the top five advertisements ‘liked’ overall. Carlton Draught (1) was the highest scoring advertisement across all the advertised brands in terms of advertisement liking and brand preference scores. Furthermore, Carlton Draught (1) was nominated as the advertisement that stood out the most and perceived to be the most effective in getting young people to try that particular beverage.

Consistent with Chen et al. (2005), this study found a strong positive relationship between specific advertisement elements contained in alcohol advertisements and underage viewers’ advertisement liking. This finding is consistent with other studies that have positively associated content appeal with youth drinking behaviours and intentions (Aitken, Leather, & Scott, 1988b; Aitken et al., 1988c; Atken, Neuendorf, & McDermott, 1983; Austin & Knaus, 2000; Chen et al., 2005; Grube & Waiters, 2005; Waiters et al., 2001; Wyllie et al., 1998a, 1998b).

### 5.3.3 Structural Equation Modelling

Structural equation modelling using AMOS (SPSS Inc., 2009) utilised element liking to predict latent effects on advertising likeability and effectiveness. The standardised parameter estimates ( $\lambda$ ) for each of the eight elements specifying “Ad attractiveness” significantly explained overall

attractiveness of alcohol advertisements ( $p=0.001$ ). Two measured parameters ‘want to try the brand’ and ‘prefer the brand’ significantly explained overall ad effectiveness ( $p=0.001$ ).

The model showed that ‘Ad attractiveness significantly predicted ‘Ad likeability’ and ‘Ad likeability’ significantly predicted ‘Ad effectiveness’. Gender was shown to have a small but significant impact on ‘Ad effectiveness’, however year level had no effect. These modelling results confirm the need to restrict the content of alcohol advertising that contains elements that are attractive to underage youth.

#### **5.4 Alcohol Beverages Advertising (and Packaging) Code (ABAC)**

This study mapped content of the 25 alcohol advertisements against the Australian code of practice for regulation of alcohol advertising (the ABAC).

##### **5.4.1 ABAC – identified breaches**

The ABAC Scheme operates under a code that:

“...is designed to ensure that alcohol advertising will be conducted in a manner which neither conflicts with nor detracts from the need for responsibility and moderation in liquor merchandising and consumption, and which does not encourage consumption by underage persons.” (ABAC, 2009, p.1).

Standards applied to alcohol advertising under this code are set out by eight articles (A to H) and their sub-articles.



Content analysis of the 25 advertisements against five ABAC code articles (A to E) found that 22 were perceived to contain at least one or more breaches of the ABAC, with the majority of advertisements containing multiple breaches. Bundaberg Rum (2), titled ‘Macca’s Party’ featured the *Bundy Bear* character attending an all female (pre-wedding) party celebration with the scenario that *Bundy Bear* is mistaken for a stripper. This advertisement was perceived to contain 11 breaches. Tooheys New Draught recorded 10 breaches. It featured crowd scenes and showed two men on the top of a city building catapulting the ingredients for beer (along with two females and a stag) into the sky resulting in people in the city celebrating beer raining from the sky. Victoria Bitter (2) attracted nine breaches and featured an ex-Australian cricket player (David Boone) emerging from a large pink cake featuring scantily dressed girls. Boags Draught (1) also attracted nine breaches. This advertisement featured male employees at the Boags factory producing the product and included various scenarios including singing, dancing and storytelling.

Across the sample of advertisements, code articles ‘A’, ‘B’ and ‘C’ recorded the highest number of breaches. Eight advertisements breached Code article ‘A’ (22 total breaches), 18 breached code article ‘B’ (21 total breaches) and 20 breached code article ‘C’ (46 total breaches). The ABAC Scheme states with respect to article ‘A’ that advertisements must ‘*present a mature, balanced and responsible approach to the consumption of alcohol beverages...*’, under article ‘B’ that alcohol advertisements must ‘*not have a strong or evident appeal to children or adolescents*’ and code article ‘C’ requires that alcohol advertisements do ‘*not suggest that the consumption or presence of alcohol beverages may create or contribute to a significant change in mood or environment*’ (ABAC, 2009, p. 1).

Given the high number of coded breaches among the alcohol advertisements used in this study, concern is raised about the efficacy of the ABAC Scheme in protecting underage audiences from alcohol advertising that appeals to children and underage youth. The ABAC articles appear to be a permeable barrier allowing underage exposure to alcohol advertisements. The analysis carried out in this study suggests that the code articles under the ABAC Scheme lack reasonable substance or sensitivity for determining breaches and hence casts possible doubt over the ABAC Scheme's seriousness about enforcing the ABAC.

#### **5.4.2 Previous advertisement breaches**

Of the 25 alcohol television advertisements used in this study, a search of the Advertising Standards Board determinations revealed that complaints had been lodged with the Board against six of these advertisements by members of the public: Bundaberg Rum (2); Cascade Premium Lager; Hahn Premium Light; Tooheys New; Tooheys Extra Dry; and Victoria Bitter. All six advertisements contained humour, story and music. Four of the six contained an animal or animated character. The Advertising Standards Board received complaints against these advertisements and referred all six to the ABAC for adjudication.

Four of the complaints were dismissed by the ABAC panel and, despite receiving pre-approval, two were upheld (Bundaberg Rum [2] and Tooheys New). With respect to the Bundaberg Rum (2) advertisement, the ABAC panel upheld the complaint (reference number 11/06) based upon the panel's agreement that the *Bundy Bear* character in the advertisement would have evident appeal to children when the bear was placed within the context of the advertisement. In its final determination, the panel makes reference to the *Bundy Bear* character:

- ‘37. The Panel accepts that without the use of the “Bundy” character, the advertisement would not have “strong or evident appeal” to children. However the “Bundy” character is central to the advertisement and this character in appearance (not behaviour) does resemble characters which have long been popular or associated with children’s entertainment.
38. This means the use of the polar bear character has always a potential to have “appeal” to children. Whether this moves from an incidental or residue appeal to a “strong or evident appeal” in breach of the ABAC standard will depend on the context in which the “Bundy” character is used. The advertiser needs to be careful about the use of the character.
39. In a particular context, the use of the character will not have a strong or evident appeal to children, whereas in another context, the character’s use might offend against the ABAC standard. In this particular case, a majority of the Panel on balance believes the advertisement does breach the ABAC.
40. In reaching this decision, the Panel takes account that the character is placed at a party within a private home. The scene has balloons, bright colours, music and dancing. While all the persons at the party are adult, the party scene will be familiar to children and placing the “Bundy” character in this context creates an overall impression which has an evident appeal to children.’ (ABAC Complaints Panel, Determination No: 11/06, 25 April, 2006).

Given the above decision and the results of this study confirming specific appeal of animal characters to underage youth, the candidate submitted a complaint to the ASB regarding a Bundaberg Rum advertisement that aired during children's viewing time during a live sporting event in June 2009. The complaint (reference number 58/09) was based on the appeal of 'Bundy Bear' to children and underage youth. This complaint was also dismissed by the ASB and the ABAC panel.

A more recent advertisement for Bundaberg Rum using computer enhanced imagery similar to that of video games featured a cowboy scene with 'Bundy Bear' and two cowboys wearing cowboy hats. This advertisement attracted complaint (reference number 37/10) on the basis that the cowboy scene and the bear would have evident appeal to children and youth. This complaint was also dismissed by the ABAC.

The ABAC adjudication noted that in the previously upheld Bundaberg Rum advertisement, party-goers were wearing 'children's versions of cowboy hats' and that because the 'Bundy Bear' character had altered in appearance from other advertisements considered in previous determinations, the new version of the character was 'less familiar in appearance to younger children's characters, but may bring to mind computer generated characters popular in current movies and computer games'. Such comments emphasise the scope of ambiguity in interpreting code articles. The ABAC panel appear to be subjective drawing widely on definition and importance of context to justify their decisions with relation to the appeal of the 'Bundy Bear' character. Ambiguity of interpretation would be simplified if the ABAC codes were more specific in restricting the inclusion of elements for which there is evidence of appeal to children and underage youth, regardless of the form or context in which they appear.

The ABAC logic is also open to question. The ABAC argues that if the advertisement does not appeal to children and youth when the bear is removed, then the advertisement with the bear does not appeal to children and youth. The more acceptable logic is that adding an element that appeals to children and youth to an advertisement will enhance the appeal of the advertisement to children and youth.

The above highlight a number of problems associated with effectively applying the ABAC to alcohol advertising in Australia. Assessing the content of advertisements against Codes is problematic in that many interpretations are subjective; for example, is the advertisement saying that consumption will result in or contribute to sexual success, or only associating the product with sex? This issue has been raised previously in the literature. For example, Jones and Donovan's use of marketing experts suggests that such experts could be used to judge advertisement breaches (Jones & Donovan, 2002).

## **5.5 Recommendations**

The results of this study support evidence from other Australian studies that the system of self regulation in its current form fails to protect underage youth from exposure to alcohol advertising and from content elements within that advertising that they find appealing (Fielder et al., 2009; King et al., 2005; Winter et al., 2008). The ABAC appears to be subjectively interpreted by industry and the panel that adjudicates complaints.

The body of literature pertaining to the health and social impact of youth alcohol consumption supports the importance of restricting youth exposure to alcohol advertising. The growing evidence that the cumulative effect of alcohol advertising promotes pro-drinking attitudes and plays a significant role in drinking initiation and the normalisation of drinking (Anderson et al.,

2009; Babor et al., 2003; Hastings et al., 2005; Jernigan & Mosher, 2005) has prompted some countries to impose stringent codes restricting alcohol advertising. For example, France's Loi Evin law (Rigaud & Craplet, 2004), effective as of 1991, prescribes strict regulation of alcohol advertising in France. This law provides a sound framework for alcohol advertising by providing a clear definition of alcoholic drinks (any beverage over 1.2% by volume alcohol content), mandatory restriction of all alcohol advertising on television or cinemas, and no alcohol industry sponsorship of cultural or sporting events. While advertising is permitted in adult press, on billboards and radio, and more recently the internet, strict controls on content apply. For example, messages and images must only refer to qualities of the product and a health message must be included. The law also restricts any advertising targeting young people.

Given the results of this study, that children and underage youth in Australia are being exposed to alcohol advertisements that would be in breach of specific codes of the ABAC, and that appealing content predicts advertising likeability which in turn, is related to advertising effectiveness, the following recommendations in relation to self-regulation of alcohol advertising are suggested:

1. Mandatory independent monitoring of alcohol advertising;
2. Revision of the ABAC code as per the French code such that advertising for product attributes only is permitted. That would eliminate elements that appeal to children and youth and specifically 'lifestyle' positioning;
3. Substantial penalties imposed upon advertisers who breach the codes such as banning advertising of the product for a significant period of time;

4. Review of children's viewing times and tightening of the CTICP to restrict the promotion of alcohol at any time except during adult viewing timeslots (including live sporting events);
5. Mandatory independent pre-vetting of alcohol advertisements.

## **5.6 Limitations of the study**

Several limitations of this study are identified.

### **5.6.1 Sample selection**

Although stratification of SES and systematic interval sampling were employed to recruit government schools in the Perth metropolitan area, the sample of participating schools for this study was biased toward those located in high socio-economic areas. This simply reflects a greater agreement to participate amongst these schools.

Furthermore, parents were required to read and sign a consent form contained in a package provided to students in confidential sealed envelopes. This process relied upon the student taking the envelope home, having the parent read and sign the consent form and then return the documents to the school. Therefore the sample may have been biased toward students who were generally more diligent by nature or compliant with school procedures.

### **5.6.2 Peer influence on responding**

The majority of data collection took place in schools and all respondents viewed the advertisements in groups of peers. However, the desire to

provide answers that are socially acceptable is a consideration for validity. For example, a potential confounder was identified by anecdotal observation which revealed that some brands were considered by youth to be ‘more cool’ than others used in the sample. This may have influenced the measure of advertisement liking for some brands. The candidate was present throughout all data collection sessions and attempted to reduce peer influence by controlling social interaction throughout sessions.

### **5.6.3 Media exposure and youth**

This study was limited to alcohol advertising exposure on television whereas youth are exposed to alcohol advertising in various media forms (e.g. radio; billboard; transit; internet).

Further, advertising effects were measured for the advertised brand and not alcohol in general.

### **5.7 Future research**

This study has noted above, that the advertising effects were measured for the advertising brand but not for alcohol in general. Future research could include measures on attitudes and intentions with respect to the category of alcohol.

With respect to breaches of the self-regulation codes, future research could specifically assess the extent to which advertisements that breach the codes have more or less impact on advertising effective measures than do ads that do not breach the code.



The structural equation model used in this study used single item variables. Future research should include multi-item scales. This may also help to improve the model fit indices for future research testing structural equation models.

Finally, this study's SEM model did not include all elements as they were not present in all advertisements. Few advertisements contained 'animals', 'animated or cartoon characters' and 'sexual appeal'. Future research could select sample advertisements that contain these specific elements to make the SEM modelling more robust.

## **5.8 Conclusion**

This study identified specific execution and theme elements contained in alcohol advertising that predict positive attitudes to alcohol advertising among youth. Further, it modelled the relationship between liking of specific elements, advertisement liking and alcohol advertisement effectiveness.

This study supports international evidence that alcohol advertising that youth find appealing is strongly associated with advertising effectiveness. Further, this study extends the evidence that specific elements contained in alcohol advertising have a direct association with alcohol advertising effectiveness.

Exposure data and an analysis of ABAC code breaches of alcohol advertisements used in this study highlighted weaknesses in the current Australian system of self-regulation of advertising and its apparent failure to effectively protect children and underage youth from exposure to alcohol advertising and its harmful effects. Findings support the recommendation of

mandatory independent monitoring of alcohol advertising and a more stringent system of regulation of advertising in general.

The results of this study add to existing evidence demonstrating an inherently flawed system of self-regulation that supports an ineffective alcohol beverages code of advertising and thus exposing children and underage youth to inappropriate alcohol advertising and subsequent harmful effects. These findings serve to support federal policy reform of the self-regulatory system of advertising in Australia.

## References

- Abbey, A., Scott, R., & Smith, M. (1993). Physical, subjective, and social availability: their relationship to alcohol consumption in rural and urban areas. *Addiction*, 88, 489-499.
- Acuff, D., & Reiher, R. (1997). *What kids buy and why*. New York: Free Press.
- Adlaf, E. M., & Kohn, P. M. (1989). Alcohol advertising, consumption and abuse: a covariance-structural modelling look at Strickland's data. *Br J Addiction*, 84(7), 749-757.
- Advertising Standards Bureau. (2008). AdStandards News 0308. *AdStandards News 0308 (7th edn)*.
- Advertising Standards Bureau. (2011). Advertising Standards Bureau. Retrieved from <http://www.adstandards.com.au/advertisingstandards/codesweadminister>
- Aitken, P., Eadie, D. R., Leather, D. S., McNeill, R. E., & Scott, A. C. (1988a). Television advertisements for alcoholic drinks do reinforce under-age drinking. *British Journal of Addiction*, 83, 1399 - 1419.
- Aitken, P., Leather, D., & Scott, A. (1988b). Ten to sixteen year olds' perceptions of advertisements for alcoholic drinks. *Alcohol and Alcoholism*, 23, 491-500.
- Aitken, P. P., Eadie, D. R., Leather, D. S., McNeill, R. E., & Scott, A. C. (1988c). Television advertisements for alcoholic drinks do reinforce under-age drinking. *British J Addiction*, 83(12), 1399-1419.
- Aitken, P. P., Leather, D. S., Scott, A. L., & Squair, S. I. (1987). Cigarette brand preferences of teenagers and adults. *Health Promotion International*, 2(3), 219-226. doi:10.1093/heapro/2.3.219
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Alcohol and Other Drugs Council of Australia. (2005). *National Alcohol Strategy 2005-2009*. Woden ACT.
- Andersen, A., Holstein, B. E., & Due, P. (2006). School-related risk factors for drunkenness among adolescents: risk factors differ between socio-economic groups. *European Journal of Public Health*, 17(1), 27-32. doi:10.1093/eurpub/ckl071
- Andersen, A., Holstein, B. E., & Due, P. (2007). School-related risk factors for drunkenness among adolescents: risk factors differ between socio-economic groups. *European Journal of Public Health*, 17(1), 27-32 doi:10.1093/eurpub/ckl071

- Anderson, P., de Bruijn, A., Angus, K., Gordon, R., and Hastings, G. (2009). 'Impact of alcohol advertising and media exposure on adolescent alcohol use: a systematic review of longitudinal studies', *Alcohol & Alcoholism*, 44(3), 229-243. doi:10.1093/alcalc/agn115
- Anson, J. (2010). Evin Law: alcohol advertising now allowed on internet. (17 June 2009). Retrieved from <http://www.decanter.com/news/wine-news/484681/evin-law-alcohol-advertising-now-allowed-on-internet>
- Atken, C., Neuendorf, K., & McDermott, S. (1983). The role of alcohol advertising in excessive and hazardous drinking. *Journal of Drug Education*, 13, 313-325.
- Atkin, C. K. (1990). Effects of televised alcohol messages on teenage drinking patterns. *Journal of Adolescent Health Care*, 11, 10 - 24.
- Audrain-McGovern, J., Rodriguez, D., Patel, V., Faith, M. S., Rodgers, K., & Cuevas, J. (2006). How do psychological factors influence adolescent smoking progression? The evidence for indirect effects through tobacco advertising receptivity. *Pediatrics*, 117(4), 1216-1225.
- Austin, E., & Knaus, C. (2000). Predicting the potential for risky behavior among those "too young" to drink as a result of appealing advertising. *Journal of Health Communication*, 5(1), 13-27.
- Austin, E., & Nach-Ferguson B. (1995). Sources and influences of young school-aged children's knowledge about alcohol. *Health Communication*, 7, 1-20.
- Austin, E. W., Chen, M. J., & Grube, J. W. (2006). How does alcohol advertising influence underage drinking? The role of desirability, identification and skepticism. *Journal of Adolescent Health*, 38(4), 376-384.
- Austin, E. W., & Hust, S. J. (2005). Targeting adolescents? The content and frequency of alcoholic and nonalcoholic beverage ads in magazine and video formats November 1999-April 2000. *Journal of Health Communication*, 10(8), 769-785.
- Austin, E. W., Pinkleton, B. E., & Fujioka, Y. (2000). The Role of Interpretation Processes and Parental Discussion in the Media's Effects on Adolescents' Use of Alcohol. *Pediatrics*, 105(2), 343-349. doi:10.1542/peds.105.2.343
- Australian Broadcasting Authority. (2004). *Commercial Television Industry Code of Practice 2004*. Retrieved from [http://www.freetv.com.au/Content\\_Common/pg-Code-of-Practice.seo](http://www.freetv.com.au/Content_Common/pg-Code-of-Practice.seo)

- Australian Bureau of Statistics. (2006). *Year Book Australia, 2006* (1301.0). Canberra. Retrieved from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1301.02006?OpenDocument>
- Australian Bureau of Statistics. (2008). Australian Social Trends (4364.0). Canberra. Retrieved from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Chapter5002008>
- Australian Bureau of Statistics. (2010). *Apparent consumption of alcohol, Australia, 2008-09*. Retrieved from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/4307.0.55.001/#Spirits>
- Australian Communications and Media Authority. (2005). Children's Television Standards. (Subsection 122 (1)). Retrieved from [http://www.acma.gov.au/acmainterwr/aba/contentreg/codes/television/documents/childrens\\_tv\\_standards\\_2005.pdf](http://www.acma.gov.au/acmainterwr/aba/contentreg/codes/television/documents/childrens_tv_standards_2005.pdf)
- Australian Communications and Media Authority. (2007). *Television advertising to children: A review of contemporary research on the influence of television advertising directed to children*. Canberra.
- Australian Department of Health and Ageing. (2002). *A study of attitudes and behaviours of drinkers at risk: research report*. Canberra.
- Australian Institute of Health & Welfare. (2008). *2007 National drug strategy household survey: Detailed findings*. Canberra.
- Australian Television Audience Measurement (OzTAM). (2005). *Terms and definitions*. Retrieved from [http://www.oztam.com.au/pdf/tv\\_ratings/terms\\_definitions.pdf](http://www.oztam.com.au/pdf/tv_ratings/terms_definitions.pdf)
- Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., et al. (2003). *Alcohol: No ordinary commodity*. Oxford University Press.
- Babor, T., Xuan, Z., & Damon, D. (2010). Changes in the self-regulation guidelines of the US Beer Code reduce the number of content violations reported in TV advertisements. *Journal of Public Affairs*, 10(1-2), 6-18.
- Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall, c1977.
- Baumberg, B. (2006). The global economic burden of alcohol: a review and some suggestions. *Drug and Alcohol Review*, 25, 537-551.
- Beaver, W. (1997). What to do about alcohol advertising. *Business Horizons*, July August 87-91.

- Beder, S. (2010). *Branded Democracy*. Retrieved from <http://herinst.org/BusinessManagedDemocracy/education/commercialism/classroom.html>
- Beder, S., Varney, W., & Gosden, R. (2009). *This little kiddy went to market*. Sydney, NSW: University of New South Wales Press Ltd.
- Best, D., Manning, V., Gossop, M., Gross, S., & Strang, J. (2006). Excessive drinking and other problem behaviours among 14-16 year old school children. *Addictive Behaviors*, 31(8), 1424-1435.
- Biehl, M., Natsuaki, M., & Ge, X. (2007). The Influence of pubertal timing on alcohol use and heavy drinking trajectories. *Journal of Youth Adolescence*, 36, 153-167.
- Bollen, K., & Stine, R. (1992). Bootstrapping goodness-of-fit measures in structural equation Models. In K. Bollen & S. Long (Eds.), *Testing structural equation models*. London: Sage Publications.
- Bonomo, Y. (2005). Adolescent alcohol problems: whose responsibility is it anyway? *MJA*, 183(8), 430-432.
- Bonomo, Y. A., Bowes, G., Coffey, C., Carlin, J. B., & Patton, G. C. (2004). Teenage drinking and the onset of alcohol dependence: a cohort study over seven years. *Addiction*, 99(12), 1520-1528.
- Borsari, B., & Carey, K. B. (2001). Peer influences on college drinking: A review of the research. *Journal of Substance Abuse*, 13(4), 391-424.
- Brown, S., & Tapert, S. (2004). Health consequences of adolescent alcohol involvement. In National Research Council and Institute of Medicine (Ed.), *Reducing underage drinking: A collective responsibility*. (pp. 383-401). Washington DC: The National Academies Press.
- Brown, S. A., Tapert, S. F., Granholm, E., & Delis, D. C. (2000). Neurocognitive functioning of adolescents: effects of protracted alcohol use. *Alcohol Clin Exp Res*, 24(2), 164-171.
- Buijzen, M., & Valkenberg, P. (2004). Developing a typology of humor in audiovisual media. *Media Psychology*, 6, 147-167.
- Carroll, T., & Donovan, R. (2002). Alcohol marketing on the Internet: new challenges for harm reduction. *Drug and Alcohol Review*, 21, 83-91.
- Carroll, T., Stewart, C., King, E., & Taylor, J. (2005). *Consistency of Alcohol Advertising and Promotion on the Internet with the Revised Alcohol Beverages Advertising Code*. Canberra.
- Casswell, S. (2004). Alcohol brands in young people's everyday lives: new developments in marketing *Alcohol and alcoholism*, 39(6), 471-476.

- Casswell, S., & Zhang, J. (1998). Impact of liking for advertising and brand allegiance on drinking and alcohol-related aggression: a longitudinal study. *Addiction*, 93(8), 1209-1217.
- Center for Media Education. (1998). *Alcohol Advertising Targeted at Youth on the Internet: An update 1998*. Washington.
- Center on Alcohol Marketing and Youth. (2002). *Overexposed: Youth a target of alcohol advertising in magazines*. Washington DC.
- Center on Alcohol Marketing and Youth. (2004a). *Alcohol Advertising on Sports Television 2001 to 2003*. Washington DC. Retrieved from
- Center on Alcohol Marketing and Youth. (2004b). *Clicking with Kids: Alcohol marketing and youth on the Internet*. Washington.
- Center on Alcohol Marketing and Youth. (2005). *The toll of underage drinking*. Washington DC.
- Center on Alcohol Marketing and Youth. (2007). *Youth exposure to alcohol advertising on television and in national magazines, 2001 to 2006*. Washington DC.
- Center on Alcohol Marketing and Youth. (2008). *Youth exposure to alcohol advertising on television, 2001 to 2007*. Washington DC.
- Chaloupka, F. J., Grossman, M., & Saffer, H. (2002). The effects of price on alcohol consumption and alcohol-related problems. *Alcohol Research & Health*, 26(1), 22-34.
- Chandran, R. (2003). Application of neuroscience to study ad response. *Businessline*, 1-2.
- Charters, S. (2006). *Wine and Society: The social and cultural context of a drink* Sydney: Butterworth-Heinemann.
- Chen, M., Grube, J., Bersamin, M., Waiters, E., & Keefe, D. (2005). Alcohol Advertising: What makes it attractive to youth? *Journal of Health Communication*, 10, 553-565.
- Chikritzhs, T., Chikritzhs, T., Pascal, R., & Jones, P. (2004). *National Alcohol Indicators Bulletin No. 7. Perth: Under-aged drinking among 14-17 year olds and related harms in Australia*. National Drug Research Institute. Curtin University, Perth, Western Australia.
- Chikritzhs, T., Catalano, P., Stockwell, T., Donath, S., Ngo, H., Young, D., et al. (2003). *Australian alcohol indicators, 1990-2001: patterns of alcohol use and related harms for Australian states and territories*. . Perth, Western Australia.
- Chikritzhs, T., Dietze, P., Allsop, S., Daube, M., Hall, W., & Kypri, K. (2009). The "alcopops" tax: heading in the right direction. *MJA*, 190(6), 294-295.

