

School of Management and Marketing
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Hedonic Engagement
&
Adaptation to
Cosmetic Procedures

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Declaration

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

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

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ABSTRACT

Hedonic engagement and adaptation to cosmetic procedures

Hedonic engagement and adaptation to cosmetic procedures were explored in the current research. The research conceptualised and operationalised hedonic adaptation to repeated engagement with a cosmetic procedure. Research also proposed a decision-making framework, the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB), to explain hedonic engagement with a cosmetic procedure. Finally, it developed a segmentation typology of consumers who engaged with cosmetic procedures according to their perceived risk profile. To achieve these three key objectives, qualitative and quantitative research was conducted. The qualitative research incorporated an extant literature review, focus groups and expert panels to determine the face and content validity of key constructs in the HEMGB. The quantitative research implemented eight studies in the USA, Australia and India under four cosmetic procedures, namely, chemical peel, Botox, hair transplant and liposuction. These countries were selected primarily due to the popularity of non-invasive and invasive cosmetic procedures undertaken by their populations. A survey was self-administered to online panels and face-to-face at public venues to consumers who had previously engaged in cosmetic procedures. Study One in the USA (N=600) and Study Two in Australia (N=600) confirmed the dimensionality, reliability and validity of the constructs under the chemical peel condition. Study Three in the USA (N=550) and Study Four in Australia (N=550) explored the relationships hypothesised in the HEMGB under the Botox condition. Study Five in the USA (N=350) and Study Six in India (N=350) investigated the hypothesised relationships in the HEMGB under the hair transplant condition. Study Seven in the USA (N=350) and Study Eight in India (N=350) validated the HEMGB under the liposuction condition. Finally, Studies Three to Eight determined the risk profiles of cosmetic procedure users and their emotional responses.

The research introduced an adapted theoretical framework from the model of goal-directed behaviour, the HEMGB, which empirically explained hedonic engagement with cosmetic procedures. It also applied a methodological approach that elicited and mapped out anticipated positive and negative emotions pre-, post- and toward the next procedure in hedonic adaptation. The research introduced the perceived risk dimensions to develop a segmentation typology that profiled consumer risk perceptions of cosmetic surgical procedures. The implications of handling perceived risk and hedonic adaptation were considered from the perspectives of the consumer segments and healthcare professionals. Further, the pragmatic consequences for communication and activation strategies were contemplated to safeguard consumer interests and retain their loyalty.

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Chapter One

Introduction

1.0. Introduction

This chapter provides an overview of the cosmetic surgery industry and use of optional cosmetic procedures. It highlights the limited scope of research on consumer hedonic engagement and adaptation to cosmetic procedures. This identifies the research gaps and objectives for the current research. Supporting and secondary theories that underpin hedonic engagement and adaptation to cosmetic procedures are outlined to form conceptualisations of the key constructs. The methodology is introduced and the research paradigm, design, sampling method, data collection and statistical analysis are described. These delineate the delimitations and scope of the methodology. The theoretical, methodological and managerial significance of the research are considered. Finally, the organisation of the research is presented in a visualised format.

1.1. Hedonic Engagement and Adaptation to Cosmetic Procedures

Consumer engagement with cosmetic procedures has observed spectacular growth in the last decade (King, 2019; Townley, 2019). The global cosmetic surgery industry is expecting a compounded annual growth rate of 7.8% between 2017 and 2023 to reach USD21.97 billion by 2023 (Market Research Future, 2019). In the USA, the American Society of Plastic Surgeons reported that 2.6 million cosmetic procedures were conducted in the USA in 2019, an increase of a quarter of a million compared to 2018 (Townley, 2019). In Australia, the Australasian College of Cosmetic Surgery noted that 500,000 cosmetic procedures were conducted in 2020, generating \$1 billion and representing 40% more spend than the USA per

capita (King, 2019). In India, engagement with cosmetic procedures is on the rise, with approximately 466,000 Indians engaging in cosmetic procedures (Saha & Saha, 2017) and the market estimated to be \$1 billion.

The act of engaging in cosmetic procedures involves hedonic consumption because it correlates with an anticipated positive emotional experience (Akhlaghi et al., 2015; Petersen et al., 2018). In envisioning a procedure, a consumer generates a mental projection of their perfected state and anticipates positive emotions, such as pleasure, pride and excitement (Kim et al., 2017). In contemplating *not* going through with the procedure, the consumer creates a mental simulation of their existing state and anticipates negative emotions, such as displeasure, anger and anxiety (Kim et al., 2017). Hedonic engagement that is directed at pursuing positive emotions and avoiding negative ones is underpinned by the model of goal-directed behaviour (MGB). Adjustments of positive and negative emotional states, pre- and post-procedure, depend on the consumer's personality, cultural values and emotional base (Karami et al., 2016). This is referred to as "hedonic adaptation", which observes that each individual is born with their own happiness set point and adapts differently to life events (Frederick & Loewenstein, 1999; Lyubomirsky, 2010). Hedonic adaptation is underpinned by set-point theory and hedonic treadmill theory (Brickman & Campbell, 1971; Diener et al., 2006).

According to the American Society of Plastic Surgeons (ASPS), cosmetic surgery is "a unique discipline of medicine focused on enhancing appearance through surgical and medical techniques" (ASPS, 2019). There are two main types of cosmetic procedures. Non-surgical cosmetic procedures are non-invasive and do not penetrate the skin barrier, such as chemical peels, whereas minimally-invasive surgical procedures break the skin, either with needles or incisions, such as Botox (Hubbard, 2016). Invasive procedures require incisions to the skin, such as hair transplants and liposuction (Mordon & Plot, 2009).

Scholars have attributed the uptake in cosmetic procedures to social norms and the dissipating stigma attached to cosmetic procedures, technology and advancements in treatments, psychological assurances of short recovery downtimes, economic and financial freedom as well as the accessibility of cosmetic procedures in the marketplace (Yazdanparast & Spears, 2018). In societies preoccupied with body image, beauty operates as a transactional commodity, promising “personhood, rights and good governance” (Estill, 2017, p. 181). Thus, cosmetic procedures are seen as quick-fix solutions to address perceived beauty flaws (Sood et al., 2017) as well as a means to attaining the transactional outcomes of happiness, popularity, mating preferences, employment opportunities and financial success (El Jurdi & Smith, 2018). Understanding the cognitive and affective factors that drive desire and intention for hedonic engagement and adaptation has potential to extend theory in the research area and offer pragmatic input to the beauty industry.

Yet, the likelihood of a cosmetic procedure going wrong has been noted (Taylor, 2012) as consumers may experience physical, financial, performance, social and psychological risk (Mitchell et al., 1997). Qualifying key segments of cosmetic procedure users according to their perceived risk would steer communication strategies that help users to make informed choices in some risky contexts (Boulton & Malacrida, 2012).

1.2. Limited Scope in Hedonic Engagement and Adaptation to Cosmetic Procedures

Despite consumer interest in cosmetic procedures, research has not kept up with its growth. Although a smaller body of work has focused on the affective aspects of consumer choice, there is emerging recognition that these aspects exert a stronger impact on hedonic engagement (Lawton et al., 2009), specifically with a cosmetic procedure (e.g. Henderson-King & Brooks, 2009; Milfelner et al., 2017). Delving further into the affect construct uncovers emotions in hedonic consumption, an area that has received limited attention. While the existing literature

focuses on how positive emotions adapt in hedonic consumption (e.g. Emmerling & Qari, 2017; Kwon & Lee, 2020; Line et al., 2016; Park et al., 2017; Tong et al., 2016; Wu et al., 2020), there is less focus on how negative emotions adapt in hedonic consumption (e.g. Kieling et al., 2016; Yang et al., 2017). Further, the influence of emotional expectations prior to a behaviour has been relatively under-researched (Phillips & Baumgartner, 2002). This underlines that the positive *and* negative emotions consumers feel before, after and toward their next hedonic engagement, particularly with a cosmetic procedure, remain undetermined.

To the best of the researcher's knowledge, a theoretical decision-making framework has not been introduced to explain hedonic engagement with a cosmetic procedure. Fewer studies on consumption choices have explored the affective aspects (e.g. Brakus et al., 2009; Ding & Tseng, 2015), with a larger body of work centred on the cognitive aspects (e.g. Han & Hwang, 2014; Homburg et al., 2006). The deliberative attributes, which nest in affect (i.e. attitude and emotions) and cognition (i.e. perceptions of peer pressure and self-control), require further consideration for how they drive choice and consumption (Dube et al., 2003). Integrating affective and cognitive factors with non-volitional and motivational factors (Han & Hwang, 2014) would help to clarify and explain hedonic conative engagement with a cosmetic procedure.

Finally, the prospect of risk in decision-making has long occupied the interest of consumer psychology and consumer behaviour scholars (e.g. Arora & Kaur, 2018; Ray & Sahney, 2018; Schiffman et al., 2011). However, there is scant research that addresses in what ways risk perceptions influence consumer decisions or how consumers perceive felt risks in specific situations (Cho & Lee, 2006). Moreover, only limited studies have considered perceived risk as a segmentation variable to identify and profile consumers in contexts, such as financial investments (e.g. Munnukka et al., 2017), cyber security (e.g. Morosan & DeFranco, 2019),

food-related hazards (e.g. Cunha et al., 2010), blood donation (e.g. Zhou et al., 2012), cosmetic procedures (e.g. Boulton & Malacrida, 2012; Bradbury, 2009) and information use related to non-surgical cosmetic procedures (e.g. Reisenwitz & Fowler, 2018). This limitation is more acute in the context of cosmetic procedures, which are fraught with potential risks and where a spectrum of consumers exist, with varying risk concerns (Boulton & Malacrida, 2012; Bradbury, 2009; Taylor, 2012).

1.3. Research Gaps and Objectives

From the literature review of hedonism, adaptation, goal-directed behaviour and perceived risk, three research gaps are identified. The current research sets out to address these gaps:

Gap 1: There is a lack of clarity underpinning the positive and negative emotions consumers feel and a methodology for tracking these emotions before, after and toward their next cosmetic procedure.

Gap 2: There is limited empirical research on the affective and cognitive factors that explain hedonic conative engagement with a cosmetic procedure.

Gap 3: There is a lack of empirical research that segments consumers according to their perceived risk toward engagement with a cosmetic procedure.

With the three research gaps established, the following three research objectives are set for the current research:

RO1: Conceptualise and operationalise hedonic adaptation to repeated hedonic engagement with a cosmetic procedure (Gap 1).

RO2: Propose an empirical decision-making framework that explains hedonic engagement with a cosmetic procedure (Gap 2).

RO3: Develop a segmentation typology of consumers who engage with cosmetic procedures according to their perceived risk profile (Gap 3).

1.4. Theoretical Underpinnings

The current research cites various theories to underpin the key constructs identified in the research. The relevant theoretical underpinnings for the key constructs, research questions and research hypotheses are outlined in Chapter Two and Chapter Three, respectively. Summaries of the theories are as follows:

1.4.1. Supporting Theory

1.4.1.1. Model of Goal-Directed Behaviour

The model of goal-directed behaviour (MGB) extends the theory of planned behaviour (TPB) and the theory of reasoned action (TRA) with self-regulation theory (Bagozzi, 1992). The TPB introduces three tenets of consumer decision-making, namely attitude, subjective norms and perceived behavioural control. The MGB introduces three additional tenets of consumer decision-making, namely anticipated emotions toward a behaviour, past experience and desire for a behaviour (Perugini & Bagozzi, 2001). The decision to engage in a cosmetic procedure involves the assessment of attitude, subjective norms, perceived behavioural control, positive and negative emotions, past experience and the desire to enhance body image. The MGB is regarded as a superior model to the TPB as it offers better systematic control and higher anticipatory power for measuring the variance in intention toward a goal-directed behaviour (Perugini & Bagozzi, 2001).

1.4.1.2. Set-Point Theory and Hedonic Treadmill Theory

Hedonic adaptation is grounded in set-point and hedonic treadmill theory (Brickman & Campbell, 1971; Diener et al., 2006). Both theories contend that changes in a situation or life event may increase (decrease) the level of happiness. However, over time, an individual's reward (punishment) system eventually returns them to their inherent, genetically determined happiness baseline (Headey & Wearing, 1989; Luhmann & Intelisano, 2018; Perez-Truglia, 2012). Generally, individuals only temporarily move away from the set point, rebounding from life events and reverting to the set point or neutrality (Diener & Diener, 1996; Luhmann & Intelisano, 2018; Myers & Diener, 1995). In positive life events, individuals rebound from a heightened state to return to a preset stasis over time (Luhmann & Intelisano, 2018). In negative life events, individuals recover from a depressed state to return to the set point (Brickman et al., 1978). It is surmised that a consumer may experience positive emotions shortly after engaging in a cosmetic procedure, although this may be short-lived as they become accustomed to their enhanced appearance (Sood et al., 2017).

1.4.2. Secondary Theory

1.4.2.1. Regulatory Focus Theory

Regulatory focus theory is founded on the hedonic concept that an individual attunes their behaviour to focus on attaining positive outcomes and retreating from negative outcomes (Higgins, 1997). The theory posits that an individual is expected to feel magnetism toward experiences with positive values and aversion toward those with negative values (Vroom, 1964). For instance, when contemplating a cosmetic procedure to enhance their body image, consumers are likely to pursue positive emotions (e.g. self-esteem) and avoid negative emotions (e.g. shame) (Vlahos & Bove, 2016).

1.4.2.2. Excitation Transfer Theory

Excitation transfer theory is premised on the argument that certain situations may evoke a particular emotional reaction, and then, residual portions from this preceding emotion strengthen a feeling of euphoria in the aftermath (Zillmann, 1983). The theory advances the notion of hedonic reversal, whereby some situations may initially not lead to pleasure but later result in positive outcomes. For instance, an individual may develop a fondness for an experience, which was first avoided due to fear and pain (Rozin, 1999). This implies that repeated engagement with a behaviour results in transference and adaptation to pain, which ultimately delivers pleasurable outcomes (Amould & Price, 1993). It may be argued that recurring exposure to the same cosmetic procedure, although initially viewed with some fear and apprehension, may eventually result in satisfaction and delight (Yenchai and Sirisook, 2018).

1.4.2.3. Gratification Theory

Gratification theory describes the positive emotional reaction to the fulfilment of desire (Baumeister & Bushman, 2010) and is embedded in hedonic motives that stimulate behaviour. These hedonic motives may be personal and driven by a desire for self-gratification or sensory stimulation (Tauber, 1972). Central to the conceptualisation of hedonism in behavioural psychology research is that an individual will choose an action that delivers an outcome of gratification. It is conjectured that consumers who engage in a cosmetic procedure to gratify their desire to look more attractive are likely to be driven by hedonic motives to find self-esteem, social acceptance and happiness (Braun, 2005; Hart & Wellings, 2002).

1.4.2.4.Theory of Fantasy Realisation

The theory of fantasy realisation underpins how fantasy is converted into a desire or motivation to achieve goals according to an individual's level of commitment (Oettingen, 1999). In consumer behaviour research, hedonic consumption activates the fantasy aspects of the consumption experience (Hirschman & Holbrook, 1982), stimulating sensory pleasure, fun and the imagination (Dhar & Wertenbroch, 2000). For instance, the reality television programme *Extreme Makeover* features surgically enhanced young, slim and attractive participants wearing designer clothes, being chauffeured in luxury cars, dining in eclectic settings and enjoying celebrity lifestyles. Regular viewing of reality TV and the use of social media can instigate an individual's desire to live the fantasy and foster some unrealistic expectations (Heyes, 2007; Lim, 2017; Menon, 2019; Tait, 2007).

1.4.2.5.Positivity Offset

Positivity offset is centred on a tendency to remain in a positive state if nothing negative is happening (Cacioppo et al., 1999). This theory proposes that an individual's happiness baseline can shift upwards to an elevated point and remain at this positive set point (Diener & Diener, 1996). For instance, Calogero et al. (2010) observed that women's experiences of sexual objectification and body shame instigate their positive attitude toward cosmetic procedures to improve their body image. Having undertaken such a procedure, consumers are likely to sustain a positive shift from their happiness baseline as they continue to receive compliments about their enhanced looks.

1.4.2.6.Adaptation-Level Theory

Adaptation-level theory propounds that all life events create an adaptation level, and as an individual becomes accustomed to these developments, a greater degree of stimulation is required for subsequent engagements to produce a similar affective reaction (Helson, 1964;

Parducci, 1995). This may compel the individual to pursue elevated degrees of engagement in the hope of achieving the high intensity of happiness previously experienced (Pasdiora et al., 2020; Sheldon & Lyubomirsky, 2012). For instance, a consumer who engages in a cosmetic procedure is likely to adapt to the positive outcomes of their transformed appearance and seek subsequent procedures in due course (Castle et al., 2002; Sood et al., 2017).

1.4.2.7. Habituation and Habitual Adaptation Theory

Habituation and habitual adaptation theory are focused on repeated behaviour (Martin, 1964). Both theories suggest an individual habituates and adapts to their environment but seeks heightened levels of subsequent stimulation to derive a similar emotional response from previous stimulation (Lyubomirsky, 2010). For instance, a consumer who undergoes a cosmetic procedure gradually adjusts to their enhanced image and reverts to their happiness set point (Sood et al., 2017), resulting in the pursuance of increased levels of engagement to attain the similar emotional “high” experienced before (Perez-Truglia, 2012).

1.5. Key Concepts and Definitions

The current research adopts several conceptualisations for the implementation of the empirical studies. The conceptual definitions of the key constructs identified in the research model and how they were derived are detailed in Chapter Two. Summaries of the conceptual definitions are as follows:

1.5.1. Hedonism

Hedonism stems from the Greek word *hedone*, which means “pleasure” (Sandoff & Widell, 2008). In behavioural psychology research, hedonism is conceptualised as the ability to experience pleasure in life. In marketing research, hedonic consumption is designated to “those facets of consumer behaviour that relate to the multi-sensory, fantasy and emotive aspects of

one's experience with products" (Hirschman & Holbrook, 1982, p. 92). Thus, hedonic behaviour is described as actions motivated by a desire to maximise pleasure and minimise pain (Higgins, 1997). This characterises the consumer who repeatedly engages in a cosmetic procedure as a hedonist who demonstrates magnetism toward behaviour likely to result in positive emotions and aversion toward behaviour likely to result in negative emotions (Vroom, 1964).

1.5.2. Adaptation

In behavioural psychology research, adaptation is conceived as a process that reduces the positive (negative) effects of a constant or repeated stimulus (Martin, 1964; Sale, 1988). It is the body's inherent response to survive against internal and external challenges (Baffy & Loscalzo, 2014) by moving toward an environment best suited for its subjective well-being (Fisher, 1930).

1.5.3. Hedonic Adaptation

Hedonic adaptation is viewed as a natural coping mechanism that facilitates temporary (permanent) movements away from an innate predisposition or preset happiness baseline, as a result of exposure to a repeated positive (negative) stimulus (Diener & Diener, 1996; Luhmann & Intelisano, 2018). Hedonic adaptation is operationalised in terms of the emotions that consumers feel over time (Kwon & Lee, 2020; Wu et al., 2020), namely before, after and toward their next experience with a cosmetic procedure.

1.5.4. Attitude

Attitude is construed as a propensity to appraise a behaviour with a degree of favour (disfavour) (Ajzen, 1991). Both the TRA and TPB explain attitude with an emphasis on the action used to (not) perform a behaviour (Ajzen, 1991; Fishbein & Ajzen, 1980). The MGB corroborates this

conceptualisation and expands it by suggesting that attitude toward a behaviour can be formed from an acquaintance of past experience with that behaviour (Perugini & Bagozzi, 2001).

1.5.5. Subjective Norms

Subjective norms refer to an individual's understanding of pressure from peers to (not) engage in a behaviour (Ajzen, 1991). Both the TRA and TPB define subjective norms as an individual's actions that are likely to be influenced by a certainty as to whether such actions will be accepted (rejected) by other members in a social group (Ajzen, 1991; Fishbein & Ajzen, 1980). The MGB reiterates that subjective norms represent an apparent pressure from the social group to (not) perform a behaviour (Perugini & Bagozzi, 2001).

1.5.6. Perceived Behavioural Control

Perceived behavioural control, according to the TPB, encompasses an individual's belief about their capability regarding, and mastery of, an intended behaviour (Ajzen, 1991). It addresses non-volitional situations (i.e. time, money, skills and cooperation from others) that may be seen as a barrier to effective engagement with an intended behaviour. The MGB also conceptualises perceived behavioural control as an individual's belief that they are (not) capable of successfully engaging in a behaviour (Perugini & Bagozzi, 2001).

1.5.7. Emotions

Anticipated emotions, according to the MGB, describe the positive (negative) affect that an individual expects after (not) accomplishing a goal (Perugini & Bagozzi, 2001). The MGB identifies positive anticipated emotions, such as feeling excited, glad, happy, delighted, satisfied, proud and self-assured, as well as negative anticipated emotions, such as feeling angry, frustrated, sad, worried, guilty, ashamed, disappointed, depressed and anxious toward (not) enacting a behaviour and fulfilling an outcome (Perugini & Bagozzi, 2001).

1.5.8. Past Behaviour

Past behaviour is underscored by the distinction between the frequency and recency of a past experience (Bagozzi & Warshaw, 1990). This distinction hinges on when the experience has taken place. The frequency of past behaviour refers to engagement with a behaviour within a comparatively longer period of time, whereas the recency of past behaviour refers to engagement with a behaviour over a reasonably short period of time (Song et al., 2014).