- Chikritzhs, T., & Pascal, R. (2004). *Trends in youth alcohol consumption and related harms in Australian jurisdictions, 1990–2002*. Perth Western Australia.
- Choi, W. S., Ahluwalia, J. S., Harris, K. J., & Okuyemi, K. (2002). Progression to established smoking: the influence of tobacco marketing. *American Journal of Preventative Medicine*, 22(4), 228-233. doi:S0749379702004208 [pii]
- Chung, P., Garfield, C., Elliott, M., Ostroff, J., Ross, C., Jernigan, D., et al. (2010). Association between adolescent viewership and alcohol advertising on cable television. *American Journal of Public Health Health Affairs*, 100, 555–562.
- Clark, A. E., & Loheac, Y. (2007). "It wasn't me, it was them!" Social influence in risky behavior by adolescents. *Journal of Health Economics*, 26(4), 763-784.
- Clow, K., & Baack, D. (2004). *Integrated advertising, promotion, and marketing communications* (Second ed.). New Jersey: Pearson Education Inc.
- Coleman, L., & Cater, S. (2007). Changing the culture of young people's binge drinking: From motivations to practical solutions. *Drugs: Education, Prevention and Policy*, 14(4), 305-317.
- Collins, D., & Lapsley, A. (2002). *Counting the cost: estimates of the social costs of drug abuse in Australia in 1998-9* (Monograph series no. 49.). Canberra.
- Collins, D., & Lapsley, H. (2008). *The costs of tobacco, alcohol and illicit drug abuse to Australian society in 2004/05*. Canberra.
- Collins, R. L., Ellickson, P. L., McCaffrey, D., & Hambarsoomians, K. (2007). Early adolescent exposure to alcohol advertising and its relationship to underage drinking. *Journal of Adolescent Health*, 40(6), 527-534.
- Committee on Communications. (2006). Children, adolescents, and advertising. *Pediatrics*, 118(6), 2563-2569.
- Committee on Substance Abuse. (2010). Alcohol Use by Youth and Adolescents: A Pediatric Concern. *Pediatrics*, 125(5), 1078-1087. doi:10.1542/peds.2010-0438
- Commonwealth of Australia. (1992). *Broadcasting Services Act 1992*. Canberra.
- Connolly, G. M., Casswell, S., Zhang, J. F., & Silva, P. A. (1994). Alcohol in the mass media and drinking by adolescents: a longitudinal study. *Addiction*, 89, 1255 - 1263.



- Constantinides, E. (2006). The Marketing Mix Revisited: Towards the 21st Century Marketing. *Journal of Marketing Management*, 22(3/4), 407-438.
- Cowan, R., & Mosher, J. (1985). Public health implications of beverage marketing: Alcohol as an ordinary consumer product. *Contemporary Drug Problems*, 12(4), 621-657.
- De Bellis, M., Clark, D., Beers, S., & Soloff, P. (2000). Hippocampal volume in adolescent-onset alcohol use disorders. *The American Journal of Psychiatry*, 157(5), 737-744.
- Department of Education and Training Western Australia. (2007). Research conducted on DET sites by external parties.
- DesRoches, G. (1994, September 26). An adman's struggle with Joe Camel and free speech. *Advertising Age*. Detroit, USA.
- DeWit, D., Adlaf, E., Offord, D., & Ogborne, A. (2000). Age at first alcohol use: A risk factor for the development of alcohol disorders. *American Journal of Psychiatry*, 157(5), 745-750.
- Distilled Spirits Industry Council of Australia Inc. (2010). The Alcohol Beverages Advertising Code. Retrieved from <http://www.abac.org.au/uploads/File/ABAC%20Code%20at%206%20July%202010.pdf>
- Donovan, K., Donovan, R., Howat, P., & Weller, N. (2007). Magazine alcohol advertising compliance with the Australian Alcoholic Beverages Advertising Code. *Drug and Alcohol Review*, 26(1), 73-81.
- Donovan, R. (1997). *A model of alcohol consumption to assist in developing communication strategies for reducing excessive alcohol consumption by young people*. Perth.
- Doran, C. M., & Shakeshaft, A. P. (2008). Using taxes to curb drinking in Australia. *The Lancet*, 372(9640), 701-702.
- Duffy, M. (1989). Measuring the contribution of advertising to growth in demand: econometric accounting framework. *International Journal of Advertising*, 8, 95 - 110.
- Duncan, T. (2005). *Principles of advertising and IMC* (Second ed.). New York: McGraw-Hill/Irwin.
- Dunn, M., & Yniguez, R. (1999). Experimental demonstration of the influence of alcohol advertising on the activation of alcohol expectancies in memory among fourth and fifth grade children. *Exp Clin Psychopharm*, 7(4), 473-483.
- Dworkin, J. (2005). Risk taking as developmentally appropriate experimentation for college students. *Journal of Adolescent Research*, 20(2), 219.

- Elders, M. (1997). *Preventing tobacco use among young people: A report of the US Surgeon General*. Washington D.C.: US Department of Health and Human Services.
- Ellickson, P. L., Collins, R. L., Hambarsoomians, K., & McCaffrey, D. F. (2005). Does alcohol advertising promote adolescent drinking? Results from a longitudinal assessment. *Addiction*, 100, 235 - 246.
- Endicott, R. (2005). 19th Annual Global Marketing. *Advertising Age*, 100, 1201.
- Epstein, J., Griffin, K., & Botvin, G. (2008). A Social Influence Model of Alcohol Use for Inner-City Adolescents: Family Drinking, Perceived Drinking Norms, and Perceived Social Benefits of Drinking. *Journal of Studies on Alcohol and Drugs*, 69(3), 397.
- European Advertising Standards Alliance. (2004). *EASA Issue Brief on Motor Vehicle Advertising and Road Safety*. Retrieved from <http://www.easa-alliance.org>
- Ferguson, S., Hardy, A., & Williams, A. (2003). Content analysis of television advertising for cars and minivans: 1983-1988. *Accident Analysis and Prevention*, 35, 825-831.
- Fielder, L., Donovan, R., & Ouschan, R. (2009). Exposure of children and adolescents to alcohol television advertising on Australian free-to-air television. *Addiction*, 104(7), 1157-1165.
- Finn, T., & Strickland, D. (1982). A content analysis of beverage alcohol advertising. *Journal of Studies on Alcohol*, 43, 964-989.
- Fischer, P. M., Schwartz, M. P., Richards, J. W., Jr., Goldstein, A. O., & Rojas, T. H. (1991). Brand Logo Recognition by Children Aged 3 to 6 Years: Mickey Mouse and Old Joe the Camel. *JAMA*, 266(22), 3145-3148. doi:10.1001/jama.1991.03470220061027
- Fisher, L. B., Miles, I. W., Austin, S. B., Camargo, C. A., Jr., & Colditz, G. A. (2007). Predictors of initiation of alcohol use among US adolescents: findings from a prospective cohort study. *Arch Pediatr Adolesc Med*, 161(10), 959-966.
- Fleming, K., Thorson, E., & Atkin, C. K. (2004). Alcohol advertising exposure and perceptions: links with alcohol expectancies and intentions to drink or drinking in underaged youth and young adults. *Journal of Health Communication*, 9(1), 3-29.
- Franke, G., & Wilcox, G. (1987). Alcoholic beverage advertising and consumption in the United States 1964-1984. *Journal of Advertising*, 16(3), 22-30.

- Free TV Australia. (2007). *Commercial Television Industry Code of Practice*. Mosman, NSW. Retrieved from [http://www.freetv.com.au/Content\\_Common/pg-Code-of-Practice.seo](http://www.freetv.com.au/Content_Common/pg-Code-of-Practice.seo)
- Gangadharbatla, H., & Wilcox, G. (2005a). Does beer advertising affect overall consumption in the United States? *American Academy of Advertising. Conference. Proceedings*, 145. Retrieved from <http://proquest.umi.com.dbgw.lis.curtin.edu.au/pqdweb?did=898840141&Fmt=7&clientId=22212&RQT=309&VName=PQD>
- Gangadharbatla, H., & Wilcox, G. (2005b). *Does beer advertising affect overall consumption in the United States?* Paper presented at the American Academy of Advertising Conference, Hong Kong.
- Gardner, M., & Steinberg, L. (2005). Peer influence on risk taking, risk preference and risky decision making in adolescence and adulthood: an experimental study. *Developmental Psychology*, 41(4), 625-635.
- Garfield, C. F., Chung, P. J., & Rathouz, P. J. (2003). Alcohol advertising in magazines and adolescent readership. *Jama*, 289(18), 2424-2429.
- Garitaonandia, C., Juaristi, P., & Oleagaa, J. (2001). Media genres and content preferences. In S. Livingstone & M. Bovill (Eds.), *Children and their changing media environment: A European comparative*. (pp. 141-157). Mahwah: Lawrence Erlbaum Associates.
- Gentile, D., Walsh, D., Bloomgren, B., Atti, J., & Norman, J. (2001). *Frogs sell beer: the effects of beer advertisements on adolescent drinking knowledge, attitudes and behavior*. Paper presented at the Biennial Conference of the Society for Research in Child Development, Minneapolis, Minnesota.
- Gordon, R., Hastings, G., & Moodie, C. (2010). Alcohol marketing and young people's drinking: what the evidence base suggests for policy. *Journal of Public Affairs*, 10(1-2), 88-101.
- Grant, B., & Dawson, D. (1997). Age of onset of alcohol use and its association with DSM-IV alcohol abuse and dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey *Journal of Substance Abuse*, 9, 103-110.
- Grube, J. (1993). Alcohol portrayals and alcohol advertising on television: content and effects on children and adolescents. *Alcohol, Health and Research World*, 17(1), 61-66.
- Grube, J. (1995). Television Alcohol Portrayals, Alcohol Advertising and Alcohol Expectancies among Children and Adolescents. *Effects of the Mass Media on the Use and Abuse of Alcohol*. (pp. 105-121). Bethesda: National Institute on Alcohol Abuse and Alcoholism.

- Grube, J. W., & Waiters, E. (2005). Alcohol in the media: content and effects on drinking beliefs and behaviours among youth. *Adolescent Medicine Clinics*, 16, 327 - 343.
- Gruber, E. L., Thau, H. M., Hill, D. L., Fisher, D. A., & Grube, J. W. (2005). Alcohol, tobacco and illicit substances in music videos: A content analysis of prevalence and genre. *Journal of Adolescent Health*, 37(1), 81-83.
- Hackbarth, D. P., Schnopp-Wyatt, D., Katz, D., Williams, J., Silvestri, B., & Pflieger, M. (2001). Collaborative research and action to control the geographic placement of outdoor advertising of alcohol and tobacco products in Chicago. *Public Health Rep*, 116(6), 558-567.
- Hall, B. (2002). A new model for measuring advertising effectiveness. *Journal of Advertising Research*, 42(2), 23-31.
- Hanewinkel, R., & Sargent, J. D. (2009). Longitudinal study of exposure to entertainment media and alcohol use among german adolescents. *Pediatrics*, 123(3), 989-995.
- Hanley, P. (2000). *Copypat Kids? The Influence of Television Advertising on Children and Teenagers*. London. Retrieved from [www.itc.org.uk](http://www.itc.org.uk)
- Hansen, D. (1997). History of alcohol and drinking around the world:. *Preventing Alcohol Abuse: Alcohol, culture and control*. Westport, CT: Praeger, 1995. Retrieved from <http://www2.potsdam.edu/hansondj/Controversies/1114796842.html>
- Harris, S., & Daniels, L. (2001). Reliability and validity of the Harris Infant Neuromotor Test. *Journal of Pediatrics*, 139(2), 249-253. Retrieved from [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=11487752](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=11487752). doi:S0022-3476(01)13832-1 [pii] 10.1067/mpd.2001.115896
- Hastings, G., Anderson, S., Cooke, E., & Gordon, R. (2005). Alcohol marketing and young people's drinking: a review of the research. *Journal of Public Health Policy*, 26(3), 296-311.
- Hastings, G., Ryan, H., Teer, P., & MacKintosh, A. (1994). Cigarette advertising and children's smoking: why Reg was withdrawn. *BMJ*, 309, 933-937.
- Hayes, L. (2004). *Parenting influences on adolescent alcohol use*. Australian Institute of Family Studies. Commonwealth of Australia. Retrieved from [www.aifs.gov.au/institute/pubs/resreport10/aifsreport10.pdf](http://www.aifs.gov.au/institute/pubs/resreport10/aifsreport10.pdf)
- Henriksen, L., Feighery, E. C., Schleicher, N. C., & Fortmann, S. P. (2008). Receptivity to alcohol marketing predicts initiation of alcohol use. *J Adolesc Health*, 42(1), 28-35. 10.1016/j.jadohealth.2007.07.005

- Herttua, K., Mäkelä, P., & Martikainen, P. (2008). Changes in alcohol-related mortality and its socioeconomic differences after a large reduction in alcohol prices: a natural experiment based on register data. *American Journal of Epidemiology*, 168(10), 1110-1118.
- Hill, S., Thomsen, S., Page, R., & Parrott, N. (2005). Alcohol advertisements in youth-oriented magazines: persuasive themes and responsibility messages. *American Journal of Health Education*, 36(5), 258-265.
- Hingson, R., Heeren, T., Winter, M., & Wechsler, H. (2005). Magnitude of alcohol-related mortality and morbidity among US college students ages 18-24: Changes from 1998 to 2001. *Annu. Rev. Public Health*, 26, 259-279.
- Hingson, R., & Kenkel, D. (2004). Social, health, and economic consequences of underage drinking. In National Research Council and Institute of Medicine (Ed.), *Reducing underage drinking: A collective responsibility*. (pp. 351-382). Washington DC: The National Academies Press.
- Ho, R. (1994). Cigarette advertising and cigarette health warnings: What role do adolescents' motives for smoking play in their assessment? *Australian Psychologist*, 29(1), 49 - 56.
- Hoek, J. (2004). Tobacco promotion restrictions: ironies and unintended consequences. *Journal of Business Research*, 57(11), 1250-1257.
- Hollingworth, W., Ebel, B., McCarty, C., Garrison, M., Christakis, D., & Rivara, F. (2006). Prevention of deaths from harmful drinking in the United States: The potential effects of tax increases and advertising bans on young drinkers. *J.Stud.Alcohol*, 67, 300-308.
- Hurtz, S. Q., Henriksen, L., Wang, Y., Feighery, E. C., & Fortmann, S. P. (2007). The relationship between exposure to alcohol advertising in stores, owning alcohol promotional items, and adolescent alcohol use. *Alcohol and Alcoholism*, 42(2), 143-149.
- International Centre for Alcohol Policy (ICAP). (2003). Industry views on beverage alcohol advertising and marketing, with special reference to young people. Washington DC. Retrieved from [http://www.icap.org/portals/0/download/all\\_pdfs/Other\\_Publications/WHO\\_paper\\_annexed.pdf](http://www.icap.org/portals/0/download/all_pdfs/Other_Publications/WHO_paper_annexed.pdf)
- Jackson, C. (2002). Perceived legitimacy of parental authority and tobacco and alcohol use during early adolescence. *Journal of Adolescent Health*, 31, 425-432.
- Jackson, M. C., Hastings, G., Wheeler, C., Eadie, D., & Mackintosh, A. M. (2000). Marketing alcohol to young people: implications for industry regulation and research policy. *Addiction*, 95 Suppl 4, S597-608.

- Jernigan, D. (2001). *Global status report: Alcohol and young people*. World Health Organization, Geneva.
- Jernigan, D. H. (2009). [Commentary] Alcohol Advertising Regulation: Where To From Here? *Addiction*, 104(7), 1166-1167.
- Jernigan, D., & Mosher, J. (2005). Editors' introduction: Alcohol marketing and youth - public health perspectives. *Journal of Public Health Policy*, 26, 287-291.
- Jernigan, D., & O'Hara, J. (2004). Alcohol advertising and promotion *Reducing Underage Drinking: A Collective Responsibility*. (pp. 625-653). Washington DC: The National Academies Press.
- Jernigan, D., Ostroff, J., & Ross, C. (2005). Alcohol advertising and youth: a measured approach. *Journal of Public Health Policy*, 26(3), 312-325.
- Jernigan, D., Ostroff, J., Ross, C., & O'Hara, J. A., 3rd. (2004). Sex differences in adolescent exposure to alcohol advertising in magazines. *Arch Pediatr Adolesc Med*, 158(7), 629-634.
- Jernigan, D., & Ross, C. (2010). Monitoring youth exposure to advertising on television: the devil is in the details. *Journal of Public Affairs*, 10(1-2), 36-49.
- Jones, S., & Donovan, R. (2001). Messages in alcohol advertising targeted to youth. *Australian and New Zealand Journal of Public Health*, 25, 126-131.
- Jones, S., & Donovan, R. (2002). Self-regulation of Alcohol Advertising: Is it working for Australia. *Journal of Public Affairs*, 2(3), 153-165.
- Jones, S., & Jernigan, D. (2010). Editorial: Alcohol advertising, marketing and regulation. *Journal of Public Affairs*, 10(1-2), 1-5.
- Jones, S., & Lynch, M. (2007). Non-advertising alcohol promotions in licensed premises: does the Code of Practice ensure responsible promotion of alcohol? *Drug and Alcohol Review*, 26, 477-485.
- Jones, S., Phillipson, L., & Barrie, L. (2010). Most men drink especially like when they play sports - alcohol advertising during sporting broadcasts and the potential impact on child audiences. *Journal of Public Affairs*, 10(1-2), 59-73.
- Jones, S. C., Gregory, P., & Munro, G. (2009). Adolescent and young adult perceptions of Australian alcohol advertisements. *Journal of Substance Use*, 14(6), 335 - 352.
- Jones, S. C., Hall, D., & Munro, G. (2008). How effective is the revised regulatory code for alcohol advertising in Australia? *Drug and Alcohol Review*, 27(1), 29 - 38.

- King, E., Taylor, J., & Carroll, T. (2005). *Australian alcohol beverage advertising in mainstream Australian media 2003 to 2005: Expenditure, exposure and related issues*. Canberra.
- Kontominas, B. (2007, Apr 6, 2007). Drink ads blur message. *Sydney Morning Herald*, p. 2.
- Kuntsche, E., Knibbe, R., Gmel, G., & Engels, R. (2005). Why do young people drink? A review of drinking motives. *Clinical Psychology Review*, 25(7), 841-861.
- Kuntsche, E., Knibbe, R., Gmel, G., & Engels, R. (2006). Who drinks and why? A review of socio-demographic, personality, and contextual issues behind the drinking motives in young people. *Addictive Behaviors*, 31(10), 1844-1857.
- La Barbera, P., Weingard, P., & Yorkston, E. (1998). Matching the message to the mind: advertising imagery and consumer processing styles. *Journal of Advertising Research*, 38(5), 29-43.
- LaBrie, J. W., Rodrigues, A., Schiffman, J., & Tawalbeh, S. (2008). Early Alcohol Initiation Increases Risk Related to Drinking Among College Students. *Journal of Child & Adolescent Substance Abuse*, 17(2), 125 - 141.
- Leiber, L. (1996). *Commercial and character slogan recall by children aged 9 to 11 years: Budweiser frogs versus Bugs Bunny*. Berkeley.
- Leiberman, L., & Orlandi, M. (1987). Alcohol advertising and adolescent drinking. *Alcohol and Research World*, 12(1), 30-33,43.
- Leigh, B., & Stacy, A. (2003). Alcohol Outcome Expectancies: Scale Construction and Predictive Utility in Higher Order Confirmatory Models. *Psychological Assessment* 5, 216-229.
- Lynch, B., & Bonnie, R. E. (1994). *Growing up tobacco free: Preventing nicotine addiction in children and youths*. Washington DC: Institute of Medicine, National Academy Press.
- Management Committee of the ABAC Scheme. (2007). *The ABAC Scheme: Annual Report 2006*. South Melbourne, VIC.
- Martin, S. E., Snyder, L. B., Hamilton, M., Fleming-Milici, F., Slater, M. D., Stacy, A., et al. (2002). Alcohol advertising and youth. *Alcohol Clin Exp Res*, 26(6), 900-906.
- Mazzella, C., Durkin, K., Cerini, E., & Buralli, P. (1992). Sex role stereotyping in Australian television advertisements. *Sex Roles*, 26(7/8), 243-259.
- McBride, N., Farrington, F., & Milford, R. (2000). What harms do young Australians experience in alcohol use situations? *Australian & New Zealand Journal of Public Health*, 24(1), 54-59.

- McClure, A. C., Dal Cin, S., Gibson, J., & Sargent, J. D. (2006). Ownership of alcohol-branded merchandise and initiation of teen drinking. *Am J Prev Med*, 30(4), 277-283.
- McClure, A. C., Stoolmiller, M., Tanski, S. E., Worth, K. A., & Sargent, J. D. (2009). Alcohol-branded merchandise and its association with drinking attitudes and outcomes in US adolescents. *Arch Pediatr Adolesc Med*, 163(3), 211-217.
- McCreanor, T., Greenaway, A., Barnes, H. M., Borell, S., & Gregory, A. (2005). Youth identity formation and contemporary alcohol marketing. *Critical Public Health*, 15(3), 251 - 262.
- McNally, A., & Palfai, T. (2001). Negative emotional expectancies and readiness to change among college student binge drinkers. *Addictive Behaviors*, 26(5), 721-734.
- Miller, J. W., Naimi, T. S., Brewer, R. D., & Jones, S. E. (2007). Binge drinking and associated health risk behaviors among high school students. *Pediatrics*, 119(1), 76-85.
- Miller, P. M., & Plant, M. (1996). Drinking, smoking, and illicit drug use among 15 and 16 year olds in the United Kingdom. *Bmj*, 313(7054), 394-397.
- Miller, R., & Mizerski, D. (2005). *Using the RCE scales to test the effect of beer ads in underage teen intention to consume and reported consumption of beer*. Paper presented at the ANZMAC Conference: Advertising/Communication Issues, Fremantle.
- Miller, T., Levy, D., Spicer, R., & Taylor, D. (2006). Societal costs of underage drinking. *J Stud. Alcohol*, 67, 519-528.
- Ministerial Council on Drug Strategy. (2006). *National alcohol strategy 2006-2009: Towards safer drinking cultures*. Canberra. Retrieved from [http://www.health.gov.au/internet/alcohol/publishing.nsf/Content/B83AD1F91AA632ADCA25718E0081F1C3/\\$File/nas-06-09.pdf](http://www.health.gov.au/internet/alcohol/publishing.nsf/Content/B83AD1F91AA632ADCA25718E0081F1C3/$File/nas-06-09.pdf)
- Moore, E., & Lutz, R. (2000). Children, advertising, and product experiences: a multimethod inquiry. *Journal of Consumer Research*, 27(1), 31-48.
- Moses, L., & Baldwin, D. (2005). What can the study of cognitive development reveal about children's ability to appreciate and cope with advertising? *Journal of Public Policy and Marketing*, 24(2), 186-201.
- Mosher, J. (2006). *Alcohol industry voluntary regulation of its advertising practices: A status report*. Washington DC.



- Müller, S., Piontek, D., Pabst, A., Baumeister, S. E., & Kraus, L. (2010). Changes in alcohol consumption and beverage preference among adolescents after the introduction of the alcopops tax in Germany. *Addiction*, 105(7), 1205-1213.
- Munro, G. (2000). Challenging the culture of sport and alcohol. *International Journal of Drug Policy*, 11(3), 199-202.
- Munro, G., & de Wever, J. (2008). Culture clash: alcohol marketing and public health aspirations. *Drug and Alcohol Review*, 27(2), 204-211.
- National Committee for the Review of Alcohol Advertising. (2003). *Review of the self-regulatory system for alcohol advertising*. Victoria.
- National Committee for the Review of Alcohol Advertising. (2005). *Effect of alcohol advertising on Aboriginal and Torres Strait Islander youth*. Leichhardt NSW.
- National Health and Medical Research Council. (2007). *Australian alcohol guidelines for low-risk drinking: Draft for public consultation October 2007*. Australian Government, Canberra.
- National Preventative Health Taskforce. (2009). *Australia: the healthiest country by 2020* (Technical report 3: Preventing alcohol related harm in Australia: a window of opportunity including addendum for October 2008 to June 2009). Canberra. Retrieved from [http://www.health.gov.au/internet/preventativehealth/publishing.nsf/Content/09C94C0F1B9799F5CA2574DD0081E770/\\$File/alcohol-jul09.pdf](http://www.health.gov.au/internet/preventativehealth/publishing.nsf/Content/09C94C0F1B9799F5CA2574DD0081E770/$File/alcohol-jul09.pdf)
- National Research Council and Institute of Medicine. (2004). *Reducing underage drinking: A collective responsibility*. Washington DC.
- Nelson, J. (2005). Advertising, alcohol and youth. *Regulation*, 28(2), 40-47.
- Nova Scotia Department of Health Promotion and Protection. (2009). *Literature Review: Effects of alcohol advertising on alcohol consumption among youth*. Nova Scotia.
- Nutbeam, D., & Harris, E. (2004). *Theory in a nutshell: A practical guide to health promotion theories* (2nd ed.). North Ryde, NSW: McGraw-Hill.
- Office of Communications. (2007). *Young people and alcohol advertising an investigation of alcohol advertising following changes to the Advertising Code*. Retrieved from [http://www.ofcom.org.uk/research/tv/reports/alcohol\\_advertising/](http://www.ofcom.org.uk/research/tv/reports/alcohol_advertising/)
- Office of Communications. (2010). *The Ofcom broadcasting code*. Retrieved from <http://stakeholders.ofcom.org.uk/broadcasting/broadcast-codes/broadcast-code/>

- Oppenheim, A. N. (2005). Questionnaire design, interviewing and attitude measurement (new edition). Norfolk, UK: Biddles Ltd.
- Osaki, Y., Tanihata, T., Ohida, T., Minowa, M., Wada, K., Suzuki, K., et al. (2006). Adolescent smoking behaviour and cigarette brand preference in Japan. *Tobacco Control*, 15, 172-180. doi:10.1136/tc.2005.013060
- Palmqvist, R., Martikainen, L., & von Wright, M. (2003). A moving target: Reasons given by adolescents for alcohol and narcotics use, 1984 and 1999. *Journal of Youth and Adolescence*, 32(3), 195.
- Park, C. (2004). Positive and negative consequences of alcohol consumption in college students. *Addictive Behaviors*, 29, 311-321.
- Parra, G. R., Krull, J. L., Sher, K. J., & Jackson, K. M. (2007). Frequency of heavy drinking and perceived peer alcohol involvement: Comparison of influence and selection mechanisms from a developmental perspective. *Addictive Behaviors*, 32(10), 2211-2225.
- Pasch, K. E., Komro, K. A., Perry, C. L., Hearst, M. O., & Farbachsh, K. (2007). Outdoor alcohol advertising near schools: What does it advertise and how is it related to intentions and use of alcohol among young adolescents? *Journal of Studies on Alcohol and Drugs*, 68, 587-596.
- Pechmann, C., Levine, L., Loughlin, S., & Leslie, F. (2005). Impulsive and self-conscious: Adolescents vulnerability to advertising. *Journal of Public Policy and Marketing* 24(2), 202-221.
- Pennsylvania Department of Conservation and Natural Resources. (2007). History of Smokey the Bear. Retrieved from <http://www.dcnr.state.pa.us/FORESTRY/ffp/history.aspx>
- Pettigrew, S., & Donovan, R. (2003). *A literature review of the factors that influence alcohol consumption and the effectiveness of past interventions: A report to the Drug and Alcohol Office Perth*, Western Australia.
- Phillipson, L., & Jones, S. (2007). *Awareness of alcohol advertising among children who watch televised sports*. Paper presented at the ANZMAC, Dunedin, New Zealand
- Preston, C. C., & Colman, A. M. (2000). Optimal number of response categories in rating scales: reliability, validity, discriminating power, and respondent preferences. *Acta Psychologica*, 104(1), 1-15.
- Rehm, J., Mathers, C., Popova, S., Thavorncharoensap, M., Teerawattananon, Y., & Patra, J. (2009). Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. *The Lancet*, 373(9682), 2223-2233.

- Rehm, J., Room, R., Graham, K., Monteiro, M., Gmel, G., & Sempos, C. T. (2003). The relationship of average volume of alcohol consumption and patterns of drinking to burden of disease: an overview. *Addiction*, 98(9), 1209-1228. doi:doi:10.1046/j.1360-0443.2003.00467.x
- Reichert, T., & Ramirez, A. (2000). *Defining sexually oriented appeals in advertising: a grounded theory investigation*, in Advances in Consumer Research, 27, eds. Stephen J. Hoch and Robert J. Meyer, Provo, UT : Association for Consumer Research, Pages: 267-273.
- Renna, F. (2007). The economic cost of teen drinking: Late graduation and lowered earnings. *Health Economics*, 16, 407-419.
- Research and markets. (2008). *Australia - Pay TV - Statistics - Subscribers Overview and Analysis*. Retrieved from [http://www.researchandmarkets.com/reportinfo.asp?report\\_id=303264](http://www.researchandmarkets.com/reportinfo.asp?report_id=303264)
- Rhen, N., Room, R., & Edwards, G. (2001). *Alcohol in the European Region: consumption, harm and policies*. World Health Organization. Geneva.
- Ribisl, K. M., Lee, R. E., Henriksen, L., & Haladjian, H. H. (2003). A content analysis of Web sites promoting smoking culture and lifestyle. *Health Education Behaviour*, 30(1), 64-78.
- Rigaud, A., & Craplet, M. (2004). *The 'Loi Evin' : a French exception*. Varsovie, 20 May 2004. Retrieved from [http://www.ias.org.uk/btg/conf0604/papers/rigaud\\_craplet.pdf](http://www.ias.org.uk/btg/conf0604/papers/rigaud_craplet.pdf)
- Ringel, J. S., R. L. Collins, and P. L. Ellickson. 2006. Time trends and demographic differences in youth exposure to alcohol advertising on television. *J Adolesc Health* 39 (4):473-80.
- Robinson, T. N., Chen, H. L., & Killen, J. D. (1998). Television and music video exposure and risk of adolescent alcohol use. *Pediatrics*, 102(5), E54.
- Room, R., Babor, T., & Rehm, J. (2005). Alcohol and public health. *Lancet*, 365(9458), 519-530.
- Room, R., Graham, K., Rehm, J., Jernigan, D., & Monteiro, M. (2003). Drinking and its burden in a global perspective: policy considerations and options. *Eur Addict Res*, 9(4), 165-175.
- Rossiter, J., & Bellman, S. (2005). *Marketing communications: theory and applications*. Frenchs Forest: Pearson Education Australia.
- Rossiter, J. R., & Percy, L. (1987). *Advertising and promotion management*. New York, NY, England: Mcgraw-Hill.

- Ruiz, S., & Sicilia, M. (2004). The impact of cognitive and/or affective processing styles on consumer response to advertising appeals. *Journal of Business Research*, 57, 657-664.
- Rundle-Thiele, S. R., & Wymer, W. (2010). Stand-Alone Ethics, Social Responsibility, and Sustainability Course Requirements. *Journal of Marketing Education*, 32(1), 5-12. Retrieved from <http://jmd.sagepub.com/content/32/1/5.abstract>. doi:10.1177/0273475309345002
- Saffer, H. (1996). Studying the effects of alcohol advertising on consumption. *Alcohol Health and Research World*, 20(4), 266-272.
- Saffer, H. (2002). Alcohol advertising and youth. *J Stud Alcohol Suppl*(14), 173-181.
- Saffer, H. (2004). *The Effect of Advertising on Tobacco and Alcohol Consumption*. National Bureau of Economic Research: NBER Reporter: Research Summary. Winter. Retrieved from <http://www.nber.org/reporter/winter04/saffer.html>
- Saffer, H., & Dave, D. (2006). Alcohol advertising and alcohol consumption by adolescents. *Health Economics*, 15(6), 617-637.
- Sanchez, L., Sanchez, S., Goldberg, A., & Goldberg, A. (2000). Tobacco and alcohol advertisements in magazines: are young readers being targeted? *JAMA*, 283(16), 2106-2107.
- Sargent, J. D., Wills, T. A., Stoolmiller, M., Gibson, J., & Gibbons, F. X. (2006). Alcohol use in motion pictures and its relation with early-onset teen drinking. *J Stud Alcohol*, 67(1), 54-65.
- Schultz, D. (2006). Challenges to study on alcohol advertising effects on youth drinking. *Archives of Pediatric Adolescent Medicine*, 160, 857.
- Shanahan, L. (2009, February 25, 2009). Senator threatens to topple alcopops tax. *The Age*. Retrieved from <http://www.theage.com.au/national/senator-threatens-to-topple-alcopops-tax-20090224-8gw9.html>
- Shand, F., Gates, J., & Fawcett, J. (2003). *The treatment of alcohol problems: A review of the evidence*. Commonwealth of Australia. Canberra.
- Slater, M. D., Rouner, D., Murphy, K., Beauvais, F., Van Leuven, J., & Rodriguez, M. D. (1996). Male adolescents' reactions to TV beer advertisements: the effects of sports content and programming context. *J Stud Alcohol*, 57(4), 425-433.
- Smart, R. (2006). Limitations of study on alcohol advertising effects on youth drinking. *Archives of Pediatric Adolescent Medicine*, 160, 857.

- Smith, G. (Ed.). (2009). *Results from the 2008 Australian Secondary Students' Alcohol and Drug Survey*. Centre for Behavioural Research in Cancer. Victoria.
- Smith, L., & Foxcroft, D. (2009). The effect of alcohol advertising, marketing and portrayal on drinking behaviour in young people: systematic review of prospective cohort studies. *BMC Public Health*, 9(1), 51.
- Smith, R. C., & Geller, E. S. (2009). Marketing and alcohol-related traffic fatalities: Impact of alcohol advertising targeting minors. *Journal of Safety Research*, 40(5), 359-364.
- Snyder, L., & Slater, M. (2006). In reply. *Archives of Pediatric Adolescent Medicine*, 160, 858.
- Snyder, L. B., Milici, F., Sun, H., & Strizhakova, Y. (2006). Effects of alcohol advertising exposure on drinking among youth. *Archives of Pediatrics & Adolescent Medicine*, 160, 18-24.
- Spear, L. (2002a). The adolescent brain and the college drinker: Biological basis of propensity to use and misuse alcohol. *Journal of Studies on Alcohol*, (Suppl. 14), 71-81.
- Spear, L. P. (2002b). Alcohol's effects on adolescents. *Alcohol Research and Health*, 26(4), 287-291.
- SPSS Inc. (2009). *AMOS (release 17.0)* statistical software. Chicago, Illinois: SPSS Inc.
- Stacy, A. W., Zogg, J. B., Unger, J. B., & Dent, C. W. (2004). Exposure to televised alcohol ads and subsequent adolescent alcohol use. *American Journal of Health Behavior*, 28, 498 - 509.
- Stark, J. (2007). Insider tells of young drinkers being targeted. *The Age*, 1-3. Retrieved from <http://www.theage.com.au/news/national/get-young-drunk-faster/2007/08/05/1186252546269.html>
- Story, M., & French, S. (2004). Food advertising and marketing directed at children and adolescents in the US. *International Journal of Behavioral Nutrition and Physical Activity*, 1(3), 1-17.
- Strasburger, V., & Wilson, B. (2002). *Children, adolescents, and the media*. Thousand Oaks, Sage. CA.
- Strasburger, V. C., & Donnerstein, E. (2000). Children, adolescents, and the media in the 21st century. *Adolescent Medicine*, 11(1), 51-68.
- Tapert, S., McCarthy, D., Arons, G., Schweinsburg, A., & Brown, S. (2003). Influence of language abilities and alcohol expectancies on the persistence of heavy drinking in youth. *Journal of Studies on Alcohol*, 64(3), 313-321.

- Tapert, S. F., Granholm, E., Leedy, N., & Brown, S. A. (2002). Substance use and withdrawal: Neuropsychological functioning over 8 years in youth. *Journal of the International Neuropsychological Society*, 8, 873-883.
- The ABAC Scheme. (2011). Alcohol Beverages Advertising Code: Guidance Notes. Retrieved from <http://www.abac.org.au/uploads/File/ABAC%20Guidance%20Notes.pdf>
- Thomsen, S. R., & Rekve, D. (2006). Entertainment and music magazine reading and binge drinking among a group of juvenile offenders. *Int J Adolesc Med Health*, 18(1), 123 - 131.
- US Department of Health and Human Services. (2007). *The Surgeon General's Call to Action To Prevent and Reduce Underage Drinking 2007*. Rockville, MD.
- Valkenburg, P. (2000). Media and youth consumerism. *Journal of Adolescent Health*, 27S, 52-56.
- Villani, S. (2001). Impact of media on children and adolescents: a 10-year review of the research. *J Am Acad Child Adolesc Psychiatry*, 40(4), 392-401.
- Waiters, E., Treno, A., & Grube, J. W. (2001). Alcohol advertising and youth: A focus-group analysis of what young people find appealing in alcohol advertising. *Contemporary Drug Problems*, 28(4), 695.
- Wakefield, M., Balch, G., Terry-McElrath, Y., Szczypka, G., Clegg Smith, K., Ruel, E., et al. (2002). *Assessment of youth responses to anti-smoking ads: Description of a research protocol* (Research paper series, no. 23). Chicago.
- Wallack, L., Cassady, D., & Grube, J. (1990). *TV beer commercials and children: Exposure, attention, beliefs and expectations about drinking as an adult*. Washington, DC.
- Walsh, D., & Gentile, D. (2005). "Slipping under the radar: Advertising and the mind" in *Drinking it in: Alcohol marketing and young people*. World Health Organization. Geneva.
- Waterson, M. J. (1989). Advertising and alcohol: an analysis of the evidence relating two major aspects of the debate. *Int J Advertising*, 8, 111 - 132.
- Weschler, H., Dowdall, G., Maenner, G., Gledhill-Hoyt, J., & Lee, H. (1998). Changes in binge drinking and related problems among American college students between 1993-1997. Results of the Harvard School of Public Health college alcohol study. *Journal of American College Health*, 47(2), 57-68.

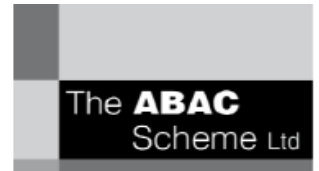
- White, V., & Hayman, J. (2006). *Australian secondary students' use of alcohol in 2005*. Centre for Behavioural Research in Cancer, Anti-cancer Council of Victoria. National Drug Strategy Unit, Australian Government Department of Health and Ageing, Victoria.
- White, V., & Hayman, J. (2009). *Australian secondary school students' use of tobacco, alcohol, and over-the-counter and illicit substances in 2008*. Centre for Behavioural Research in Cancer, Anti-cancer Council of Victoria. National Drug Strategy Unit, Australian Government Department of Health and Ageing, Victoria. Retrieved from [http://www.health.gov.au/internet/drugstrategy/publishing.nsf/Content/85D7B21B3E3A993ECA2572250007755F/\\$File/mono58.pdf](http://www.health.gov.au/internet/drugstrategy/publishing.nsf/Content/85D7B21B3E3A993ECA2572250007755F/$File/mono58.pdf)
- Winter, M. (2006). *Factual or flawed?: Using market response models to establish the impact of alcohol advertising on adolescents*. Paper presented at the Paper presented to the 3rd Australasian social and not-for-profit marketing conference, Newcastle.
- Winter, M., Donovan, R., & Fielder, L. (2008). Exposure of children and adolescents to alcohol advertising on television in Australia. *Journal of Studies on Alcohol and Drugs*, 69, 676-683.
- Wolburg, J. (2005). Drawing the line between targeting and patronizing: how "vulnerable" are the vulnerable? *Journal of Consumer Marketing*, 22(5), 287-288.
- World Health Organization. (2002). *The World Health Report. Reducing risks, promoting health Life*. WHO. Retrieved from <http://www.who.int/whr/2002/en/>
- World Health Organization. (2004a). *Global status report on alcohol*. WHO. Geneva.
- World Health Organization. (2004b). *World report on road traffic injury prevention*. WHO. Geneva. Retrieved from [http://www.who.int/world-health-day/2004/infomaterials/world\\_report/en/](http://www.who.int/world-health-day/2004/infomaterials/world_report/en/)
- World Health Organization. (2007a). *Alcohol and injury in Emergency Departments* (NLM classification: WM 274.). WHO. Geneva. Retrieved from [http://www.who.int/substance\\_abuse/publications/alcohol\\_injury\\_summary.pdf](http://www.who.int/substance_abuse/publications/alcohol_injury_summary.pdf)
- World Health Organization. (2007b). *Expert Committee on Problems Related to Alcohol Consumption, Second Report. WHO Technical Report Series 944, Provisional edition* Retrieved from [http://www.who.int/substance\\_abuse/activities/expert\\_comm\\_alcohol\\_2nd\\_report.pdf](http://www.who.int/substance_abuse/activities/expert_comm_alcohol_2nd_report.pdf)

- World Health Organization. (2008). *Report from a round table meeting with economic operators on harmful use of alcohol*. WHO. Geneva. Retrieved from [http://www.who.int/substance\\_abuse/activities/msbeoreport.pdf](http://www.who.int/substance_abuse/activities/msbeoreport.pdf)
- World Health Organization. (2009a). *Evidence-based strategies and interventions to reduce alcohol-related harm: Global assessment of public-health problems caused by harmful use of alcohol* (A60/14). WHO. Geneva. Retrieved from [http://apps.who.int/gb/ebwha/pdf\\_files/WHA60/A60\\_14add1-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA60/A60_14add1-en.pdf)
- World Health Organization. (2009b). *Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm*. Denmark. Retrieved from [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0020/43319/E92823.pdf](http://www.euro.who.int/__data/assets/pdf_file/0020/43319/E92823.pdf)
- World Health Organization. (2009c). *Global health risks: Mortality and burden of disease attributable to selected major risks*. WHO. Geneva. Retrieved from [http://www.who.int/healthinfo/global\\_burden\\_disease/GlobalHealthRisks\\_report\\_full.pdf](http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf)
- World Health Organization. (2009d). *Global strategy to reduce harmful use of alcohol*. WHO. Thailand. Retrieved from [http://www.searo.who.int/LinkFiles/Meeting\\_reports\\_GSRH-Alcohol.pdf](http://www.searo.who.int/LinkFiles/Meeting_reports_GSRH-Alcohol.pdf)
- World Health Organization. (2010a). *European status report on alcohol and health 2010*. WHO. Geneva. Retrieved from [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0004/128065/e94533.pdf](http://www.euro.who.int/__data/assets/pdf_file/0004/128065/e94533.pdf)
- World Health Organization. (2010b). *Strategies to reduce the harmful use of alcohol: draft global strategy* (A63/13). WHO. Geneva. Retrieved from [http://apps.who.int/gb/ebwha/pdf\\_files/WHA63/A63\\_13-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA63/A63_13-en.pdf)
- World Health Organization. (2011). *Global status report on alcohol*. WHO. Geneva. Retrieved from [http://www.who.int/substance\\_abuse/publications/global\\_alcohol\\_report/msbgsruprofiles.pdf](http://www.who.int/substance_abuse/publications/global_alcohol_report/msbgsruprofiles.pdf)
- Wright, P., Friestat, M., & Boush, D. (2005). The development of marketplace persuasion knowledge in children, adolescents, and young adults. *American Marketing Association*, 24(2).
- Wyllie, A., Zhang, J. F., & Casswell, S. (1998a). Positive responses to televised beer advertisements associated with drinking and problems reported by 18 to 29-year-olds. *Addiction*, 93(5), 749-760.



- Wyllie, A., Zhang, J. F., & Casswell, S. (1998b). Responses to televised alcohol advertisements associated with drinking behaviour of 10-17-year-olds. *Addiction*, 93(3), 361-371.
- Zogg, J. B., Ma, H., Dent, C. W., & Stacy, A. W. (2004). Self-generated alcohol outcomes in 8th and 10th graders: exposure to vicarious sources of alcohol information. *Addict Behav*, 29(1), 3-16.
- Zwarun, L. (2006). Ten years and 1 master settlement agreement later: the nature and frequency of alcohol and tobacco promotion in televised sports, 2000 through 2002. *Am J Public Health*, 96(8), 1492-1497.

## Appendix 1: The Alcohol Beverages Advertising (and Packaging) Code



### The ABAC Scheme: ALCOHOL BEVERAGES ADVERTISING (AND PACKAGING) CODE

#### Preamble

Brewers Association of Australia and New Zealand Inc, the Distilled Spirits Industry Council of Australia Inc and the Winemakers Federation of Australia are committed to the goal that all advertisements for alcohol beverages produced for publication or broadcast in Australia other than point of sale material produced by alcohol beverage retailers, comply with the spirit and intent of this Code.

The Code is designed to ensure that alcohol advertising will be conducted in a manner which neither conflicts with nor detracts from the need for responsibility and moderation in liquor merchandising and consumption, and which does not encourage consumption by underage persons.

The conformity of an advertisement with this Code is to be assessed in terms of its probable impact upon a reasonable person within the class of persons to whom the advertisement is directed and other persons to whom the advertisement may be communicated, and taking its content as a whole.

#### Definitions

For the purpose of this Code –

**adult** means a person who is at least 18 years of age;

**alcohol beverage** includes any particular brand of alcohol beverage;

**adolescent** means a person aged 14-17 years inclusive;

**Australian Alcohol Guidelines** means the electronic document 'Australian Guidelines to Reduce Health Risks from Drinking Alcohol (1-2)' published by the National Health & Medical Research Council ("NHMRC") as at 1<sup>st</sup> January 2010.

**child** means a person under 14 years of age; and

**low alcohol beverage** means an alcohol beverage which contains less than 3.8% alcohol/volume.

#### Standards to be applied

##### Part 1 – Standards to be applied to advertisements for alcohol beverages

**Advertisements for alcohol beverages must –**

- a) present a mature, balanced and responsible approach to the consumption of alcohol beverages and, accordingly –
  - i) must not encourage excessive consumption or abuse of alcohol;

- ii) must not encourage under-age drinking;
  - iii) must not promote offensive behaviour, or the excessive consumption, misuse or abuse of alcohol beverages;
  - iv) must only depict the responsible and moderate consumption of alcohol beverages;
- b) not have a strong or evident appeal to children or adolescents and, accordingly –
  - i) adults appearing in advertisements must be over 25 years of age and be clearly depicted as adults;
  - ii) children and adolescents may only appear in advertisements in natural situations (eg family barbecue, licensed family restaurant) and where there is no implication that the depicted children and adolescents will consume or serve alcohol beverages; and
  - iii) adults under the age of 25 years may only appear as part of a natural crowd or background scene;
- c) not suggest that the consumption or presence of alcohol beverages may create or contribute to a significant change in mood or environment and, accordingly –
  - i) must not depict the consumption or presence of alcohol beverages as a cause of or contributing to the achievement of personal, business, social, sporting, sexual or other success;
  - ii) if alcohol beverages are depicted as part of a celebration, must not imply or suggest that the beverage was a cause of or contributed to success or achievement; and
  - iii) must not suggest that the consumption of alcohol beverages offers any therapeutic benefit or is a necessary aid to relaxation;
- d) not depict any direct association between the consumption of alcohol beverages, other than low alcohol beverages, and the operation of a motor vehicle, boat or aircraft or the engagement in any sport (including swimming and water sports) or potentially hazardous activity and, accordingly –
  - i) any depiction of the consumption of alcohol beverages in connection with the above activities must not be represented as having taken place before or during engagement of the activity in question and must in all cases portray safe practices; and
  - ii) any claim concerning safe consumption of low alcohol beverages must be demonstrably accurate;
- e) not challenge or dare people to drink or sample a particular alcohol beverage, other than low alcohol beverages, and must not contain any inducement to prefer an alcohol beverage because of its higher alcohol content; and
- f) comply with the Advertiser Code of Ethics adopted by the Australian Association of National Advertisers.
- g) not encourage consumption that is in excess of, or inconsistent with the Australian Alcohol Guidelines issued by the NHMRC.
- h) not refer to The ABAC Scheme, in whole or in part, in a manner which may bring the scheme into disrepute.

### **Internet Advertisements**

The required standard for advertisements outlined in (1)(a) to (h) above applies to internet sites primarily intended for advertising developed by or for producers or importers of alcohol products available in Australia or that are reasonably expected to be made available in Australia, and to banner advertising of such products on third party sites.

### **Retail Advertisements**

Advertisements which contain the name of a retailer or retailers offering alcohol beverages for sale, contain information about the price or prices at which those beverages are offered for sale, and which contain no other material relating to or concerning the attributes or virtues of alcohol beverages except –

- i) the brand name or names of alcohol beverages offered for sale;
- ii) the type and/or style of the alcohol beverages offered for sale;
- iii) a photographic or other reproduction of any container or containers (or part thereof, including any label) in which the alcohol beverages offered for sale are packaged;
- iv) the location and/or times at which the alcohol beverages are offered for sale; and
- v) such other matter as is reasonably necessary to enable potential purchasers to identify the retailer or retailers on whose behalf the advertisement is published,

must comply with the spirit and intent of the Code but are not subject to any process of prior clearance.

### **Promotion of alcohol at events**

Alcohol beverage companies play a valuable role in supporting many community events and activities. It is acknowledged that they have the right to promote their products at events together with the right to promote their association with events and event participation. However, combined with these rights comes a range of responsibilities. Alcohol beverage companies do not seek to promote their products at events which are designed to clearly target people under the legal drinking age.

This protocol commits participating alcohol beverage companies to endeavour to ensure that:

- All promotional advertising in support of events does not clearly target underage persons and as such is consistent with the ABAC standard; and
- Alcohol beverages served at such events are served in keeping with guidelines, and where applicable legal requirements, for responsible serving of alcohol (which preclude the serving of alcohol to underage persons); and
- Promotional staff at events do not promote consumption patterns that are inconsistent with responsible consumption, as defined in the NHMRC Guidelines; and
- Promotional staff do not misstate the nature or alcohol content of a product; and
- Promotional staff at events are of legal drinking age; and



- Promotional materials distributed at events do not clearly target underage persons; and
- Promotional materials given away at or in association with events do not connect the consumption of alcohol with the achievement of sexual success; and
- Promotional materials given away at or in association with events do not link the consumption of alcohol with sporting, financial, professional or personal success; and
- Promotional materials given away at events do not encourage consumption patterns that are inconsistent with responsible consumption, as defined in the NHMRC Guidelines; and
- A condition of entry into giveaways promoted by alcohol companies at or in association with events is that participants must be over the legal drinking age; and Prizes given away in promotions associated with alcohol beverage companies will only be awarded to winners who are over the legal drinking age.

### *Third Parties*

At many events alcohol companies limit their promotional commitments to specified activities. This protocol only applies to such conduct, activities or materials associated with events that are also associated with alcohol beverage companies.

Alcohol beverage companies will use every reasonable endeavour to ensure that where other parties control and/or undertake events, including activities surrounding those events, they comply with this protocol. However non-compliance by third parties will not place alcohol beverage companies in breach of this protocol.

### *Public Education*

This protocol does not apply to or seek to restrict alcohol beverage companies from being associated with conduct, activity or materials that educate the public, including underage persons, about the consequences of alcohol consumption and the possible consequences of excessive or underage consumption.