1.5.9. Desire

Desire, according to the MGB, is explained as “a state of mind whereby an agent has a personal motivation to perform an action or to achieve a goal” (Perugini & Bagozzi, 2001 p. 71). The authors highlight the distinction between goal and implementation desire. Goal desire encapsulates an individual’s motivational state of mind and how keenly they want to perform a particular goal-directed behaviour to achieve their end state, whereas implementation desire represents how strongly the individual wants to perform a specific behaviour, targeting their means to achieve their end state (Bagozzi et al., 2003).

1.5.10. Perceived Risk

Perceived risk is seen as “an expectation of losses associated with the purchase and, as such, acts as an inhibitor to purchase” (Peter & Ryan, 1976, p. 185). In marketing research, it is commonly viewed by marketing scholars as a consumer’s subjective expectation of prospective losses (Ray & Sahney, 2018; Roy et al., 2012; Stone & Winter, 1987). The construct is multidimensional, encompassing several facets of perceived risk (Arora & Kaur, 2018; Featherman & Pavlou, 2003; Ray & Sahney, 2018). The five perceived risk dimensions relevant to cosmetic procedures are defined as follows:

Physical risk refers to the potential of a negative effect that the purchased product/service may have on an individual's physiological condition (Stone & Gronhaug, 1993).

Financial risk considers the likelihood of whether an individual is able to monetarily support or be compensated for making a purchase (Havlena & DeSarbo, 1991).

Performance risk is the possibility that the purchased product/service does not deliver the anticipated benefits (Havlena & DeSarbo, 1991).

Social risk reflects the potential of a loss of status within an individual's social group as a result of the negative opinions of others (Arora & Kaur, 2018).

Psychological risk represents the likelihood of anxiety or mental discomfort that an individual may experience during or after a purchase (Roehl & Fesenmaier, 1992).

1.6. Research Methodology

The research paradigm, design, sampling method and data collection identified in the current research are detailed in Chapter Four. Highlights of the research methodology are presented as follows:

1.6.1. Research Paradigm

The pragmatism paradigm integrates both descriptive and empirical methods (Onwuegbuzie, 2003). This mixed-method research refers to “the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study” (Johnson & Onwuegbuzie, 2004, p. 17). It is emerging as a popular paradigm among researchers due to its merits (Creswell, 2013; Tashakkori & Teddlie, 1998). Its integration of qualitative and quantitative research, scope for exploration and evaluation, rigour in analytical methods and richness of the results prompted Woodruff (2003)

to recommend the approach to marketing research. For all these reasons, the mixed-method approach was adopted to lay the foundation for the current research.

1.6.2. Research Design

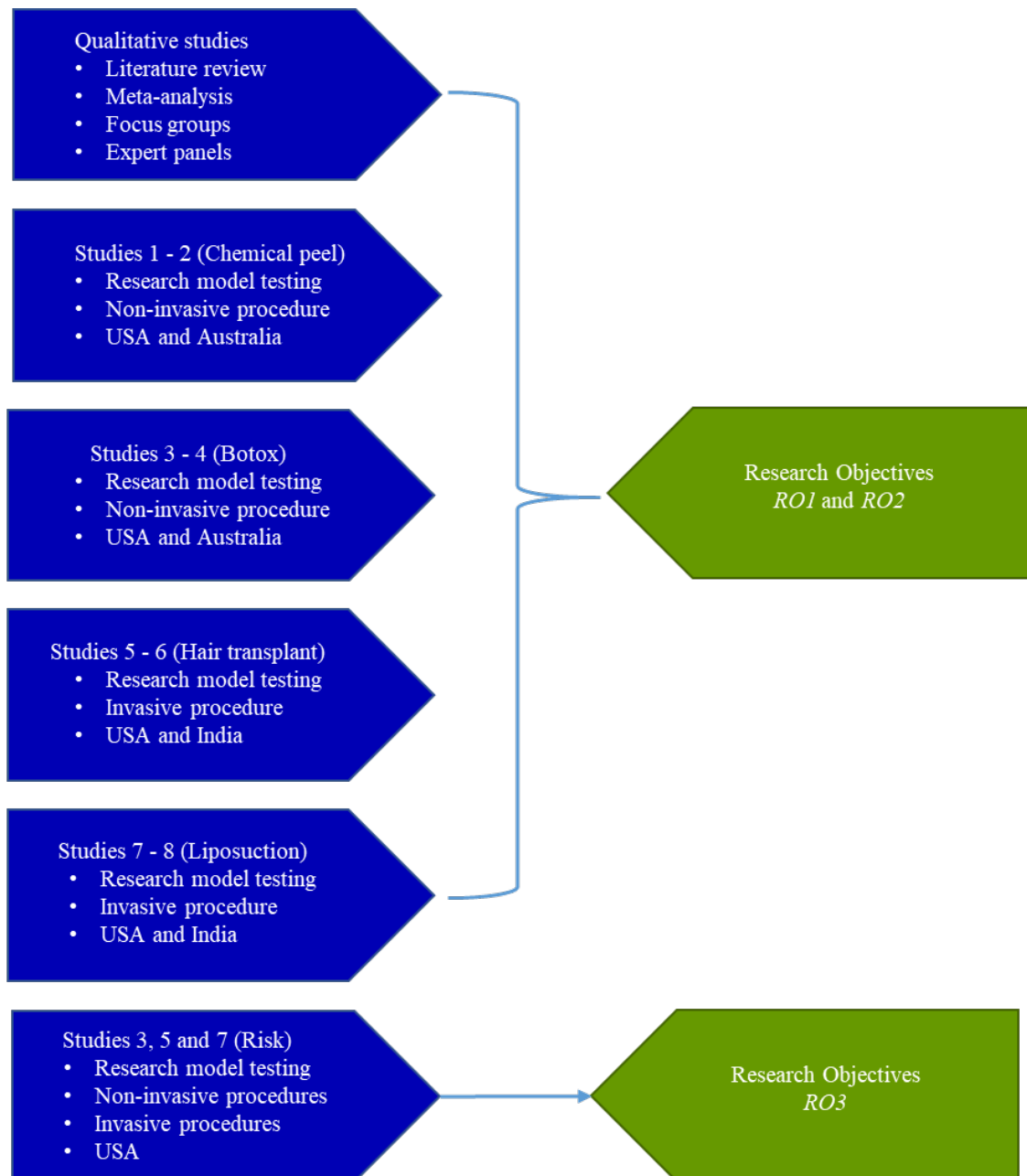
The current research is conducted in the context of hedonic engagement and adaptation to repeated cosmetic procedures. Two non-invasive cosmetic procedures (i.e. chemical peels and Botox) and two invasive cosmetic procedures (i.e. hair transplants and liposuction) were selected by focus groups and expert panels as appropriate conditions for addressing the research objectives. Chemical peels and Botox represented lower levels of involvement and perceived risk, whereas hair transplants and liposuction represented higher levels of involvement and perceived risk.

The research on non-invasive cosmetic procedures, which included chemical peels (Studies One and Two) and Botox (Studies Three and Four), was conducted in the USA and Australia. The research on invasive cosmetic procedures, which included hair transplants (Studies Five and Six) and liposuction (Studies Seven and Eight), was conducted in the USA and India. Notably, the USA was selected for every cosmetic procedure condition because of its leadership status in the practice on social media (Hopkins et al., 2020) and its rising demand, with 18 million Americans engaged in cosmetic procedures in 2019 (ASPS, 2019).

An overview of the research design can be seen in Figure 1.1.

Figure 1.1

Research Design



1.6.3. Sampling Method

A questionnaire, utilising existing scale items adapted to the research context, was used as the survey instrument in the current research. The survey instrument, which was self-administered to online consumer panels as well as face-to-face at public venues and medical practices,

adopted a non-probability and convenience sampling approach. Prospective respondents were approached with an information sheet outlining the research and asked for their written consent to complete the survey. They were assured that their individual responses would remain anonymous and that they were at liberty to disengage from the survey at any time. This followed the ethical protocols that were approved by the Curtin University Ethics Committee (Approval number: HRE2017-0209).

The survey targeted consumers who had previously engaged in a cosmetic procedure. Only one survey under one of the four conditions was completed by each respondent to avoid interviewee bias. The sampling frame, which varied in age, gender, social class, education, occupation and income, was from the USA, Australia and India. All three countries were identified because of their significant growth and spend on cosmetic procedures (King, 2019; Townley, 2019).

1.6.4. Data Collection

Due to budget constraints and access to the target sample, a quota over 350 was set for each country sample. This met the minimum sample size of 100–150 required to achieve a stable maximum likelihood estimation outcome (Hair et al., 2018). Study One in the USA (N = 600) and Study Two in Australia (N = 600) confirmed the dimensionality, reliability and validity of the constructs under the chemical peel condition. Studies Three and Four explored the relationships hypothesised in the research model under the Botox condition in the USA (N = 550) and Australia (N = 550). Study Five in the USA (N = 350) and Study Six in India (N = 350) investigated the hypothesised relationships in the research model under the hair transplant condition. Studies Seven and Eight assessed the model under the liposuction condition in the USA (N = 350) and India (N = 350). Finally, Studies Three to Eight determined the risk profiles of cosmetic procedure users and their emotional responses.

1.6.5. Statistical Analysis

Various statistical techniques were utilised to analyse the data in order to address the research questions and hypotheses. This was achieved with the use of statistical software programs from IBM, namely SPSS 26 and AMOS 26. Descriptive analysis outlined the demographic profiles of respondents and correlation analysis assessed the content validity of the scale items that represented the key constructs. Exploratory and confirmatory factor analysis established the dimensions in the key constructs and refined the scale items that represented them. Cluster analysis determined a typology of consumer segments based on their perceived risk profiles as cosmetic procedure users. Analysis of variance ascertained the significant differences in consumer emotions before, after and toward their next cosmetic procedure. Finally, structural equation modelling tested the hypotheses in the research model.

1.7. Delimitations and Scope

There were several limitations to the current research. The research focus was only on two non-invasive (i.e. chemical peels and Botox) and two invasive (i.e. hair transplants and liposuction) cosmetic procedures undertaken in just three countries (i.e. the USA, Australia and India). Also, the country sample size for each cosmetic procedure condition was relatively small. This limits the generalisability of the research findings. Moreover, the research was designed as a retrospective study, requiring respondents to look back on their pre-, actual and post-experiences with a cosmetic procedure. This reflective approach, with its incorporated pre-and-post experiences, has the merit of presenting a truthful narrative of human behaviour, particularly in the health context (Östlund et al., 2011). Conversely, it poses the challenges of being an inconsistent approach because respondents may have forgotten their experiences (Baoguo et al., 2017) and have a tendency to bias their responses as they try to justify their behaviour (Rosenman et al., 2011). However, as the research assured respondents of their

anonymity and confidentiality, the authenticity of the narrative outweighed the possibility of interviewee bias.

1.8. Research Significance

The current research makes some methodological, theoretical and managerial contributions to the areas of hedonic engagement and adaptation, particularly in the context of cosmetic procedures. These contributions are identified as follows:

1.8.1. Theoretical Significance

The research's first theoretical contribution is to the hedonic engagement literature. It proposes a decision-making framework, the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB), which integrates the affective and cognitive aspects of hedonic consumption. This framework empirically evaluates hedonic engagement under four cosmetic procedure conditions and across three countries. The HEMGB presents researchers with a model that explains hedonic engagement with a range of cosmetic procedures available in the marketplace, contributing to the decision-making literature on hedonic consumption.

The research's second theoretical contribution is to the perceived risk literature. It develops a segmentation typology based on the risk profiles of cosmetic procedure users. This typology empirically identifies consumer segments with distinct trends in their perceived risk and emotions toward three cosmetic procedure conditions (i.e. Botox, hair transplants and liposuction) and across three countries (i.e. the USA, Australia and India). This typology assists in profiling clusters of consumers for their risk behaviour toward various cosmetic procedures in the marketplace, adding to the perceived risk and segmentation literature.

1.8.2. Methodological Significance

The research's methodological contribution to the hedonic adaptation literature is the introduction of an approach for identifying and tracking anticipated positive and negative emotions over time. This approach empirically assesses emotions before, after and toward the next stage of repeated hedonic engagement under four cosmetic procedure conditions (i.e. chemical peels, Botox, hair transplants and liposuction) and across three countries (i.e. the USA, Australia and India). Such an approach enables researchers to map out the fluctuating positive and negative emotions of consumers across the gamut of cosmetic procedures in the marketplace, contributing to the hedonic adaptation literature.

1.8.3. Managerial Significance

The function of attitude toward undertaking a cosmetic procedure determines a consumer's desire for the procedure. In shaping positive public attitude, the beauty industry has an opportunity to position itself as a professional and socially responsible body, starting with the development of a quality assurance system for national accreditation.

Exploring the role of subjective norms highlights the extent to which society and the media exert pressure in shaping how consumers view themselves. As the media is instrumental in setting and managing consumer expectations, practitioners must consider engaging with consumers on social platforms while being mindful of the legal, contractual, copyright, privacy and ethical obligations to their clients and their own employees.

How a consumer assesses their own skills and competencies influences their perceived behavioural control over engaging in a cosmetic procedure. Practitioners who are able to discern what non-volitional factors (i.e. time, money, skills and cooperation from others) are

critical to influencing self-efficacy have a real opportunity to develop customised procedures and services for their clients.

The anticipated positive and negative emotions that impact repeated engagement with a cosmetic procedure account for the mood states of consumers. The descriptors that encapsulate key emotions may be used to form the basis for a checklist that assists practitioners in empirically detecting a client's psychological and physical well-being. By understanding and addressing this psyche, practitioners may be able to establish trust and enjoy long-standing relationships with loyal clients.

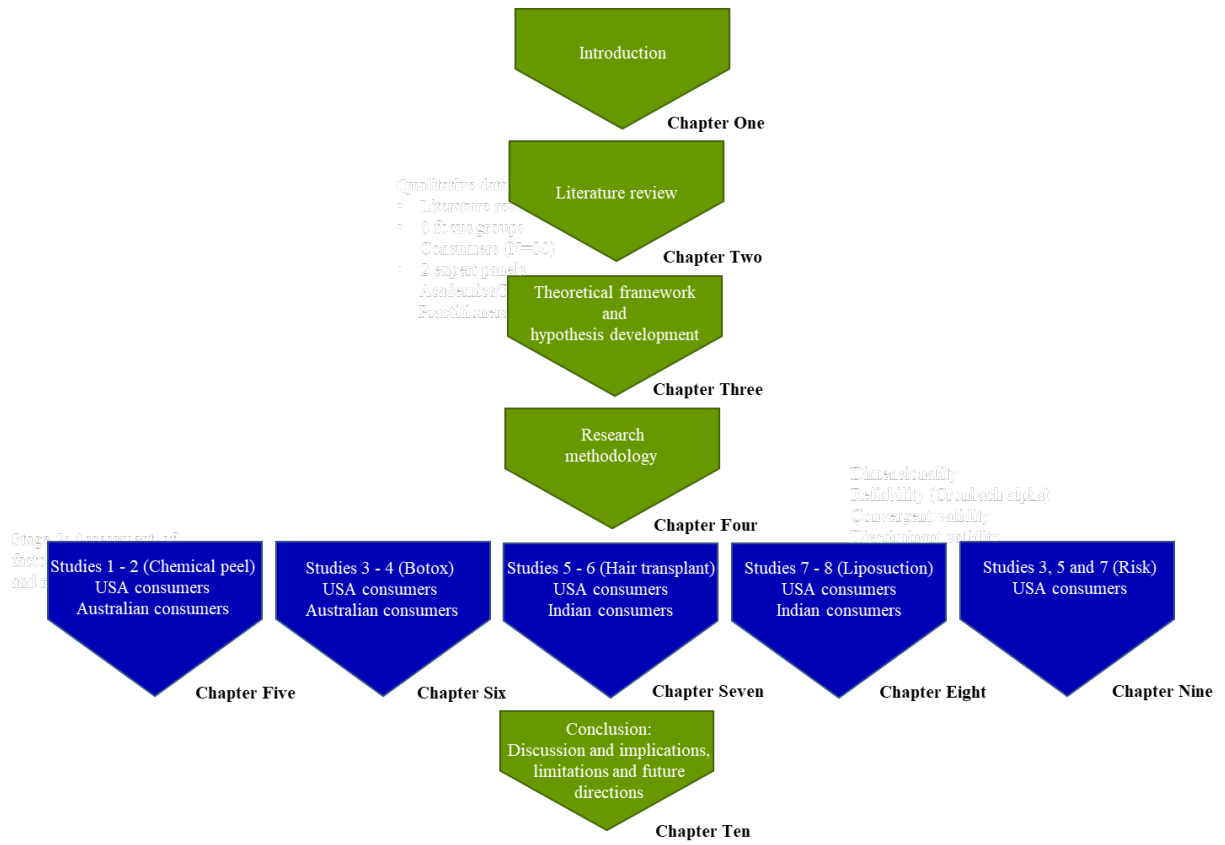
The desire for a body image that is perfected by cosmetic procedures may be driven by a fantasy world that is far removed from reality. Insights into such desires and drivers may guide practitioners to develop and implement communication strategies that set realistic expectations for clients.

1.9. Organisation of Research

The current research is organised into the following 10 chapters: (1) Introduction; (2) Literature review; (3) Theoretical framework and hypothesis development; (4) Methodology; (5) Studies One and Two – chemical peel; (6) Studies Three and Four – Botox; (7) Studies Five and Six – hair transplants; (8) Studies Seven and Eight – liposuction; (9) Studies Three to Eight – risk profiles; and (10) Conclusion. A schematic overview of the research process can be seen in Figure 1.2.

Figure 1.2

Schematic Overview of the Research Process



Chapter Two

Literature Review

2.0. Introduction

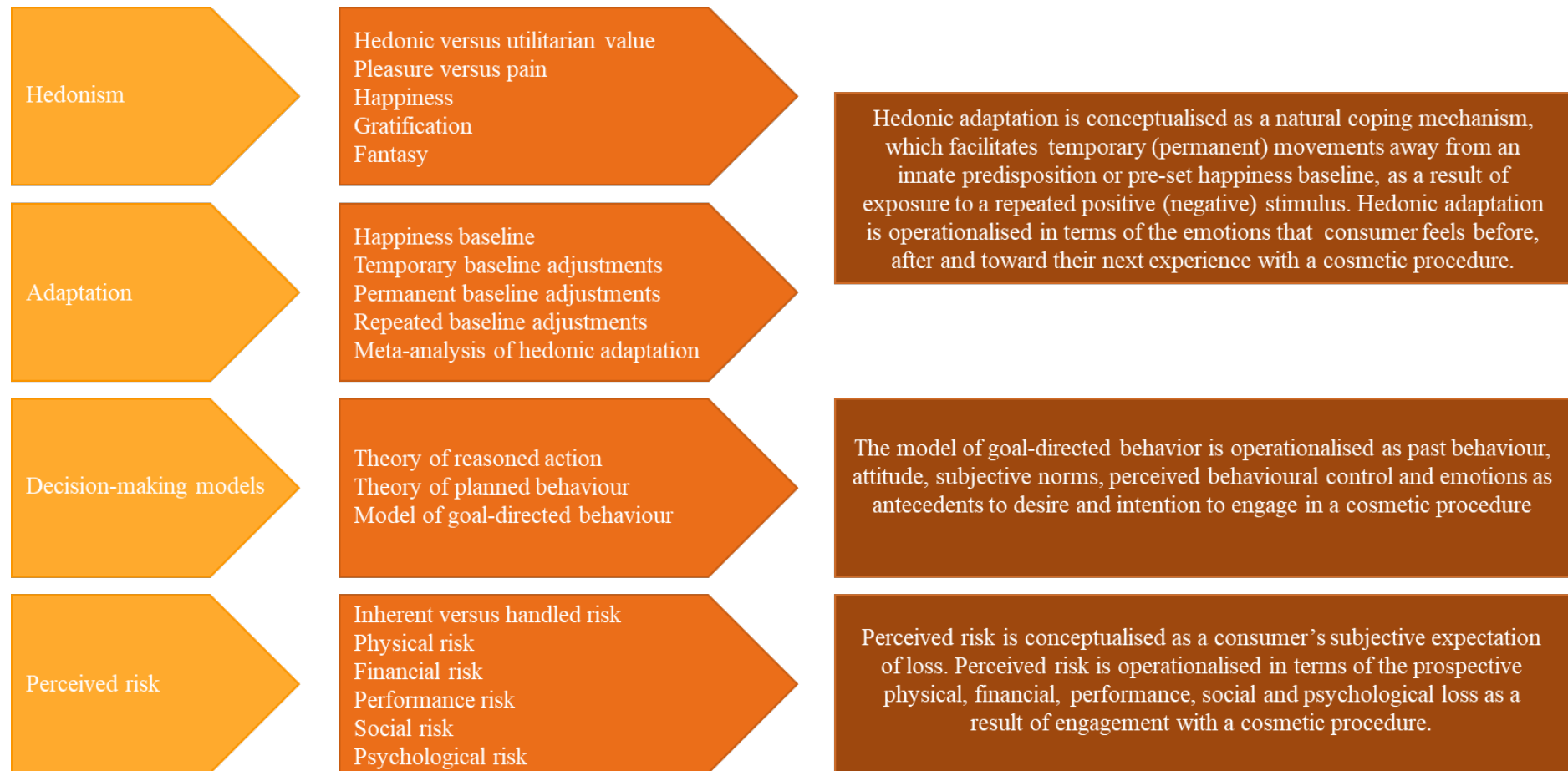
This chapter reviews literature related to the four research areas in the thesis, namely hedonism, adaptation, goal-directed behaviour and perceived risk, in the context of cosmetic procedures.

It scopes the extant literature from psychology, marketing and recreation to consider: (1) conceptualisations of hedonism, adaptation, goal-directed behaviour, perceived risk and their relevant underpinning theories; (2) empirical models of purposeful consumer decision-making; and (3) critical factors that impact on the goal-directed behaviour of consumers who engage in repeated cosmetic procedures. In doing so, the chapter identifies the research gaps in the relevant literature and the research objectives set in addressing these gaps. It also highlights the theoretical, methodological and managerial contributions for the current research.