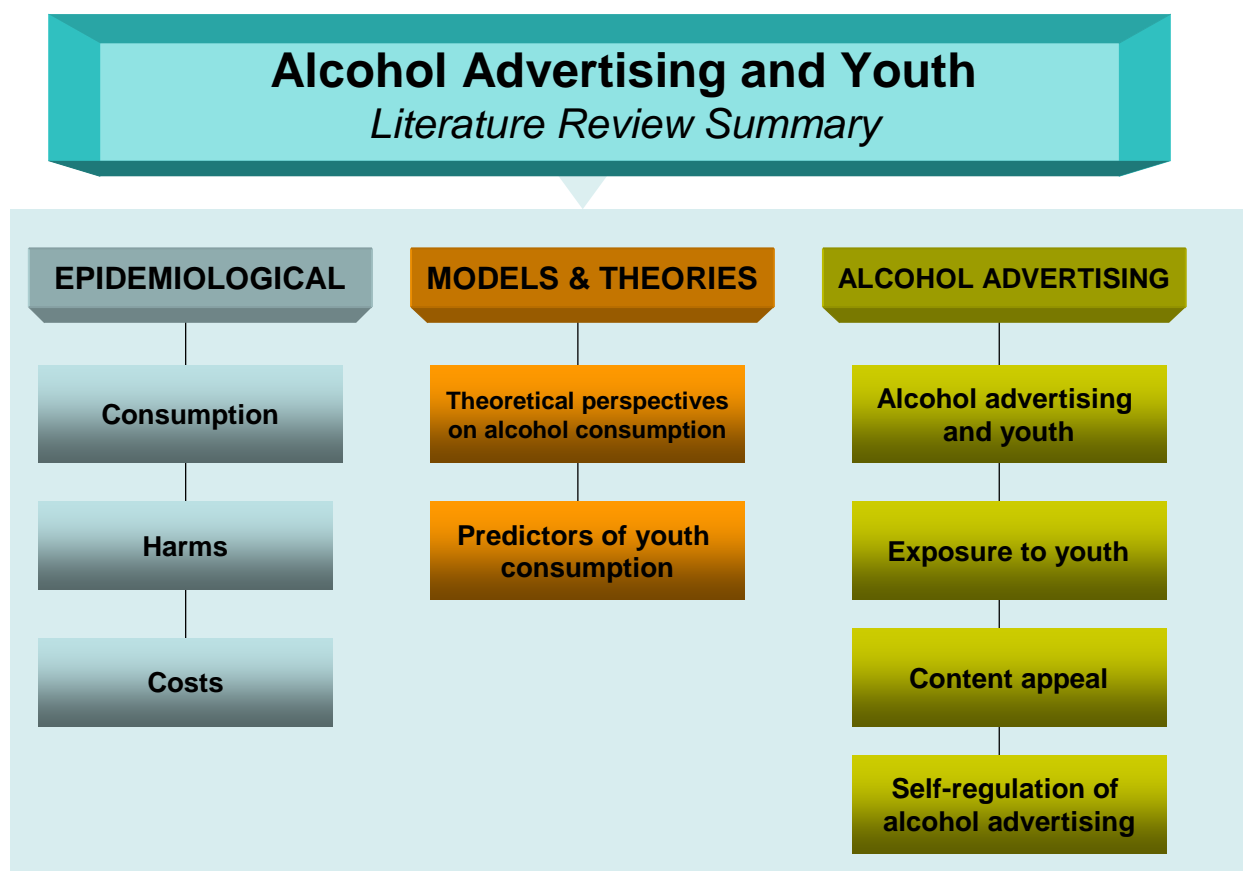
## Part 2 – Standards to be applied to the naming and packaging of alcohol beverages

1. The naming or packaging of alcohol beverages (which is also referred to within these standards as “product material”) must:

- a) present a mature, balanced and responsible approach to the consumption of alcohol beverages and, accordingly –
  - i) must not encourage excessive consumption or abuse of alcohol;
  - ii) must not encourage under-age drinking;
  - iii) must not promote offensive behaviour, or the excessive consumption, misuse or abuse of alcohol beverages;
  - iv) must only depict the responsible and moderate consumption of alcohol beverages;
- b) not have a strong or evident appeal to children or adolescents and, accordingly –
  - i) adults appearing in product material must be over 25 years of age and be clearly depicted as adults;

- ii) children and adolescents may only appear in product material in natural situations (e.g. family barbecue, licensed family restaurant) and where there is no implication that the depicted children and adolescents will consume or serve alcohol beverages; and
  - iii) adults under the age of 25 years may only appear as part of a natural crowd or background scene;
- c) not suggest that the consumption or presence of alcohol beverages may create or contribute to a significant change in mood or environment and, accordingly –
  - i) must not depict the consumption or presence of alcohol beverages as a cause of or contributing to the achievement of personal, business, social, sporting, sexual or other success;
  - ii) if alcohol beverages are depicted as part of a celebration, must not imply or suggest that the beverage was a cause of or contributed to success or achievement; and
  - iii) must not suggest that the consumption of alcohol beverages offers any therapeutic benefit or is a necessary aid to relaxation;
- d) not depict any direct association between the consumption of alcohol beverages, other than low alcohol beverages, and the operation of a motor vehicle, boat or aircraft or the engagement in any sport (including swimming and water sports) or potentially hazardous activity and, accordingly –
  - i) any depiction of the consumption of alcohol beverages in connection with the above activities must not be represented as having taken place before or during engagement of the activity in question and must in all cases portray safe practices; and
  - ii) any claim concerning safe consumption of low alcohol beverages must be demonstrably accurate;
- e) not challenge or dare people to drink or sample a particular alcohol beverage, other than low alcohol beverages, and must not contain any inducement to prefer an alcohol beverage because of its higher alcohol content; and
- f) not encourage consumption that is in excess of, or inconsistent with the Australian Alcohol Guidelines issued by the NHMRC.
- g) not refer to The ABAC Scheme, in whole or in part, in a manner which may bring the scheme into disrepute.

2. These standards, (Part 2 (1) (a)-(g)), apply to the naming and packaging of all alcohol beverages supplied in Australia, with the exception of the name of any product or a trademark which the supplier can demonstrate, to the satisfaction of the Adjudication Panel, had been supplied for bona fide retail sale in the ordinary course of business in a State or Territory of Australia prior to 31 October 2009.

**Appendix 2: Literature review summary**

## Appendix 3: Fielder et al. (2009) paper and copyright approval

## Exposure of children and adolescents to alcohol advertising on Australian metropolitan free-to-air television

Lynda Fielder<sup>1</sup>, Robert J. Donovan<sup>1,2</sup> & Robyn Ouschan<sup>1</sup>

School of Marketing, Curtin University, Perth, WA, Australia<sup>1</sup> and Centre for Behavioural Research in Cancer Control, Curtin University, Perth, WA, Australia<sup>2</sup>

### ABSTRACT

**Aim** This study investigated the exposure of underage youth to alcohol television advertising on metropolitan free-to-air television in the five mainland capital city markets of Australia. **Design** Exposure levels (target audience rating points; TARPs) were obtained for all alcohol advertisements screened from November 2005 to October 2006 in each capital city market for: children 0–12 years; underage teens 13–17 years; young adults 18–24 years; and mature adults 25+ years. The 30 most exposed advertisements across age groups were then content-analysed for elements appealing to children and underage youth. **Results** In each of the five metropolitan markets, mature adults were most exposed to alcohol advertising. Children were exposed to one-third the level of mature adults and underage teens to approximately the same level as young adults. However, there was considerable variation in media weight between markets, such that underage teens in two markets had higher advertising TARPs than young adults in other markets. All 30 highest exposed advertisements contained at least one element known to appeal to children and underage youth, with 23 containing two or more such elements. Fifteen of the 30 advertisements featured an animal. **Conclusions** The self-regulation system in Australia does not protect children and youth from exposure to alcohol advertising, much of which contains elements appealing to these groups.

**Keywords** Advertising elements, advertising exposure, alcohol advertising, children and youth, industry self-regulation, target audience rating points, voluntary codes.

*Correspondence to:* Lynda Fielder, School of Marketing, Curtin University, GPO Box U1987, Perth, Western Australia 6845, Australia. E-mail: l.fielder@curtin.edu.au

Submitted 18 June 2008; initial review completed 16 October 2008; final version accepted 3 March 2009

### INTRODUCTION

Globally, alcohol accounts for 1.8 million deaths annually, representing 3.2% of all deaths and 4.0% of disease burden [1,2]. Young people in particular are susceptible to short-term social harms and long-term physiological effects resulting from alcohol consumption [3–6]. Acute short-term harms include injury and death resulting from motor vehicle crashes, suicide, violence, risky sexual behaviour, substance abuse and criminal behaviour [7,8]. Longer-term harms include chronic disease, loss of memory and neurological damage [5,9–11]. These harms associated with alcohol use and misuse apply to young people around the globe [4,7,12]. In Australia, the 2007 National Drug Strategy Household Survey reported that approximately 22% of Australian teenagers drink at

least weekly and approximately 9% of youths aged 14–19 years reported drinking at risky or high-risk levels [13].

Many factors influence alcohol consumption, including social, individual, structural and marketing factors [14]. Alcohol is among the most heavily advertised products world-wide [15], resulting in increasing exposure to underage youth [16]. Estimated expenditure on alcohol advertising in mainstream Australian media exceeds A\$100 million per annum, with metropolitan television representing more than 45% [17]. In the larger United States markets, alcohol advertising spending on television from 2001 to 2006 increased from US\$779 million to US\$992 million, with the number of advertisements growing by 33% [18].

Two recent studies in Australia found high levels of alcohol advertising exposure to underage youth [17,19].



For example, Winter *et al.* found that teens aged 13–17 years in the Sydney metropolitan market were exposed to almost identical levels of alcohol advertising as young adults aged 18–24 years, and that children under 13 years were exposed to around one-third of the exposure of mature adults over 24 years [19].

Several studies have found significant relationships between youth exposure to alcohol advertising and drinking intentions and behaviours [20–24]. Alcohol advertising may influence adolescents by promoting positive associations with alcohol and linking consumption with attractive symbols, role models and outcomes (positive expectancies) [20,25–28], thus making them more comfortable with consuming alcohol [29]. Hollingworth and colleagues estimated that a complete media ban on alcohol advertising in the United States would reduce alcohol-related life-years lost by 16.4% [30].

#### Advertising elements with appeal to children and underage youth

Alcohol advertisements often contain non-product-related creative elements that youth find appealing [31]. Chen and colleagues recently investigated the affective responses of youth towards specific elements featured in alcohol advertisements: humour; music; story; people characters; and animal characters. They found liking of these elements contributed significantly to overall likeability of the advertisements and purchase intent for the product advertised [32]. Other studies have also found that liking of alcohol advertisements influences consumption and the quantity consumed by youth [33–35].

Humour is a widely used advertising technique, particularly in television [36,37]. Research has found that slapstick and clownish humour are particularly appealing to children [38], while adolescents appreciate slapstick humour but also enjoy more 'sophisticated' forms such as sarcasm, irony and sexual allusion [38]. Liking of the music used in an alcohol advertisement has been found to influence advertising effectiveness among youth [32], and beer advertisements containing an engaging storyline are more attractive to youth than those without [32]. There is considerable evidence that cartoon and animal characters hold special appeal to children, and animals have been a favoured topic of TV shows targeting children [39–42]. Youths also pay greater attention when television advertisements feature animation and cute animals [41–46]. Animal characters have been used by marketers to target children and youth for a range of products, including tobacco and alcohol [47]. Special technological effects are another creative device that are successful in gaining the attention of children [48,49], are popular within youth culture, and are particularly appealing to boys [50].

#### Regulation of advertising

Given the acknowledged effects of alcohol advertising on children and youth, most countries have regulatory systems that attempt to control the content of alcohol advertising and/or the times that such advertising is allowed. Australia has a national system of co-regulation whereby both government and industry play a role in regulating advertising on metropolitan free-to-air television. The government's function is exercised through the Australian Communications and Media Authority (ACMA), which enforces the Children's Television Standards (CTS) which serve to protect children from possible harmful effects of television by ensuring quality programming and by imposing content restrictions [51]. The television broadcasting industry operates under the Commercial Television Industry Code of Practice (CTICP) [52]. Restrictions in this Code focus on regulation of programming content and advertising as a whole. With respect to exposure restrictions, the CTICP [52] limits alcohol advertising to between 12.00 noon and 3.00 p.m. (school days), and from 8.30 p.m. to 5.00 a.m. weekdays (school days and school holiday periods). However, alcohol advertisements are permitted in daytime hours during live broadcasting of sporting events on weekends and public holidays.

The Advertising Standards Bureau (ASB) administers a national system of self-regulation of the content of advertising through the Advertising Standards Board and the Advertising Claims Board. These two boards make their determinations on received complaints under appropriate sections of the relevant Code of Ethics as prescribed by the Australian Association of National Advertisers (AANA) [53]. The Australian voluntary Alcohol Beverages Advertising Code (ABAC) is a specific code developed for alcohol advertising [54]. This code has a number of restrictions regarding the content of alcohol advertising. Most notably, Article B states that alcohol advertising 'must not have strong or evident appeal to children or adolescents' (see Table 1).

There have been several studies on the content of alcohol advertising in Australia and whether or not such content breaches the ABAC [26,27,55–58]. These studies generally conclude that much alcohol advertising content contravenes the ABAC, but that complaints received by the ASB tend to be dismissed rather than upheld as valid complaints. For example, of a total of 20 complaints against alcohol television advertisements received by the ASB between October 2007 and November 2008, only one complaint was upheld while 19 were dismissed [59].

However, there have been few studies on children's and underage teens' exposure to alcohol advertising and whether existing levels of exposure are consistent with

**Table 1** The Alcohol Beverage Advertising Code (ABAC).

*The ABAC States that advertisements for alcohol must:*

- (a) Present a mature, balanced and responsible approach to the consumption of alcohol beverages and, accordingly
  - i must not encourage excessive consumption or abuse of alcohol;
  - ii must not encourage underage drinking; must not promote offensive behaviour or the excessive misuse or abuse of alcohol beverages;
  - iii must only depict the responsible and moderate consumption of alcohol beverages.
- (b) Not have a strong or evident appeal to children or adolescents and, accordingly:
  - i adults appearing in advertisements must be over 25 years of age and be clearly depicted as adults;
  - ii children and adolescents may only appear in advertisements in natural situations (e.g. family barbecue, licensed family restaurant) and where there is no implication that the depicted children and adolescents will consume or serve alcohol beverages;
  - iii adults under the age of 25 years may only appear as part of a natural crowd or background scene.
- (c) Not suggest that the consumption or presence of alcohol beverages may create or contribute to a significant change in mood or environment and, accordingly:
  - i must not depict the consumption or presence of alcohol beverages as a cause of or contributing to the achievement of personal, business, social, sporting, sexual or other success;
  - ii if alcohol beverages are depicted as part of a celebration, must not imply or suggest that the beverage was a cause of or contributed to success or achievement;
  - iii must not suggest that the consumption of alcohol beverages offers any therapeutic benefit or is a necessary aid to relaxation.
- (d) Not depict any direct association between the consumption of alcohol beverages, other than low-alcohol beverages, and the operation of a motor vehicle, boat or aircraft or the engagement in any sport (including swimming and water sports) or potentially hazardous activity and, accordingly:
  - i any depiction of the consumption of alcohol beverages in connection with the above activities must not be represented as having taken place before or during engagement of the activity in question and must in all cases portray safe practices;
  - ii any claim concerning safe consumption of low-alcohol beverages must be demonstrably accurate.
- (e) Not challenge or dare people to drink or sample a particular alcohol beverage, other than low-alcohol beverages, and must not contain any inducement to prefer an alcohol beverage because of its higher alcohol content.
- (f) Comply with the Advertiser Code of Ethics adopted by the Australian Association of National Advertisers.
- (g) Not encourage consumption that is in excess of, or inconsistent with the Australian Alcohol Guidelines issued by the NHMRC.
- (h) Not refer to The ABAC Scheme, in whole or in part, in a manner which may bring the scheme into disrepute.

Source: The ABAC Scheme, 2007 (accessed 17 October 2008). Available at: <http://www.abac.org.au/> [54].

the aims of the Industry Code of Practice. The purpose of this study was to investigate the exposure of underage youth to alcohol television advertising on metropolitan free-to-air television in the five mainland capital city markets of Australia. Two research questions were examined: (i) to what extent are children and underage youth in Australia exposed to high levels of alcohol advertisements on metropolitan free-to-air television; and (ii) to what extent do alcohol advertisements that are most exposed to children aged 0–12 years and youth aged 13–17 years contain elements that appeal to children and youth?

## METHOD

For the purpose of this study, we obtained exposure data (Target Audience Rating Points; TARPs) for all alcohol advertisements screened on three national metropolitan free-to-air television channels from November 2005 to October 2006 in the capital city markets of the five mainland states: Sydney, New South Wales; Brisbane, Queensland; Adelaide, South Australia; Melbourne, Victoria; and Perth, Western Australia. Between them, these five metropolitan markets account for 60% of the Australian population. Free-to-air television comprises three commercial networks and two government-funded national networks. Subscription television was not included in this study due to low audience penetration (approximately 24%) [60] and because many cable channels do not carry advertising.

TARPs are a measure of advertising weight. In general, the greater the TARPs for an advertisement, the greater the proportion of the target audience exposed to the advertisement and the more often members of the target audience are exposed to it. The TARPs figure for an advertisement is calculated from the number of target audience individuals exposed to the advertisement as a proportion of the total target audience, multiplied by 100. Therefore, if an advertisement is aired in a particular programme that has a viewing audience of 15 000 13–17-year-olds, and the total population of 13–17-year-olds is 60 000, then that exposure equates to 25 TARPs for the target audience of 13–17-year-olds. If the advertisement is aired three times during that programme, it equates to 75 TARPs.

In Australia, TARPs are derived from weekly audience measurement and scheduling data generated by OzTAM (Australian Television Audience Measurement). OzTAM is the official source of television audience measurement covering all free-to-air and subscription television across the five city metropolitan markets and national subscription television [61]. These data provide a tool for advertisers to monitor their exposure and for media planners to maximize the level of exposure to defined target

audiences. Nielsen Media Research is the national service provider contracted by OzTAM as the supplier of television audience measurement services for the Australian metropolitan markets.

TARPs data were obtained for a total of 2162 individual alcohol advertisements promoting 79 different brands for four target audiences: children (0–12 years); underage teens (13–17 years); young adults (18–24 years); and mature adults aged 25 years and over. Age groupings were based on separating underage teenagers from children, as from age 13 years a substantial increase in experimentation with alcohol occurs [4]. The separation of young adults (18–24 years) and adults over 25 years coincides with the distinction in the ABAC specifying that all models in television commercials should be more than 25 years of age.

The 30 advertisements to which 13–17-year-olds were most exposed were content-analysed to identify whether or not they contained 'sex appeal' and for five elements known to appeal (although not exclusively) to children and underage youth: slapstick humour; an engaging story line; the presence of animals or anthropomorphized animal characters; pop music; and special technical effects [32,43,44,46,50]. Apart from one or two exceptions, these advertisements were also the most exposed for all other age groups.

## RESULTS

### Exposure

Table 2 shows the annual TARPs for the four age groups for each of the capital city markets. Using young adults as the benchmark, Table 2 shows the relative exposure levels of these age groups within each market. To provide some indication of what this means in terms of numbers of advertisements to which the groups are exposed, Table 2 also shows a simple average of the number of alcohol advertisements to which the average member of each age group is exposed per week. Given that 100% exposure of the target audience is obtained rarely in practice, these figures underestimate the number of advertisements to which heavier television viewers are exposed.

Table 2 shows considerable variation in alcohol advertising weight between these five markets, with Adelaide residents of all age groups receiving more alcohol advertising exposure than all other capital city residents. In each capital city market, mature adults (25 years plus) are most exposed to alcohol advertising on free-to-air television, but underage teens (13–17-year-olds) are exposed to almost as much alcohol advertising as are young adults (18–24 years), with children exposed to half the amount as young adults. It is clear that the

**Table 2** Target audience rating points (TARPs) and relative exposure ratios for the four age groups by capital city market: November 2005–October 2006.

	TARPs			
	Children 0–12 years	Underage teenagers 13–17 years	Young adults 18–24 years	Mature adults 25+ years
<b>Market</b>				
Sydney	9947	20 222	23 063	35 287
Brisbane	11 763	18 402	25 529	36 435
Adelaide	20 322	28 215	32 012	45 470
Melbourne	11 258	21 049	21 244	30 775
Perth	12 703	25 237	27 920	40 789
<b>Relative exposure within each market<sup>a</sup></b>				
Sydney	0.43	0.88	1.0	1.53
Brisbane	0.46	0.72	1.0	1.43
Adelaide	0.63	0.88	1.0	1.42
Melbourne	0.53	0.99	1.0	1.45
Perth	0.45	0.90	1.0	1.46
<b>Simple average advertisement exposure (per week)<sup>b</sup></b>				
Sydney	1.9	3.9	4.4	6.8
Brisbane	2.3	3.5	4.9	7.0
Adelaide	3.9	5.4	6.2	8.7
Melbourne	2.2	4.0	4.1	5.9
Perth	2.4	4.9	5.4	7.8

<sup>a</sup>Young adults = 1.0. <sup>b</sup>Based on 100% exposure.



**Table 3** Target audience rating points (TARPs) by alcohol product category for the four age groups for each capital city market: November 2005–October 2006.

<i>Product</i>	<i>Children 0–12 years</i>		<i>Underage teenagers 13–17 years</i>		<i>Young adults 18–24 years</i>		<i>Mature adults 25+ years</i>	
	<i>TARPs</i>	<i>Ratio</i>	<i>TARPs</i>	<i>Ratio</i>	<i>TARPs</i>	<i>Ratio</i>	<i>TARPs</i>	<i>Ratio</i>
<b>Beer (full strength)</b>								
Sydney	3811	0.38	8732	0.86	10 122	1.0	14 304	1.41
Brisbane	4465	0.42	7875	0.74	10 649	1.0	14 432	1.36
Adelaide	11 068	0.60	16 314	0.88	18 526	1.0	24 810	1.34
Melbourne	5466	0.50	11 065	1.02	10 842	1.0	14 825	1.37
Perth	6167	0.42	13 436	0.92	14 652	1.0	20 238	1.38
<b>Beer (medium/low strength)</b>								
Sydney	1427	0.53	2723	1.01	2696	1.0	4821	1.79
Brisbane	2005	0.49	2994	0.73	4129	1.0	6109	1.48
Adelaide	1551	0.69	2089	0.93	2242	1.0	3649	1.63
Melbourne	713	0.66	1059	0.98	1085	1.0	2039	1.88
Perth	1299	0.47	2524	0.92	2745	1.0	4353	1.59
<b>Wine—regular</b>								
Sydney	899	0.40	1847	0.83	2229	1.0	3716	1.67
Brisbane	917	0.40	1530	0.67	2297	1.0	3300	1.44
Adelaide	1600	0.55	2545	0.87	2929	1.0	3770	1.29
Melbourne	1014	0.46	2416	1.10	2193	1.0	3378	1.54
Perth	1231	0.45	2488	0.91	2749	1.0	4234	1.54
<b>Spirits—straight</b>								
Sydney	2778	0.48	4871	0.84	5832	1.0	9038	1.55
Brisbane	3076	0.51	4217	0.70	6046	1.0	9024	1.49
Adelaide	3954	0.73	4674	0.86	5452	1.0	8849	1.62
Melbourne	2781	0.56	4420	0.89	4982	1.0	7428	1.49
Perth	2755	0.52	4314	0.81	5294	1.0	8552	1.62
<b>Spirits—mixed</b>								
Sydney	929	0.48	1742	0.90	1933	1.0	3044	1.57
Brisbane	1171	0.55	1540	0.72	2133	1.0	3222	1.51
Adelaide	1915	0.76	2270	0.90	2535	1.0	3959	1.56
Melbourne	1144	0.61	1745	0.92	1889	1.0	2713	1.44
Perth	1103	0.52	2128	1.00	2136	1.0	3018	1.41

alcohol marketers' media schedules not only deliver adult audiences but also reach underage audiences—particularly 13–17-year-olds.

The highest relative exposure of underage audiences occurred in the Melbourne market, with underage teens (13–17 years) exposed to virtually the same level as young adults (18–24 years) in that market. With respect to children under 13 years, Adelaide had the highest exposure relative to young adults (almost two-thirds, 0.63) and Sydney had the lowest, but still just under half (0.43) the exposure of young adults in that market.

The overall differences in TARPs levels between the capital city markets lead to some anomalies in exposure by age group. For example, in terms of TARPs, underage teens in the Adelaide market are exposed to more alcohol advertising than young adults in the Sydney, Melbourne and Brisbane markets, and underage children in the

Adelaide market are exposed to almost the same level of alcohol advertising as young adults in the Melbourne market.

Table 3 shows exposure levels by alcohol product category for the four age groups for each market (sparkling wine and liqueurs categories not shown due to low TARPs levels). Full strength beer is the dominant product category, followed by straight spirits. Table 3 shows that the approximately equal exposure for underage teens and young adults shown in Table 2 applies for all product categories. However, in two product categories in the Melbourne market, TARPs for underage teens exceed those for young adults: full strength beer TARPs are higher for underage teens than for young adults (11 065 versus 10 842, respectively); and wine TARPs for underage teens are higher than for young adults (2416 versus 2193, respectively).

With respect to differences between the markets noted earlier, Table 3 shows that Adelaide underage teens are exposed to substantially far more full strength beer advertising (16 314 TARPs) than young adults in all other markets. Perth underage teens are exposed to substantially more full strength beer advertising (13 436 TARPs) than young adults in all other markets except Adelaide (18 526).

### Content analysis

The 30 brands most exposed to the underage teens during the study period were content-analysed for elements that appeal to children and underage youth. Excluding sex appeal, Table 4 shows that all 30 of these advertisements contain at least one element known to appeal to children or underage youth, with 23 of the 30 containing two or more such elements. Animals or anthropomorphized

animal characters ( $n = 15$ ) were the most common element featured in the 30 advertisements, with the majority of such advertisements featuring real animals. Two advertisements for Bundaberg rum used an anthropomorphized polar bear, a digitally enhanced animal character known as 'Bundy Bear'. Humour and popular music were equally common elements ( $n = 14$ ). An engaging storyline was present in 13 of the advertisements and special effects (technical) appeared in 10. Sexual appeal was a less common feature ( $n = 6$ ).

### DISCUSSION

Contrary to the intended objective of the CTICP, underage youth in Australia are exposed to high levels of alcohol advertising on metropolitan free-to-air television. In the period under study, children aged up to 12 years were

**Table 4** Elements appealing to children and underage youth contained in television advertisements for the 30 advertisements most exposed to underaged children and youth.

<i>Brand</i>	<i>Humour</i>	<i>Popular music</i>	<i>Engaging storyline</i>	<i>Animals/ animation</i>	<i>Special effects (technical)</i>	<i>Sexual appeal</i>
Absolut Cut vodka	v	—	v	—	—	—
Boags draught beer	v	—	—	—	—	v
Boags St George beer	v	v	v	—	—	—
Bundaberg rum	v	—	—	v	—	v
Bundaberg rum and cola	v	—	v	v	—	v
Carlton draught beer	—	—	—	v	—	—
Carlton midstrength bitter beer	v	—	—	—	—	—
Cascade premium lager and light beer	v	—	—	v	—	—
Castlemaine •• Gold lager	v	—	—	v	—	—
Hahn premium light beer	v	v	v	v	—	v
Heineken lager beer	—	—	v	v	v	—
Smirnoff Ice <sup>a</sup>	—	v	—	—	—	—
Tooheys extra dry beer	—	v	v	—	v	—
Tooheys new draught beer	v	—	—	v	v	—
Victoria bitter beer	v	—	—	v	—	—
Wolf Blass Wine Corporate <sup>a</sup>	—	—	—	v	—	—
Jim Beam bourbon—white label	—	v	v	—	—	—
Becks beer	—	v	—	—	—	v
Orlando Jacobs Creek reserve S	—	v	v	—	—	—
Boags premium lager beer	—	v	v	—	—	v
West End draught beer	v	—	v	—	—	—
Carlsberg beer <sup>a</sup>	—	v	—	—	v	—
Carlton & United Beverages-Com	—	—	—	v	v	—
Smirnoff vodka <sup>a</sup>	—	—	—	—	v	—
Orlando Jacobs Creek sparkling wine <sup>a</sup>	—	v	—	v	v	—
Coopers premium lager	v	—	v	—	—	—
Johnnie Walker Scotch whisky	—	v	v	—	—	—
Orlando Jacobs Creek Chardonnay <sup>a</sup>	—	v	—	v	v	—
Johnny Walker Corporate <sup>a</sup>	—	v	—	v	v	—
Corona extra beer	v	v	v	v	v	—
Total	14 (47%)	14 (47%)	13 (43%)	15 (50%)	10 (33%)	6 (20%)

<sup>a</sup>15 second advertisement.

exposed to almost one-third of the exposure level of mature adults, and underage teenagers 13–17 years old were exposed to almost the same levels as young adults aged 18–24 years. While clearly a result of the differences in overall advertising weight, of particular note was the observed variation in exposure between capital cities, such that children aged up to 12 years and 13–17-year-olds in the capital cities of South Australia and Western Australia were subjected to higher levels of alcohol advertising TARPs than young adults in other States. Future research in Australia could attempt to monitor such differences on an ongoing basis, as differences in consumption of underage youth in different markets could be expected to reflect these advertising weight differences.

The levels of alcohol advertising exposure of children and underage youth revealed in this study suggest two failures of the self-regulation system in Australia. First, given that alcohol advertisers rarely place advertisements within the restricted classification zones [17], these time zones appear insufficient to prevent considerable exposure to children and underage youth. The 8.30 p.m. threshold needs to be reconsidered. One Australian audience research study reported that approximately 550 000 0–17-year-olds watch television after 8.30 p.m. from Monday to Sunday, and this number does not decline significantly until 9.30 p.m. [62]. Hence, this time-slot classification should be increased from 8.30 p.m. to 9.30 p.m. or 10.00 p.m. for weekdays and weekends. Secondly, allowing alcohol advertising during live sports programming is problematic, as it provides an additional opportunity for children and underage youth to be exposed to alcohol advertising. Studies assessing the level of exposure of alcohol advertising to children and youth during sports programming are limited. However, sports programming attracts a high proportion of advertising spending [63] and youth have a high level of recognition for alcohol advertisements shown during sporting broadcasts [64].

Alternative methods of reducing underage exposure include excluding alcohol advertising in programmes with a certain percentage of underage viewers. However, given that audience composition may change over time and needs to be established for new programmes, along with the time-of-day audience correlation with age, it is likely that time restrictions can provide a simpler and more effective way of reducing exposure.

Contrary to the intention of the ABAC, alcohol advertisements most exposed to children and underage youth contained elements that appeal to these groups. All 30 of the advertisements with highest exposure to children and underage youth contained at least one such element. In particular, half the 30 advertisements contained an animal or animal character. While some use of animals seems innocuous, others could be interpreted as targeting

children and underage youth deliberately. Regardless of intent, given the universal appeal to children of bear characters (e.g. Humphrey B. Bear in Australia; 'Fozzie Bear' of *Muppets* fame; and the US forests icon 'Smokey the Bear' [65]), it is likely that 'Bundy Bear', the life-size polar bear used as the main character in Bundaberg rum and Bundaberg rum and cola advertisements, would have considerable appeal to children. In fact, the ABAC complaints panel made this specific comparison when upholding a complaint in April 2006 about Bundaberg rum featuring 'Bundy Bear'. The complaint was upheld on the grounds that the character was appealing to children and appeared in a time-slot where children were exposed. However, six other complaints for Bundaberg rum advertisements between 1999 and 2006 all featured 'Bundy Bear' but were dismissed by the Advertising Standards Board.

The CTICP regulates children's exposure to programming and advertising that is intended for adult viewing. This Code contains an 'Advisory Note', which provides guidance in Clause 6.23 on assessing whether or not advertisements are directed to children. This clause alerts assessors to the following themes or elements as indicative of being directed towards children: characters such as monsters and animals; simple, uncomplicated storyline; animation or visuals; and use of children's language [52]. That is, the industry is clearly aware that these execution elements have special appeal to children, yet the Australian Advertising Standards Board continues to allow the airing of alcohol advertisements that contain such elements. It is recommended that these specific elements be included in the ABAC as prohibited in any alcohol advertising—or permitted only for advertisements aired in restricted hours and never in any sports broadcast, whether live or delayed. The use of animals and animal characters is particularly of concern. In general, no animals should appear in an alcohol advertisement; exceptions might be considered where an animal has traditionally been part of the logo. In those cases, regulations might allow the animal to appear in the advertisement as part of the packaging or the logo but not animated or in motion, and restricted to a small proportion of the total screen size.

Overall, this study suggests that the current system of self-regulation protects children and underage youth inadequately from exposure to alcohol television advertising on metropolitan free-to-air television in Australia. Given that advertisers have substantial information about their audiences when planning media schedules, the findings of this study are not inconsistent with the proposition that alcohol marketers in Australia may be targeting underage children and youth deliberately not only in their advertising content, but also in their media scheduling. At the very least, they appear to be 'turning a



blind eye' to the underage reach of their media schedules. Either the system should incorporate further restrictions voluntarily in content and programming zones or a mandatory system with substantial penalty powers should be considered.

#### Declarations of interest

None.

#### Acknowledgements

This research was supported by a Curtin Business School Area of Research Excellence (AORE) grant. The Centre for Behavioural Research in Cancer Control is supported by the Cancer Council WA.

#### References

- World Health Organization (WHO). *Global Status Report on Alcohol*. Geneva: WHO; 2004.
- World Health Organization (WHO). *Alcohol and Injury in Emergency Departments*. Geneva: WHO; 2007.
- Chikritzhs T. *Under-aged Drinking among 14–17 Year Olds and Related Harms in Australia*. Perth: Curtin University of Technology; 2004.
- Jernigan D. *Global Status Report: Alcohol and Young People*. Geneva: World Health Organization; 2001.
- National Research Council and Institute of Medicine. *Reducing Underage Drinking: A Collective Responsibility*. Washington, DC: Washington DC Academies Press; 2004.
- US Department of Health and Human Services. *The Surgeon General's Call to Action to Prevent and Reduce Underage Drinking 2007*. Rockville, MD: Office of the Surgeon General; 2007.
- Chikritzhs T., Pascal R., Jones P. *National Alcohol Indicators Bulletin no. 7*. Perth: Curtin University of Technology; 2004.
- Hingson R., Kenkel D. Social, health, and economic consequences of underage drinking. In: National Research Council and Institute of Medicine, editor. *Reducing Underage Drinking: A Collective Responsibility*. Washington, DC: The National Academies Press; 2004, p. 351–82.
- Brown S., Tapert S. Health consequences of adolescent alcohol involvement. In: National Research Council and Institute of Medicine, editors. *Reducing Underage Drinking: A Collective Responsibility*. Washington, DC: The National Academies Press; 2004, p. 383–401.
- Chandran R. Application of neuroscience to study ad response. *Businessline* 2003, 14 November 2003, p. 1–2.
- Pechmann C., Levine L., Loughlin S., Leslie F. Impulsive and self-conscious: adolescents vulnerability to advertising. *J Public Policy Mark* 2005; **24**: 202–21.
- Miller T., Levy D., Spicer R., Taylor D. Societal costs of underage drinking. *J Stud Alcohol* 2006; **67**: 519–28.
- Australian Institute of Health and Welfare (AIHW). *2007 National Drug Strategy Household Survey: First Results*. Canberra: AIHW; 2008.
- Donovan R. A model of alcohol consumption to assist in developing communication strategies for reducing excessive alcohol consumption by young people. Technical Report prepared for the Health Department of Western Australia, Perth. 1997.
- Endicott C. 19th Annual Global Marketing. *Advert Age* 2005; **100**: 1–53. Chicago.
- Centre on Alcohol Marketing and Youth. Youth exposure to alcohol advertising on television, 2001 to 2007. 2008. Available at: <http://www.camy.org/research/tv0608/tv0608.pdf> (accessed 24 October 2008).
- King E., Taylor J., Carroll T. *Australian Alcohol Beverage Advertising in Mainstream Australian Media 2003 to 2005: Expenditure, Exposure and Related Issues*. Canberra: Department of Health and Ageing; 2005.
- Centre of Alcohol Marketing and Youth (CAMY). *Youth Exposure to Alcohol Advertising on Television and in National Magazines, 2001 to 2006*. Washington, DC: CAMY; 2007.
- Winter M., Donovan R., Fielder L. Exposure of children and adolescents to alcohol advertising on television in Australia. *J Stud Alcohol Drugs* 2008; **69**: 676–83.
- Fleming K., Thorson E., Atkin C. K. Alcohol advertising exposure and perceptions: links with alcohol expectancies and intentions to drink or drinking in underage youth and young adults. *J Health Commun* 2004; **9**: 3–29.
- Stacy A. W., Zogg J. B., Unger J. B., Dent C. W. Exposure to televised alcohol ads and subsequent adolescent alcohol use. *Am J Health Behav* 2004; **28**: 498–509.
- Ellickson P., Collins R., Hambarsoomians K., McCaffrey D. Does alcohol advertising promote adolescent drinking? Results from a longitudinal assessment. *Addiction* 2005; **100**: 235–46.
- Collins R. L., Ellickson P. L., McCaffrey D., Hambarsoomians K. Early adolescent exposure to alcohol advertising and its relationship to underage drinking. *J Adolesc Health* 2007; **40**: 527–34.
- Snyder L. B., Fleming Milici E., Slater M., Sun H., Strizhakova Y. Effects of alcohol advertising exposure on drinking among youth. *Arch Pediatr Adolesc Med* 2006; **160**: 18–24.
- Austin E. W., Chen M. J., Grube J. W. How does alcohol advertising influence underage drinking? The role of desirability, identification and skepticism. *J Adolesc Health* 2006; **38**: 376–84.
- Carroll T., Donovan R. Alcohol marketing on the Internet: new challenges for harm reduction. *Drug Alcohol Rev* 2002; **21**: 83–91.
- Donovan K., Donovan R., Howat P., Weller N. Magazine alcohol advertising compliance with the Australian alcoholic beverages advertising code. *Drug Alcohol Rev* 2007; **26**: 73–81.
- Dunn M., Yniguez R. Experimental demonstration of the influence of alcohol advertising on the activation of alcohol expectancies in memory among fourth and fifth grade children. *Exp Clin Psychopharm* 1999; **7**: 473–83.
- Walsh D., Gentile D. 'Slipping Under the Radar: Advertising and the Mind' in *Drinking it in: Alcohol Marketing and Young People*. Geneva: WHO; 2005.
- Hollingworth W., Ebel B., McCarty C., Garrison M., Christakis D., Rivara F. Prevention of deaths from harmful drinking in the United States: the potential effects of tax increases and advertising bans on young drinkers. *J Stud Alcohol* 2006; **67**: 300–8.
- Walters E., Treno A., Grube J. W. Alcohol advertising and youth: a focus-group analysis of what young people find appealing in alcohol advertising. *Contemp Drug Probl* 2001; **28**: 695–718.
- Chen M., Grube J., Bersamin M., Walters E., Keefe D. Alcohol advertising: what makes it attractive to youth? *J Health Commun* 2005; **10**: 553–65.

33. Wyllie A., Zhang J. E., Casswell S. Responses to televised alcohol advertisements associated with drinking behaviour of 10–17-year-olds. *Addiction* 1998; **93**: 361–71.
34. Wyllie A., Zhang J. E., Casswell S. Positive responses to televised beer advertisements associated with drinking and problems reported by 18 to 29-year-olds. *Addiction* 1998; **93**: 749–60.
35. Austin E., Knaus C. Predicting the potential for risky behavior among those 'too young' to drink as a result of appealing advertising. *J Health Commun* 2000; **5**: 13–27.
36. Catanescu C., Tom G. Types of humor in television and magazine advertising. *Rev Bus* 2001; **22**: 92–5.
37. Zhang Y., Zinkhan G. Responses to humorous ads. *J Advertising* 2006; **35**: 113–27.
38. Buijzen M., Valkenberg P. Developing a typology of humor in audiovisual media. *Media Psychol* 2004; **6**: 147–67.
39. Acuff D., Reiher R. *What Kids Buy and Why*. New York: Free Press; 1997.
40. Garitaonandia C., Juaristi P., Oleagaa J. Media genres and content preferences. In: Livingstone S., Bovill M., editors. *Children and Their Changing Media Environment: A European Comparative*. Mahwah: Lawrence Erlbaum Associates; 2001, p. 141–57.
41. Gentile D., Walsh D., Bloomgren B., Atti J., Norman J. Frogs sell beer: the effects of beer advertisements on adolescent drinking knowledge, attitudes and behavior. Paper presented at the Biennial Conference of the Society for Research in Child Development, Minneapolis, Minnesota, 19–21 April 2001. Available from: <http://drdouglass.org/drddpdfs/Ale%20Ad%20SRCD%20Handout.pdf> (accessed 4 May 2009).
42. Australian Communications and Media Authority. *Television Advertising to Children: A Review of Contemporary Research on the Influence of Television Advertising Directed to Children*. Canberra: Commonwealth of Australia; 2007.
43. Guber S., Berry J. *Marketing To and Through Kids*. New York: McGraw Hill; 1993.
44. McNeal J. *The Kids Market: Myths and Realities*. New York: Paramount Market Publishing; 1999.
45. McNeal J. *Kids as Customers: A Handbook of Marketing to Children*. New York: Lexington Books; 1992.
46. Sutherland A., Thompson B. *Kidfluence: The Marketer's Guide to Understanding and Reaching Generation Y—Kids, Tweens and Teens*. New York: McGraw-Hill; 2003.
47. DesRoches G. An adman's struggle with Joe Camel and free speech. *Advert Age*, 26 September 1994.
48. Greer D., Potts R., Wright J., Huston A. The effects of television commercial form and commercial placement on children's social behavior and attention. *Child Dev* 1982; **53**: 611–9.
49. Huston A., Wright J. Television forms and children. In: Comstock G., editor. *Public Communication and Behavior*. New York: Academy Press; 1989, p. 103–59.
50. Hanley P. *Copycat Kids? The Influence of Television Advertising on Children and Teenagers*. London: ITC; 2000.
51. Australian Communications and Media Authority. Children's Television Standards. 2005. Available at: [http://www.acma.gov.au/webwr/aba/contentreg/codes/television/documents/chstdvarn\\_03.pdf](http://www.acma.gov.au/webwr/aba/contentreg/codes/television/documents/chstdvarn_03.pdf) (accessed 4 May 2009).
52. Free TV Australia. *Commercial Television Industry Code of Practice*. NSW: Mosman; 2007.
53. Australian Association of National Advertisers. AANA Advertiser Code of Ethics. 2006. Available at: [http://www.advertisingstandardsbureau.com.au/pages/images/6067\\_AANA\\_ethics\\_final.pdf](http://www.advertisingstandardsbureau.com.au/pages/images/6067_AANA_ethics_final.pdf) (accessed 25 April 2009).
54. The ABAC Scheme. Alcoholic beverages advertising code. 2004. Available at: <http://www.abac.org.au/> (accessed 17 October 2008).
55. Donovan K. The content and frequency of alcoholic beverage advertisements and sales promotions in popular magazines. [MPH Thesis]. Perth: Curtin University of Technology; 2003.
56. Jones S., Donovan R. Messages in alcohol advertising targeted to youth. *Aust NZ J Public Health* 2001; **25**: 126–31.
57. Jones S. C., Hall D., Munro G. How effective is the revised regulatory code for alcohol advertising in Australia? *Drug Alcohol Rev* 2008; **27**: 29–38.
58. Roberts G. Analysis of alcohol promotion and advertising. Centre for Youth Drug Studies. Melbourne: Australian Drug Foundation. 2002.
59. Advertising Standards Bureau. Advertising Standards Bureau. 2008. Available at: <http://www.adstandards.com.au/pages/index.asp> (accessed 9 December 2008).
60. Research and markets. Australia—pay TV—statistics—subscribers overview and analysis. 2008. Available at: [http://www.researchandmarkets.com/reportinfo.asp?report\\_id=303264](http://www.researchandmarkets.com/reportinfo.asp?report_id=303264) (accessed 23 October 2008).
61. Australian Television Audience Measurement (OzTAM). Terms and definitions. 2005. Available at: [http://www.oztam.com.au/pdf/tv\\_ratings/terms\\_definitions.pdf](http://www.oztam.com.au/pdf/tv_ratings/terms_definitions.pdf) (accessed 9 October 2008).
62. Australian Communications and Media Authority. *Children's Viewing Patterns on Commercial, Free-to-air and Subscription Television: Report Analysing Audience Ratings Data for 2001, 2005 and 2006*. Canberra: Commonwealth of Australia; 2007.
63. Centre on Alcohol Marketing and Youth. *Alcohol Advertising on Sports Television 2001 to 2003*. Washington DC: CAMY; 2004.
64. Phillipson L., Jones S. Awareness of alcohol advertising among children who watch televised sports. Proceedings of the Australian and New Zealand Marketing Academy (ANZMAC) Conference. Dunedin, New Zealand, 3–5 December 2007. Available from: <http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1064&context=hbspapers> (accessed 4 May 2009).
65. Pennsylvania Department of Conservation and Natural Resources. History of Smokey the bear. 2007. Available at: <http://www.dcnr.state.pa.us/FORESTRY/ffp/history.aspx> (accessed 20 July 2008).



**JOHN WILEY AND SONS LICENSE  
TERMS AND CONDITIONS**

Jan 31, 2011

This is a License Agreement between Lynda Jane Fielder ("You") and John Wiley and Sons ("John Wiley and Sons") provided by Copyright Clearance Center ("CCC"). The license consists of your order details, the terms and conditions provided by John Wiley and Sons, and the payment terms and conditions.

**All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.**

License Number	2599180458977
License date	Jan 31, 2011
Licensed content publisher	John Wiley and Sons
Licensed content publication	Addiction
Licensed content title	Exposure of children and adolescents to alcohol advertising on Australian metropolitan free-to-air television
Licensed content author	Lynda Fielder,Robert J. Donovan,Robyn Ouschan
Licensed content date	Jul 1, 2009
Start page	1157
End page	1165
Type of use	Dissertation/Thesis
Requestor type	Author of this Wiley article
Format	Print and electronic
Portion	Full article
Will you be translating?	No
Order reference number	Fielder1
Total	0.00 USD

**Terms and Conditions****TERMS AND CONDITIONS**

This copyrighted material is owned by or exclusively licensed to John Wiley & Sons, Inc. or one of its group companies (each a "Wiley Company") or a society for whom a Wiley Company has exclusive publishing rights in relation to a particular journal (collectively "WILEY"). By clicking "accept" in connection with completing this licensing transaction, you agree that the following terms and conditions apply to this transaction (along with the billing and payment terms and conditions established by the Copyright Clearance Center Inc., ("CCC's Billing and Payment terms and conditions"), at the time that you opened your Rightslink account (these are available at any time at <http://myaccount.copyright.com>)

**Terms and Conditions**

1. The materials you have requested permission to reproduce (the "Materials") are protected by copyright.
2. You are hereby granted a personal, non-exclusive, non-sublicensable, non-transferable, worldwide, limited license to reproduce the Materials for the purpose specified in the licensing process. This license is for a one-time use only with a maximum distribution equal to the number that you identified in the licensing process. Any form of republication granted by this licence must

be completed within two years of the date of the grant of this licence (although copies prepared before may be distributed thereafter). The Materials shall not be used in any other manner or for any other purpose. Permission is granted subject to an appropriate acknowledgement given to the author, title of the material/book/journal and the publisher and on the understanding that nowhere in the text is a previously published source acknowledged for all or part of this Material. Any third party material is expressly excluded from this permission.

3. With respect to the Materials, all rights are reserved. Except as expressly granted by the terms of the license, no part of the Materials may be copied, modified, adapted (except for minor reformatting required by the new Publication), translated, reproduced, transferred or distributed, in any form or by any means, and no derivative works may be made based on the Materials without the prior permission of the respective copyright owner. You may not alter, remove or suppress in any manner any copyright, trademark or other notices displayed by the Materials. You may not license, rent, sell, loan, lease, pledge, offer as security, transfer or assign the Materials, or any of the rights granted to you hereunder to any other person.

4. The Materials and all of the intellectual property rights therein shall at all times remain the exclusive property of John Wiley & Sons Inc or one of its related companies (WILEY) or their respective licensors, and your interest therein is only that of having possession of and the right to reproduce the Materials pursuant to Section 2 herein during the continuance of this Agreement. You agree that you own no right, title or interest in or to the Materials or any of the intellectual property rights therein. You shall have no rights hereunder other than the license as provided for above in Section 2. No right, license or interest to any trademark, trade name, service mark or other branding ("Marks") of WILEY or its licensors is granted hereunder, and you agree that you shall not assert any such right, license or interest with respect thereto.

5. NEITHER WILEY NOR ITS LICENSORS MAKES ANY WARRANTY OR REPRESENTATION OF ANY KIND TO YOU OR ANY THIRD PARTY, EXPRESS, IMPLIED OR STATUTORY, WITH RESPECT TO THE MATERIALS OR THE ACCURACY OF ANY INFORMATION CONTAINED IN THE MATERIALS, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY, ACCURACY, SATISFACTORY QUALITY, FITNESS FOR A PARTICULAR PURPOSE, USABILITY, INTEGRATION OR NON-INFRINGEMENT AND ALL SUCH WARRANTIES ARE HEREBY EXCLUDED BY WILEY AND ITS LICENSORS AND WAIVED BY YOU.

6. WILEY shall have the right to terminate this Agreement immediately upon breach of this Agreement by you.

7. You shall indemnify, defend and hold harmless WILEY, its Licensors and their respective directors, officers, agents and employees, from and against any actual or threatened claims, demands, causes of action or proceedings arising from any breach of this Agreement by you.

8. IN NO EVENT SHALL WILEY OR ITS LICENSORS BE LIABLE TO YOU OR ANY OTHER PARTY OR ANY OTHER PERSON OR ENTITY FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, INDIRECT, EXEMPLARY OR PUNITIVE DAMAGES, HOWEVER CAUSED, ARISING OUT OF OR IN CONNECTION WITH THE DOWNLOADING, PROVISIONING, VIEWING OR USE OF THE MATERIALS REGARDLESS OF THE FORM OF ACTION, WHETHER FOR BREACH OF CONTRACT, BREACH OF WARRANTY, TORT, NEGLIGENCE, INFRINGEMENT OR OTHERWISE (INCLUDING, WITHOUT LIMITATION, DAMAGES BASED ON LOSS OF PROFITS, DATA, FILES, USE, BUSINESS OPPORTUNITY OR CLAIMS OF THIRD PARTIES), AND WHETHER OR NOT THE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY PROVIDED HEREIN.

9. Should any provision of this Agreement be held by a court of competent jurisdiction to be illegal, invalid, or unenforceable, that provision shall be deemed amended to achieve as nearly as possible the same economic effect as the original provision, and the legality, validity and enforceability of the remaining provisions of this Agreement shall not be affected or impaired thereby.

10. The failure of either party to enforce any term or condition of this Agreement shall not constitute a waiver of either party's right to enforce each and every term and condition of this Agreement. No breach under this agreement shall be deemed waived or excused by either party unless such waiver or consent is in writing signed by the party granting such waiver or consent. The waiver by or consent of a party to a breach of any provision of this Agreement shall not operate or be construed as a waiver of or consent to any other or subsequent breach by such other party.

11. This Agreement may not be assigned (including by operation of law or otherwise) by you without WILEY's prior written consent.

12. Any fee required for this permission shall be non-refundable after thirty (30) days from receipt.

13. These terms and conditions together with CCC's Billing and Payment terms and conditions (which are incorporated herein) form the entire agreement between you and WILEY concerning this licensing transaction and (in the absence of fraud) supersedes all prior agreements and representations of the parties, oral or written. This Agreement may not be amended except in writing signed by both parties. This Agreement shall be binding upon and inure to the benefit of the parties' successors, legal representatives, and authorized assigns.

14. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall prevail.

15. WILEY expressly reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

16. This Agreement will be void if the Type of Use, Format, Circulation, or Requestor Type was misrepresented during the licensing process.

17. This Agreement shall be governed by and construed in accordance with the laws of the State of New York, USA, without regards to such state's conflict of law rules. Any legal action, suit or proceeding arising out of or relating to these Terms and Conditions or the breach thereof shall be instituted in a court of competent jurisdiction in New York County in the State of New York in the United States of America and each party hereby consents and submits to the personal jurisdiction of such court, waives any objection to venue in such court and consents to service of process by registered or certified mail, return receipt requested, at the last known address of such party. . BY CLICKING ON THE "I ACCEPT" BUTTON, YOU ACKNOWLEDGE THAT YOU HAVE READ AND FULLY UNDERSTAND EACH OF THE SECTIONS OF AND PROVISIONS SET FORTH IN THIS AGREEMENT AND THAT YOU ARE IN AGREEMENT WITH AND ARE WILLING TO ACCEPT ALL OF YOUR OBLIGATIONS AS SET FORTH IN THIS AGREEMENT.

v1.4

**Gratis licenses (referencing \$0 in the Total field) are free. Please retain this printable license for your reference. No payment is required.**

**If you would like to pay for this license now, please remit this license along with your payment made payable to "COPYRIGHT CLEARANCE CENTER" otherwise you will be invoiced within 48 hours of the license date. Payment should be in the form of a check or money order referencing your account number and this invoice number RLNK10922666.**

**Once you receive your invoice for this order, you may pay your invoice by credit card. Please follow instructions provided at that time.**

**Make Payment To:**  
**Copyright Clearance Center**  
**Dept 001**  
**P.O. Box 843006**  
**Boston, MA 02284-3006**

**If you find copyrighted material related to this license will not be used and wish to cancel, please contact us referencing this license number 2599180458977 and noting the reason for cancellation.**

**Questions? [customer care@copyright.com](mailto:customer care@copyright.com) or +1-877-622-5543 (toll free in the US) or +1-978-646-2777.**

**Appendix 4: Letter to Principal and Principal consent form**

23 May, 2008

Principal  
XXX Senior High School  
PO Box XXX  
Suburb WA 6000

Dear

**Re: Project – Advertising and youth research study (HR44/2007)**

We would like to invite your school to participate in an important and innovative research study conducted by Professor Rob Donovan in collaboration with the School of Public Health and School of Marketing, at Curtin University. The study is funded by Healthway and will aim to identify the elements of television advertising (i.e. cartoon characters; animated characters; music; humour etc) that are appealing to and impact on the attitudes and behaviours of youth. The advertisements will contain some alcohol ads and food/beverage ads. As you may be aware the issue of alcohol advertising has received considerable attention recently. The results of this study will provide important information which will serve to inform government policy and regulation of alcohol advertising at a national level.

This study will survey students approximately 500 students in Years 8, 9 and 10 attending government secondary schools in the Perth metropolitan area. Ethics approval has been granted according to the NHMRC guidelines and Department of Education approval has been received. As this study is cross-sectional, it will take one school session (approximately 1 hour to view dvd and fill in questionnaire plus a short debriefing). Enclosed is a copy of the consent forms that will be supplied by Curtin University to be sent home with students invited to participate. These, active consent forms will be returned by post to the university for collation and storage. Students who participate will be shown a series of 8 television advertisements, all of which have been screened on commercial free-to-air television in Perth. To avoid any negative effects from the advertisements, students will be debriefed on deconstructing alcohol advertising and be provided with Health Department literature on safe drinking.