The chapter culminates with a summary of the research gaps identified and links these to the research objectives stipulated. A visual overview of the literature's schema for the current research can be seen in Figure 2.1.

Figure 2.1

Overview of Literature Review Schema



2.1. Hedonism

Hedonism stems from the Greek word *hedone*, which means “pleasure” (Sandoff & Widell, 2008). According to Greek mythology, Hedone is the goddess of pleasure, happiness and gratification (Johnson & Ryan, 2004). Pleasure refers to “a positive experienced state that we seek and that we try to maintain or enhance” (Kahneman et al., 1999, p. 112). Happiness is a positive emotional state (Bradburn, 1969) in which an individual experiences emotions such as joy, satisfaction and contentment (Boehm & Lyubomirsky, 2008). Gratification describes the positive emotional reaction to the fulfilment of desire (Baumeister & Bushman, 2010).

The three aspects of hedonism, namely pleasure, happiness and gratification, are acknowledged across the psychology, marketing and recreation disciplines. In psychology research, hedonism is conceptualised as the ability to experience pleasure in life, thereby characterising “hedonists” as individuals with good intellectual functioning and an inclination to experience pleasure (Chapman et al., 1976). In marketing research, Hirschman and Holbrook’s (1982, p. 92) seminal study observed that “hedonic consumption designates those facets of consumer behaviour that relate to the multi-sensory, fantasy and emotive aspects of one’s experience with products”. This conceptualisation highlights two aspects of consumption. First, consumers experience positive (negative) sensory input from a product/service. Second, in processing this sensory input, consumers acquire cognitive information about the product/service in their existing environment (Stein and Stanford, 2008). The positive (negative) emotions from this experience may be retrieved at will as the sensory organs are linked to memory (Lindstrom, 2005). In recreational research, the link between hedonism and leisure activities is also noted. For instance, participating in party games presents an opportunity to socialise and develop a foundation for hedonic experiences that yield pleasurable and happy outcomes (Stebbins,

2001). Likewise, the act of tourism is pleasure-seeking, with tourists experiencing hedonic value from their travel experience (Malone et al., 2014).

2.1.1. Hedonic Versus Utilitarian Value

Behavioural psychology scholars have explained value-based pleasure by the worth an individual ascribes to an experience and the desire related to that experience (Wielenberg, 2002). According to the author, an individual who values winning at sports and has a desire to receive a trophy will get value-based pleasure out of being first in a marathon. Similarly, an individual who values physical beauty and has a desire to look beautiful will experience pleasure from a successful cosmetic procedure (Delinsky, 2005).

Marketing scholars have pointed out that a purchase decision is driven by the value that a consumer ascribes to a product/service according to their relative hedonic or utilitarian properties (e.g. Batra & Ahtola, 1991; Shukla, 2012; Vigneron & Johnson, 2004; Yang & Mattila, 2016). In doing so, researchers make a distinction between hedonic and utilitarian value (e.g. Babin et al., 1994; Bridges & Florsheim, 2008; Hirschman & Holbrook, 1982).

Hedonic value refers to the intrinsic worth and emotional benefit from a product/service (Westbrook & Oliver, 1991), such as excitement, fantasy and escapism from everyday activities when buying a product/service (Dedeoglu et al., 2018; Hirschman & Holbrook, 1982; Mathwick et al., 2001). In this context, a consumer experiences pleasure from the actual buying or consumption process rather than just its tangible use (Ma'ruf et al., 2019; O'Guinn & Faber, 1989). This prompted Hirschman and Holbrook (1982) to stipulate that hedonic value is aesthetic and subjective in nature as it is an effect of the emotional value of a product/service.

Utilitarian value is derived from the functional benefits of a product/service (Babin et al., 1994). These benefits include the price, value for money, features and performance of the

product/service (Grewal et al., 2003; Huang et al., 2019; Mathwick et al., 2001; Zeithaml, 1988). In this context, a consumer anticipates satisfaction with the function of a product/service and the actual benefits from its use (Kiran et al., 2019; To et al., 2007).

Clearly, the literature suggests that hedonism encompasses the dimensions of pleasure, happiness, gratification and fantasy (e.g. Hirschman & Holbrook, 1982; Johnson & Ryan, 2004). Each of these dimensions is considered in the following sections.

2.1.2. Pleasure Versus Pain

Central to the conceptualisation of hedonism in behavioural psychology research is that an individual chooses an action that they believe maximises pleasure and minimises pain (Vroom, 1964). It has been observed that “[n]ature has placed mankind under the governance of two sovereign masters, pain and pleasure” (Bentham, 1972, p. 141). This led Higgins (1997) to suggest that pleasure-seeking is a natural action for humans who are hardwired to pursue pleasure and avoid pain. Neuroscience research also corroborates “brain wiring” in that the brain’s pleasure centre “turns on” to be receptive to a pleasurable act (Rogers & Robbins, 2001). Thus, engaging in behaviour that results in pleasure is a natural part of brain wiring (Rogers, 2002). This contributes to individual expectations of “the good life”, which entails seeking and maximising pleasant and happy experiences (Feldman, 2004).

In marketing research, pleasure is believed to exist in a consumer’s imagination and arises from a certain pattern of sensation during the consumption process (Campbell, 1987). For instance, female consumers who engage in shopping or “retail therapy” do so to eliminate negative mood states, implying that the act of shopping brings pleasure and provides an escape route from a current state (Kirgiz, 2014; Underhill, 2009). Similarly, consumers who make impulse purchases are motivated by the pleasure derived from this behaviour (Graa & Dani, 2012).

Also, online shoppers are driven by the anticipated pleasure, which instigates their online purchase behaviour (Menon & Kahn, 2002; To & Sung, 2015).

Individuals are inherently equipped with a natural ability to experience two types of pleasure (Kubovy, 1999). First, tonic pleasure is an explicit stimulus originating from the skin, such as touch, taste or sexual stimulation. This suggests that pleasure consists of physical sensations (Higgins, 1997). Second, relief pleasure originates from orifices of the skin to provide pleasurable relief from internal discomforts, such as sneezing, belching and orgasm. For instance, certain foods stimulate the brain's reward system, enhancing pleasurable relief from hunger (Berridge et al., 2010). The act of engaging in a cosmetic procedure appears to tap into both pleasure types. The desire for tonic pleasure instigates individuals to engage in a cosmetic procedure to make themselves more attractive to their sexual partners (Sullivan, 2001). At the same time, relief pleasure from a cosmetic procedure improves body image satisfaction and the self-esteem of individuals who engage in the procedure (Yoon & Kim, 2019).

Pain is conceptualised as “a negative experienced state that we avoid and that we try to reduce or eliminate” (Kahneman et al., 1999, p. 112). The construct is underpinned by the model of the affective-motivational dimension of pain (Price & Harkins, 1993), which conjectures that pain is a multidimensional construct. First, it takes into account sensory attributes such as intensity and duration. Second, it taps emotions such as fear, anxiety and depression. According to the model, an individual may engage in self-perspective behaviour that is motivated by their desire to reduce pain.

The multidimensionality of the pain construct is illustrated in behaviours related to exercising and engaging in a cosmetic procedure. For instance, participating in regular physical activity has been found to reduce the intensity of pain and distress amongst respondents with arthritis (Da Costa et al., 2003). Similarly, it has been reported that individuals who engage in regular

leisure activities such as playing sport demonstrate decreased intensity levels of depression (Taquet et al., 2016). By the same argument, an individual who is preoccupied with their physical flaws is inclined to stress intensely about their appearance and experience body image dissatisfaction (Sarwer, 2019). Propelled by nagging low self-esteem and a desire to relieve stress, the individual is likely to engage in a cosmetic procedure (Yoon & Kim, 2019). For such individuals, engagement with a procedure that has the potential to alleviate the intensity of their prolonged negative mood states can result in lower negative emotions (Blum, 2003; Sood et al., 2017).

The tenet of maximising pleasure and minimising pain is underpinned by regulatory focus theory (Higgins, 1997). The theory is founded on the hedonic concept that an individual regulates their behaviour to focus on attaining positive outcomes and retreating from negative outcomes. Consequently, an individual is expected to feel magnetism toward experiences with positive values and aversion toward those with negative values (Vroom, 1964). For instance, the brain reward system heightens the hedonic pleasure of eating for food lovers, resulting in their desire to eat more food and, in extreme cases, binge eat (Berridge, 2009; Davis et al., 2009). Conversely, the brain reward system repulses any unpleasant pain and veers away from an activity that generates this response (Johansen & Fields, 2004; Price & Harkins, 1993). Thus, hedonism shapes individual behaviour where an individual is attracted to and maximises positive affect, and is repulsed by and minimises negative affect.

As an individual feels magnetism toward a positive outcome and aversion toward a negative outcome, pain and pleasure may be regarded as emotional motivations. Scholars in behavioural psychology have argued that pleasure and pain are primary motivators for an action, whereby pleasure acts as a driver for engagement and pain, an inhibitor (e.g. Freud, 1915). As the key instigator of hedonism (Schwartz & Huismans, 1995), pleasure guides behaviour that seeks a

positive emotional state (Alba & Williams, 2013; Rozin, 1999; Sober & Wilson, 1999). As the key inhibitor to hedonism, pain navigates behaviour that avoids a negative emotional state (Johansen & Fields, 2004; Price & Harkins, 1993; Vroom, 1964).

Scholars in consumer behaviour have also examined motivation in the pursuit of hedonic value in consumption (e.g. Babin et al., 1994; Shukla, 2012; Yang & Mattila, 2016). This is underpinned by two instinctive motivational systems. The Behavioural Activation System (BAS) initiates behaviour to seek pleasure and reward, whereas the Behavioural Inhibition System (BIS) instigates avoidance behaviour to forestall pain and punishment (Ma-Kellams & Wu, 2020). According to the authors, both systems correspond with emotional responses to a stimulus, with BAS correlating with positive emotions (e.g. happiness), and BIS with negative emotions (e.g. fear and anxiety). Thus, consumers are likely to pursue positive emotions (e.g. self-esteem) and avoid negative emotions (e.g. shame) when contemplating a cosmetic procedure to enhance their body image (Vlahos & Bove, 2016).

Of notable interest is hedonic reversal, whereby it is conjectured that some situations may initially not lead to pleasure but later result in positive outcomes. The phenomenon, underpinned by excitation transfer theory (Zillmann, 1983), posits that certain situations may evoke a particular emotional reaction, and then residual portions from this preceding emotion strengthen a feeling of euphoria in the aftermath (Branscombe, 1985). Accordingly, hedonic reversal is described as “benign masochism”, alluding to the ensuing pleasure from an experience initially assumed to provoke upset or fear (Rozin et al., 2013, p. 439). For instance, an individual who watches a sad movie anticipates and feels emotional distress. However, a happy event in the movie results in a positive cognitive, and then an affective, adjustment. The individual feels increased joy as their residual distress strengthens their joy. Likewise, participants report feeling scared and uncomfortable during white-water rafting, yet feeling

happy and excited at the end of the expedition, even identifying pleasure as a motivator to engage in the activity (Amould & Price, 1993).

Proponents of excitation transfer theory have also referred to hedonic reversal to explain repeated behaviour, whereby an individual may develop a fondness for an experience that is first avoided due to fear and pain (Rozin, 1999). In an extended study, Rozin et al. (2013) examined eight hedonic sensations, namely sadness, burn, disgust, fear, pain, alcohol, exhaustion and bitterness, across 29 hedonic contexts, including encountering sad music, spicy food, disgusting jokes, frightening movies, massage pain, physical exhaustion and bitter food. The authors discerned hedonic reversal in several contexts, including experiencing sad music, spicy food, painful massages and thrill-seeking activity. This suggests that repeated engagement with a behaviour results in transference of, and adaptation to, pain, which ultimately delivers pleasurable outcomes. It may be argued that recurring exposure to the same cosmetic procedure, although initially viewed with some fear and apprehension, may eventually result in satisfaction and delight (Yenchai & Sirisook, 2018).

2.1.3. Happiness

Happiness is vital for the existence of the natural state of a human being (Domeyko, 1996). Commonly linked to hedonism, it is conceptualised from specific and generalised perspectives. Specifically, happiness refers to satisfaction with life, and personal and emotional well-being (Fordyce, 1977). This implies that happiness is the more emotion-laden view of an experience (Griffin et al., 2000) as it ascends from fun and pleasure through the experience (Babin et al., 1994). A broader view of happiness suggests that it is a constant, positive emotional state (Bradburn, 1969), which is not controlled by any event (Kitayama et al., 1997). It reflects “the belief that one is getting the important things one wants, as well as certain pleasant affects that normally go along with this belief” (Kraut, 1979, p. 178).

There exists a significant relationship between satisfactory leisure experiences and the happiness derived from these experiences (Headey & Wearing, 1992; Kaya, 2016). This may be attributed to the personal choice that an individual makes to engage in a hedonic leisure activity (Hills & Argyle, 1998). For instance, engagement with leisure activities has been found to enhance the level of happiness of college students in Turkey (Kaya, 2016). Likewise, Veenhoven (2003), who used secondary data from 705 studies available through the World Database of Happiness, examined the relationship between happiness and leisure activities such as eating out, visiting theatres, spending time with friends and engaging in sporting activities, and concluded that such pleasant experiences result in happiness.

In conceptualisations of happiness, the notion of subjective well-being is commonly introduced (e.g. Binder, 2013; Frank, 2001; Seligman, 2002). Subjective well-being represents an ongoing (instinctive and often not fully cognisant) assessment of an individual's state in the context of a hedonic experience (e.g. pleasure) – a notion of well-being that parallels what individuals encounter as rewarding (Binder, 2013). Thus, subjective well-being refers to an individual's own perception and evaluation of the quality of life and the conditions in which they live (Diener et al., 2006; Diener & Suh, 1997; Siedlecki et al., 2014). For instance, a comparison between college students and adults in the community identified happiness and well-being as more vital elements of “the good life” than money (King & Napa, 1998).

Two components of subjective well-being are identified in behavioural psychology research. The cognitive component refers to an individual's mental evaluation of their life, whereas the affective component refers to their pleasurable experience of life events and the absence of pain (Diener & Diener, 1996). Thus, subjective well-being is dyadic, encompassing both cognitive evaluation and affective reaction to different life events that happen to an individual (Ben-Shahar, 2007). For instance, residents in Ohio have identified both cognitive evaluations

(i.e. life satisfaction) and affective reactions (i.e. happiness or sadness) to life events as an integral part of their subjective well-being (Andrews & Withey, 2012).

In negotiating the cognitive and affective aspects of subjective well-being, an individual must weigh up the preponderance of pleasure over pain (Dambrun et al., 2012; Plant, 1991). This points to subjective well-being as a consequence of hedonism (Disabato et al., 2016; Ryff, 1989). For instance, hedonism has been found to have a favourable effect on an individual's physical well-being (Sirgy & Uysal, 2016; Warburton, 1996), which in turn impacts on their mental well-being by reducing negative emotion and depression (Disabato et al., 2016). It is generally surmised that positive emotions increase an individual's ability to cope effectively with life challenges, which boosts their subjective well-being over time (Fredrickson, 2001).

A diverse range of factors have been observed to influence subjective well-being (Binder, 2013). According to Frey and Stutzer (2002), these relate to the personal (e.g. self-respect, positivity or other personality characteristics), socio-demographic (e.g. age, gender, education or marital status), economic (e.g. income, occupation, work status or unemployment), situational (e.g. social interactions or health) and an institutional (e.g. democracy, freedom or inequality). These diverse and complex factors interact over time to create an individual's subjective evaluation of "the good life".

Studies of "the good life" have highlighted that happiness and subjective well-being play a paramount role in achieving personal and professional outcomes. Happy people have been noted to have more friends (Okun et al., 1984), possess supportive social networks, demonstrate personal well-being (Harker & Keltner, 2001), exude more energy and flow (Csikszentmihalyi, 2014), and enjoy higher incomes (Staw et al., 1994). In fact, Wilson (1967, p. 294) characterised the happy individual as a "young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious, married person with high self-esteem, job morale, modest

aspirations... and a wide range of intelligence”. Likewise, Gen Y consumers have reported that undertaking a cosmetic procedure to enhance their attractiveness provides them with the means to improve their happiness and subjective well-being (Sood et al., 2017).

2.1.4. Gratification

Central to the conceptualisation of hedonism in the psychology discipline is that an individual will select an action that delivers an outcome of gratification. Two categories of gratification are identified in the literature. The first category is instant gratification, referring to the state of attaining pleasure without delay and gaining it in the shortest time possible (Freud & Strachey, 1962; Tobin & Graziano, 2010). To illustrate, Mischel et al. (1972) conducted “The Stanford Marshmallow Experiment”, which examined children’s ability to delay gratification. The researchers placed a marshmallow in a room and told each subject that they could eat the marshmallow now or get more marshmallows if they waited for 15 minutes. The study observed that the majority of subjects could not wait out the 15 minutes and ate the marshmallow before the time was up. This suggests that if a pleasurable outcome or reward is instantly possible, it leads to decreased ability to delay gratification. Similarly, it has been pointed out that drug users are unable to delay their fix due to the “high” they expect to experience from the drug use (Bechara, 2005; Kirby et al., 1999). Likewise, the inability to delay instant gratification leads to negative behaviours, such as substance abuse (Anokhin et al., 2011) and gambling (Dixon et al., 2003; Vitaro et al., 1999). This suggests that individuals engage in activities in a desire to seek instant gratification as the appeal of an instantaneous reward becomes irresistible (Spiro, 2006).

The second category is delayed gratification, referring to impulse control (Freud & Strachey, 1962), in which an individual refrains from engaging in the behaviour in the now for a greater reward later (Tobin & Graziano, 2010). To illustrate, in a follow-up study with the same

individuals who took part in the original “Stanford Marshmallow Experiment” study, Mischel et al. (1988) reported that subjects who delayed gratification in the original experiment were more successful in their life than subjects who could not resist eating the marshmallow. Subsequent studies have corroborated the positive link between the ability to delay gratification and success in life (e.g. Bembenutty & Karabenick, 2004).

Gratification is embedded in hedonic motives that stimulate behaviour. The hedonic motive may be personal and driven by a desire for self-gratification or sensory stimulation (Tauber, 1972). For instance, self-gratification functions as a motivator for hedonic behaviour to escape from everyday problems (Hirschman & Holbrook, 1982), ease stress (Arnold & Reynolds, 2003; McGuire, 1974; Verplanken & Herabadi, 2001) and reduce depression (Babin et al., 1994; Logsdon et al., 2006). Indeed, consumers who shop for luxury goods are motivated by self-gratifying pleasure (Atwal & Williams, 2017; Dubois & Laurent, 1994; Kivetz & Zheng, 2006). The hedonic motive may also be social and driven by a desire for peer group attraction or social experience (Tauber, 1972). It has been observed that when shopping with others, consumers are motivated to enhance their mood through social interaction (Arnold & Reynolds, 2003). By the same argument, consumers who engage in a cosmetic procedure to gratify their desire to look more attractive are likely to be driven by hedonic motives to find self-esteem, social acceptance and happiness (Braun, 2005; Hart & Wellings, 2002).

2.1.5. Fantasy

Psychology research has observed that fantasy is a platform where an individual shifts attention from an external stimulus, such as an ongoing physical task, to an internal stimulus (Mason et al., 2007; Singer & McCraven, 1961), such as daydreaming about financial success, fame (Halderman et al., 1985) or sex (Toledano & Pfaus, 2006). Fantasy may be a source of energy and enthusiasm for an individual to experience behaviour and its consequences without actually engaging in the behaviour (Singer & McCraven, 1961; Toledano & Pfaus, 2006).

Consumer behaviour research has highlighted that hedonic consumption activates the fantasy aspects of the consumption experience (Hirschman & Holbrook, 1982). Consumers seek positive stimuli from engaging with a product/service that increases their sensory pleasure, fun and imagination (Dhar & Wertenbroch, 2000). For instance, shopping elicits fantasy-like qualities because the act of shopping assists a consumer in escaping from their everyday problems (Babin et al., 1994; Kirgiz, 2014; Mathwick et al., 2001). Similarly, in online shopping behaviour, fantasy offers pleasurable mental imagery of product use, positively influencing the desire to purchase the product (Song et al., 2007).

The role of fantasy in hedonic consumption is underpinned by the theory of fantasy realisation, which outlines how fantasy may be converted into a desire or motivation to achieve goals according to three levels of commitment (Oettingen, 1999). First, an individual may cognitively contrast positive and negative aspects of the fantasy, examining whether the fantasy can be successfully attained, and then setting expectations. If the success rate of the set expectations is deemed high, the individual is more likely to desire and commit to setting behavioural goals to convert such fantasy into a reality. If the success rate is deemed low, the individual is likely to still desire but refrain from setting behavioural goals to convert such fantasy into a reality. Second, an individual may desire and indulge in the positive aspects of fantasy and cognitively

consume the anticipated results from the fantasy without actually wanting to set any expectations. Here, the individual's commitment to establishing behavioural goals to fulfil such a fantasy will be modest and not based on the success rate. Third, an individual may dwell on the negative aspects of the fantasy, resulting in neither desire nor requirement to act or set expectations to succeed. Thus, the individual's commitment level to setting behavioural goals that fulfil such fantasy will be low.

Reality television, which promulgates cosmetic procedures, addresses the first form of fantasy. These programmes present a fantasy world where good-looking and satisfied individuals live "the good life", which brings them pleasure, happiness and gratification (Adams, 2010). Cosmetic procedures are presented as a positive and quick solution to enhance body image without giving due focus to the risks and recovery times involved (Ashikali et al., 2016). For instance, the television programme *Extreme Makeover* features surgically enhanced young, slim and attractive participants wearing designer clothes, being chauffeured in luxury cars, dining in eclectic settings and enjoying celebrity lifestyles. Regular viewing of reality TV can instigate an individual's desire to live the fantasy and foster some unrealistic expectations (Campbell, 1987). This may result in a continued desire to seek unattainable outcomes from cosmetic procedures (Pearl & Weston, 2003), generating a cycle of optimism and cynicism.

In sum, hedonism encompasses the multi-sensory tenets of pleasure, happiness, gratification and fantasy. In the current research, hedonism is conceptualised as a multi-sensory construct, which encapsulates pleasure, happiness, gratification and fantasy. Thus, hedonic behaviour is construed as actions motivated by a desire to maximise pleasure and minimise pain. This characterises the consumer who repeatedly engages in a cosmetic procedure as a hedonist who demonstrates magnetism toward behaviour that is likely to result in positive emotions and an aversion toward behaviour that is likely to result in negative emotions.

2.2. Adaptation

Scholars in behavioural psychology have conceptualised adaptation as a process that reduces the positive (negative) effects of a constant or repeated stimulus (e.g. Martin, 1964; Sale, 1988). Notably, there are two perspectives that explain this phenomenon. The first perspective conjectures that adaptation is the body's inherent response to survive against internal and external challenges (Baffy & Loscalzo, 2014). Adaptation reduces the psychological damage caused by positive (negative) events (Frederick & Loewenstein, 1999) by moving an individual toward an environment that is most suitable for their subjective well-being (Fisher, 1930). The second perspective theorises that an individual's basic intuition deems that heightened emotional states are unproductive as they generate feelings that tap energy from the brain. To minimise these non-productive outputs, the individual adapts with hedonic states that revert to their original levels (Perez-Truglia, 2012). Such conceptualisations highlight two points. First, adaptation is learned by an individual through behavioural engagement. Second, adaptation is a sensory process of gradual decrease to a response. This prompted Headey and Wearing (1989) to speculate that happy individuals are more likely to experience positive events than unhappy individuals, who are more likely to experience negative events.

It has been highlighted that positive events facilitate faster adaptation rates than negative events, which have slower adaptation rates (Lucas, 2007). For instance, individuals adapt faster to positive events, such as a new job (Griffeth et al., 2000), salary increase (Di Tella et al., 2010), marriage (Clark et al., 2008; Lucas et al., 2003), the birth of a child (Clark et al., 2008), a holiday (Kwon & Lee, 2020) and cosmetic surgery (Lowenstein et al., 2014). In these positive situations, individuals experience elevated positive emotions before returning more quickly to their original state. Conversely, individuals adapt slower to negative events, such as physical disability (Oswald & Powdthavee, 2008), unemployment (Clark et al., 2008; Lucas et al.,

2004), divorce (Copen et al., 2012), widowhood (Clark et al., 2008; Lucas et al., 2003) and the loss of a loved one (Line et al., 2016). In these negative situations, individuals experience intense negative emotions before returning more slowly to their original state.

2.2.1. Happiness Baseline

Adaptation occurs naturally, and every individual is born with an innate predisposition or preset happiness baseline (Lykken, 1999; Lyubomirsky et al., 2005; Staddon, 1983) or set point (Anusic et al. 2014; Headey & Wearing, 1992; Lykken & Tellegen, 1996). Adaptation is underpinned by set-point theory and its extended hedonic treadmill theory (Brickman & Campbell, 1971; Diener et al., 2006). Both theories stipulate that changes in a situation or life event may increase (decrease) the level of happiness. However, after some time, an individual's reward (punishment) system eventually brings them back to their inherent, genetically determined happiness baseline (Headey & Wearing, 1989; Luhmann & Intelisano, 2018; Perez-Truglia, 2012). To illustrate, research conducted on the level of happiness in twins has observed that the baseline of happiness in individuals is predetermined at the time of conception, demonstrating the link between an individual's genetics and set-point level of happiness (e.g. Lykken & Tellegen, 1996; Weiss et al., 2008).

2.2.2. Temporary Baseline Adjustments

Generally, individuals only temporarily move away from the set point, rebounding from life events and settling to the set point or neutrality (Diener & Diener, 1996; Luhmann & Intelisano, 2018; Myers & Diener, 1995). Even in positive life events, individuals rebound from a heightened state to return to a preset stasis over time (Luhmann & Intelisano, 2018; Perez-Truglia, 2012). For instance, lottery winners have been described as exhibiting a higher level of happiness before returning to their original level of happiness over an extended duration (Brickman et al., 1978). Similarly, Myers' (2000) investigation of the link between happiness

and wealth pointed out that although income doubled in the last 50 years, the happiness levels of Americans remained unchanged, mainly due to their return to the set point.

In negative life events, individuals have been known to recover from a depressed state to return to the set point (Brickman et al., 1978). For instance, individuals with spinal cord injuries who initially reveal higher negative emotions have shown reduced negative emotions seven weeks after sustaining the injury (Silver, 2002). In fact, in lengthy trials of civil litigation, individuals have appeared to revert emotionally to their pre-injury state after two years, exhibiting an increased readiness to agree on a lower settlement amount for their injuries (Bronsten et al., 2008).

It has been proposed that happiness is a combination of several well-being variables that move in different directions (Lucas et al., 2003). This is underpinned by the likelihood of the concept of multiple set points (Diener et al., 2006), which suggests three conditions under which positive and negative emotions potentially exist: (1) positive emotions increase while negative emotions decrease; (2) positive emotions decrease while negative emotions increase; or (3) both positive and negative emotions decrease. Under any of these conditions, an individual may exist in a particular mood state for an extended duration.

The first condition in which positive emotions increase while negative emotions decrease for a sustained period of time is corroborated in the literature (e.g. Lucas, 2007). For instance, individuals who engage in regular religious practices or physical exercise have been found to exhibit an increased level of well-being over a long period of time, suggesting it is possible to stay in the heightened state and delay adaptation (Mochon et al., 2008). Likewise, college students who make an increased positive adjustment toward studying have reported a successful academic first semester, which is sustained by their continued positive approach toward study in the second semester (Sheldon & Houser-Marko, 2001).

The second condition in which positive emotion decreases while negative emotion increases for a prolonged period of time is reiterated in the literature (e.g. Lucas, 2007). For instance, individuals with spinal cord injuries demonstrate a sustained swing away from their happiness baseline over an extended duration (Hammell, 2004). Likewise, individuals who have lost a spouse adapt to a lower happiness level that may linger for over eight years (Lucas et al., 2003).

The third condition in which both positive and negative emotions decline for a sustained period of time is supported in the literature. For instance, individuals who continually compare themselves to others who are financially better off exhibit decreased self-esteem and reduced positive emotions (Buunk et al., 2013). However, it is also possible that making such comparisons may stimulate the individual toward goals and desires to be successful, resulting in decreased negative emotions (Collins, 2000).

2.2.3. Permanent Baseline Adjustments

In some circumstances, an individual's happiness baseline can shift upwards to an elevated point and remain in this positive set point (Diener & Diener, 1996). This is underpinned by positivity offset (Cacioppo et al., 1999), which refers to a tendency to remain in a positive state if nothing negative is happening. For instance, Fujita and Diener (2005) monitored the variance in life satisfaction of 3,608 German respondents over a period of 17 years and concluded that over this time, 24% of respondents appeared to sustain a positive upward shift from their well-being baseline. Similarly, Calogero et al. (2010) observed that women's experiences of sexual objectification and body shame instigated their positive attitude toward cosmetic surgery to improve their body image. Such consumers are likely to sustain a positive shift from their happiness baseline as they continue to receive compliments about their enhanced looks.

Conversely, an individual's happiness baseline can shift downwards to a depressed point and never revert from this negative set point (Diener et al., 2006). For instance, at the irrevocable

loss of a child, parents report that they will never be able to return to their happiness baseline (Wortman & Silver, 1987). Individuals have also found an inability to return to neutrality after a long-standing period of unemployment (Lucas et al., 2004). Similarly, some individuals who experience disability never fully adapt to their altered circumstances and continue to show decreased life satisfaction even after an extended period of time (Mehnert et al., 1990).

2.2.4. Repeated Baseline Adjustments

Constant engagement with the same and domain-specific stimulus reduces the affective intensity of an experience (Higgins, 2006). This phenomenon is underpinned by adaptation-level theory, which suggests that all life events create an adaptation level, and as an individual becomes accustomed to these developments, a greater degree of stimulation is required for subsequent engagements to produce a similar affective reaction (Helson, 1964; Parducci, 1995; Paddiora et al., 2020). To illustrate, Hulshoff Pol et al. (1998) investigated the influence of previously smelled odours on the judgement of subsequent odour intensity. Subjects were asked to smell ten different concentrations of California orange oil. Those who first smelled a strong concentration rated subsequent light concentrations as weak because of prior exposure to the strong concentration and adaptation to that experience. By the same argument, an individual who engages in a cosmetic procedure is likely to adapt to the positive outcomes of their enhanced appearance in due course (Sood et al., 2017). This may compel the individual to pursue elevated degrees of engagement in the hope of achieving the high intensity of happiness previously experienced (Perez-Truglia, 2012; Sheldon & Lyubomirsky, 2012).

2.3. Hedonic Adaptation

Hedonic adaptation has been examined across a range of disciplines. Such disciplines include psychology (Diener et al., 2006; Frederick & Loewenstein, 1999; Patterson et al., 1993; Quoidbach & Dunn, 2013; Riis et al., 2005; Wilson & Gilbert, 2008), social psychology

(Brickman et al., 1978; Fujita & Diener, 2005; Sheldon & Lyubomirsky, 2012), health (Ashton-James & Chemke-Dreyfus, 2019; Kettlewell et al., 2020; Lyubomirsky, 2010), law (Bronsten et al., 2008), social science (Binder, 2013; Bussière et al., 2021; Uglanova & Staudinger, 2013), economics (Easterlin, 2006; Graham & Oswald, 2010; Loewenstein & Ubel, 2008; Mace, 2015; Oswald & Powdthavee, 2008), management (Kieling et al., 2016; Park et al., 2019) and marketing (Kwon & Lee, 2020; Pasdiora et al., 2020; Wu et al., 2020; Ying et al., 2016). These studies considered hedonic adaptation in light of determinants with potential to impact happiness, satisfaction and subjective well-being. Such determinants are identified to be socio-demographic (e.g. ageing, marital status and widowhood), economic (e.g. income and unemployment), situational (e.g. social interactions and illness) and institutional (e.g. public policy and welfare) factors (Frey & Stutzer, 2002).

A summary of key studies on hedonic adaptation over the last four decades can be seen in Table 2.1.

Table 2.1

Summary of Key Studies on Hedonic Adaptation Research

Authors	Emotions over time	Emotions and frequency	Past experience	Context
Brickman et al. (1978)				Physical disability Financial windfalls
Silver (2002)				Injury
Wortman & Silver (1987)				Loss of loved one
Mehnert et al. (1990)				Physical disability
Tyc (1992)				Physical disability
Patterson et al. (1993)				Burn victims
Myers & Diener (1995)				Happiness and personal goals
Diener & Diener (1996)				Happiness and subjective well-being
Frederick & Loewenstein (1999)				Food Physical disability
Griffeth et al. (2000)				New employment
Myers (2000)				Happiness and economic growth
Sheldon & Houser-Marko (2001)				Studying
Lucas et al. (2003)				Widowhood
Hammell (2004)				Injury
Lucas et al. (2004)				Unemployment
Fujita & Diener (2005)				Life satisfaction
Riis et al. (2005)				Chronic illness
Diener et al. (2006)				Happiness and life satisfaction
Easterlin (2006)				Life cycle and happiness
Lucas (2007)				Subjective well-being after major life events
Bronsten et al. (2008)				Physical disability and monetary compensation
Clark et al. (2008)				Marriage Widowhood Unemployment
Loewenstein & Ubel (2008)				Public policy and welfare
Lucas et al. (2003)				Widowhood
Lucas et al. (2004)				Unemployment
Mochon et al. (2008)				Religion Exercise
Oswald & Powdthavee (2008)				Physical disability and monetary compensation
Wilson & Gilbert (2008)				Managing emotions
Di Tella et al. (2010)				Salary increase
Graham & Oswald (2010)				Happiness and resilience
Lyubomirsky (2010)				Subjective well-being and favourable/unfavourable life changes
Sheldon & Lyubomirsky (2012)				Happiness and positive life changes
Copen et al. (2012)				Divorce
Perez-Truglia (2012)				Adapting to sensations
Binder (2013)				Innovativeness
Quoidbach & Dunn (2013)				Eating chocolate
Uglanova & Staudinger (2013)				Subjective well-being and effects of positive and negative life events
Mace (2015)				Savings and health risk
Kieling et al. (2016)				Negative surprise
Line et al. (2016)				Loss of loved one
Ying et al. (2016)				Smartphone satisfaction
Sood et al. (2017)				Cosmetic procedure intention

Table 2.1***Summary of Key Studies on Hedonic Adaptation Research (continued)***

Authors	Emotions over time	Emotions and frequency	Past experience	Context
Luhmann & Intelisano (2018)				Subjective well-being
Ashton-James & Chemke-Dreyfus (2019)				Orthognathic patient well-being
Park et al. (2019)				Tourist satisfaction
Kettlewell et al. (2020)				Cognitive and affective well-being
Kwon & Lee (2020)				Travel happiness
Pasdiora et al. (2020)				Enjoyment with apps Repetitive consumption
O'Brien (2021)				Repetitive consumption
Bussière et al. (2021)				Ageing and subjective well-being

As can be seen in Table 2.1, hedonic adaptation is operationalised in three main ways: (1) emotions over time (Bussière et al., 2021; Kwon & Lee, 2020; Lyubomirsky, 2010; Wilson & Gilbert, 2008; Wu et al., 2020; Ying et al., 2016); (2) emotions and frequency (Ashton-James & Chemke-Dreyfus, 2019; Di Tella et al., 2010; Graham & Oswald, 2010; Sheldon & Lyubomirsky, 2012; Wilson & Gilbert, 2008); and (3) emotions, frequency and past experience (Bronsten et al., 2008; Frederick & Loewenstein, 1999; Kettlewell et al., 2020; Pasdiora et al., 2020; Uglanova & Staudinger, 2013). As marketing studies have predominantly utilised the first approach (i.e. emotions over time), the current research also adopts this approach.

In sum, hedonic adaptation refers to an adjustment in an individual's predetermined happiness baseline in response to a stimulus. In the current research, hedonic adaptation is conceptualised as a natural coping mechanism, which facilitates temporary (permanent) movements away from an innate predisposition or preset happiness baseline, as a result of exposure to a repeated positive (negative) stimulus. Thus, hedonic adaptation is operationalised in terms of the emotions that a consumer feels before, after and toward their next experience with a cosmetic procedure.

2.4. Decision-making Models

In exploring hedonic engagement in consumer behaviour, several decision-making frameworks were considered. These include: (1) the theory of reasoned action (TRA) (Fishbein & Ajzen, 1980); (2) the theory of planned behaviour (TPB) (Ajzen, 1991); and (3) the model of goal-directed behaviour (MGB) (Perugini & Bagozzi, 2001).

2.4.1. Theory of Reasoned Action (TRA)

The theory of reasoned action (TRA) predicts actual reasoned behaviour from intention to act (Fishbein & Ajzen, 1980). It posits that behavioural intention is determined by two independent factors, namely attitude and subjective norms. The TRA has been used to explore hedonic behaviour related to consuming marijuana (Yzer, 2012), fast food at restaurants (Bagozzi et al., 2010), functional foods (Rezai et al., 2017), halal cosmetic products (Briliana & Mursito, 2017) and cosmetic surgery (Barati et al., 2020). The TRA has some limitations (Trafimow, 2009) and has been criticised for not providing a mechanism to account for the impact of non-volitional factors on intention (Montano & Kasprzyk, 2015). It also makes the erroneous assumption that behavioural beliefs and normative beliefs are distinctive concepts, resulting in a contradiction and rendering the theory “unfalsifiable” (Sharma & Kanekar, 2007). Also, where beliefs are more cognitive, respondents are more likely to associate with pathways for cognitive-based beliefs than for affective-based beliefs, suggesting that attitudes identified in the theory do not represent distinctive and affective components (Ajzen et al., 1982).

2.4.2. Theory of Planned Behaviour (TPB)

The theory of planned behaviour (TPB), which extends the TRA, predicts purposeful behaviour because actions can be planned (Ajzen, 1991). In addition to the TRA constructs, the TPB introduces one other predictor of behavioural intention, namely perceived behavioural control. The TPB has been applied to scrutinise hedonic choices related to healthy eating (Kapetanaki et al., 2014), fruit consumption (Canova et al., 2020), dietary supplements (Conner et al., 2001), eating disorders (Pickett et al., 2012), physical activity (Saqib, 2018), steroid use in bodybuilders (Patiro et al., 2016), retail marketing targeted at women's shape and size (Walters et al., 2018), organic personal care (Ghazali et al., 2017; Yeon & Chung, 2011) and cosmetic procedures (Richetin et al., 2019). Several criticisms are levelled at the TPB (Sniehotta et al., 2014). Four constructs do not sufficiently explain a theory of volitional behaviour, with its singular focus on reasoning and its exclusion of unconscious influences on behaviour and emotions (Conner & Armitage, 1998). Also, there are issues of "inclined abstainers" or respondents who articulate an intention but subsequently fail to act (Orbell & Sheeran, 1998). Further, the static predictive nature of the theory does not give insight into the evidenced influences of behaviour on cognition and future behaviour (Conner & Armitage, 1998).

2.4.3. Model of Goal-Directed Behaviour (MGB)

The MGB extends the TPB with self-regulation theory (Bagozzi, 1992), which considers the process of goal setting and dealing with challenges to achieve such goals (Mischel et al., 1996). In addition to the TPB constructs, the MGB introduces three more tenets of consumer decision-making, namely positive and negative emotions toward a behaviour, past experience and desire for a behaviour (Perugini & Bagozzi, 2001). Each key construct is outlined in the following paragraphs.

Attitude, according to the TPB, is a propensity to appraise a behaviour with a degree of favour or disfavour (Ajzen, 1991). Both the TRA and TPB explain attitude with an emphasis on the action used to (not) perform a behaviour (Ajzen, 1991; Fishbein & Ajzen, 1980). The MGB corroborates this conceptualisation and expands it by suggesting that attitude toward a behaviour can be formed from an acquaintance of past experience with that behaviour (Perugini & Bagozzi, 2001).

Subjective norms, according to the TRA and TPB, refer to an individual's understanding of pressure from peers to (not) engage in a behaviour (Ajzen, 1991). An individual's actions are likely to be influenced by a certainty as to whether such actions will be accepted (rejected) by other members in a social group (Ajzen, 1991; Fishbein & Ajzen, 1980). The MGB reiterates that subjective norms are an apparent pressure from the social group to (not) perform a behaviour (Perugini & Bagozzi, 2001).

Perceived behavioural control, according to the TPB, encompasses an individual's belief about their capability and self-control over an intended behaviour (Ajzen, 1991). It addresses non-volitional situations (i.e. time, money, skills and cooperation from others) that may be seen as a barrier to effective engagement with an intended behaviour. The MGB also conceptualises perceived behavioural control as an individual's belief that they are (not) capable of successfully engaging in a behaviour (Perugini & Bagozzi, 2001).

Anticipated emotions, according to the MGB, describe the positive (negative) affect that an individual expects after (not) accomplishing a goal (Perugini & Bagozzi, 2001). The theory identifies positive anticipated emotions, such as feeling excited, glad, happy, delighted, satisfied, proud and self-assured, as well as negative anticipated emotions, such as feeling angry, frustrated, sad, worried, guilty, ashamed, disappointed, depressed and anxious toward (not) enacting a behaviour and fulfilling an outcome (Perugini & Bagozzi, 2001).

Habitual responses from past experiences with a behaviour influence future behaviour (Lally & Gardner, 2013; Sutton, 1994; Triandis, 1977). This premise is underpinned by habituation and habitual adaptation theory, which focuses on repeated behaviour (Martin, 1964). Both theories propound that an individual habituates and adapts to their environment but requires heightened levels of subsequent stimuli to elicit a similar emotional response from previous stimuli (Lyubomirsky, 2010). Thus, it has been argued that past behaviour has a direct influence on future behaviour for activities that are conducted on a regular basis (Ouellette & Wood, 1998). The multidimensional nature of past behaviour is underscored by the distinction between the frequency and recency of a past experience (Bagozzi & Warshaw, 1990), depending on when the experience has occurred. The frequency of past behaviour refers to engagement with a behaviour within a comparatively longer period of time, whereas the recency of past behaviour refers to engagement with a behaviour over a reasonably short period of time (Song et al., 2014).

Desire, according to the MGB, is defined as “a state of mind whereby an agent has a personal motivation to perform an action or to achieve a goal” (Perugini & Bagozzi, 2001 p. 71). The multidimensional nature of desire is underscored by the distinction between goal desire and implementation desire (Bagozzi et al., 2003). Goal desire represents an individual’s motivational state of mind and how keenly the individual wants to perform a particular goal-directed behaviour to achieve their *end* state. Implementation desire describes how strongly an individual wants to perform a specific behaviour, targeting the individual’s *means* to achieve their end state (Bagozzi et al., 2003).