We appreciate the heavy workload placed on educators in the current education climate. Accordingly, a trained academic researcher will supervise the students during the process. We hope to conduct the data collection during first term of the 2008 school year. If you agree to your school's participation, we will request two classes each from Years 8, 9 and 10 and the provision of a classroom in which to conduct the study (all required equipment will be provided by Curtin University). These classes will be selected at the school's discretion. Once Principal consent is received, parent packages (information sheet, parental and student consent forms and reply paid envelopes) will be delivered to the school for distribution to relevant students.

We are keen to commence the study and look forward to working you in the near future. Should you agree to your school's participation, please sign the attached consent form and return by email or fax (details below). If you have any further queries or wish to discuss the study, please don't hesitate to contact the Project Officer, Ms Lynda Fielder.

Yours sincerely,

**Lynda Fielder**

Project Officer  
Social Marketing Research Unit, School of Marketing  
Curtin University of Technology  
Bentley, Western Australia 6102  
Telephone: (08) 9266 1873  
Facsimile: (08) 9266 1642  
Email: [L.Fielder@curtin.edu.au](mailto:L.Fielder@curtin.edu.au)

**Professor Rob Donovan**

Professor of Behavioural Research  
Centre for Behavioural Research in Cancer Control  
Division of Health Sciences  
Professor of Social Marketing, School of Marketing  
Curtin University of Technology  
Bentley, Western Australia 6102



## **Principal Consent for School Participation**

### **Advertising and youth study**

I give my permission for \_\_\_\_\_

(NAME OF SCHOOL)

to participate in the *Advertising and Youth* research study being conducted

by the Division of Health Sciences and Social Marketing Research Unit,

Curtin University of Technology (ethics approval: HREC HR44/2007).

I agree to allow research staff access to conduct research with students who

agree to participate and who have parental consent to participate in the study.

Signed: \_\_\_\_\_

(SIGNATURE)

Name: \_\_\_\_\_

(FULL NAME IN BLOCK LETTERS)

Name of school: \_\_\_\_\_

Date: \_\_\_\_\_

Please complete and return to Curtin University of Technology in the stamped envelope provided; fax to: 08 9266 1642; or send an electronic copy to L.Fielder@curtin.edu.au.

*This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR44/2007). Verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing hrec@curtin.edu.au.*





The Parent/Guardian  
Year 8, 9 or 10 student

Dear Parent/Guardian,

Re: Project – Advertising and youth research study (HR44/2007)

Your child has been invited to participate in a research study being conducted jointly by the School of Public Health and the Social Marketing Research Unit, at Curtin University of Technology. The study is funded by Healthway and will gather information from 500 students attending Years 8, 9 and 10, in the Perth metropolitan area. The study looks at advertising and the elements of advertising that appeal to young people. An information sheet (attached) provides details of the study.

Data collected will be held strictly confidential. Identification codes will be used in place of names and any information provided will not be linked to individuals. Information obtained will be used for scientific presentations and publications, and will report group findings only. Participation is voluntary and you are free to withdraw consent to further participation without prejudice in any way. However your consent for your child to participate is essential, only students who have signed parental consent and who have signed the Student Consent Form will be allowed to participate. Those who participate will be updated and informed of the results of the study.

If you agree to your child's participation, please:

- Discuss the matter with your child;
- Sign the attached Parent Consent form and have your child sign the attached Student Consent form, if they agree to participate.;
- Place both signed Parent Consent and Student Consent forms in the supplied enveloped and return to the school as soon as possible.

Only those students who have signed the consent form and have parental consent will be allowed to participate. Should you have any questions, or wish to discuss the study further, please contact feel free to contact me on the contact details provided. Your assistance is greatly appreciated.

Yours sincerely,

A handwritten signature in blue ink that reads "Lynda Fielder".

Lynda Fielder

Project Officer, Advertising and Youth Study

Curtin University of Technology

Tel: (08) 9266 1873; Mobile: 0418 941 947

Email: L.Fielder@curtin.edu.au.

*This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR44/2007). Verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing hrec@curtin.edu.au.*

**Appendix 6: Active, written parent/guardian consent form****Parent / Guardian Consent**

Advertising and youth study (HR44/2007)

I give permission for my child to participate in the advertising and youth research study being conducted by the Division of Health at Curtin University of Technology.

I have read the information sheet provided and understand that my son/daughter will participate in the study and will be informed of their right to withdraw from the study at any time.

*Please Write Details in Block Letters*

Student's Name: \_\_\_\_\_

Year level: \_\_\_\_\_

Parent or  
Guardian's signature: \_\_\_\_\_

Date: \_\_\_\_\_

**INSTRUCTIONS:**

Please place the following in the supplied envelope return to the school as soon as possible:

1. Signed parental consent form (this form)
2. Signed student consent form

**THANK YOU FOR YOUR ASSISTANCE**

Should you have any queries or wish to discuss the study further, please contact:

**Lynda Fielder**  
Project Officer  
Advertising and Youth Study  
Social Marketing Research Unit, School of Marketing  
Curtin University  
Bentley, Western Australia 6102  
Telephone: (08) 9266 1873  
Facsimile: (08) 9266 1642

*This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR44/2007). Verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing hrec@curtin.edu.au.*



## Student Consent

### Advertising and youth study (HR44/2007)

Thank you for your interest in this research study. Details of this study are provided in the attached information sheet.

It is important that you read and understand the points below before signing this consent form.

- Your participation in this research study is voluntary.
- Only students who provide written consent by signing the bottom of this form will participate.
- You may stop taking part in the study at any time, without having to justify with a reason.
- If you should decide to withdraw from the study, all records and data will be removed.
- All information obtained during this research project will be kept strictly confidential.
- Students are not required to put their name on their questionnaire. An identification code will be assigned to each participant.
- Any responses or information provided will not be linked to individuals in any way.
- Any publication of the research results will not identify any of the participants by name.

### Advertising and youth study

Please tick

I have read and understand the above:..... ☐

I have read and understand the *Information Sheet* describing the study procedure: ..... ☐

I give my voluntary agreement to participate in the above research study:..... ☐

\_\_\_\_\_  
**Name** (please print)

\_\_\_\_\_  
**School**

\_\_\_\_\_  
**Current year level**

\_\_\_\_\_  
**Current age** yrs

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Date**

**PLEASE RETURN SIGNED FORM TOGETHER WITH PARENT/GUARDIAN CONSENT FORM TO  
YOUR SCHOOL IN THE ENVELOPE PROVIDED.**

*This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR44/2007). Verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing hrec@curtin.edu.au.*



## Appendix 8: Information sheet sent to students and parents



## Advertising and Youth Study Information Sheet

Professor Rob Donovan and his team at Curtin University are conducting a research study into advertising and its effect on young people. Young people from secondary schools in the Perth metropolitan area have been invited to participate. The following provides information on the study and what will be involved.

### Aim of the study:

This study aims to identify the specific elements used in television advertising (for example: animal characters; people; music; story; humour) that have special appeal to young people and may encourage specific attitudes and behaviours.

### Participants:

A total of 500 students in Years 8-10 attending public secondary schools in the Perth metropolitan area will be invited to participate.

### Consent:

Letters of consent must be signed by parents/guardians and students wishing to participate. These should be returned to school with the student and given to the form class/tutor group teacher as soon as possible. Only those students with active written consent will be allowed to participate. Students who wish to withdraw their consent can do so at any time without reason or justification.

### Procedure:

Students who agree to participate and who have provided active written parental consent will participate. A trained researcher will visit the school at an arranged date and time. Students will be collected from class and taken to a room at the school set up appropriately for the study. The study will involve students viewing a dvd of TV advertisements (including some alcohol and food and beverage ads). All of these advertisements will have been previously aired on commercial free-to-air television in Perth. A total of 9 advertisements will be shown. After each advertisement, the tape will be stopped and students will be asked to answer questions on a written questionnaire before viewing the next. The procedure will take approximately 55 minutes. Following completion of the questionnaire, students will be de-sensitised to the negative impact of advertising by receiving a brief talk on how advertising works and a handout on '*deconstructing an alcohol advertisement*'. Appropriate Health Department literature on alcohol use will also be distributed.

### Impact:

The results of this study will provide important information which will serve to inform government policy and regulation of alcohol advertising at a national level.

For more information, please contact the Project Officer, Lynda Fielder (details below).

#### Lynda Fielder

Project Officer  
Social Marketing Research Unit, School of Marketing  
Curtin University of Technology  
Perth WA 684  
Tel: 08 9266 1873  
Mobile: 0418 941 947  
Email: L.Fielder@curtin.edu.au

#### Professor Rob Donovan

Professor of Behavioural Research  
Centre for Behavioural Research in Cancer Control  
Professor of Social Marketing, School of Marketing  
Curtin University of Technology

## Appendix 9: Calculation example target audience ratings points (TARPs)

### Target Audience Rating Points (TARPs)

Consider the following:

Market A: Contains 10,000 underage teens and 20,000 adults aged 18-30

Market B: Contains 100,000 underage teens and 200,000 adults aged 18-30

During the first month of an ad campaign in each Market, let us assume that in each market 25% of teens and 30% of adults are reached with the teens getting an average of 10 exposures each and adults getting an average of 15 exposures each (frequencies). That is, in each market teens are exposed to 250 TARPs and adults are exposed to 450 TARPs (reach by frequency). Obviously the number of teens reached in Market B is much higher than in Market A (50,000 vs 2,500), but the TARPs are the same. We cannot add the TARPs across the markets because of the different size populations, but we can compare the TARPs for the different groups within each market and across markets. In this case, teens get 5/9 the exposure adults do in Market A and in Market B and each demographic gets an equal number of TARPs in each market.

Now let's say the advertising intensity goes up in Market A in month two due to a local boutique brewery doing a couple of week's intensive advertising to announce it's opening. The campaign doesn't get any additional reach, but in addition to the average 10 exposures from (national/other) advertisers, Market A teens get an additional average 10 exposures and Market A adults get an additional average 15 exposures, yielding average frequencies of 20 and 30 respectively compared to Market B staying at 10 and 15 respectively. The new TARPs are:

Market A teens 500 TARPs and adults 900 TARPs.

Market B teens 250 TARPs and adults 450 TARPs.

In Market A, teens are still getting 5/9 the TARPs that adults do and in Market B the same ratio of 5/9 is still apparent. That is, if we ignore the large increase in intensity of advertising and look only at these ratios, we miss the fact that in month two, Market A teens are being exposed to more TARPs than Market B adults (ratio 10/9). And that is the point we wish to make.

There are many variations. The boutique's advertising may also have extended reach to 30% of teens and 40% of adults in Market A with slightly diminished average total frequencies of 18 and 28 respectively yielding 480 TARPs and 1012 TARPs. And so on.

The overall issue is not the population sizes, but the fact that TARPs/GRPs are a combination of Reach X Average Frequency --- and hence any single figure (eg 200) can be made up by all sorts of combinations (4 x 50; 2 x 100; 8 x 25 etc etc). Comparing TARPs of different demographics within markets carries the same problems (or lack of) as does comparing TARPs of different demographics between markets.

### Reference

Jernigan D, Ross C. (2007) Measurement issues in underage youth exposure to advertising on television. Available: <http://camy.org/action/pdf/TelevisionMonograph.pdf> (accessed February 10, 2009).

**Appendix 10: Coding frame – Elements, Settings, Actions, Themes and Appeals**

	<b><i>ELEMENTS</i></b>	Yes	No	Unsure	N/A
EL1	Humour - slapstick				
EL2	Humour – Male > Female “put down”/joke at the expense of female				
EL3	Humour - subtle				
EL4	Music style - background				
EL5	Music style – loud/dramatic/dominant				
EL6	Storyline				
EL7	People – general				
EL8	People – celebrities/actors				
EL9	People - sports persons				
EL10	Animal - cartoon				
EL11	Animal - real				
EL12	Animal – electronic animation (“Babe” like)				
EL13	Sexual appeal				
EL14	Special effects				
	<b><i>SETTING</i></b>	Yes	No	Unsure	N/A
S1	Outdoors				
S2	Bar/nightclub/party				
S3	Restaurant				
S4	Home				
S5	Workplace				
S6	Multiple				
S7	Other				

	<b>ACTIONS</b>				
A1	Working				
A2	Relaxing/around pool/lazing around				
A3	Romancing/Flirting				
A4	Partying/dancing				
A5	Dining				
A6	Celebrating				
A7	Recreational/activities/sport				
A8	Drinking shown				
A9	Special event				
A10	Spectating - entertainment				
A11	Spectating - sport				
<b>THEMES AND APPEALS:</b> <i>Only dominant ones to be coded, i.e. Positioning of the brand; associations to brand; messages</i>					
T1	Relaxation				
T2	Masculinity – brand for (tough) men				
T3	Friendship/mateship				
T4	Conformity/social norm/popular brand				
T5	Sex/romance				
T6	Success – sporting				
T7	Success - social				
T8	Success - occupational				
T9	Quality/superiority – taste; Product is King/Queen				
T10	Therapeutic benefits (increased confidence/improve mood/relaxing)				

TVC: \_\_\_\_\_

ABAC	Alcohol Advertising TVCs	Yes	No	Unsure	N/A
A)	Presents a mature, balanced responsible approach to the consumption of alcohol beverages -				
A) i	Encourages excessive consumption or abuse of alcohol beverage.				
A) ii	Encourages underage drinking.				
A) iii	Promotes offensive behaviour or the excess consumption, misuse or abuse of alcohol beverage.				
A) iv	Depicts only the responsible and moderate consumption of alcohol beverage.				
B)	Has a strong or evident appeal to children or adolescents -				
B) i	Adults appearing are over 25 years of age and clearly depicted as adults				
B) ii	Children and adolescents only appear in ads in natural situations (eg. family bbq, lic. Family restaurant)				
B) iii	Adults under the age of 25 years only appear as part of a natural crowd or background scene.				
C)	Suggests that the consumption or presence of alcohol beverages may create or contribute to significant change in mood or environment, and-				
C) i	Depicts the consumption or presence of alcohol beverages as a cause of or contributing to the achievement of personal, social, sporting, sexual or other success.				
C) ii	Depicts as part of celebration & implies/suggests that alcohol beverage contributed to success/ achievement				
C) iii	Suggests that alcohol beverage offers any therapeutic benefit or is an aid to relaxation.				
D)	Depicts direct association between consumption of alcohol (other than low alc) and the operation of a motor vehicle, boat or aircraft or the engagement in any sport (including swimming/water sports) or potentially hazardous activity and -				
D) i	Depicts consumption of alcohol beverage in connection to above activities as taken place before or during engagement of the activity.				
D) ii	Portrays safe practices in all cases.				
D) iii	Any claim concerning safe consumption of low alcohol beverage is demonstrably accurate.				
E)	Challenges or dares people to drink or sample this particular product.				
E) i	Contains an inducement to prefer an alcohol beverage because of its higher alcohol content.				



Curtin Research use only

Code: \_\_\_\_\_

## ADVERTISING SURVEY

---

This is an anonymous self-administered questionnaire.

Your name is not required

### INSTRUCTIONS

**IMPORTANT:** Please do not turn pages until instructed by the research assistant.

#### **What will you be asked to do?**

1. You will be shown a DVD containing television advertisements.
2. After watching each advertisement, you will be asked to read and answer the questions that relate to the advertisement.
3. If you have a question, please raise your hand and the research assistant will answer it for you.
4. **Please answer as truthfully as you can, it is important that you tell us what you really think. There are no 'right' or 'wrong' answers.**



*This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR44/2007). Verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing hrec@curtin.edu.au.*

## Question Examples



The questions will be presented in different ways. Here are some examples.

### Example 1: Circle your answer

Q. How much did you like the ad?

Not at all										A lot
0	1	2	3	4	5	6	7	8	9	10



The student liked the ad 'quite a lot' and so chose to circle 9.

### Example 2: Tick the box

Q. The box below (Question 1.3a to 1.3i) asks about how much you **liked** or **disliked** some of the specific elements used in the advertisement? Please circle one number on the scales below for each of the elements. **All** rows will have one number circled.

Note: Not all these elements may be in the ad you just saw. In those cases circle 'N/A' for 'Not Applicable'.

		Not Applicable	Didn't like at all										Liked a lot
1a	setting (background/location)	N/A	0	1	2	3	4	5	6	7	8	9	10
1b	humour	N/A	0	1	2	3	4	5	6	7	8	9	10
1c	music	N/A	0	1	2	3	4	5	6	7	8	9	10



The student liked the 'setting' of the ad a bit and so circled 5;  
The student thought the ad was very funny and therefore liked the 'humour' a lot, so circled 10;  
The ad contained 'music' which the student disliked quite a bit and so circled 2.

Q. The question below asks about people whom the brand's advertising is aimed at?

In your opinion, would you say that this brand's advertising is aimed at people older than you, people in your age group, or people younger than you? Please circle one number on the scale below. If you *don't know* or you are *not sure*, circle 'N/S'.

Much older than me	Slightly older than me	People in my age group	Slightly younger than me	Much younger than me	Don't know/ Not sure (N/S)
1	2	3	4	5	N/S



The student thought that the ad was aimed at people slightly older and so circled 2.

### Example 3: Write your answer

Q. In your own words, describe the ad.



The student writes a brief description of the ad.

This is an anonymous survey, your name is not required.

However, we would like to ask you a few background questions that will help us with our study.

**(Please tick ✓ one box)**

**S1** How old are you?

- Under 11 years ..... ☐1  
 11 years..... ☐2  
 12 years..... ☐3  
 13 years..... ☐4  
 14 years..... ☐5  
 15 years..... ☐6  
 16 years..... ☐7  
 17 years..... ☐8  
 Over 17 years ..... ☐9

**S2** What is the postcode of your address?

6 \_\_\_\_\_

**S3** What Year are you currently in at school?

**(Please tick ✓ one box)**

- Year 8 ..... ☐1  
 Year 9 ..... ☐2  
 Year 10 ..... ☐3

**S4** Gender

**(Please tick ✓ one box)**

- Male ..... ☐1  
 Female..... ☐2

**S5** Name of School: \_\_\_\_\_

**S6** Form class/Tutor class \_\_\_\_\_



*Time to view some television advertisements!*

**PLEASE DO NOT TURN THE PAGE UNTIL INSTRUCTED TO DO SO**





## SECTION A: ADVERTISEMENTS

## ADVERTISEMENT NO. 1

We are interested in your first impressions, please answer the following as quickly as you can.

**Q1.1** How much did you like this ad? Please tell us by circling **one** number on the scale below.

Disliked a lot										Liked a lot
0	1	2	3	4	5	6	7	8	9	10

**Q1.2** How much do you feel you would like to **try** the brand advertised? Please circle **one** number below.

Not at all										A lot
0	1	2	3	4	5	6	7	8	9	10

**Q1.3** If you were offered several brands, how likely is it that you would choose this one rather than others? Please circle **one** number below.

Not at all likely										Very likely
0	1	2	3	4	5	6	7	8	9	10

**Q1.4** In your opinion, would you say that this brand's advertising is aimed at people older than you, people in your age group, or people younger than you? Please circle **one** number on the scale below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Much older than me	Slightly older than me	People in my age group	Slightly younger than me	Much younger than me	Don't know/ Not sure (N/S)
1	2	3	4	5	N/S

**Q1.5** Have you seen this advertisement before? Please circle **one** number (1, 2 or 3) below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Yes	1
No	2
Don't know/not sure	N/S

- If 'yes' go to Q1.6
- If 'no' go to Q1.7
- If 'N/S' go to Q1.7

**Q1.6** How often have you seen the advertisement? Please circle **one** number.  
*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Once or twice	1
A few times (3-5)	2
Many times (more than 5)	3
Don't know/not sure (N/S)	N/S

**Q1.7** The box below (Question 1.7a to 1.7h) asks about how much you **liked** or **disliked** some of the elements used in the advertisement?

Please circle **one** number on the scales below for each of the elements. **All** rows will have **one** number circled.

*Note: Not all these things may apply to the ad you just saw. In those cases circle 'N/A' for 'Not applicable'*

	Elements	Not Applicable	Didn't like at all										Liked a lot
<b>1.7a</b>	How much did you like the <b>settings</b> (i.e. backgrounds, locations) of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7b</b>	How much did you like the <b>humour</b> ?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7c</b>	How much did you like the <b>music or jingle</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7d</b>	How much did you like the <b>actors</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7e</b>	How much did you like the <b>animated or cartoon characters</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7f</b>	How much did you like the <b>animals</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7g</b>	How much did you like the <b>story</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7h</b>	How much did you like the <b>special effects</b> (ie. hi-tech computerisation) in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7i</b>	How much did you like the overall <b>visual</b> appeal of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7j</b>	How much did you like the <b>sound</b> effects in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7k</b>	How much did you like the <b>slogan</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>1.7l</b>	How much did you like the <b>sexual appeal</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10

**Q1.8** Apart from 'buy the product' what was the ad telling you? Please describe the key message/s in a few words.

---



---



---

Thanks for answering these questions honestly. **PLEASE DON'T TURN THE PAGE YET.**



## ADVERTISEMENT NO. 2

We are interested in your first impressions, please answer the following as quickly as you can.

**Q2.1** How much did you like this ad? Please tell us by circling **one** number on the scale below.

Disliked a lot										Liked a lot
0	1	2	3	4	5	6	7	8	9	10

**Q2.2** How much do you feel you would like to **try** the brand advertised? Please circle **one** number below.

Not at all										A lot
0	1	2	3	4	5	6	7	8	9	10

**Q2.3** If you were offered several brands, how likely is it that you would choose this one rather than others? Please circle **one** number below.

Not at all likely										Very likely
0	1	2	3	4	5	6	7	8	9	10

**Q2.4** In your opinion, would you say that this brand's advertising is aimed at people older than you, people in your age group, or people younger than you? Please circle **one** number on the scale below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Much older than me	Slightly older than me	People in my age group	Slightly younger than me	Much younger than me	Don't know/ Not sure (N/S)
1	2	3	4	5	N/S

**Q2.5** Have you seen this advertisement before? Please circle **one** number (1, 2 or 3) below.  
*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Yes	1
No	2
Don't know/not sure	N/S

- If '**yes**' go to Q2.6
- If '**no**' go to Q2.7
- If '**N/S**' go to Q2.7

**Q2.6** How often have you seen the advertisement? Please circle **one** number.  
*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Once or twice	1
A few times (3-5)	2
Many times (more than 5)	3
Don't know/not sure (N/S)	N/S

**Q2.7** The box below (Question 2.7a to 2.7h) asks about how much you **liked** or **disliked** some of the elements used in the advertisement?

Please circle **one** number on the scales below for each of the elements.

**All** rows will have **one** number circled.

*Note: Not all these things may apply to the ad you just saw. In those cases circle 'N/A' for 'Not applicable'*

	Elements	Not Applic- able	Didn't like at all										Liked a lot
<b>2.7a</b>	How much did you like the <b>settings</b> (ie. backgrounds, locations) of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7b</b>	How much did you like the <b>humour</b> ?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7c</b>	How much did you like the <b>music or jingle</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7d</b>	How much did you like the <b>actors</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7e</b>	How much did you like the <b>animated or cartoon characters</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7f</b>	How much did you like the <b>animals</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7g</b>	How much did you like the <b>story</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7h</b>	How much did you like the <b>special effects</b> (ie. hi-tech computerisation) in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7i</b>	How much did you like the overall <b>visual</b> appeal of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7j</b>	How much did you like the <b>sound</b> effects in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7k</b>	How much did you like the <b>slogan</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>2.7l</b>	How much did you like the <b>sexual appeal</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10

**Q2.8** Apart from 'buy the product' what was the ad telling you?

---



---



---

**PLEASE DON'T TURN THE PAGE YET.**



### ADVERTISEMENT NO. 3

We are interested in your first impressions, please answer the following as quickly as you can.

**Q3.1** How much did you like this ad? Please tell us by circling **one** number on the scale below.

Disliked a lot										Liked a lot
0	1	2	3	4	5	6	7	8	9	10

**Q3.2** How much do you feel you would like to **try** the brand advertised? Please circle **one** number below.

Not at all										A lot
0	1	2	3	4	5	6	7	8	9	10

**Q3.3** If you were offered several brands, how likely is it that you would choose this one rather than others? Please circle **one** number below.

Not at all likely										Very likely
0	1	2	3	4	5	6	7	8	9	10

**Q3.4** In your opinion, would you say that this brand's advertising is aimed at people older than you, people in your age group, or people younger than you? Please circle **one** number on the scale below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Much older than me	Slightly older than me	People in my age group	Slightly younger than me	Much younger than me	Don't know/ Not sure (N/S)
1	2	3	4	5	N/S

**Q3.5** Have you seen this advertisement before? Please circle **one** number (1, 2 or 3) below.  
*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Yes	1
No	2
Don't know/not sure	N/S

- If **'yes'** go to Q3.6
- If **'no'** go to Q3.7
- If **'N/S'** go to Q3.7

**Q3.6** How often have you seen the advertisement? Please circle **one** number.  
*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Once or twice	1
A few times (3-5)	2
Many times (more than 5)	3
Don't know/not sure (N/S)	N/S

**Q3.7** The box below (Question 3.7a to 3.7h) asks about how much you **liked** or **disliked** of the elements used in the advertisement?

Please circle **one** number on the scales below for each of the elements.  
**All** rows will have **one** number circled.

*Note: Not all these things may apply to the ad you just saw. In those cases circle 'N/A' for 'Not applicable'*

	Elements	Not Applic- able	Didn't like at all										Liked a lot
<b>3.7a</b>	How much did you like the <b>settings</b> (ie. backgrounds, locations) of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7b</b>	How much did you like the <b>humour</b> ?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7c</b>	How much did you like the <b>music or jingle</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7d</b>	How much did you like the <b>actors</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7e</b>	How much did you like the <b>animated or cartoon characters</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7f</b>	How much did you like the <b>animals</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7g</b>	How much did you like the <b>story</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7h</b>	How much did you like the <b>special effects</b> (ie. hi-tech computerisation) in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7i</b>	How much did you like the overall <b>visual</b> appeal of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7j</b>	How much did you like the <b>sound</b> effects in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7k</b>	How much did you like the <b>slogan</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>3.7l</b>	How much did you like the <b>sexual appeal</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10

**Q3.8** Apart from 'buy the product' what was the ad telling you?

---



---



---

Thanks for answering these  
questions honestly. **PLEASE DON'T TURN THE PAGE YET.**



## ADVERTISEMENT NO. 4

We are interested in your first impressions, please answer the following as quickly as you can.