The MGB has been applied to hedonic decision-making contexts across disciplines, such as social psychology, public health, tourism management and marketing. For instance, in social psychology, the MGB has been utilised to explain goal-directed behaviour related to physical

activity (Esposito et al., 2016), weight control (Wu et al., 2016), vanity sizing (Ketron & Naletelich, 2017), alcohol consumption (Prestwich et al., 2008), soft drink consumption (Richetin et al., 2008) and fruit consumption (Prestwich et al., 2008). In public health, MGB-related studies have assessed the efficacy of self-help mental services (Dibb et al., 2013) and parenting practices in influencing children's food intake (Baranowski et al., 2015). In tourism management, the MGB has been introduced to explore tourists' intention to visit a place (Lam & Hsu, 2006), a pop culture-featured destination (Lee et al., 2018) or an environmentally responsible museum (Han et al., 2018), undergo a non-pharmaceutical intervention for influenza before travelling overseas (Lee et al., 2012), engage in duty-free shopping (Choi & Park, 2017), cruise travel (Han et al., 2016) or physical activity screen-golfing (Han & Hwang, 2014), and gamble responsibly at casinos (Song et al., 2016). In marketing, MGB-related studies have examined the promotion of breastfeeding (Parkinson et al., 2018), classical music attendance (Tong et al., 2016), outdoor recreation (Park et al., 2017), the purchase of sporting goods online (Chiu et al., 2018) and spectators' intention to attend prestigious, recurring sports events (Chiu et al., 2019). When compared with the TPB attributes, the MGB attributes are deemed to offer better systematic control and higher anticipatory power for measuring variance in intention toward goal-directed behaviour (Perugini & Bagozzi, 2001).

2.5. Perceived Risk

In an often fluctuating and unpredictable marketplace, consumers encounter risk in making decisions (Ray & Sahney, 2018; Schiffman et al., 2011). Perceived risk describes a consumer's negative views on altering and opposing outcomes as a result of purchasing a product/service (Laroche et al., 2004). Cox (1967, p. 38) observed perceived risk to be "a function of the importance or magnitude of the goals to be attained, the seriousness of the penalties that might be imposed for non-attainment, and the amount of means committed to achieving the goals". Both Mitchell et al. (1997) and Arora and Kaur (2018) reiterated that perceived risk operates as the magnitude or extent of goals that an individual strives to attain and the severity of the payback that is endured when not achieving these goals. Therefore, lower levels of perceived risk are associated with satisfaction, favourable word of mouth and re-engagement, whereas higher levels of perceived risk are linked with dissatisfaction, unfavourable word of mouth and unwillingness to re-engage (Chahal et al., 2014).

In a seminal study, Bauer (1960, p. 21) introduced perceived risk to the marketing discipline when he commented that "consumer behaviour involves risk in the sense that any action of a consumer will produce consequences that he cannot anticipate with anything approximating certainty, some of which at least are likely to be unpleasant". This set in motion three schools of thought, with varying perspectives of perceived risk in consumer decision-making (Ray & Sahney, 2018).

The first perspective, stemming directly from Bauer's (1960) initial observation, interprets risk in terms of uncertainty (e.g. Arndt, 1967; Ross, 1975). Five decades on, perceived risk continues to be conceptualised as the uncertainty that consumers encounter when they are unable to predict outcomes of their purchase decision (e.g. Jereb, 2013; Schiffman et al., 2011). From this perspective, perceived risk is the potential uncertainty consumers feel about the

prospective unfavourable consequences of utilising any product/service (Featherman & Pavlou, 2003; Mishra, 2014). However, this conceptualisation is problematic as it equates uncertainty with risk, two distinct constructs, with the latter dealing in probabilities and the former with no probabilities (Stone & Gronhaug, 1993).

The second perspective contends that perceived risk embodies two aspects, namely indecisions and consequences. Indecisions deal with the probability that a loss might occur, while consequences deal with the subjective importance of the loss to the consumer (e.g. Cunningham et al., 2005; Kogan & Wallach, 1964). This led to the two-component conceptualisation of perceived risk as the probability of loss and the subjective importance of that loss (Laroche et al., 2004). Thus, a risky context exists when the consequence of a choice relies on the outcomes of future events with discerned probabilities. From this perspective, where consumers observe the probability of a loss to be low, the less risk they will perceive in the purchase outcomes (Ariffin et al., 2018). Conversely, when consumers believe that the probability of a loss is high, they will perceive more risk in the purchase outcomes (Arora & Kaur, 2018; Çal & Lambkin, 2017). Mitchell et al., (1997) cited Sjoberg (1980) in criticising this conceptualisation as it is considered to be too limiting to encapsulate such an ambiguous construct.

The third perspective conjectures that perceived risk is “the expectation of losses associated with purchase and, as such, acts as an inhibitor to purchase” (Peter & Ryan, 1976, p. 185). Expanding on this perspective, Stone and Winter (1987) described perceived risk as a consumer’s subjective expectation of prospective losses. This definition continues to be reiterated in contemporary research (e.g. Ray & Sahney, 2018; Roy et al., 2012). Thus, the higher the expectations that losses will occur, the greater the level of risk perceived by consumers (Dholakia, 1997). Ultimately, the body of empirical research has favoured Stone and Winter’s (1987) conceptualisation of perceived risk as a subjective anticipation of potential loss. The current research also adopts the third perspective embraced by contemporary studies.

In exploring the role of perceived risk in decision-making contexts, Bettman (1973) posited that there were two types of perceived risk, namely inherent risk and handled risk. Inherent risk is associated with decisions about the product class (i.e. *what* cosmetic procedure). Handled risk is associated with decisions about a particular brand within a particular product class (i.e. *which* practitioner and *which* products to use for the specific cosmetic procedure). The body of empirical research on perceived risk has focused on inherent risk. In the main, such studies consider risk perception and product choice, with risk assessed in the context of adopting specific products (Dowling, 1986). The current research follows this approach, centring on inherent risk with three selected cosmetic procedures or product classes (i.e. Botox, hair transplants and liposuction) but extends the research area by considering handled risk in how consumers specifically choose and engage in one of these procedures.

The decision-making literature commonly acknowledges that the perceived risk construct is multidimensional, encapsulating several facets of perceived risk (e.g. Arora & Kaur, 2018; Featherman & Pavlou, 2003; Ray & Sahney, 2018; Zheng et al., 2012). From its earlier conceptualisations, perceived risk has been proposed to embody six different dimensions, namely safety, financial, performance, opportunity/time, social and psychological (Cunningham, 1967). These risk dimensions have gained an empirical profile as evinced in the consumer behaviour literature, particularly when examining the risk consumers perceive across varying purchase contexts (e.g. Quintal et al., 2010; Ray & Sahney, 2018). Indeed, the empirical research has demonstrated that 88.8 per cent of variance in the overall risk construct can be explained by the physical, financial, performance, social, time and psychological risk dimensions (Stone & Gronhaug, 1993).

Clearly, the decision to engage in a cosmetic procedure involves risk, which leaves an individual exposed to an outcome of probable loss (Warner et al., 2008). Given the context of

the current research, five pertinent dimensions, namely physical, financial, performance, social and psychological risks, were selected to identify customer segments according to their risk profiles associated with cosmetic procedure use. The five perceived risk dimensions are defined accordingly.

2.5.1. Physical Risk

Physical risk refers to the potential of a negative effect that the purchased product/service may have on an individual's physiological condition (Stone & Gronhaug, 1993). For instance, the physical risks associated with a cosmetic procedure include pain (Gimlin, 2000), bruising, infections and undesirable side effects on a consumer's physical appearance (Gabriel et al., 1997; Morgan, 1991; Richetin et al., 2019).

2.5.2. Financial Risk

Financial risk considers the likelihood of whether an individual is able to monetarily support a purchase decision (Havlena & DeSarbo, 1991). For instance, the British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) highlighted that over 50% of their clientele acknowledge that the cost of a cosmetic procedure is of concern to them (BAPRAS, 2014). With cosmetic surgery, such as breast augmentation, costing up to \$20,000 (Kearns, 2014), the absence of proper financial planning has the potential to impact on a consumer's financial well-being.

2.5.3. Performance Risk

Performance risk is the possibility that the purchased product/service does not provide the anticipated benefits (Havlena & DeSarbo, 1991). The normalisation of cosmetic procedures through reality television programmes and social media (Heyes, 2009; Lim, 2017; Menon, 2019; Tait, 2007) can create unfeasible expectations (Weston, 2008). If such expectations are unmet,

they run the risk of creating negative mood states, such as dissatisfaction, anger, sleep disorder (Borah et al., 1999; Naraghi & Atari, 2016) and increased body image discontent (Sarwer, 2019).

2.5.4. Social Risk

Social risk reflects the potential of a loss of status within an individual's social group as a result of the negative opinions of others (Arora & Kaur, 2018). This is expressed in the possible disapproval voiced by a social group due to an individual's decision to undergo a cosmetic procedure. For instance, Tam et al.'s (2012) study in Hong Kong and Japan found social discrimination of consumers who engage in a cosmetic procedure.

2.5.5. Psychological Risk

Psychological risk represents the likelihood of anxiety or mental discomfort that an individual might experience during or after a purchase (Roehl & Fesenmaier, 1992). Consumers are likely to encounter anxiety and distress in the pre- and post-stages of a cosmetic procedure, where the prospect of a loss in an unpredictable context has varied impacts on their emotional state. In some cases, even though consumers acknowledge psychological concerns over self-improvement and self-esteem, they do not recount any emotional distress or depression prior to the cosmetic procedure (Nahai, 2009). In other cases, consumers who feel emotional distress pre-surgery report significant improvement to their emotional well-being (e.g. Braun, 2005; Naraghi & Atari, 2016) and quality of life (e.g. Rankin et al., 1998) post-surgery. Yet in more cases, consumers express anxiety and depression after experiencing complications in their cosmetic procedure (Borah et al., 1999; Jacobsen et al., 2004).

In sum, perceived risk is a subjective evaluation of possible multidimensional loss, which embodies inherent risk associated with decisions about product class and handled risk

associated with decisions about brands within a product class. The current research conceptualises perceived risk as a consumer's subjective expectation of loss. Perceived risk is operationalised in terms of the prospective physical, financial, performance, social and psychological loss as a result of engagement with a cosmetic procedure. Inherent risk is considered in the selection of three nominated cosmetic procedures (i.e. Botox, hair transplants and liposuction) and handled risk, in how consumers specifically choose and engage in one of these procedures.

2.6. Research Gaps

While cosmetic surgery is fast becoming a twenty-first-century practice (Jones, 1998), research pertaining to consumer behavioural psychology and consumer behaviour has been limited in its focus on three key areas. The first area, which asserts that consumer culture is not separate from broader expressions of culture (Joy & Venkatesh, 1994), scopes the media and sociocultural influences that dictate and promulgate norms of beauty ideals and bias (e.g. Cluley, 2016; El Jurdi & Smith, 2018; Lim, 2017; Menon, 2019; Sischo & Martin, 2015). The second area highlights the behavioural psychology behind self-concept, self-confidence and self-esteem that underpins body image (e.g. Ketron & Naletelich, 2017; Milfelner et al., 2017; Sischo & Martin, 2015; Yazdanparast & Spears, 2018). The third area investigates consumer satisfaction with actual cosmetic procedures (e.g. Chen & Song, 2017; Kim et al., 2017; Sharif, 2017) and the pre- and post-services provided (e.g. Daniels et al., 2017; Karami et al., 2016). This signalled that there was scope to expand the research area and address three gaps related to hedonic engagement and hedonic adaptation to cosmetic procedures.

2.6.1. Gap 1

Fewer studies on consumption choices have explored the affective aspects (Brakus et al., 2009; Ding & Tseng, 2015), with a larger body of work centred on the cognitive aspects (e.g. Han &

Hwang, 2014; Homburg et al., 2006). Yet, the affective aspects appear to exert a stronger impact on hedonic engagement (Lawton et al., 2009), specifically with cosmetic procedures (e.g. Henderson-King & Brooks, 2009; Milfelner et al., 2017).

Delving further into the affect construct are emotions in hedonic consumption, an area that has received limited attention. After Hirschmann and Holbrook (1982) conceptualised hedonic consumption as an experiential concept, this underscored the need to consider a consumer's evaluation of their experience, which subsequently influences their emotions toward it (Lazarus, 1991). The literature focuses more on how positive emotions adapt in hedonic consumption (e.g. Emmerling & Qari, 2017; Kwon & Lee, 2020; Line et al., 2016; Park et al., 2017; Tong et al., 2016; Wu et al., 2020) and less on how negative emotions adapt in hedonic consumption (e.g. Kieling et al., 2016; Yang et al., 2017). Further, the influence of prior emotional expectations has been relatively under-researched (Phillips & Baumgartner, 2002). Currently, the positive *and* negative emotions consumers feel before, after and toward their next hedonic experience remain undetermined. This offers potential to pinpoint and track how consumer emotions adapt to recurring stimuli (i.e. the same cosmetic procedure) in order to understand the consumer psyche (Loewenstein, 2007; Lyubomirsky, 2010). Such understanding potentially extends the theory and methodology for conceptualising and operationalising hedonic adaptation.

2.6.2. Gap 2

To the best of the researcher's knowledge, a theoretical decision-making framework has not been introduced to explain hedonic engagement with a cosmetic procedure. The deliberative attributes, which nest in affect (e.g. attitude and emotions) and cognition (e.g. perceptions of peer pressure and self-control), require further consideration on how they drive choice and consumption (Dube et al., 2003). Integrating affective and cognitive factors with non-volitional

and motivational factors (Han & Hwang, 2014) would help to explain hedonic conative engagement with a cosmetic procedure.

A proposed framework, empirically tested under varying cosmetic procedure conditions, is envisaged to help researchers and practitioners to ascertain critical influencers and mood states in consumers, guiding the development of appropriate coping and communication strategies that safeguard consumer interests and retain their loyalty. This gives theoretical and pragmatic input to the hedonic decision-making literature and beauty industry.

2.6.3. Gap 3

The prospect of risk in decision-making has long occupied the interest of consumer psychology and consumer behaviour scholars. The body of work has taken into account decision-making in risky contexts, such as financial investments (e.g. Munnukka et al., 2017), cyber security (e.g. Morosan & DeFranco, 2019), food hazards (Cunha, 2010), blood donation (Zhou et al., 2012), cosmetic procedures (e.g. Milfelner et al., 2017) and information use related to non-surgical cosmetic procedures (e.g. Reisenwitz & Fowler, 2018). However, there is scant research that addresses in what ways risk perceptions influence consumer decisions or how consumers perceive felt risks in specific situations (Cho & Lee, 2006). Moreover, only limited studies have considered perceived risk as a segmentation variable to identify and profile consumers. This limitation is more acute in the context of cosmetic procedures, which is fraught with potential risk and where a spectrum of consumers exist, with varying risk concerns (Boulton & Malacrida, 2012; Bradbury, 2009; Taylor, 2012). Theoretically, segmenting consumers based on their risk profiles is paramount for researchers to understand consumer concerns and their affect toward a cosmetic procedure (Milfelner et al., 2017; Reisenwitz & Fowler, 2018). Managerially, such insights can also help guide practitioners with precise

targeting (Lee et al., 2013; Yankelovich & Meer, 2006) so as to create relevant product/service development (Daniels et al., 2017) and communication that alleviate perceptions of risk.

2.7. Research Objectives

Three gaps were identified in the literature related to hedonism, adaptation goal-directed behaviour and perceived risk in the context of cosmetic procedures. As a result, the following three research objectives were set for the current research:

RO1: Conceptualise and operationalise hedonic adaptation to repeated hedonic engagement with a cosmetic procedure (Gap 1).

RO2: Propose an empirical decision-making framework that explains hedonic engagement with a cosmetic procedure (Gap 2).

RO3: Develop a segmentation typology of consumers who engage with cosmetic procedures according to their perceived risk profile (Gap 3).

2.8. Chapter Summary

This chapter presented the literature related to the four research areas in the thesis, namely hedonism, adaptation, goal-directed behaviour and perceived risk in the context of cosmetic procedures. Literature from the behavioural psychology, marketing and recreation disciplines was examined to conceptualise hedonism, adaptation and perceived risk with the use of relevant underpinning theories as well as to identify empirical models of consumer decision-making and factors that impact their goal-directed behaviour to engage in a cosmetic procedure. The following chapter will present the research questions and outline the research model and hypotheses related to the proposed relationships between the key constructs.

Chapter Three

Theoretical Framework and Hypotheses Development

3.0. Introduction

Chapter Two reviewed the literature related to the four research areas in the thesis, namely hedonism, adaptation, goal-directed behaviour and perceived risk, and their underpinning theories, in the context of cosmetic procedures. In doing so, nine key constructs, namely attitude, subjective norms, perceived behavioural control, anticipated positive emotions, anticipated negative emotions, past behaviour, desire, intention and perceived risk, were introduced.

This chapter revisits the objectives for research in the thesis. It builds on the literature review introduced in Chapter Two, posing the research questions and presenting the conceptual model and hypotheses that were developed to address the identified research objectives. Relevant theories and studies are introduced to explain each construct and justify their hypothesised relationships with each other. To achieve this, the nine key constructs are adapted to the context of cosmetic procedures and introduced in a proposed decision-making framework, the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB), which integrates the affective and cognitive aspects of hedonic consumption.

3.1. Research Objectives

From the research gaps identified in Chapter Two, this research addresses the following research objectives:

RO1: Conceptualise and operationalise hedonic adaptation to repeated hedonic engagement with a cosmetic procedure.

RO2: Propose an empirical decision-making framework that explains hedonic engagement with a cosmetic procedure.

RO3: Develop a segmentation typology of consumers who engage with cosmetic procedures according to their perceived risk profile.

Research Objective 1 (*RO1*) addressed Research Gap 1. *RO1* was delivered by applying set-point theory (Brickman & Campbell, 1971; Diener et al., 2006), as a foundation theory, to exploring fluctuating emotions over time in hedonic adaptation. This is supported by hedonic treadmill theory (Brickman & Campbell, 1971), adaptation-level theory (Helson, 1964) and the Behavioural Activation/Inhibition System (Vlahos & Bove, 2016). From these, eight positive and nine negative anticipated emotions were identified in the context of repeated engagement with cosmetic procedures. These emotions were traced in the pre-, post- and toward the next engagement with a procedure. In doing so, this research extends theoretical conceptualisations of hedonic adaptation and implements a methodology for tracking hedonic adaptation across a range of cosmetic procedures.

Research Objective 2 (*RO2*) responded to Research Gap 2. *RO2* was addressed by adopting and adapting the model of goal-directed behaviour (Perugini & Bagozzi, 2001) as the underpinning theory to examining consumer decision-making in hedonic engagement. This is supported by social learning theory (Bandura & Walters, 1977), framing theory (Green & Pritchard, 2003), self-efficacy theory (Bandura, 1977), the Schachter-Singer theory of emotion (Schachter & Singer, 1962), the Behavioural Activation/Inhibition System (Ma-Kellams & Wu, 2020), habituation and habitual adaptation (Martin, 1964), conditioned response theory (Drummond, 2000), and the dual-process theory of habituation (Groves & Thompson, 1970).

Consequently, the antecedents to decision-making, namely attitude, subjective norms, perceived behavioural control, anticipated positive emotions, anticipated negative emotions, past behaviour and perceived risk, were identified in the context of engagement with cosmetic procedures. These antecedents were investigated for their influence on desire and intention toward engagement with a procedure. In doing so, this research proposes an adapted theoretical framework for identifying the key influencers of hedonic engagement across a range of cosmetic procedures.

Research Objective 3 (*RO3*) addressed Research Gap 3. *RO3* was performed by introducing perceived risk theory (Peter & Ryan, 1976; Stone & Winter, 1987), as an underlying theory, to segment consumers in risky hedonic engagement. This is supported by prospect theory (Kahneman & Tversky, 1979). As a result, four consumer segments were identified in the context of engagement with cosmetic procedures. These were determined according to their risk profiles of physical, financial, performance, social and psychological loss associated with a procedure. In doing so, this research theoretically develops a segmentation typology to facilitate pragmatic targeting and positioning strategies.

3.2. Theoretical Framework

3.2.1. Hedonic Adaptation

Adaptation refers to an instinctive survival process that activates to reduce the positive (negative) effects of a constant or repeated stimulus (Martin, 1964). This is achieved by an individual's move toward an environment that is best suited for their subjective well-being (Fisher, 1930). Hedonic adaptation describes a perceptual process from which an intensified affective stimulation, arising from a new experience, returns to a baseline level following recurring exposure to a stimulus (Frederick & Loewenstein, 1999). Thus, adaptation is learned through behavioural engagement and is a sensory process of gradual decrease to a response.

Adaptation is underpinned by hedonic treadmill theory (Brickman & Campbell, 1971). This theory argues that an individual is born with an inherent, genetically determined happiness baseline, and that changes in a situation or life event may temporarily increase (decrease) their level of happiness (Diener et al., 2006). However, after some time, an individual's reward (punishment) system eventually brings them back to their happiness baseline (Headey & Wearing, 1989). What this means is that the amount of utility derived from an experience has an innate predisposition to systematically return to a preset stasis with time (Line et al., 2016; Luhmann & Intelisano, 2018). To illustrate, individuals adjust to positive life events, such as new employment (Griffeth et al., 2000), a salary increment (Di Tella et al., 2010), marriage (Clark et al., 2008), a holiday (Kwon & Lee, 2020) and a cosmetic procedure (Lowenstein et al., 2014), as well as to negative life events, such as unemployment (Clark et al., 2008), physical disability (Oswald & Powdthavee, 2008), divorce (Clark et al., 2008), widowhood (Clark et al., 2008; Lucas et al., 2003) and the loss of a loved one (Line et al., 2016).

Repeated engagement diminishes the emotional intensity of an experience (Higgins, 2006; Kwon & Lee, 2020). This is underpinned by adaptation-level theory, which asserts that all life events generate an adaptative response, and as an individual becomes familiar and desensitised to this state, a higher level of stimulation is needed for the next engagements to create a similar emotional response (Helson, 1964). In the context of cosmetic procedures, a consumer who engages in a procedure may eventually adapt to the positive outcomes of their enhanced appearance and return to their happiness baseline (Sood et al., 2017). This may drive the consumer to intensify their engagement with cosmetic procedures in the hope of achieving the elevated level of happiness previously experienced (Perez-Truglia, 2012; Sheldon & Lyubomirsky, 2012). Therefore:

RQ1: How will anticipated (a) positive emotions and (b) negative emotions differ significantly at the pre-, post- and toward the next engagement with a cosmetic procedure?

3.2.2. Decision-making Models

Several theoretical models underpin the decision-making framework of this research. These are identified as: (1) the theory of reasoned action (TRA) (Fishbein & Ajzen, 1980); (2) the theory of planned behaviour (TPB) (Ajzen, 1991); and (3) the model of goal-directed behaviour (MGB) (Perugini & Bagozzi, 2001). Each of these frameworks has been empirically tested as decision-making models that involve hedonic consumption and their limitations are highlighted.

The theory of reasoned action (TRA) predicts actual reasoned behaviour from intention to act (Fishbein & Ajzen, 1980). It posits that behavioural intention is determined by two independent factors, namely attitude and subjective norms. The TRA has been used to explore hedonic behaviour across a variety of health and recreational contexts (e.g. Bagozzi et al., 2003; Barati et al., 2019; Briliana & Mursito, 2017; Rezai et al., 2017; Yzer, 2012). The TRA has some limitations (Trafimow, 2009). It makes the assumption that behavioural beliefs and normative beliefs are distinctive concepts, resulting in a contradiction and rendering the theory “unfalsifiable” (Sheppard et al., 1988). Also, where beliefs are more cognitive, respondents are more likely to associate pathways with cognitive-based beliefs rather than with affective-based beliefs, suggesting that attitudes identified in the theory do not represent distinctive and affective components (Blue, 1995).

The theory of planned behaviour (TPB), which extends the TRA, predicts purposeful behaviour because actions can be planned (Ajzen, 1991). In doing so, it introduces one other predictor of behavioural intention, namely perceived behavioural control. The TPB has been applied to scrutinise hedonic choices in a plethora of health and recreational contexts (e.g. Canova et al.,

2020; Conner et al., 2001; Ghazali et al. 2017; Kapetanaki et al., 2014; Kim & Chung, 2011; Patiro et al., 2016; Pickett et al., 2012; Richetin et al., 2019; Saqib, 2018; Walters et al., 2018). Several criticisms are levelled at the TPB (Sniehotta et al., 2014). Four constructs do not sufficiently explain a theory of volitional behaviour, with its singular focus on reasoning and its exclusion of unconscious influences on behaviour and emotions (Conner & Armitage, 1998). Also, there are issues of “inclined abstainers” or respondents who articulate an intention but subsequently fail to act (Conner & Sparks, 2005). Further, the static predictive nature of the theory does not give insight into the evidenced influences of behaviour on cognition and future behaviour (Sutton, 1994).

Extending from the TPB, with self-regulation theory (Bagozzi, 1992), is the model of goal-directed behaviour (MGB) (Perugini & Bagozzi, 2001). Departing from the TRA and TPB, which are purely dependent on the volitional aspects of decision-making behaviour, the MGB incorporates affective and motivational dimensions that predict intention to act, namely anticipated emotions, past experience and desire toward a behaviour (Poels & Dewitte, 2008). The MGB has been utilised to explain hedonic decision-making in a range of health and recreational contexts (e.g. Baranowski et al., 2015; Chiu et al., 2018; Chiu et al., 2019; Choi & Park, 2017; Dibb et al., 2013; Esposito et al., 2016; Han & Hwang, 2014; Han et al., 2016; Han et al. 2018; Ketron & Naletelich, 2017; Lam & Hsu, 2006; Lee et al., 2012; Lee et al., 2018; Park et al., 2017; Parkinson et al., 2018; Perugini & Bagozzi, 2001; Prestwich et al., 2008; Richetin et al., 2008; Song et al., 2012; Tong et al., 2016; Wu et al. 2016).

When compared with the TPB attributes, the cognitive, affective, volitional and motivational MGB attributes are deemed to offer better systematic control and higher anticipatory power for measuring variance in intention toward goal-directed behaviour (Perugini & Bagozzi, 2001). Given the research objectives to explore consumer engagement and consumer adaptation to

repeated engagement with a cosmetic procedure, the MGB has the latitude to determine anticipated mood states in hedonic adaptation and decision formation in hedonic consumption. Moreover, the MGB's viability to integrate the cognitive and affective antecedents of desire and intention makes it an appropriate model to examine hedonic behaviour in cosmetic procedure engagement.

For these reasons, the MGB underpins research in the thesis. Consequently, the nine key constructs are adapted to the context of cosmetic procedures and introduced in a proposed decision-making framework, the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB), which integrates the affective and cognitive aspects of hedonic consumption, as can be seen in Figure 3.1.

3.2.3. Model of Goal-Directed Behaviour

3.2.3.1. Attitude

In the psychology literature, attitude refers to a set of beliefs that involves positives and negatives with continued emotions toward a certain object, person or situation (Ajzen, 1991). It embodies "a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour" (Eagly & Chaiken, 1993, p. 1). Attitude is commonly expressed as a two-component construct (Parkinson et al., 2018). Instrumental attitude considers the more cognitive aspects of performing a behaviour, such as the costs and benefits, whereas affective attitude deliberates on the more emotional consequences of performing the behaviour, such as hedonic benefits (Ajzen & Fishbein, 2005). Other researchers have advocated a third component, which encompasses the mental residues that represent cognitive, affective and conative reactions toward a behaviour (Eagly & Chaiken, 2007).

The attitude construct is identified in the three key empirical decision-making models, namely the TRA, TPB and MGB. According to the TRA, an attitude refers to a positive (negative) or favourable (unfavourable) approach toward performing a behaviour (Fishbein & Ajzen, 1980). The TPB defines attitude as a propensity to appraise the execution of a behaviour with a degree of favour or disfavour (Ajzen, 1991). Driven by beliefs and perceptions toward a behaviour, an individual attains a positive (negative) attitude toward the behaviour (Ajzen, 1990; Fishbein & Ajzen, 1980). Both the TRA and TPB explain attitude with an emphasis on the action to (not) act toward a behaviour. The MGB corroborates this conceptualisation and expands it by suggesting that attitude toward a behaviour can be formed from an acquaintance of past experience with that behaviour (Perugini & Bagozzi, 2001).

According to the MGB, attitude toward a behaviour exerts a significant and positive impact on the desire to perform a behaviour (Perugini & Bagozzi, 2001). In health and leisure studies, attitude has been proposed to demonstrate a significant and positive impact on the desire for physical activity (Esposito et al., 2016), outdoor recreation (Park et al., 2017), cruise travel (Han et al., 2016), soft drink consumption (Richetin et al., 2008), weight control (Wu et al., 2016) and vanity sizing (Ketron & Naletelich, 2017). Moreover, there is emerging evidence that attitude is the most powerful antecedent of various health behaviours (e.g. Lawton et al., 2009). In the last decade, a positive shift has been observed in the attitude towards cosmetic procedures, resulting in a phenomenal growth in the desire for engagement in the USA (American Society of Plastic Surgeons, 2019), Australia (Tijerina et al., 2019) and India (Saha & Saha, 2017). Therefore:

H1: Attitude toward engaging in a cosmetic procedure has a significant and positive influence on desire to engage in a cosmetic procedure.

3.2.3.2. Subjective Norms

In the behavioural psychology literature, social norms are described as the stimulus of an individual's social context, where an individual is expected to deviate their behaviour to fit in a social group (Festinger, 1954). This deviation to behaviour is driven by a desire to become part of the group by reducing any inconsistencies with group norms (Tajfel, 1981). Further, social norms impact on an individual's self-concept and their behaviour is stimulated by actions observed in other group members (Bandura, 1977; Tajfel, 1981). Similarly, subjective norms represent "the perception of social pressure related to the action" (Han & Hwang, 2014, p. 1120). Such norms are an individual's perception of the collective judgements of people they consider to be important regarding behaviour they should (not) perform (Choi & Park, 2017). Consequently, subjective norms wield social influence on the individual attempting to perform a specific behaviour (Han et al., 2018).

The subjective norms construct is identified in the three key empirical decision-making models, namely the TRA, TPB and MGB. According to the TRA, subjective norms refer to an individual's reflection of how reference groups would consider that the individual should (not) engage in a behaviour (Fishbein & Ajzen, 1980). The TPB defines subjective norms as an individual's understanding of pressure from peers to (not) engage in a behaviour (Ajzen, 1991). An individual's actions are likely to be influenced by a certainty if such actions will be accepted (rejected) by the other members in a social group (Ajzen, 1991; Fishbein & Ajzen, 1980). The MGB reiterates that subjective norms reflect an apparent pressure from the social group to (not) perform a behaviour (Perugini & Bagozzi, 2001).

The influence of social norms in perpetuating beauty ideals is underpinned by social learning theory (Bandura & Walters, 1977). According to this theory, humans are social learners, imitating a behaviour that yields positive outcomes. Social norms create ideals of beauty, which

are referred to as “beauty bias” (Sarwer, Magee & Clark, 2003), commonly coined as the “Instagram aesthetic” (Definojun, 2019). This bias prescribes to image-conscious individuals the stereotypical body weight and body shape that are accepted by society (Jones et al., 2001). Consequently, individuals who engage in cosmetic procedures to correct their physical features cite their desire to appear more “normal” in society as a key reason for their behaviour (Gimlin, 2000, p. 92).

The media is a critical instrument in reshaping the social value system by commodifying the human body and perpetuating stereotypes of physical attractiveness (Grogan, 2016; Sullivan, 2001). This phenomenon is underpinned by framing theory, which suggests that the media structures a message in a way that influences perception, such as presenting cosmetic procedures as the ultimate solution to physical transformation to an idealised image and lifestyle (Green & Pritchard, 2003). Social media propagates the bias that physically attractive individuals are more physically fit (Hönekopp et al., 2004), intelligent (Kanazawa, 2011), trustworthy (Oosterhof & Todorov, 2009; Wheeler & Kim, 1997), accomplished (Feingold, 1992; Hamermesh, 2011), successful with job applications (Cash & Kilcullen, 1985; Chiu & Babcock, 2002; Fletcher, 2009), financially viable (Fletcher, 2009), popular (Davis, 2013; Moutinho et al., 2011; Sorokowski, 2010) and desirable (Axt et al., 2018; Cash, 1981).

According to the MGB, subjective norms exert a significant and positive impact on the desire to perform a behaviour (Perugini & Bagozzi, 2001). In health and leisure studies, subjective norms have been reported to produce a significant and positive impact on the desire for social marketing of breastfeeding (Parkinson et al., 2018), self-help mental health services (Dibb et al., 2013), duty-free shopping (Choi & Park, 2017), cruise travel (Han et al., 2016), body weight control (Perugini & Bagozzi, 2001) and cosmetic surgery (Sood et al., 2017). Researchers have also explored the link between sociocultural influences and physical appearance, noting a

positive relationship between beauty bias and the desire to engage in a cosmetic procedure (e.g., Blum, 2003; Markey & Markey, 2009; McKinley & Hyde, 1996; Stuart et al., 2012).

Therefore:

H2: Subjective norms on beauty bias have a significant and positive influence on desire to engage in a cosmetic procedure.

3.2.3.3. Perceived Behavioural Control

The perceived behavioural control construct is identified in the two key empirical decision-making models, namely the TPB and MGB. The TPB defines perceived behavioural control as an individual's belief about their capability and self-control over an intended behaviour (Ajzen, 1991). According to the author, a behaviour is affected by internal factors within the individual's control, such as demographics, personality, competence and emotion, as well as external factors beyond the individual's control, such as time, opportunity and social influence. For this reason, perceived behavioural control addresses volitional factors (e.g. competencies and finances) and non-volitional factors (e.g. time and cooperation from others), which may be viewed as obstacles to successful engagement with a behaviour. The MGB supports the conceptualisation of perceived behavioural control as the belief in the (non-)capability of engaging in an intended behaviour (Choi & Park, 2017; Han et al., 2018; Perugini & Bagozzi, 2001; Wu et al., 2016).

Belief in the capability to execute an action is underpinned by self-efficacy theory (Bandura, 1977). According to the theory, an individual is likely to perform a behaviour that they believe to be within their capability (Sheppard et al., 1988). When engaging in a behaviour in which they excel, the individual feels happy (Bandura, 1977) and continues to seek engagement with the behaviour (Deci & Ryan, 2000). Conversely, the individual is likely to avoid behaviour that they believe is not within their reach (Johe & Bhullar, 2016).

It has been pointed out that the positive and direct relationship between perceived behavioural control and desire may change with extremely high and low levels of self-efficacy. To illustrate, a very low level of perceived behavioural control may act as a strong predictor of a desire for engagement with a behaviour (Madden et al., 1992). Thus, perceived low levels of self-efficacy (e.g. lack of time and money) may still positively drive an individual's desire to engage in a cosmetic procedure. As soon as such resources become available, the individual is highly likely to engage in the cosmetic procedure. Conversely, a very high level of perceived behavioural control may have minimal influence on an individual's desire to engage in a behaviour (Madden et al., 1992). With perceived high levels of self-efficacy (e.g. availability of time and money), the individual may see no urgency for actual engagement with the cosmetic procedure.

According to the MGB, perceived behavioural control exerts a significant and positive impact on the desire to perform a behaviour (Perugini & Bagozzi, 2001). In health and leisure studies, perceived behavioural control has been found to exhibit a significant and positive impact on the desire for self-help mental services (Dibb et al., 2013), health-coping and intervention programmes (Wu et al., 2016), screen-golfing (Han & Hwang, 2014), environmentally responsible museums (Han et al., 2018) and alcohol consumption (Fry et al., 2014). Therefore:

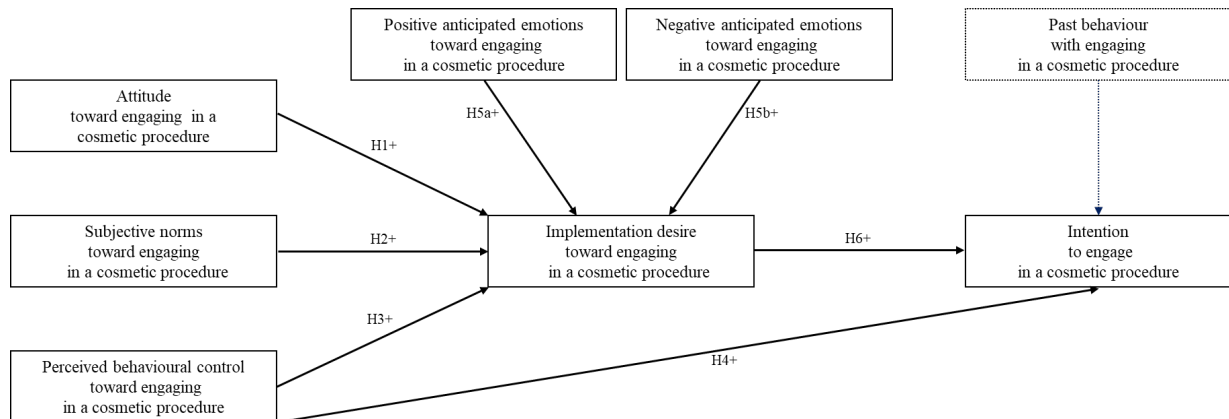
H3: Perceived behavioural control has a significant and positive influence on desire to engage in a cosmetic procedure.

At the same time, in health and leisure studies, perceived behavioural control has been proposed to create a significant and positive impact on the intention to engage in healthy eating (Kapetanaki et al., 2014), winery visitation (Quintal et al., 2015), alcohol consumption (Prestwich et al., 2008), medicine festival visitation (Song et al., 2014) and a cosmetic procedure (Richetin et al., 2019; Sood et al., 2017). Therefore:

H4: *Perceived behavioural control has a significant and positive influence on the intention to engage in a cosmetic procedure.*

Figure 3.1

Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB)



3.2.3.4. Emotions

In the psychology literature, the thalamic theory of emotion (Bard, 1934) conceptualises emotion as an outcome of a physiological reaction, when the thalamus (brain structure responsible for receiving sensory information) sends a signal to the brain in response to a triggering event. This suggests that both physical and psychological emotions occur simultaneously as an individual reacts to a stimulus and experiences the associated emotion at the same time (Bard, 1934). The Schachter-Singer theory of emotion extends this conceptualisation by introducing a cognitive aspect to emotion (Schachter & Singer, 1962). According to the theory, emotion comprises a two-stage process. First, an individual experiences a physiological reaction from a triggering event. Subsequently, the individual experiences an emotion through the cognitive appraisal of the stimulus (Lim, 2013).

The emotions construct is identified in one of the key empirical decision-making models, namely the MGB. The MGB, which conceptualises anticipated emotions with a focus on

achieving goals, also concedes that emotions emerge from a two-stage process, incorporating a cognitive aspect to affect. According to the MGB, anticipated emotions are the positive (negative) emotions that an individual expects after (not) accomplishing a goal (Perugini & Bagozzi, 2001). The theory identifies positive anticipated emotions (e.g. feeling excited, glad, happy, delighted, satisfied, proud and self-assured) and negative anticipated emotions (e.g. feeling angry, frustrated, sad, worried, guilty, ashamed, disappointed, depressed and anxious) (Perugini & Bagozzi, 2001).

This pleasure versus pain dyadic is underpinned by two innate motivational systems that drive emotion and behaviour, namely the Behavioural Activation System (BAS) and the Behavioural Inhibition System (BIS). The BAS drives behaviour to acquire pleasure and reward, whereas the BIS instigates avoidance behaviour to avert pain and punishment (Ma-Kellams & Wu, 2020). According to the authors, both systems reliably relate to emotional responses to a stimulus, with the BAS corresponding with positive emotions (e.g. happiness) and the BIS with negative emotions (i.e. fear and anxiety). Thus, consumers are expected to pursue positive emotions (e.g. high self-esteem) and avoid negative emotions (e.g. shame) when contemplating cosmetic procedures to enhance their body image (Vlahos & Bove, 2016).

According to the MGB, anticipated emotions exert significant and positive impacts on the desire to perform a behaviour (Perugini & Bagozzi, 2001). An individual's pre-positive emotions (aligned with goal accomplishment) and pre-negative emotions (associated with goal failure) predict a desire for a specific behaviour (Han & Hwang, 2014). In contemplating cosmetic procedures as a means of improving physical attractiveness and body image, consumers are likely to pursue outcomes that lead to higher positive emotions and avoid lower negative emotions. Physical attractiveness and positive body image are directly related to higher self-esteem (Akhlaghi et al., 2015; Henderson-King & Henderson-King, 2005;

Milfelner et al., 2017). As a result, individuals who physically enhance themselves through cosmetic procedures report increased self-esteem and satisfaction as well as reduced anxiety (Haiken, 1997; Simis et al., 2002; Wei et al., 2018). In health and leisure studies, anticipated emotions have been observed to generate significant and direct impacts on the desire to engage in classical music attendance (Tong et al., 2016), outdoor recreation (Park et al., 2017), fruit consumption (Prestwich et al., 2008), authentic tourism activities (Han et al., 2018) and weight control programmes (Wu et al., 2016). Therefore:

H5a: Anticipated positive emotions from engaging in a cosmetic procedure have a significant and positive influence on desire to engage in the procedure.

H5b: Anticipated negative emotions from not engaging in a cosmetic procedure have a significant and positive influence on desire to engage in the procedure.

3.2.3.5.Past Behaviour

In the behavioural psychology literature, it is commonly acknowledged that behaviour is influenced by habitual responses due to past experiences with a behaviour (Lally & Gardner, 2013; Sutton, 1994; Triandis, 1977). Extending this conceptualisation, it has been suggested that past behaviour has a direct influence on future behaviour for activities that are conducted on a regular basis (Ouellette & Wood, 1998). In decision-making, past behaviour has been acknowledged to make four impacts: (1) it predicts actual behaviour; (2) it predicts other variables in the model, including intention; (3) it attenuates the influence of other variables on intention and behaviour; and (4) it contributes to a significant increase in the variance in behaviour explained by the model (Ajzen, 2002). The MGB corroborates the positive impacts of past behaviour on future intention toward a behaviour (Perugini & Bagozzi, 2001), particularly when such behaviour is carried out frequently (Huang & Hsu, 2009; Laaksonen et al., 2002; Ouellette & Wood, 1998).

The multidimensional nature of past behaviour is underscored by the distinction between the frequency and recency of the past experience (Bagozzi & Warshaw, 1990). Both these constructs are different, each providing independent information about its influence on the intention to engage in a behaviour (Song et al., 2014).

The frequency of past behaviour refers to the behavioural engagement within a comparatively longer period of time (Song et al., 2014). The construct directly influences intention to engage in future behaviour, particularly when the intention is tentative (Bagozzi & Warshaw, 1990). Studies in the literature reiterate the significant relationship between the frequency of past behaviour with intention and future behaviour (e.g. Ajzen, 2001; Carrus et al., 2008; Eagly & Chaiken, 1993; Lee & Back, 2008; Leone et al., 2004; Richetin et al., 2008). In the context of cosmetic procedures, a consumer may demonstrate frequency by their history of engaging in a particular behaviour, such as getting Botox, without having done so recently, perhaps due to a series of frustrated desires with the outcomes.

The recency of past behaviour refers to the behavioural engagement over a reasonably short period of time (Song et al., 2014). The construct influences the intention to engage in future behaviour (Bagozzi & Warshaw, 1990). Research in the area supports the significant relationship between the recency of past behaviour with intention and future behaviour (e.g. Ferguson, 2004). In the context of cosmetic procedures, a consumer may exhibit recency when they newly engage in a behaviour with no prior experience of it, such as getting their first liposuction.