**Q4.1** How much did you like this ad? Please tell us by circling **one** number on the scale below.

Disliked a lot										Liked a lot
0	1	2	3	4	5	6	7	8	9	10

**Q4.2** How much do you feel you would like to **try** the brand advertised? Please circle **one** number below.

Not at all										A lot
0	1	2	3	4	5	6	7	8	9	10

**Q4.3** If you were offered several brands, how likely is it that you would choose this one rather than others. Please circle **one** number below.

Not at all likely										Very likely
0	1	2	3	4	5	6	7	8	9	10

**Q4.4** In your opinion, would you say that this brand's advertising is aimed at people older than you, people in your age group, or people younger than you? Please circle **one** number on the scale below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Much older than me	Slightly older than me	People in my age group	Slightly younger than me	Much younger than me	Don't know/ Not sure (N/S)
1	2	3	4	5	N/S

**Q4.5** Have you seen this advertisement before? Please circle **one** number (1, 2 or 3) below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Yes	1
No	2
Don't know/not sure	N/S

- If '**yes**' go to Q4.6
- If '**no**' go to Q4.7
- If '**N/S**' go to Q4.7

**Q4.6** How often have you seen the advertisement? Please circle **one** number.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Once or twice	1
A few times (3-5)	2
Many times (more than 5)	3
Don't know/not sure (N/S)	N/S

**Q4.7** The box below (Question 4.7a to 4.7h) asks about how much you **liked** or **disliked** some of the elements used in the advertisement?

Please circle **one** number on the scales below for each of the elements.  
**All** rows will have **one** number circled.

*Note: Not all these things may apply to the ad you just saw. In those cases circle 'N/A' for 'Not applicable'*

	Elements	Not Applic- able	Didn't like at all										Liked a lot
<b>4.7a</b>	How much did you like the <b>settings</b> (ie. backgrounds, locations) of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7b</b>	How much did you like the <b>humour</b> ?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7c</b>	How much did you like the <b>music or jingle</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7d</b>	How much did you like the <b>actors</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7e</b>	How much did you like the <b>animated or cartoon characters</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7f</b>	How much did you like the <b>animals</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7g</b>	How much did you like the <b>story</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7h</b>	How much did you like the <b>special effects</b> (ie. hi-tech computerisation) in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7i</b>	How much did you like the overall <b>visual</b> appeal of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7j</b>	How much did you like the <b>sound</b> effects in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7k</b>	How much did you like the <b>slogan</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>4.7l</b>	How much did you like the <b>sexual appeal</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10

**Q4.8** Apart from 'buy the product' what was the ad telling you?

---



---



---

**Well done! YOU MAY TURN THE PAGE**





**OKAY, STOP HERE.**

**You are over half way – take a few seconds break.**

**Put your pen down and give your hands a shake.**

**NO TALKING PLEASE!**

**You have four more to go.**



## ADVERTISEMENT NO. 5

We are interested in your first impressions, please answer the following as quickly as you can.

**Q5.1** How much did you like this ad? Please tell us by circling **one** number on the scale below.

Disliked a lot										Liked a lot
0	1	2	3	4	5	6	7	8	9	10

**Q5.2** How much do you feel you would like to **try** the brand advertised? Please circle **one** number below.

Not at all										A lot
0	1	2	3	4	5	6	7	8	9	10

**Q5.3** If you were offered several brands, how likely is it that you would choose this one rather than others? Please circle **one** number below.

Not at all likely										Very likely
0	1	2	3	4	5	6	7	8	9	10

**Q5.4** In your opinion, would you say that this brand's advertising is aimed at people older than you, people in your age group, or people younger than you? Please circle **one** number on the scale below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Much older than me	Slightly older than me	People in my age group	Slightly younger than me	Much younger than me	Don't know/ Not sure (N/S)
1	2	3	4	5	N/S

**Q5.5** Have you seen this advertisement before? Please circle **one** number (1, 2 or 3) below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Yes	1
No	2
Don't know/not sure	N/S

- If '**yes**' go to Q5.6
- If '**no**' go to Q5.7
- If '**N/S**' go to Q5.7

**Q5.6** How often have you seen the advertisement? Please circle **one** number.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Once or twice	1
A few times (3-5)	2
Many times (more than 5)	3
Don't know/not sure (N/S)	N/S

**Q5.7** The box below (Question 5.7a to 5.7h) asks about how much you **liked** or **disliked** some of the elements used in the advertisement?

Please circle **one** number on the scales below for each of the elements.  
**All** rows will have **one** number circled.

*Note: Not all these things may apply to the ad you just saw. In those cases circle 'N/A' for 'Not applicable'*

	Elements	Not Applic- able	Didn't like at all										Liked a lot
<b>5.7a</b>	How much did you like the <b>settings</b> (ie. backgrounds, locations) of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7b</b>	How much did you like the <b>humour</b> ?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7c</b>	How much did you like the <b>music or jingle</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7d</b>	How much did you like the <b>actors</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7e</b>	How much did you like the <b>animated or cartoon characters</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7f</b>	How much did you like the <b>animals</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7g</b>	How much did you like the <b>story</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7h</b>	How much did you like the <b>special effects</b> (ie. hi-tech computerisation) in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7i</b>	How much did you like the overall <b>visual</b> appeal of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7j</b>	How much did you like the <b>sound</b> effects in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7k</b>	How much did you like the <b>slogan</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>5.7l</b>	How much did you like the <b>sexual appeal</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10

**Q5.8** Apart from 'buy the product' what was the ad telling you?

---



---



---

Thanks for answering these questions honestly. Now get ready to view the next advertisement.



## ADVERTISEMENT NO. 6

We are interested in your first impressions, please answer the following as quickly as you can.

**Q6.1** How much did you like this ad? Please tell us by circling **one** number on the scale below.

Disliked a lot										Liked a lot
0	1	2	3	4	5	6	7	8	9	10

**Q6.2** How much do you feel you would like to **try** the brand advertised? Please circle **one** number below.

Not at all										A lot
0	1	2	3	4	5	6	7	8	9	10

**Q6.3** If you were offered several brands, how likely is it that you would choose this one rather than others? Please circle **one** number below.

Not at all likely										Very likely
0	1	2	3	4	5	6	7	8	9	10

**Q6.4** In your opinion, would you say that this brand's advertising is aimed at people older than you, people in your age group, or people younger than you? Please circle **one** number on the scale below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Much older than me	Slightly older than me	People in my age group	Slightly younger than me	Much younger than me	Don't know/ Not sure (N/S)
1	2	3	4	5	N/S

**Q6.5** Have you seen this advertisement before? Please circle **one** number (1, 2 or 3) below.  
*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Yes	1
No	2
Don't know/not sure	N/S

- If **'yes'** go to Q6.6
- If **'no'** go to Q6.7
- If **'N/S'** go to Q6.7

**Q6.6** How often have you seen the advertisement? Please circle **one** number.  
*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Once or twice	1
A few times (3-5)	2
Many times (more than 5)	3
Don't know/not sure (N/S)	N/S

**Q6.7** The box below (Question 6.7a to 6.7h) asks about how much you **liked** or **disliked** some of the elements used in the advertisement?

Please circle **one** number on the scales below for each of the elements.  
**All** rows will have **one** number circled.

*Note: Not all these things may apply to the ad you just saw. In those cases circle 'N/A' for 'Not applicable'*

	Elements	Not Applic- able	Didn't like at all										Liked a lot
<b>6.7a</b>	How much did you like the <b>settings</b> (ie. backgrounds, locations) of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7b</b>	How much did you like the <b>humour</b> ?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7c</b>	How much did you like the <b>music or jingle</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7d</b>	How much did you like the <b>actors</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7e</b>	How much did you like the <b>animated or cartoon characters</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7f</b>	How much did you like the <b>animals</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7g</b>	How much did you like the <b>story</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7h</b>	How much did you like the <b>special effects</b> (ie. hi-tech computerisation) in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7i</b>	How much did you like the overall <b>visual</b> appeal of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7j</b>	How much did you like the <b>sound</b> effects in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7k</b>	How much did you like the <b>slogan</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>6.7l</b>	How much did you like the <b>sexual appeal</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10

**Q6.8** Apart from 'buy the product' what was the ad telling you?

---



---



---

Thanks for answering these questions honestly. **PLEASE DON'T TURN THE PAGE YET.**



## ADVERTISEMENT No. 7

**We are interested in your first impressions, please answer the following as quickly as you can.**

**Q7.1** How much did you like this ad? Please tell us by circling **one** number on the scale below.

Disliked a lot										Liked a lot
0	1	2	3	4	5	6	7	8	9	10

**Q7.2** How much do you feel you would like to **try** the brand advertised? Please circle **one** number below.

Not at all										A lot
0	1	2	3	4	5	6	7	8	9	10

**Q7.3** If you were offered several brands, how likely is it that you would choose this one rather than others? Please circle **one** number below.

Not at all likely										Very likely
0	1	2	3	4	5	6	7	8	9	10

**Q7.4** In your opinion, would you say that this brand's advertising is aimed at people older than you, people in your age group, or people younger than you? Please circle **one** number on the scale below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Much older than me	Slightly older than me	People in my age group	Slightly younger than me	Much younger than me	Don't know/ Not sure (N/S)
1	2	3	4	5	N/S

**Q7.5** Have you seen this advertisement before? Please circle **one** number (1, 2 or 3) below.  
*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Yes	1
No	2
Don't know/not sure	N/S

- If '**yes**' go to Q7.6
- If '**no**' go to Q7.7
- If '**N/S**' go to Q7.7

**Q7.6** How often have you seen the advertisement? Please circle **one** number.  
*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Once or twice	1
A few times (3-5)	2
Many times (more than 5)	3
Don't know/not sure (N/S)	N/S

**Q7.7** The box below (Question 7.7a to 7.7h) asks about how much you **liked** or **disliked** some of the elements used in the advertisement?

Please circle **one** number on the scales below for each of the elements.  
**All** rows will have **one** number circled.

*Note: Not all these things may apply to the ad you just saw. In those cases circle 'N/A' for 'Not applicable'*

	Elements	Not Applic- able	Didn't like at all										Liked a lot
<b>7.7a</b>	How much did you like the <b>settings</b> (ie. backgrounds, locations) of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7b</b>	How much did you like the <b>humour</b> ?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7c</b>	How much did you like the <b>music or jingle</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7d</b>	How much did you like the <b>actors</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7e</b>	How much did you like the <b>animated or cartoon characters</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7f</b>	How much did you like the <b>animals</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7g</b>	How much did you like the <b>story</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7h</b>	How much did you like the <b>special effects</b> (ie. hi-tech computerisation) in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7i</b>	How much did you like the overall <b>visual</b> appeal of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7j</b>	How much did you like the <b>sound</b> effects in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7k</b>	How much did you like the <b>slogan</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>7.7l</b>	How much did you like the <b>sexual appeal</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10

**Q7.8** Apart from 'buy the product' what was the ad telling you?

---



---



---

Great job, one more ad to go. **PLEASE DON'T TURN THE PAGE YET.**



## ADVERTISEMENT NO. 8

We are interested in your first impressions, please answer the following as quickly as you can.

**Q8.1** How much did you like this ad? Please tell us by circling **one** number on the scale below.

Disliked a lot										Liked a lot
0	1	2	3	4	5	6	7	8	9	10

**Q8.2** How much do you feel you would like to **try** the brand advertised? Please circle **one** number below.

Not at all										A lot
0	1	2	3	4	5	6	7	8	9	10

**Q8.3** If you were offered several brands, how likely is it that you would choose this one rather than others? Please circle **one** number below.

Not at all likely										Very likely
0	1	2	3	4	5	6	7	8	9	10

**Q8.4** In your opinion, would you say that this brand's advertising is aimed at people older than you, people in your age group, or people younger than you? Please circle **one** number on the scale below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Much older than me	Slightly older than me	People in my age group	Slightly younger than me	Much younger than me	Don't know/ Not sure (N/S)
1	2	3	4	5	N/S

**Q8.5** Have you seen this advertisement before? Please circle **one** number (1, 2 or 3) below.

*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Yes	1
No	2
Don't know/not sure	N/S

- If '**yes**' go to Q8.6
- If '**no**' go to Q8.7
- If '**N/S**' go to Q8.7

**Q8.6** How often have you seen the advertisement? Please circle **one** number.  
*If you 'don't know' or are 'unsure', circle "N/S" for 'Not Sure'.*

Once or twice	1
A few times (3-5)	2
Many times (more than 5)	3
Don't know/not sure (N/S)	N/S



**Q8.7** The box below (Question 1.7a to 1.7h) asks about how much you **liked** or **disliked** some of the elements used in the advertisement?

Please circle **one** number on the scales below for each of the elements.

**All** rows will have **one** number circled.

*Note: Not all these things may apply to the ad you just saw. In those cases circle 'N/A' for 'Not applicable'*

	Elements	Not Applic- able	Didn't like at all										Liked a lot
<b>8.7a</b>	How much did you like the <b>settings</b> (ie. backgrounds, locations) of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7b</b>	How much did you like the <b>humour</b> ?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7c</b>	How much did you like the <b>music or jingle</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7d</b>	How much did you like the <b>actors</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7e</b>	How much did you like the <b>animated or cartoon characters</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7f</b>	How much did you like the <b>animals</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7g</b>	How much did you like the <b>story</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7h</b>	How much did you like the <b>special effects</b> (ie. hi-tech computerisation) in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7i</b>	How much did you like the overall <b>visual</b> appeal of the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7j</b>	How much did you like the <b>sound</b> effects in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7k</b>	How much did you like the <b>slogan</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10
<b>8.7l</b>	How much did you like the <b>sexual appeal</b> in the ad?	N/A	0	1	2	3	4	5	6	7	8	9	10

**Q8.8** Apart from 'buy the product' what was the ad telling you?

---



---



---

**That is the end of Section A. The rest of the questionnaire asks some general questions.  
YOU MAY TURN THE PAGE WHEN YOU ARE READY AND CONTINUE WITH SECTION B.**



**SECTION B: GENERAL QUESTIONS**

- Q9.** Of the five alcohol advertisements you saw today, which **one** now stands out most in your mind? Write the brand name or if you can't remember the brand name describe the ad in a few words in the space below:.

---

---

---

---

---

---

- Q10.** What was it that made that advertisement stand out for you? Write in a few words below.

---

---

---

---

---

---

- Q11.** Of the five alcohol advertisements you saw today, which **one** do you think would be **most effective** in getting people your age to try that drink? Write the brand name or if you can't remember the brand name, write in a few words below to describe the ad.

---

---

---

---

---

---



**Q12.** **Why** do you think this alcohol advertisement (the ad. you wrote in Q11) would be most effective in getting people your age to drink? Please write your answer below.

---



---



---



---



---



---

**Q13.** Do you think any of the five alcohol ads would **not** be effective? Tick 'yes' or 'no' below:

**Yes**..... ☐ ➤ If you ticked 'yes' **go to Q13a**

**No**..... ☐ ➤ If you ticked 'no' **go to Q14**

**Q13a.** If you answered '**yes**', which ones? Write the brand name or if you can't remember the brand name, write in a few words below to describe the ad and why you think the alcohol ad or ads would **not** be effective in getting people your age to drink.

---



---



---



---



---



---



**Q14.** Please read the list of alcoholic drinks listed below.

Please indicate which of these drinks you have tried by circling '**Yes**' and those you have not tried by circling '**No**'.

	Beverage	Have tried	Have not tried
14.1	Regular beer	Yes	No
14.2	Low or mid strength beer	Yes	No
14.3	Wine	Yes	No
14.4	Wine cooler	Yes	No
14.5	Champagne or sparkling wine	Yes	No
14.6	Cider (e.g. Strongbow)	Yes	No
14.7	Spirits (e.g. rum, brandy, whisky, gin, vodka, etc.)	Yes	No
14.8	Pre-mixed spirits (e.g. Bacardi Breezer, Lemon Ruski, UDL, Sub Zero, etc.)	Yes	No
14.9	Alcoholic sodas (e.g. Two dogs, alcoholic lemon soda etc).	Yes	No
14.10	Liqueurs (e.g. Baileys, Tia Maria, Kahlua, Midori, etc.)	Yes	No

**Q15.** Which of the alcohol beverages listed below do you mostly drink?

Place a '✓' in the boxes beside the drinks you **mostly drink** listed below.  
Leave the other boxes blank.

If you do not drink at all - tick this box ☐ ➤ **now go to Q16**

	Beverage	Mostly Drink
15.1	Regular beer	
15.2	Low or mid strength beer	
15.3	Wine	
15.4	Wine cooler	
15.5	Champagne or sparkling wine	
15.6	Cider (e.g. Strongbow)	
15.7	Spirits (e.g. rum, brandy, whisky, gin, vodka, etc.)	
15.8	Pre-mixed spirits (e.g. Bacardi Breezer, Lemon Ruski, UDL, Sub Zero, etc.)	
15.9	Alcoholic sodas (e.g. Two dogs, alcoholic lemon soda etc).	
15.10	Liqueurs (e.g. Baileys, Tia Maria, Kahlua, Midori, etc.)	



**Q16.** For the alcohol brands listed below, please indicate which you have heard of (before today) and which you have tried, if any.

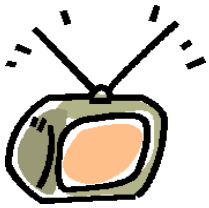
E.g. If you **have not heard** of the brand circle **1** for that brand.

If you **have heard** of the brand, but **have not tried** the brand, circle **2** for that brand.

If you **have heard** of and **have tried** the brand, then circle **3** for that brand.

		Have <b>not</b> heard of	Have heard of	Have tried
<b>16.1</b>	Absolut Cut Vodka	1	2	3
<b>16.2</b>	Becks Beer	1	2	3
<b>16.3</b>	Boags Draught Beer	1	2	3
<b>16.4</b>	Boags St George Beer	1	2	3
<b>16.5</b>	Bundaberg Rum	1	2	3
<b>16.6</b>	Bundaberg Rum & Cola	1	2	3
<b>16.7</b>	Carlton Draught Beer	1	2	3
<b>16.8</b>	Cascade premium Lager Beer	1	2	3
<b>16.9</b>	Castlemaine XXXX Gold	1	2	3
<b>16.10</b>	Corona Extra Beer	1	2	3
<b>16.11</b>	Cougar Bourbon	1	2	3
<b>16.12</b>	Hahn premium Light Beer	1	2	3
<b>16.13</b>	Heineken Lager Beer	1	2	3
<b>16.14</b>	Jim Beam Bourbon	1	2	3
<b>16.15</b>	Jim Beam Bourbon & Cola	1	2	3
<b>16.16</b>	Orlando Jacobs Creek Sparkling Wine	1	2	3
<b>16.17</b>	Smirnoff Ice	1	2	3
<b>16.18</b>	Smirnoff Vodka	1	2	3
<b>16.19</b>	Tooheys Extra Dry Beer	1	2	3
<b>16.20</b>	Tooheys New Draught Beer	1	2	3
<b>16.21</b>	Victoria Bitter Beer	1	2	3





That is the end of the survey. Please place your survey at the top right hand corner of your desk for collection.

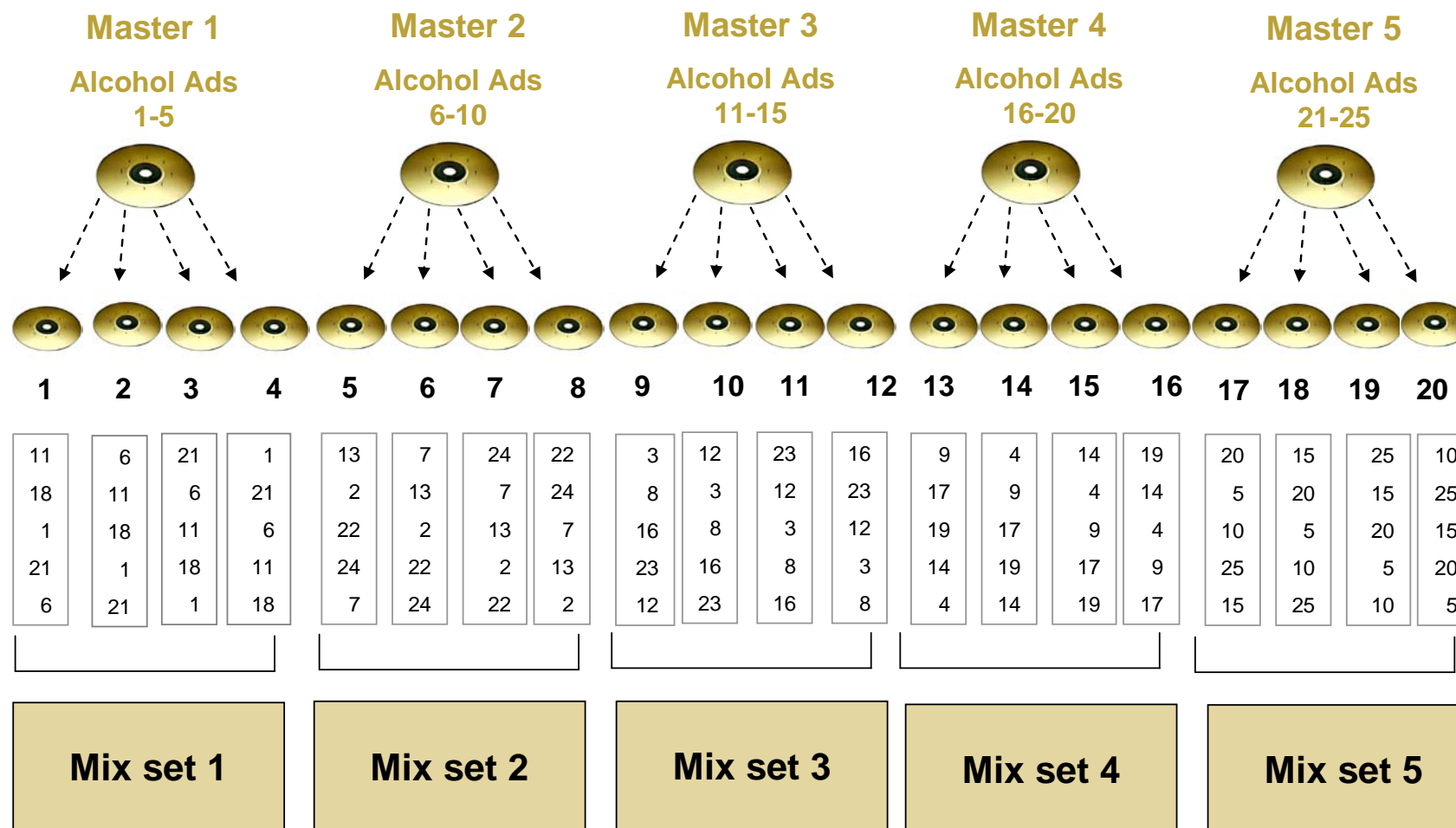
Thank you for your participation.

Please sit quietly and wait for your classmates to finish.




*When everyone is finished there will be a brief talk.*

# DVD rotational order

## Stimulus Tapes – Alcohol Ads



## Appendix 14: Description of filler advertisements

Product	Dur	Description	
Hospital Benefit Fund	30	An animated teddy bear visits three patients in hospital. The last patient is a little girl who lays sleeping. The teddy bear finds a chocolate placed on a note next to the bed that reads 'For Ted xxox'. The teddy bear takes the chocolate and runs from the room. The little girl wakes, looks up and smiles.	
Kelloggs Nutri Grain Bar	30	Two boys appear riding BMX bicycles. The voice over interjects 'Pushing yourself takes energy, so fuel up with Kelloggs Nutri Grain Bar. With wholesome corn, oats and wheat slammed together with a layer of choc'. The two boys proceed to perform a series of aerial tricks on their BMX bicycles with drum beat music playing in the background. The voice over says, 'go hard, go big, Kelloggs Nutri Grain Bar, it's Ironman food'.	
Smith's Crisps	30	A young couple shown on a tropical island walking toward a health retreat. The male comments, 'I'm a guy, health resorts, they just aren't guy things, all my mates are down the pub'. As they enter their suite, the female replies, 'It's not a prison'. The male replies, 'are you kidding, what was that stuff they gave us for dinner, bait?'. The female glances to the maid making the bed and replies to the male 'It's called sushi'. She then picks up a packet of Smith's crisps and says, 'these are new 25% less saturated fat'. The male takes a crisp and sighs 'oh I'm off' as he turns to leave. The maid comments to the female 'don't worry, he'll be back'. The male stops and turns and walks toward the female smiling. The female smiles back and the male takes the bag of crisps and says 'see ya' as he walks away again. The voiceover plays 'No one can walk away from Smith's. Now with 25% less saturated fat	



## Appendix 15: Powerpoint slideshow presented to student respondents


**Curtin**  
University of Technology

# Advertising and Youth Study

**MIX SET 3.1**

1-SOAG034330BA  
2-HNG  
3-OUC3663B  
4-CJ3140  
5-SPC  
6-HEADS102R  
7-CHIN0257  
8-BEF

## Advertising and Youth Study



This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR44/2007).

**Healthway**

**Curtin**  
University of Technology  
MIS 3.1


**Curtin**  
University of Technology


This is a confidential self-administered questionnaire.  
Your name will not be recorded

**INSTRUCTIONS**

What will you be asked to do?

1. You will be given a confidential questionnaire containing two parts (Section A and Section B).
2. Section A: You will be shown a DVD containing television advertisements. Read and answer the questions that relate to the advertisement viewed.
3. Section B: You will be asked more general questions.
4. Some pages will have a symbol telling you if you can turn the page.

 - please don't turn the page until instructed

 - turn the page when you are ready

**Curtin**  
University of Technology

**Remember: this is a confidential questionnaire**

**There are no right or wrong answers,  
we need your **honest** answers.**

**Please answer all questions truthfully.**

**If you have any questions, quietly raise your  
hand and wait for assistance.**

**Example 1: Circle your answer**

Q1 How much did you like the ad?

Not at all	1	2	3	4	5	6	7	8	9	10	As much as I like

The student liked the ad 'quite a bit' and so chose to circle 6.

**Example 2: Tick the box**

Q2 The two items (Questions 1 & 2) ask about how much you liked or disliked some of the specific advertising used in the advertisement. Please circle one number on the scales below for each of the items. (Note: All items will have one number circled.)

	Ad item	Scale	Ad item	Scale	Ad item	Scale
Yes	setting	1	2	3	4	5
No	humour	1	2	3	4	5
No	music	1	2	3	4	5

The student liked the 'setting' of the ad, a bit and so circled 3.

The student thought the ad was very funny and therefore that the 'humour' is a bit, so circled 3.

The ad contained 'music' which the student disliked quite a bit and so circled 2.