The frequency of past behaviour is underpinned by habituation and habitual adaptation (Martin, 1964). Habit is described as a performance or behavioural propensity that occurs spontaneously, with little conscious cognisance or contemplation, as a response to a suite of related conditions or contextual cues (Hagger et al., 2018). It is an involuntary behavioural

engagement re-enacted in a somewhat unconscious or mechanical manner, triggered without information processing of a stimulus (Gillan et al., 2015; Lally et al., 2010; Triandis, 1979), and is executed numerous times (Aarts et al., 1998; Neal et al., 2006). Learning new activities causes a chemical change in the brain, stimulating an individual to remember the activity (Wise, 1988). Some of this learning takes place at the subliminal level, referred to as “conditioning”, wherein the brain learns to associate a particular effect with a given situation. Once an activity becomes a habit, it increases cognitive association with the activity (Bargh & Ferguson, 2000) and decreases the cognitive resources required to perform that activity again (Kovac, 2013; Waters & Sayette, 2006).

Some habitual behaviours are strengthened by associative links established over time between environmental cues and an individual’s response (Kovac, 2013). This is underpinned by conditioned response theory (Drummond, 2000). The theory asserts that some contextual signals work together to provoke conditional responses that automatically lead to habitual behaviour. To illustrate, initially neutral stimuli in the environment (e.g. specific places, occasions and friends), when paired with addictive behaviour (e.g. drinking and smoking) over a prolonged period, trigger conditioned responses (Kovac, 2013). Consequently, a behavioural pattern, if executed several times, such as getting a monthly chemical peel or a quarterly Botox injection from the same practitioner, becomes habitual, resulting in an effortless act with minimal involvement of cognitive processes (Kovac, 2013).

Habituation is described as a decrease in the intensity of a response strength due to repeated stimulation (Bouton, 2007; Thompson & Spencer, 1966). Conversely, this relationship is reversed when a stimulus is withheld for a period of time, and then reinstated, resulting in an increased level of intensity experienced (Koukounas & Over, 1993; Quoidbach & Dunn, 2013; Thompson & Spencer, 1966).

The dual-process theory of habituation or response to repeated stimulation (Groves & Thompson, 1970) suggests that during exposure to a stimulus, two processes occur: (1) habituation (decrease in responsiveness); and (2) sensitisation (increase in responsiveness). Habituation is a learnt behaviour that reduces the effect of a stimulus through repeated engagement (Bouton, 2007). Sensitisation is a process whereby a repeated stimulus can lead to greater responsiveness to the stimuli and, in some cases, to the whole category of the stimuli (Shettleworth, 2009). Habituation and sensitisation develop autonomously in the human cognitive nervous system and both interact with each other to produce a behavioural outcome (Groves & Thompson, 1970). In the context of cosmetic procedures, an individual who develops a habit of engaging in a cosmetic procedure, such as Botox, is more likely to be sensitised and more receptive toward other cosmetic procedures, such as lip fillers, skin needling, facelifts and liposuction.

In this research, past experience was introduced as a control variable. This meant that respondents were screened for their prior experience with a cosmetic procedure. Hence, only those who had engaged in a frequent and recent cosmetic procedure constituted the desired sample.

3.2.3.6. Desire

In the psychology literature, desire refers to the strong motivational elements of psychological reasoning (Sodian et al., 2016) that induce action (Carrus et al., 2008; Han & Hwang, 2014). It functions as the motivational drivers behind volitional decision-making, integrating a series of affect, cognition, self-perception and social evaluations by an individual before an intention is formed (Bagozzi et al., 2003).

The multidimensional nature of desire is underscored by the distinction between goal desire and implementation desire (Bagozzi et al., 2003). Goal desire represents the motivational state

of mind of the individual that induces action (Carrus et al., 2008; Han & Hwang, 2014). To illustrate, goal desire indicates how keenly an individual wants to perform a particular goal-directed behaviour to achieve their *end* state (e.g. enhanced body image). Implementation desire describes how strongly an individual wants to perform a specific behaviour. To illustrate, implementation desire energises the action intention to perform the instrumental goal-directed behaviour, targeting the individual's *means* to achieve their end state (e.g. engage in a cosmetic procedure). Thus, goal desire is focused on the end state, achieving the ultimate goal of the individual, whereas implementation desire is directed at the means to securing the intended goal, activating intention to execute a goal-directed behaviour (Bagozzi et al., 2003).

The desire construct is identified in one of the key empirical decision-making models, namely the MGB. The MGB conceptualises desire as “a state of mind whereby an agent has a personal motivation to perform an action or to achieve a goal” (Perugini & Bagozzi, 2001 p. 71). Here, desire encompasses the motivational drive in the decision-making process, acting to incorporate sequences of cognitive, affective, self-perception and social evaluations by the individual before the formation of an intention (Bagozzi et al., 2003; Carrus et al., 2008).

According to the MGB, the desire to perform a behaviour exerts a significant and positive impact on the intention to engage in a behaviour (Perugini & Bagozzi, 2001). In health and leisure studies, desire is noted to show a significant and positive impact on intention to engage in self-help mental services (Dibb et al., 2013), physical activities (Esposito et al., 2016), sports brands (Chiu & Choi, 2018), environmentally responsible museum visitation (Han et al., 2018), environmentally friendly festival visitation (Song et al., 2012) and responsible gambling (Song et al., 2012). Therefore:

H6: Desire to engage in a cosmetic procedure has a significant and positive influence on the intention to engage in the procedure.

3.2.4. Perceived Risk

Perceived risk describes a consumer's negative insights of altering and opposing outcomes as a result of making a decision (Laroche et al., 2004). Bauer's (1960, p. 21) seminal conceptualisation of perceived risk in consumer behaviour highlighted the consequences and uncertainty of purchase outcomes, with some likely to be negative. As a result, there emerged three perspectives of perceived risk in consumer decision-making (Ray & Sahney, 2018).

The first school of thought, originating from Bauer's (1960) observation, interprets risk in terms of uncertainty (e.g. Arndt, 1967; Jereb, 2013; Sisco & Martin, 2015; Mishrat, 2014; Ross, 1975). However, this perspective is problematic as it equates uncertainty with risk when the latter deals in probabilities and the former in no probabilities (Quintal et al., 2010; Stone & Gronhaug, 1993).

The second school of thought explicates perceived risk as encompassing indecisions and consequences. Indecisions consider the probability that a loss might arise, while consequences consider the importance of the loss to the consumer (Laroche et al., 2004). This is underpinned by prospect theory, which argues that in risky purchase contexts, customers weigh the probable occurrence of a loss against the desirability of a benefit (Kahneman & Tversky, 1979). Mitchell (1999) calls attention to Sjoberg's (1980) criticism of this conceptualisation for its limited and ambiguous use.

The third school of thought posits that perceived risk represents the expected losses related to a purchase, which functions as a purchase inhibitor (Peter & Ryan, 1976). Expanding on this conceptualisation, Stone and Winter (1987) conjectured perceived risk to be a consumer's subjective expectation of prospective losses. This conceptualisation continues to be reiterated in contemporary research (e.g. Ray & Sahney, 2018). Therefore, the greater the expectation that losses will arise, the higher the level of risk that consumers perceive (Quintal & Phau,

2014). Generally, contemporary research has favoured Stone and Winter's (1987) conceptualisation of perceived risk as a subjective anticipation of potential loss.

A review of the literature suggests that the perceived risk construct is multidimensional, incorporating physical/safety, financial, performance, social, opportunity/time and psychological loss, as evident in various purchase contexts in the consumer behaviour literature (e.g. Quintal & Phau, 2014; Ray & Sahney, 2018; Zheng et al., 2012). For this research, five relevant perceived risk dimensions were interpreted in the context of cosmetic procedures. Physical risk anticipates the possibility of health hazards and adverse outcomes of the procedure. These include pain (Gimlin, 2000), bruising, infections and unpleasant side effects on a consumer's appearance (Gabriel et al., 1997; Hill et al., 2004; Morgan, 1991; Richetin et al., 2019). Financial risk weighs the likelihood of high costs in undertaking a procedure. For instance, half of the clientele from the British Association of Plastic, Reconstructive and Aesthetic Surgeons cite the cost of a procedure as being an issue for them (BAPRAS, 2015). Performance risk considers the prospect that the procedure does not deliver according to expectation. The normalisation of cosmetic procedures in society can generate unrealistic expectations (Weston, 2008), which if unmet can create sustained negative mood states (Borah et al., 1999; Naraghi & Atari, 2017) and body image discontent (Sarwer, 2018). Social risk takes into account the disapproval voiced by reference groups toward a procedure. For instance, consumers who undertake cosmetic procedures in Hong Kong and Japan report social discrimination from social groups about their altered attributes (Tam et al., 2012). Finally, psychological risk refers to the expectation of the loss in self-esteem or ego frustration from inner emotions. For instance, consumers express anxiety and depression after experiencing complications in their cosmetic procedure (Borah et al., 1999; Jacobsen et al., 2004).

The unpredictable marketplace compels consumers to deal with risk when making purchase decisions (Ray & Sahney, 2018; Schiffman et al., 2016). In health and leisure studies, perceived risk is conjectured to exert a significant and negative impact on the desire and intention to engage in food hazards (e.g. Cunha et al., 2010), blood donation (e.g. Zhou et al., 2012), financial investments (e.g. Munnukka et al., 2017), cosmetic procedures (e.g. Boulton & Malacrida, 2012; Milfelner et al., 2017) and information use related to non-surgical cosmetic procedures (e.g. Reisenwitz & Fowler, 2018). Therefore:

RQ2: What perceived risks associated with engaging in a cosmetic procedure will moderate the relationship between desire and intention to engage in the procedure?

In sum, the research questions and hypotheses in the research model are identified as can be seen in Table 3.1.

Table 3.1

Summary of Research Questions and Hypotheses in the Research Model

<i>RQ1</i>	<i>How will anticipated (a) positive emotions and (b) negative emotions differ significantly at the pre-, post- and toward the next engagement with a cosmetic procedure?</i>
<i>H1</i>	<i>Attitude toward engaging in a cosmetic procedure has a significant and positive influence on desire to engage in a cosmetic procedure.</i>
<i>H2</i>	<i>Subjective norms on beauty bias have a significant and positive influence on desire to engage in a cosmetic procedure.</i>
<i>H3</i>	<i>Perceived behavioural control has a significant and positive influence on desire to engage in a cosmetic procedure.</i>
<i>H4</i>	<i>Perceived behavioural control has a significant and positive influence on intention to engage in a cosmetic procedure.</i>
<i>H5a</i>	<i>Anticipated positive emotions from engaging in a cosmetic procedure have a significant and positive influence on desire to engage in the procedure.</i>
<i>H5b</i>	<i>Anticipated negative emotions from not engaging in a cosmetic procedure have a significant and positive influence on desire to engage in the procedure.</i>
<i>H6</i>	<i>Desire to engage in a cosmetic procedure has a significant and positive influence on intention to engage in the procedure.</i>
<i>RQ2</i>	<i>What perceived risks associated with engaging in a cosmetic procedure will moderate the relationship between desire and intention to engage in the procedure?</i>

3.3. Chapter Summary

This chapter introduced the conceptual framework that sets the foundation for research in the thesis. In doing so, the chapter outlines relevant theories and studies, derived from the literature review in Chapter Two, to underpin and explain the constructs and relationships to each other. The nine key constructs are introduced in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB) and their hypothesised relationships specified to meet the research objectives of this research. The next chapter identifies and examines the research paradigm for the approach, processes, methods and analyses used in planning the research design, implementing the data collection, exploring the research questions and testing the hypothesised relationships in the research model.

Chapter Four

Methodology

4.0. Introduction

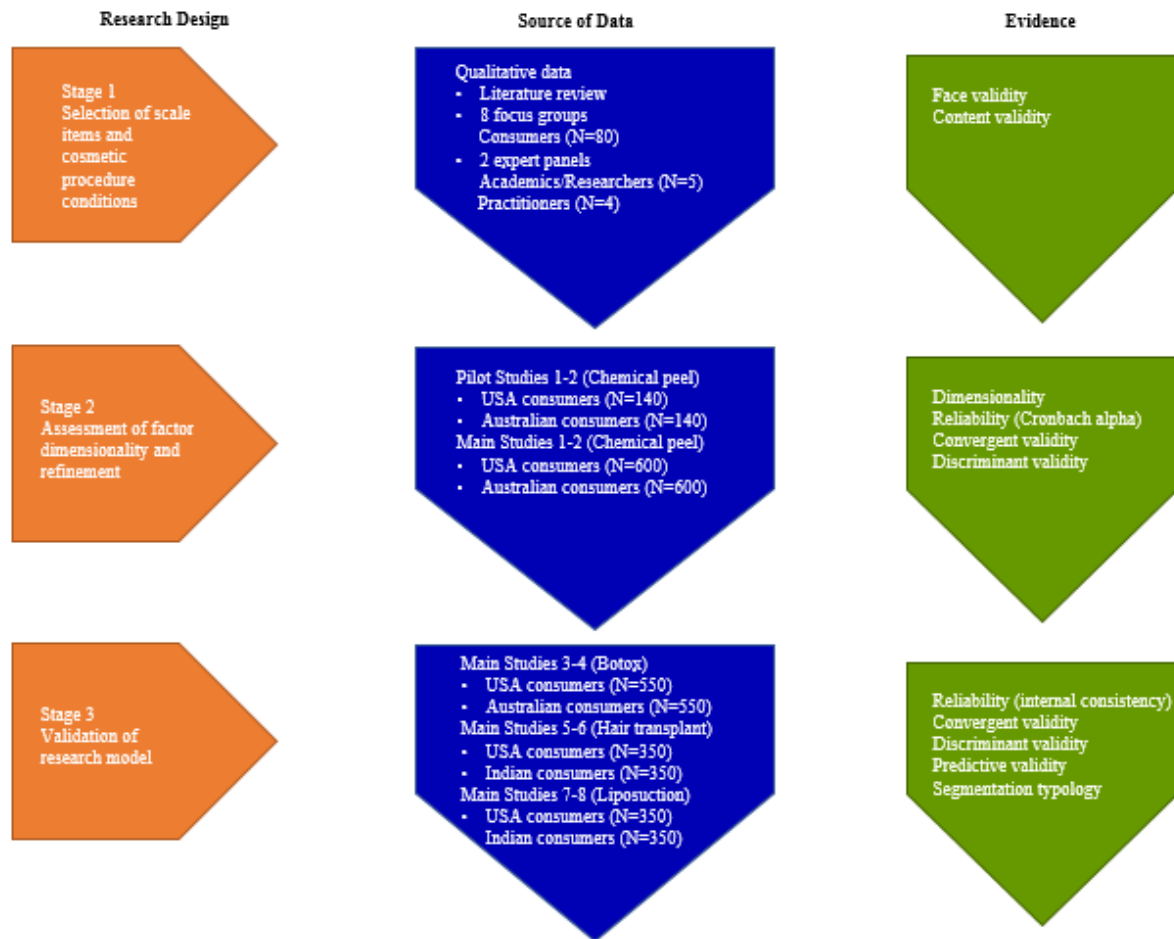
This chapter considers the research paradigm, which incorporates the methods utilised for the research design, data collection and data analysis required to examine the research questions as well as the research model and hypotheses. Each stage of the research methodology is presented and discussed in the chapter.

First, the pragmatism paradigm adopted as a platform to conduct the current research is introduced and justified. Second, the scale items for the key constructs, generated from extensive literature reviews and searches, focus groups and expert panels, are explained for their selection in the research model and under the cosmetic procedure conditions. Third, the survey instrument developed for the research is described and substantiated. Fourth, the sampling method employed in administering the data collection to the sampling frame across two pilot studies and eight main studies is identified and justified. Finally, the statistical techniques that were used to examine the data for hedonic adaptation to repeated cosmetic procedure engagement, and to determine a typology of consumer segments based on their perceived risk profiles as cosmetic procedure users, are outlined.

An overview of the methodology framework for the current research can be seen in Figure 4.1.

Figure 4.1

Overview of Methodology Framework



4.1. Research Paradigms

A paradigm is a constellation of beliefs, values and techniques shared by members within a group or discipline (Kuhn, 1970), which addresses a research problem and guides how these problems are solved (Schwandt & Schwandt, 2001). A research paradigm refers to a collaborative view shared by researchers on a prodigy that is examined (Bryman, 2003; Tashakkori & Teddlie, 1998). Paradigms act as facilitators to assist in developing research designs when examining a phenomenon (Parse, 1987). The selection of a research paradigm has a significant influence on methodological choices as it provides a platform for methods to conduct research (Guba & Lincoln, 1994).

A paradigm consists of three components, namely ontology, epistemology and methodology. Ontology (*what is reality?*) investigates what constitutes reality, whether it exists, what it looks like and what entities exist within this reality (Burrell & Morgan, 2017). Epistemology (*how do we know something?*) is concerned with the researcher's perceived knowledge of the research problem, how this knowledge is acquired and how it can be communicated (Cohen et al., 2009). Methodology (*how do we find out?*) considers the planning of methods to collect data and selecting particular methods to analyse collected data (Crotty, 1998). Consequently, three research paradigms exist in consumer psychology, namely the positivism paradigm, constructivism paradigm and pragmatism paradigm. Each paradigm is outlined in the following sections.

4.1.1. Positivism Paradigm

The positivism paradigm, also known as the “post-positivism paradigm”, is based on the view that scientific methods and techniques offer the paramount framework to examine research problems (Marsh & Furlong, 2002; Wright et al., 1992). In the positivism paradigm, reality remains constant, and information may be attained through reflection and explanation of established research hypotheses (Crotty, 1998; Guba & Lincoln, 1994) as construct validity and reliability become crucial measures (Neuman, 1997). Researchers follow a set pattern of establishing hypotheses and then test these hypotheses using quantitative measures to verify (reject) them (Buttery & Buttery, 1991). As the positivism paradigm uses closed-ended questions, statistical analysis and numerical data, it underpins the quantitative research approach.

4.1.2. Constructivism Paradigm

The constructivism paradigm is founded on cognitive psychology, suggesting that reality is subjective because it is constructed in the mind of the individual (Hansen, 2005). Constructivists argue that humans construct their own reality, which is pluralistic, interpretive and has open-ended perspectives (Creswell & Miller, 2000). In the constructivism paradigm, interaction between the researcher and participants is key toward developing research findings (Schwandt & Schwandt, 2001; Sciarra, 1999). As the constructivist paradigm uses open-ended questions and focuses on a single concept, it underpins the qualitative research approach.

4.1.3. Pragmatism Paradigm

The pragmatism paradigm integrates both descriptive and empirical methods (Onwuegbuzie, 2003). This liberates researchers from the constraints of adopting any particular research method and enables them to maximise opportunities to examine research questions by combining research methods (Hoshmand, 2003; Maxcy, 2003). Making the assumption that there are single and multiple realities to examine real-world problems (Creswell & Clark, 2007), the pragmatism paradigm provides researchers with an open-ended scope for zooming in (out) of the core of the research problem (Willems & Raush, 1969). It gives researchers the flexibility to adopt methods appropriate for their research objectives, strengthening their research design and findings (Creswell & Clark, 2007; Hall, 2012; Johnson & Onwuegbuzie, 2004; Maxcy, 2003; Robson, 1993). As the pragmatism paradigm integrates a mixed-method approach that provides a robust framework for examining and understanding a research problem (Tashakkori & Teddlie, 1998), it underpins both qualitative and quantitative research.

Mixed-method research refers to “the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study” (Johnson & Onwuegbuzie, 2004, p. 17). The mixed-method approach

incorporates a combination of both qualitative and quantitative research (Tashakkori & Teddlie, 1998). Qualitative research is a divergent reasoning approach that seeks answers to a research problem through questions, involving an in-depth study of a group of participants via interviews (Knox & Burkard, 2009). Quantitative research focuses more on convergent reasoning, allowing the examination of research elements using numerical techniques to analyse predetermined measures from a set of participants via surveys (Krathwohl, 1998).

Mixed-method research is emerging as a popular approach among researchers (Creswell, 2013; Tashakkori & Teddlie, 1998). This is attributed to three key reasons. First, research is typically multi-purpose and may not fit exclusively within a qualitative or quantitative design (Creswell, 2013; Darlington & Scott, 2002; Sechrest & Sidani, 1995). The approach creates a channel between qualitative and quantitative research methods, providing stable underpinning to a research problem (Onwuegbuzie & Leech, 2005; Shannon-Baker, 2016). Second, the interdependent and collaborative nature of the mixed-method approach offers researchers a platform to examine a research paradox and the scope to explore new perspectives that validate the results from one method with another (Darlington & Scott, 2002; Greene et al., 1989; Rossman & Wilson, 1985). Third, a combination of research methods provides a basis to develop a data analysis approach that results in richer results (Rossman & Wilson, 1985).

Mixed-method research has been adopted in the disciplines of psychology (e.g. McCrudden et al., 2019; Posadzki et al., 2010) and marketing (e.g. Hewlett & Brown, 2018; Rohm et al., 2013; So et al., 2018; Sood et al., 2017) in contexts such as addressing education problems (McCrudden et al., 2019), health behaviours among college students (Posadzki et al., 2010), planning for tranquil spaces in rural destinations (Hewlett & Brown, 2018), the use of social media to interact with brands by younger consumers (Rohm et al., 2013), motivations and constraints of Airbnb consumers (So et al., 2018), and the intention of Gen Y consumers to

engage in cosmetic surgery (Sood et al., 2017). The merits of the mixed-method approach, namely the integration of qualitative and quantitative research approaches, the scope for exploration and evaluation, the rigour in analytical methods and the richness of the results, prompted Woodruff (2003) to recommend adopting the approach in the marketing discipline. For all these reasons, the mixed-method approach was adopted to lay the foundation for the current research.