Q3 The question below asks about people whom the brand's advertising is aimed at?

In your opinion, would you say that the brand's advertising is aimed at people like you, people like you, but not like you, or people not like you? Please circle one number on the scale below. If you don't know or you are not sure, circle 'N/A'.

Much more like me	1	2	3	4	5	6	7	8	9	10	Much more not like me

The student thought that the ad was aimed at people slightly older and so circled 2.

**Example 3: Write your answer**

Q4 In your own words, describe the ad.

The student writes a brief description of the ad.

**ELEMENTS**

- Setting (backgrounds/locations) of the ad (ie. car ads – open road)
- Humour
- Music or jingle (ie. Lube mobile will come to 13 13 32)
- Actors (ie. boy in Lube mobile ad; genie in Dominoes ad)
- Animated or cartoon characters (ie. Midalia Steel V energy fly)
- Animals (ie. Optus Broadband – emu)
- Special effects (ie. Rabbit Photos – coloured clay rabbits)
- Visual appeal
- Sound effects
- Slogan (ie. Dominoes – *supercalifreakin' awesome*)

**FILL IN THIS PAGE**

This is an anonymous survey, your name is not required.  
However, we would like to ask you a few background questions that will help us with our study.

81. How old are you? Please tick one box

Under 17 years	<input type="checkbox"/>
17 years	<input type="checkbox"/>
18 years	<input type="checkbox"/>
19 years	<input type="checkbox"/>
20 years	<input type="checkbox"/>
21 years	<input type="checkbox"/>
22 years	<input type="checkbox"/>
23 years	<input type="checkbox"/>
24 years	<input type="checkbox"/>
25 years	<input type="checkbox"/>
Over 25 years	<input type="checkbox"/>

82. What is the postcode of your address? 6

83. What year are you currently in at school? Please tick one box

Year 9	<input type="checkbox"/>
Year 10	<input type="checkbox"/>
Year 11	<input type="checkbox"/>

84. Gender Please tick one box

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

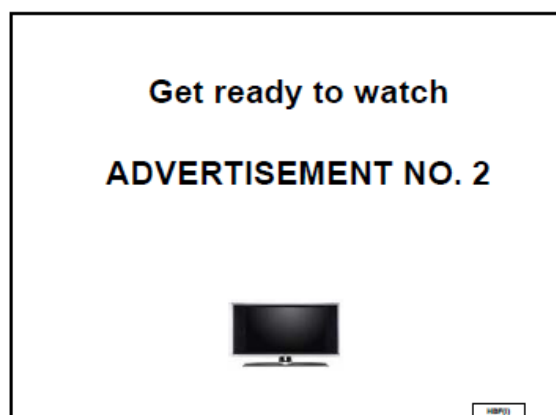
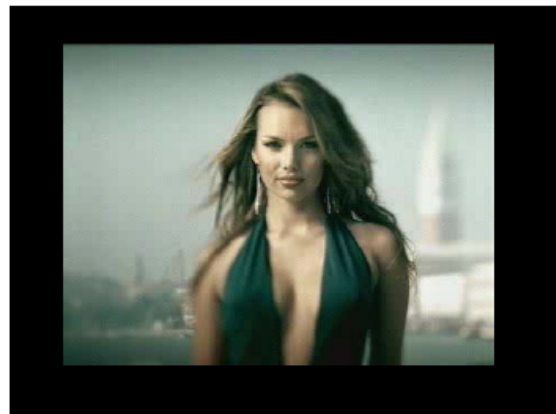
85. Name of School: \_\_\_\_\_

86. From class later class: \_\_\_\_\_

 ☐ Do you have a Facebook account?

**PLEASE DO NOT TURN THIS PAGE UNTIL INSTRUCTED TO DO SO**

# SECTION A: ADVERTISEMENTS





## Advertisement No. 2

Please answer Q2.1 to Q2.8



Next is

## ADVERTISEMENT NO. 3



DOBERKA



## Advertisement No. 3

Please answer Q3.1 to Q3.8



Here is

## ADVERTISEMENT NO. 4



LOL.BROTHA



## Advertisement No. 4

Please answer Q4.1 to Q4.8



You are now half way through  
the advertisements.

Take a brief rest  
before we move on.



**OKAY...TIME TO MOVE ON**

Get ready for

**ADVERTISEMENT NO. 5**



FORGE IT



## Advertisement No. 5

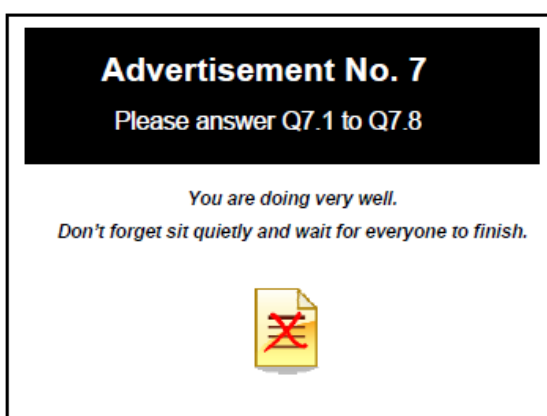
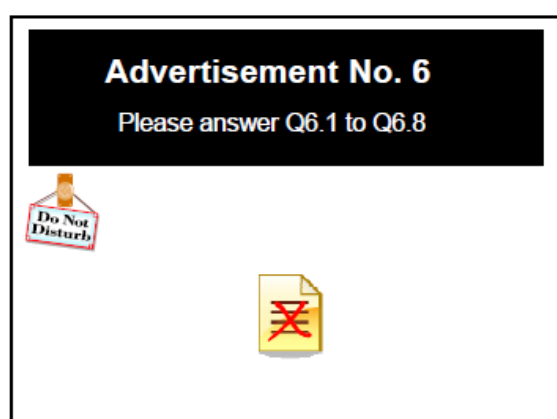
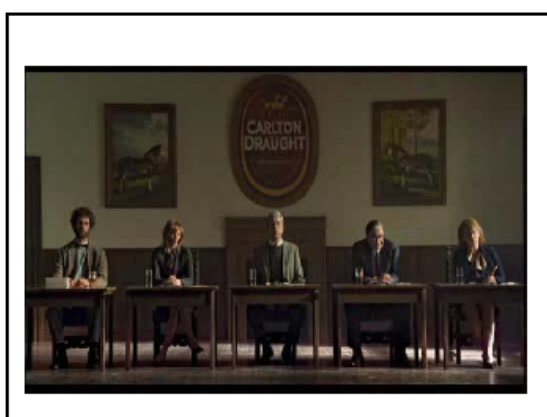
Please answer Q5.1 to Q5.8



*When you have finished, please sit quietly  
and wait until everyone is finished.*



PLEASE DON'T TURN THE PAGE UNTIL INSTRUCTED TO DO SO.






**Advertisement No. 8**  
Please answer Q8.1 to Q8.8

*Great Job!*


*When you have finished answer Q8.1 to Q8.8, you may turn the page to answer some general questions QG1 to QG8.*



**SECTION B:**

**General questions  
Q9 to Q16**

When you have finished, please sit quietly and wait for everyone else.

**Advertising and Youth Study**

That is the end of the survey.

Thank you for your participation.

Please sit quietly and wait for your classmates to finish.

*When everyone is finished there will be a brief talk.*

**DECONSTRUCTING ALCOHOL  
ADVERTISEMENTS**

1. EVALUATE THE AD'S APPEAL
2. DETERMINE THE PURPOSE OF THE AD
3. DETERMINE THE ASSUMPTIONS THE AD MAKES & THE MESSAGES IT SENDS
4. CONSIDER POSSIBLE CONSEQUENCES OF MESSAGES

DECONSTRUCTING ALCOHOL ADVERTISEMENTS

**1. EVALUATE THE AD'S APPEAL**

- Product
- Product placement
- Brand name
- Slogan
- People
- Tone
- Visual imagery
- Lighting
- Colour
- Copy text
- Animation

DECONSTRUCTING ALCOHOL ADVERTISEMENTS

**2. DETERMINE THE PURPOSE OF THE AD**

- The purpose of any ad is always: *to sell a product.*
- Appeal
- Target audience
- Emotive

DECONSTRUCTING ALCOHOL ADVERTISEMENTS

**3. ASSUMPTIONS & MESSAGES**

- What assumptions does the ad make about:
- What messages does the ad send about:

DECONSTRUCTING ALCOHOL ADVERTISEMENTS

**4. POSSIBLE CONSEQUENCES OF THE MESSAGE**

- What messages about alcohol are left out of the ad?
- What messages does the ad send about:

Healthway  
Sustainable. Healthy WA.

Curtin  
University of Technology

**Advertising and Youth Study**

***Thank you.***

***We appreciate your participation.***

Please take the two handouts with you to read later

1. Deconstructing an alcohol advertisement
2. Fact sheet "How alcohol affects teenagers"

**Appendix 16: Student handout – *Deconstructing a television alcohol advertisement*****DECONSTRUCTING A TELEVISION ALCOHOL ADVERTISEMENT**

Alcohol advertisers are very good at their job. Many alcohol ads appeal to many people. However, alcohol is product that should only be marketed to an audience that is aged above the legal drinking age [over 18 years of age]. By deconstructing an alcohol advertisement, it is possible to identify the ways in which an alcohol advertisement has been designed to attract an audience's attention and make them want to try or buy the advertised product.

**STEP 1: MAKE OBSERVATIONS****» Evaluate the advertisement's aesthetics:**

- What type of alcoholic product is being advertised—beer, wine, liquor?
- Where is the alcoholic product placed? Is it a prominent feature of the ad, or does it blend into the scene?
- What is the product's brand name? Where does that brand name appear in the ad?
- How many times do you see and/or hear the brand name of the product?
- How is the camera used? Consider the angles: where does the camera appear to be in relation to the subject—near, far, above, below?
- Does the camera seem to move a lot—from right to left, top to bottom?
- What effect does the way the camera has been used have on the ad?
- Take note of the lighting—does it appear to be natural or artificial? Are certain parts of the ad highlighted while others are not? If so, why do you think this is? Are there shadows? If so, how big are they? What effect does the lighting have on the ad?
- What colours are used? Are they bright? Black and white? In sharp contrast to each other? What effect does the colouring have on the ad?
- If the ad has text or copy, how does it look? What type(s) of font is (are) used? How big is the text? What colour is the text? What does the text actually say? Who, if anyone, appears to be saying it? What does the large text say? The small text?
- Is anyone speaking in the ad? Who speaks? Who is silent? What exactly is said? How does the speaker sound?
- Are there people in the ad? What gender(s) or race(s) are represented?
- What is the sexuality of the people in the ad? How is their sexuality portrayed?
- What do the people look like—are they young, old, sexy, plain? What are they doing?
- What does their expression suggest they are feeling?
- Are there real animals or animal graphics/characters used in the ad? If so are they central to the ad or in the background? Do they make the ad more attractive to watch?
- Does the ad use any special effects? If so what are they and do they make the ad more appealing and who would they appeal to most (which age group)?
- Does the ad have music? What genre of music is used? Do you recognize the song? Why do you think they've chosen this music? Do you like it? What, if any, feelings does the music invoke? What effect does the sound(s) have on the ad?
- What role does the alcoholic product play in what they are doing?
- What does the ad actually say? What is the tone—funny, sarcastic, serious, etc.?
- Is what the ad says in-line with or different from the scenario depicted in the ad? If different, why do you think this is?



» **Remember that the purpose of an ad is always to sell a product!**

- What is the alcoholic product being sold?
- Do you find the product appealing? Why or why not?
- Who is the target audience for this product? The legal drinking age in Australia is 18 years, does this mean that the ad is only targeting adults? Do you think that some aspects of the ad might appeal to children or underage teenagers? Do you think that this ad targets a specific gender? How?
- What feelings or emotions does the ad attach to the product? For example: partying and fun may be attached to a brand of beer. Is the ad successful at making those attachments? Why or why not?

» **What kinds of assumptions does the ad make about drinking?**

For example: the ad might assume that drinking is fun for everyone. Are these assumptions always true? Who might they not be true for?

- What messages does the ad send out about drinking?
- Do you see any contradictions in what these messages suggest and the reality of drinking? E.g. sexual success versus sexual dysfunction.
- What assumptions does the ad make and what messages does the ad send about what we want and desire? Do we really want what the ad says we want? Does the ad suggest that if we buy this product we will get something we want? Is it true?
- What assumptions does the ad make and what messages does the ad send about gender and sexuality? E.g. Couples are always heterosexual; men are interested in sex while women are interested in marriage.

» **What are some messages about drinking and alcohol that are left out of the ad? Are they left out on purpose? Why?**

Drinking alcohol can have some very serious consequences, particularly when drinking occurs at a risky level. Some of the short term harms include: headaches; nausea; shakiness and possibly vomiting and memory loss. Longer term harms can include becoming physically or psychologically dependent on alcohol, liver damage, brain damage and some cancers. Young people who drink at a risky level are also susceptible to social problems such as: property damage; unplanned pregnancies; increased conflict with parents; strained personal relationships motor vehicle accidents and violence (physical, verbal and sexual).

- What are some of the messages about drinking and alcohol that are left out of the ad? Are they left out on purpose? Why?
- Is the ad socially responsible. For example: Messages: the ad may send messages about drinking that are not true in reality. E.g. the ad may suggest that drinking will make you popular with friends or the opposite sex.

Appendix 17: Student handout – *Factsheet*

<b>factsheet</b>	<b>DRUG INFO</b>
<a href="http://www.druginfo.adf.org.au">www.druginfo.adf.org.au</a>	<b>clearinghouse</b>

Number 3.13 February 2005  
for parents

## How alcohol affects teenagers

### Introduction

Research shows that young people who drink alcohol do so in different ways than adults. For example, young people are more likely to drink a lot of alcohol in a short space of time. As a result they are more likely to suffer from the dangers of alcohol abuse. These include driving under the influence of alcohol, accidental injuries, violent behaviour and risky sexual behaviour.

However, there is another danger for young people who drink and it relates to the effects of alcohol on their brain. Teenagers who drink alcohol may damage their brain and this can cause problems for them in the future.

This fact sheet outlines the current research on the effect of alcohol on the young brain.

### The developing brain

The parts of the brain that undergo dramatic changes during the teenage years are called the frontal lobe and hippocampus. These parts of the brain are associated with motivation, impulse control and addiction. It is thought that teenagers are more interested in alcohol and other drugs because of the changes that are happening to these parts of their brain.

### Alcohol affects adults and adolescents differently

Alcohol affects adolescents differently from adults in the following ways:

- Adolescents seem to be able to stay awake and drink for longer than adults.
- Adolescents appear to be more sensitive to the learning and memory problems that can be

caused by alcohol. They are more likely than adults to suffer from lack of judgement and memory loss.

- Adolescents need only drink half as much alcohol as adults to suffer the same effects.

This may also be why adolescents who abuse alcohol tend to "binge drink". Binge drinking is drinking heavily over a short period of time or drinking continuously over a number of days or weeks.

Binge drinking is dangerous for the brain because of the heavy exposure to alcohol while drinking and also the damage caused by the hangover. It has been found that withdrawal from alcohol (hangovers) can be just as damaging to the brain as heavy exposure to alcohol.

### Effects of alcohol on memory and learning

The parts of the brain that are affected by alcohol are also involved in memory and emotions, and damage to them could be responsible for:

- memory problems
- dependence
- inability to learn
- depression
- problems with verbal skills.

Drinking alcohol regularly makes it hard for the brain to be able to store new information as memories. It also makes it difficult to remember what was just learned. Drinking alcohol during the teenage years may cause permanent damage to these parts of the brain and lead to memory and learning problems.

## Increased chance of dependence

The changes that occur to the brain during the teenage years make teenagers more vulnerable to the addictive actions of drugs. People who first use alcohol before age 15 are five times more likely to abuse alcohol than those who first use alcohol at age 21 or older. This increased use leads to a greater chance of alcohol-related problems in later life including becoming dependent on alcohol.

Rather than outgrow alcohol use young people who binge drink are significantly more likely to have drinking problems as adults.

## Effects of alcohol on social development

If young people begin to drink alcohol at an early age, it can affect their social development. It can influence the things they like to do and the way that they cope with problems. For example:

- they may spend their time drinking instead of participating in sport or other activities
- they may turn to alcohol as a form of coping with problems and be more open to using other substances.

The learning difficulties caused by teenage drinking result in poorer performance at school and an increased risk of social problems, depression, suicidal thoughts and violence.

## What can be done?

Current research suggests that heavy drinking during adolescence might permanently alter brain development. Even if a teenager stops drinking as an adult it might be too late to reverse the damage that might already have been done. For these reasons, the research suggests that adolescents should not drink alcohol.

### References

- De Bellis MD, Clark DB, Beers SR, Soloff PH, Boring AM, Hall J, Kersh A & Keshavan MS 2000 "Hippocampal volume in adolescent-onset alcohol use disorders", *American Journal of Psychiatry* 157, pp. 737–44
- Spear LP 2002 "The adolescent brain and the college drinker: Biological basis of propensity to use and misuse alcohol", *Journal of Studies on Alcohol Suppl*(14), pp. 71–81
- Toumbourou JW, Rowland B & Jefferies A 2005 "Could an alcohol abstinence focus through childhood and adolescence reduce alcohol-related harm?" *DrugInfo Clearinghouse prevention research evaluation report 13*, West Melbourne: Australian Drug Foundation
- White AM & Swartzwelder HS 2004 "Hippocampal function during adolescence: A unique target of ethanol effects", *Annals of the New York Academy of Sciences* 1021, pp. 206–20
- White AM 2003 Substance use and adolescent brain development", *Youth Studies Australia* 22:1, pp. 39–45

Appendix 18: Student handout – *Alcohol and adolescent development*

## FACT SHEET 1

## ALCOHOL AND ADOLESCENT DEVELOPMENT

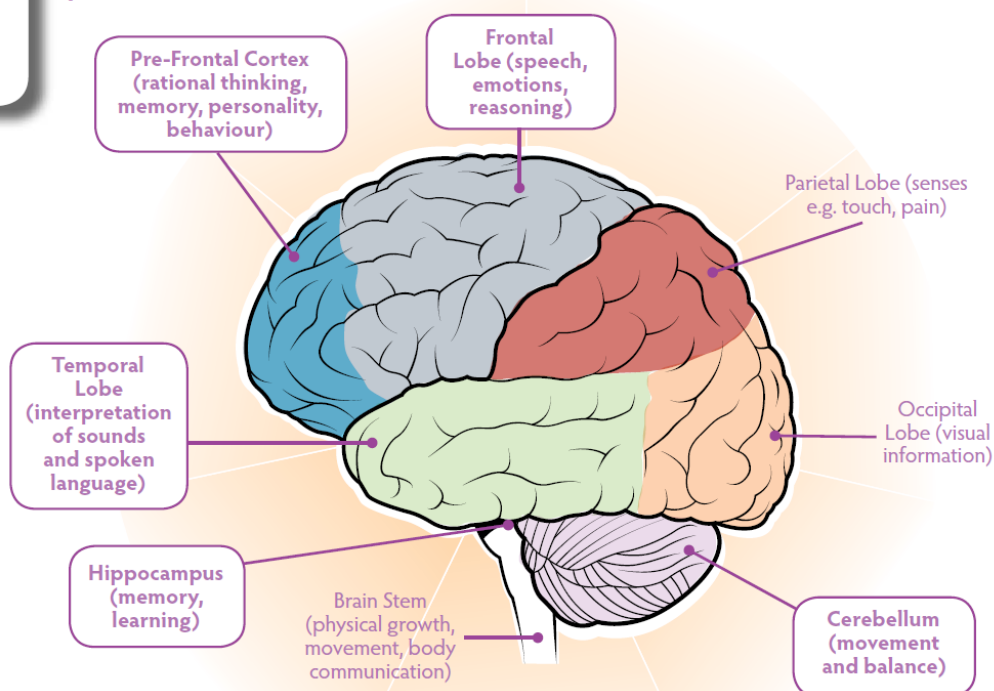
This fact sheet explains how alcohol can affect brain development during the teenage years...

## Did you know?

- Drinking in adolescence can be harmful to young people's physical development, particularly brain development. Adolescence is a critical period in a young person's development towards adulthood. What they learn during their teenage years, and how they learn it, can set the young person's path for later life. Alcohol consumption during this time can bring about learning difficulties, memory problems and other problems later in life.

&gt;&gt;&gt;

## AREAS OF THE BRAIN AND FUNCTIONS AFFECTED BY ALCOHOL



During adolescence the brain undergoes a lot of changes. As it is still developing, it is more sensitive to alcohol (sections affected are highlighted in boxes).

Areas of the brain that may be particularly vulnerable to alcohol's effects are the frontal and temporal lobes, pre-frontal cortex, cerebellum and hippocampus. The hippocampus, which lies deep within the cerebral hemispheres, plays an important role in learning and memory formation. Heavy drinking during adolescence can lead to reduced hippocampal volume and memory and learning difficulties.



## Key facts

The changes that occur to the brain during the teenage years make young people more vulnerable to drug dependence. People who first use alcohol before age 15 are five times more likely to abuse alcohol than those who first use alcohol at age 21 or older. This increased use leads to a greater chance of alcohol-related problems in later life, including becoming dependent on alcohol (addiction).

- › Different parts of the brain develop at different rates as we grow, and depending on whether we are male or female. One example is the pre-frontal cortex, which houses the part of the brain that controls rational thinking. This part of the brain does not begin to mature until age 19 and only fully matures by around age 21 in women and age 28 in men. So damage to the pre-frontal cortex during its development can have life-long consequences for the young person's memory, personality and behaviour.
- › Drinking alcohol during the teenage years can cause permanent brain damage. Damage to the brain could be responsible for memory problems, inability to learn, problems with verbal skills, alcohol dependence and depression.
- › Alcohol can affect a teenager's social development if they start drinking at an early age. They may spend their time drinking instead of participating in sports or other recreational activities. They may turn to alcohol as a form of coping with problems and be more open to using other substances. The learning difficulties caused by teenage drinking can result in poor school performance and an increased risk of social problems, depression, suicidal thoughts and violence.
- › Research shows that a hangover can be just as damaging to the brain as heavy drinking by reducing a person's ability to learn new information and recall memories.

## Special considerations and tips

- › For health reasons, recent research suggests that young people under 18 years of age should avoid alcohol, or keep drinking to a minimum.
- › There are both short-term and long-term risks associated with teenage drinking. Make sure you understand these, and keep yourself informed.
- › Talk to your teenager about alcohol. Explain the risks and the harms associated with drinking at a young age. Be firm, confident, clear and consistent, and make sure your teenager understands the boundaries and limits you have set for him or her in relation to alcohol.
- › Keep the lines of communication open, so your teenager can feel comfortable talking to you about the things that concern him or her.
- › Remember, you are not alone. Other parents of teenagers are most likely facing the same issues. Share your concerns as well as what has worked for you when dealing with teenagers and alcohol. Seek professional help if you need it.

## Further information/Where to get help

- › For further information on the short-term and long-term effects of alcohol on teenagers, go to [www.druginfo.adf.org.au](http://www.druginfo.adf.org.au).
- › To find out about the Australian Alcohol Guidelines for low-risk drinking, see **Fact Sheet 3: Standard drinks and low-risk drinking**.
- › For tips on communicating with your teenager about alcohol, see **Fact sheet 7: Teenage drinking: Parents' communication style can make a difference**. ○

## Appendix 19: Candidate observational field notes

### OBSERVATIONAL FIELD NOTES – School setting

#### 1.0 Principal contact

Favoured Initial contact was phone call to school principal to introduce candidate and describe the study. With permission, immediate follow-up email sent to principal containing attachments of study documentation (including copies of consent and information package for parents; copies of handouts to be given to students after data collection).

#### 2.0 School participation

Friendly, co-operative manner was required when communicating with school staff regardless of the level of co-operation. The study depended on their voluntary time and support. It was important to be flexible and available for data collection at a time that was convenient for the school.

#### 3.0 Student recruitment

Individual teachers: Each school/teacher contact will have a different process/method for co-ordinating the arrangements for data collection. Participant numbers for each school depended on consent form returns.

Differences observed in this study were mainly efficiencies in student follow-up of consent forms. Some teachers efficiently followed up with students, others were less efficient (e.g. school participant recruitment range 3 students from one school versus 90 students from another school).

Action: Whilst this was out of direct control of the candidate, consistent follow-up with co-ordinating teachers through phone call and/or email was found to be an effective strategy for most schools. However, caution not to encroach on valuable time was observed.

#### 4.0 Data collection

##### 4.1 Punctuality

It was important to arrive at the school at least 30 minutes early to meet with the co-ordinating teacher. Unavoidable delay issues that arose included:

- Office staff couldn't locate teacher
- Teacher had forgotten about the study and left the school grounds
- Confusion over classroom availability
- Locked classrooms
- Confusion over eligible participants (students that had returned consent forms)
- Student teacher filling-in unaware of the study

## 4.2 Student attitudes

For most sessions, the teacher left the room therefore the candidate was left to deal with negative attitudes and behaviours. Adaptive teaching style balancing authoritative and authoritarian was adopted where necessary. Issues dealt with included:

- Some students displayed negative attitudes to participating but settled once the session started.
- All students were advised of their right 'not to participate'.
- Some students were loud and disruptive before commencing.

Action: Generally once the Powerpoint presentation commenced, most students settled down. They were asked to be quiet and respect others in the classroom. Most students appeared to enjoy the session.

## 4.3 Teacher presence

Some teachers remained in the classroom during the data-collection session. It was observed in the first session that some teachers may (by habit) wander around the room looking at students work. Observing this behaviour, the candidate asked all teachers that remained in the classroom to position themselves at the front of the classroom and remain there for the duration of the session. This was important to reinforce the confidentiality of the survey and the potential response bias by respondents if their teacher was reading their responses.

## 4.4 Powerpoint presentation/Survey

Whilst the Powerpoint presentation provided example questions, it was important to remember that each school used different terminology when referring to class groups. Although this information was not imperative to the study, it appeared to be important to the students that the correct terminology relative to their own school was used. For example, 'tutor group name' or 'form group name'.

The survey instrument was long with a break after half way through. The time requirement of this break was variable depending on the pace of the student group (e.g. time enough for students to catch up). Too long resulted in disruptive behaviour, therefore when all students were ready, the survey continued.

Different literacy levels were taken into consideration and teachers identified students that may take longer than others. This issue often impacted on time.

The Powerpoint presentation contained the stimulus advertisements so that there was no lag time in connecting to another medium. This worked well and students appeared to enjoy the session. The candidate used her own lap top containing the Powerpoint slideshow and link to TVCs. This maintained the integrity of the video.