4.2. Qualitative Research

4.2.1. Focus Groups

Focus group methodology involves a group of participants who collectively discuss a set topic introduced by a researcher (Kitzinger, 1994). In interacting with, and responding to, each other, participants may reveal vital information on the research topic. To ensure a wide representation of responses across a population, it is critical to ensure heterogeneity in the demographic profiles when selecting participants for a focus group (Carey & Smith, 1994). Participant responses, added to the researcher's own views on the research topic, have the potential to generate rich, descriptive data relevant to the research problem (Clark et al., 1996).

The qualitative phase in the current research employed eight focus groups (N = 80) to gain an understanding of public awareness of the cosmetic procedures available in the marketplace and public perception of the emotions associated with engaging in a cosmetic procedure. Each focus group comprised eight to 12 participants from varying age, gender, social class, education, occupational and income groups to represent a cross section of the general population. At the outset, participants were provided with an information sheet detailing the purpose of the focus group. They were encouraged to ask any questions about the conduct of the focus groups and give written informed consent for their participation. Questions leading the discussion flow for the focus groups can be seen in Appendix 1.

Each focus group took between 75 and 90 minutes, with a 10-minute break provided in the middle of the session. The researcher recorded and took field notes of each group discussion. Initially, participants were presented with a list of six cosmetic procedures, which ranged from non-invasive to invasive procedures that were derived from literature searches of national medical websites. They were asked to rate each cosmetic procedure as either “Most Popular”, “Neutral” or “Least Popular”. Participants were also encouraged to suggest other cosmetic procedures that they deemed to be popular. This process was repeated for all eight focus groups, resulting in 10 cosmetic procedures. Scores for each cosmetic procedure that was rated “Most Popular” by the eight focus groups were pooled to arrive at an overall score. The overall score for each cosmetic procedure was calculated as a percentage and then ranked against the other cosmetic procedures. Only cosmetic procedures rated “Most Popular” and above 60 percent were selected. As a result, six cosmetic procedures were identified, as can be seen in Table 4.1.

Table 4.1

Focus Groups – Cosmetic Procedure Conditions

Non-invasive procedures	Invasive procedures
<i>Chemical peel</i>	<i>Hair transplant</i>
<i>Botox</i>	<i>Breast augmentation</i>
<i>Skin needling</i>	<i>Liposuction</i>

Next, participants were introduced to seven descriptors each for anticipated positive emotions and anticipated negative emotions, which were derived from an extensive literature review of emotions. They were asked to rate each descriptor as either “Most Appropriate”, “Neutral” or “Least Appropriate” in the context of engagement with a cosmetic procedure. Participants were also invited to suggest their own descriptors for anticipated positive emotions and anticipated negative emotions when engaging in a cosmetic procedure. This procedure was reiterated for all eight focus groups, resulting in an additional 10 new descriptors identified for anticipated positive emotions and 11 new descriptors for anticipated negative emotions.

Scores for each descriptor that was rated “Most Appropriate” by the eight focus groups were combined to arrive at an overall score. The overall score for each descriptor was converted into a percentage and then ranked against the other descriptors. Only descriptors rated “Most Appropriate” and above 60 per cent were selected. As a result, 22 scale items that represented 11 positive emotions and 11 negative emotions were identified, as can be seen in Table 4.2.

Table 4.2

Focus Groups – Emotions Scale Items

Positive emotions	Negative emotions
<i>Happy</i>	<i>Sad</i>
<i>Self-assured</i>	<i>Disappointed</i>
<i>Pleased</i>	<i>Frustrated</i>
<i>Delighted</i>	<i>Self-critical</i>
<i>Confident</i>	<i>Embarrassed</i>
<i>Gratified</i>	<i>Regretful</i>
<i>Satisfied</i>	<i>Anxious</i>
<i>Excited</i>	<i>Depressed</i>
<i>Relieved</i>	<i>Ashamed</i>
<i>Hopeful</i>	<i>Unsatisfied</i>
<i>Deserving</i>	<i>Insecure</i>

4.2.2. Expert Panels

An expert panel coalesces selected academics, researchers and practitioners who have relevant expertise in the research area (Davidson et al., 1997; Goodman, 1987). In an expert panel, these share their knowledge, provide feedback, evaluate and make recommendations for the research elements (Evans, 1997; Galliers & Huang, 2012). Drawing from their knowledge and experience, the experts are better equipped to critically review the research elements, resulting in recommendations based on sound foundations (Nind & Lewthwaite, 2018).

The qualitative phase in the current research convened two expert panels that included five academics and researchers as well as four practitioners. The academics and researchers had interests in psychology, marketing and consumer behaviour, whereas the industry practitioners

were employed in the medical and beauty industry. The panellists were invited to evaluate the six cosmetic procedures and refine the 22 scale items for anticipated emotions that were identified by the focus groups. The expert panellists were asked to rate each cosmetic procedure as “Most Popular”, “Neutral” or “Least Popular” and each emotion descriptor as “Most Appropriate”, “Neutral” or “Least Appropriate”. Once all the responses had been received, the researcher collated scores to derive an overall score for each indicator, which was then calculated as a percentage and ranked against other relevant indicators. Only indicators above 60 per cent were selected. As a result, two cosmetic procedures and five emotion descriptors were eliminated. This confirmed four cosmetic procedures, eight scale items for positive emotions and nine scale items for negative emotions, as can be seen in Tables 4.3 and 4.4.

Table 4.3

Expert Panels – Cosmetic Procedure Conditions

Non-invasive procedures	Invasive procedures
<i>Chemical peel</i>	<i>Hair transplant</i>
<i>Botox</i>	<i>Liposuction</i>

Table 4.4

Expert Panels – Emotions Scale Items

Positive emotions	Negative emotions
<i>Happy</i>	<i>Sad</i>
<i>Self-assured</i>	<i>Disappointed</i>
<i>Pleased</i>	<i>Frustrated</i>
<i>Delighted</i>	<i>Self-critical</i>
<i>Hopeful</i>	<i>Embarrassed</i>
<i>Gratified</i>	<i>Regretful</i>
<i>Satisfied</i>	<i>Anxious</i>
<i>Excited</i>	<i>Depressed</i>
	<i>Unsatisfied</i>

4.3. Quantitative Research

4.3.1. Sampling Approaches

The probability sampling method, commonly known as “random sampling” or “chance sampling”, offers every member of a given population an equal chance of being included in the research sample (Kothari, 2004). According to the author, this generates a representative sample due to the law of statistical regularity, which stipulates that if the sample size is randomly selected, it is likely to represent traits of the given population. The probability sampling method involves model-based inference, wherein an observed variable may depend on other unknown variables (Schreuder et al., 2001). Given that probability sampling aims to use the knowledge of the sample to learn more about the population, it should only be conducted in a situation where a researcher is fully aware of the list of all the possible units to be sampled (Uprichard, 2013). The key merit of the approach is that it gives an equal probability to each representative of the given population of becoming part of the sample (Hansen et al., 1983; Kothari, 2004). Its main challenge is that members of the population who are not selected become irrelevant even though they represent the population (Hajek, 1981).

The non-probability sampling method, also known as “deliberate sampling” or “purposive sampling”, intentionally selects a group that is believed to represent the entire population (Kothari, 2004). The approach has the advantages of conveniently identifying a target population and economically collecting data due to the small sample size required (Henry, 1990). The non-probability sampling method also gives researchers control over the selection process of respondents. Some researchers use non-probability sampling to further extend their understanding of the existing sample (Uprichard, 2013). Further, the approach allows researchers to corroborate research outcomes already established by other researchers (Tansey,

2007). In sum, the non-probability sampling method is more suitable when existing knowledge of the sample is required to be explored intensively.

The disadvantage of the non-probability sampling method is the smaller sample size it collects, which reduces the prospect of generalising the research findings to a wider population (Tansey, 2007). There is also the undesirable possibility of researcher bias, where a sample is selected that complements the expected research findings. This could result in some undiscovered or overlooked research elements (Kothari, 2004). As the advantages of the method (i.e. convenience of access to target sample, short time, control over sample selection and cost-effectiveness) exceed the disadvantages (i.e. smaller sample size and research bias), the use of the non-probability sampling approach in the current research was justified.

4.4. Research Instrument

4.4.1. Self-administered Survey

A self-administered survey is a stand-alone questionnaire intended to be completed by a respondent without interference from the researcher (Lavrakas, 2008). The merit of the self-administered survey is that it is a low-cost data collection method, which achieves wide terrestrial coverage when dealing with sensitive topics within a short time frame (Bowling, 2005; Etter & Perneger, 2000; Gwaltney et al., 2008; Kaplowitz et al., 2004). Additionally, it eliminates the respondent's social desirability bias that is prevalent in a face-to-face or verbal interview (Kaplowitz et al., 2004; Yun & Trumbo, 2000). One challenge of the self-administered survey is the likelihood of measurement error as researchers are not present to clarify any concerns or questions from the respondent (Lavrakas, 2008). There is also the risk that without encouragement, respondents may not be interested in completing the survey (Sekaran, 2003). As the merits of the method (i.e. cost-effective access to wider target audiences, short time and reduced social desirability bias) outweigh the challenges (i.e. missing

and incomplete data), the use of the self-administered survey was deemed appropriate for the current research.

4.4.2. Online Surveys and Panels

The practice of using an online survey for primary research is becoming common due to the advantages it offers (Andrews et al., 2003; Nie & Erbring, 2000). A main advantage is its time efficiency in collecting large quantities of data online as compared to other methods, such as face-to-face or postal surveys (Lefever et al., 2007; Schillewaert & Meulemeester, 2005; Taylor, 1999). The online survey is also cost-effective because no paper, printing or physical distribution expenses are incurred (Couper, 2000; McDonald & Adam, 2003). Further, the instrument has access to potential respondents who otherwise may be a challenge to reach (Jones, 1998; Lefever et al., 2007). The online survey protects the anonymity of respondents so they can complete the survey at leisure without the looming presence of researchers (Schillewaert & Meulemeester, 2005). Also, the instrument is user-friendly compared to printed surveys as questions are presented in a series of linked pages with prompts, challenging respondents to pay more attention and engaging them to complete the survey (Kiesler & Sproull, 1986). Moreover, the online survey compels respondents to enter their responses before moving onto the next question, resulting in reduced missing data and data entry errors (Couper et al., 2001; Schillewaert & Meulemeester, 2005). A disadvantage of the online survey is that it attracts respondents from younger age groups, professionals and higher-income earners who are more tech-savvy (McDonald & Adam, 2003), skewing the demographics in the research.

The online consumer panel provides researchers with an alternative method for collecting research data. Its key merit is the immediate availability of a pool of respondents (Brüggen et al., 2011) whom researchers can target and reach under one umbrella (Furlong, 1989). The

online consumer panel is also screened and selected based on their relevant experience with research elements, ensuring that they are an appropriate target population (Evans & Mathur, 2005). Further, respondents are encouraged to complete the online survey and provide feedback in exchange for rewards. A challenge of using the online consumer panel is respondent bias due to the high number of surveys completed by each respondent. Moreover, respondents are likely to complete the responses just to secure the rewards (Evans & Mathur, 2005). As the advantages of the method for researchers (i.e. access, time and cost efficiencies, data quality and reduced researcher bias) and for respondents (i.e. anonymity, convenience and rewards) exceed the disadvantages (i.e. skewed tech-savvy demographics and respondent bias), this justified the use of the online consumer panel in the current research. Thus, the current research employed a professional data company to identify appropriate online consumer panels that had prior experience with a cosmetic procedure.

The online survey instrument followed the ethical protocols for conducting marketing research and was approved by the Curtin University Ethics Committee (Approval number: HRE2017-0209). Initially, respondents were provided with an information sheet and asked to confirm that they had read and understood the purpose, extent and possible risks of participating in the research. Then, they were requested to provide written informed consent that they were willing to proceed with their participation in the research. Next, respondents were assured of their anonymity and that all their individual responses would remain confidential. They were also advised of their right to refuse to participate in the survey at any time without prejudice.

The survey adopted a retrospective approach, inviting respondents to contemplate their pre-, actual and post-experiences with a cosmetic procedure. On the one hand, this reflective approach, with its integrated pre-and-post experiences, has the merit of presenting a truthful narrative of human behaviour, particularly in the health context (Östlund et al., 2011). On the

other hand, it poses the challenges of being an inconsistent approach because respondents may have forgotten their experiences and being prone to biased responses as they try to justify their behaviour (Rosenman et al., 2011). However, as the research assured respondents of their anonymity and confidentiality, the authenticity of the narrative outweighed the potential of interviewee bias.

4.5. Measures

The survey, which was developed in English, comprised seven sections. A screening question asked respondents about their prior experience with a cosmetic procedure identified by the researchers. Respondents with no prior experience were screened out of the survey. Section A elicited the frequency and recency of respondents' past behaviour. Section B elicited responses about their attitude, subjective norms, perceived behavioural control and perceived risks *before* engaging with a cosmetic procedure. Section C repeated the same for attitude, subjective norms, perceived behavioural control and perceived risks *after* engaging with a cosmetic procedure. Section D invited respondents to consider their anticipated positive emotions *before, after* and toward their *next* cosmetic procedure engagement. Section E repeated the same for anticipated negative emotions *before, after* and toward the *next* cosmetic procedure engagement. Section F asked respondents about their future desire and intention toward cosmetic procedure engagement. Finally, Section G contained questions related to respondents' demographics. In total, the key constructs examined in the research were represented by 58 scale items. With the exception of the scale items for anticipated positive emotions and anticipated negative emotions, which were identified from the qualitative research, the other scale items were chosen and adapted from existing scales. These other items, selected for their reliability and relevance to the research context, are identified in the following sections.

4.5.1. Past Behaviour

Section A of the survey examined past experience by considering respondents' frequency and recency in engaging with a cosmetic procedure. Two scale items representing frequency and one for recency were used, as can be seen in Table 4.5.

Table 4.5

Past Behaviour Scale Items

Existing scale	Scale items
Past behaviour (frequency) Perugini & Bagozzi (2001) $\alpha = 0.74-0.88$	<i>I have had a [cosmetic procedure]:</i> <ul style="list-style-type: none"> • <i>Once, twice, 3 times, 4 times, over 5 times</i> <i>I engage in a [cosmetic procedure] every:</i> <ul style="list-style-type: none"> • <i>1-5 months, 6-11 months, year, 2 years, 3 years or more</i>
Past behaviour (recency) Perugini & Bagozzi (2001) $\alpha = 0.74-0.88$	<i>The last time I had a [cosmetic procedure] was:</i> <ul style="list-style-type: none"> • <i>1-5 months ago, 6-11 months ago, 1 year ago, 2 years ago, over 3 years ago</i>

4.5.2. Attitude, Subjective Norms and Perceived Behavioural Control

Section B of the survey considered respondents' attitude, subjective norms and perceived behavioural control when engaging with a cosmetic procedure. Four scale items representing attitude, four for subjective norms and five for perceived behavioural control were adopted, as can be seen in Tables 4.6, 4.7 and 4.8, respectively.

Table 4.6

Attitude Scale Items

Existing scale	Scale items
Attitude Richetin et al. (2008) $\alpha = 0.89$	<i>After I had my [cosmetic procedure], I thought that doing it was:</i> <ul style="list-style-type: none"> • <i>Bad – Good</i> • <i>Unpleasant – Pleasant</i> • <i>Negative – Positive</i> • <i>Unsatisfying – Satisfying</i>

Table 4.7***Subjective Norms Scale Items***

Existing scale	Scale items
Subjective norms Lee et al. (2012) $\alpha = 0.96$	<i>After I had my [cosmetic procedure], most people important to me:</i> <ul style="list-style-type: none"> • <i>Supported my decision to get the procedure</i> • <i>Understood why I had to have the procedure</i> • <i>Agreed with me about getting the procedure</i> • <i>Recommended that I have the procedure</i>

Table 4.8***Perceived Behavioural Control Scale Items***

Existing scale	Scale items
Perceived behavioural control Lee et al. (2012) $\alpha = 0.85$	<i>After I had my [cosmetic procedure], I was convinced that:</i> <ul style="list-style-type: none"> • <i>Whether or not I did the procedure was completely up to me</i>
Kim et al. (2011) $\alpha = 0.89$	<ul style="list-style-type: none"> • <i>I was capable of getting the procedure</i> • <i>I had enough money to do the procedure</i> • <i>I had enough time to get the procedure</i> • <i>I had enough opportunities to have the procedure</i>

4.5.3. Perceived Risk

Section C of the survey asked respondents about their perceived risk associated with engaging in a cosmetic procedure. Four scale items, each representing the physical, financial, performance and psychological risk dimensions, were utilised, as can be seen in Table 4.9.

Table 4.9***Perceived Risk Scale Items***

Existing scale	Scale items
Perceived risk (financial) Laroche et al. (2004) $\alpha = 0.90$ Mieres et al. (2006) $\alpha = 0.81-0.90$	<ul style="list-style-type: none"> • <i>The expenses incurred would not be a wise investment</i> • <i>I was not sure whether I would get my money's worth</i> • <i>Having the cosmetic procedure would involve financial loss for me</i> • <i>There were better ways of spending my money than getting the procedure</i>
Perceived risk (performance) Laroche et al. (2004) $\alpha = 0.88$	<ul style="list-style-type: none"> • <i>The procedure would not provide the benefits that I expected</i> • <i>The procedure would not really "perform" the way it was supposed to</i> • <i>The procedure could not be relied upon to give me a good outcome</i> • <i>The procedure would not live up to expectation</i>
Perceived risk (psychological) Laroche et al. (2004) $\alpha = 0.95$ Mieres et al. (2006) $\alpha = 0.86-0.90$	<ul style="list-style-type: none"> • <i>It gave me an unwanted feeling of anxiety</i> • <i>I felt uneasy when thinking about doing the procedure</i> • <i>The thought of getting the procedure caused me to experience some tension</i> • <i>I was not sure if having the procedure reflected my style</i>
Perceived risk (physical) Laroche et al. (2004) $\alpha = 0.90$ Mieres et al. (2006) $\alpha = 0.89-0.93$	<ul style="list-style-type: none"> • <i>The procedure would not be safe for me</i> • <i>The procedure would damage my health</i> • <i>The procedure would adversely affect my appearance</i> • <i>The procedure could cause me some physical harm</i>

4.5.4. Anticipated Positive Emotions

Section D of the survey examined respondents' anticipated positive emotions before, after and for the next cosmetic procedure. Eight scale items representing anticipated positive emotions derived from the qualitative research were used, as can be seen in Table 4.10.

Table 4.10***Anticipated Positive Emotions Scale Items***

Existing scale	Scale items
Anticipated positive emotions Richetin et al. (2008) $\alpha = 0.90$	<i>When considering if I did succeed with my goal in getting my [cosmetic procedure], I would feel/felt:</i> <ul style="list-style-type: none"> • <i>Satisfied</i> • <i>Pleased</i> • <i>Delighted</i> • <i>Hopeful</i> • <i>Gratified</i> • <i>Happy</i> • <i>Excited</i> • <i>Self-assured</i>
Kim et al. (2011) $\alpha = 0.91$	
Perugini & Bagozzi (2001) $\alpha = 0.74-0.88$	

4.5.5. Anticipated Negative Emotions

Section E of the survey considered respondents' anticipated negative emotions before, after and for the next cosmetic procedure. Nine scale items representing anticipated negative emotions taken from the qualitative research were adopted, as can be seen in Table 4.11.

Table 4.11***Anticipated Negative Emotions Scale Items***

Existing scale	Scale items
Anticipated negative emotions Richetin et al. (2008) $\alpha = 0.90$	<i>When considering if I did succeed with my goal in getting my [cosmetic procedure], I would feel/felt:</i> <ul style="list-style-type: none"> • <i>Depressed</i> • <i>Frustrated</i> • <i>Regretful</i> • <i>Sad</i> • <i>Unsatisfied</i> • <i>Disappointed</i> • <i>Embarrassed</i> • <i>Anxious</i> • <i>Self-critical</i>
Perugini & Bagozzi (2001) $\alpha = 0.74-0.88$	
Spangenberg et al. (2003) $\alpha = 0.74-0.88$	

4.5.6. Desire and Intention

Section F of the survey asked respondents about their desire and intention to engage with a cosmetic procedure in the near future. Five scale items representing desire and four scale items for intention were utilised, as can be seen in Tables 4.12 and 4.13.

Table 4.12

Desire Scale Items

Existing scale	Scale items
Desire	<i>In the next year:</i>
Richetin et al. (2008)	<ul style="list-style-type: none"> • <i>My desire to have my next [cosmetic procedure] is...</i> • <i>My aspirations for getting my next [cosmetic procedure] can be expressed as...</i> • <i>The intensity of my desire to have my next [cosmetic procedure] can be described as...</i> • <i>The intensity of my hope for getting my next [cosmetic procedure] is...</i> • <i>Having my next [cosmetic procedure] is something I dream about doing</i>
$\alpha = 0.85$	

Table 4.13

Intention Scale Items

Existing scale	Scale items
Intention	<i>Within the next year:</i>
Kim et al. (2011)	<ul style="list-style-type: none"> • <i>I plan to do my next [cosmetic procedure]</i> • <i>I will make an effort to get my next [cosmetic procedure]</i> • <i>I intend to have my next [cosmetic procedure]</i> • <i>I will invest time and money to get another [cosmetic procedure]</i>
$\alpha = 0.82-0.94$	

Two forms of rating scales were used to measure the 58 scale items that represented the key constructs in the research. A seven-point bipolar rating scale measured the scale items for attitude. A seven-point Likert-type scale, ranging from “Strongly Disagree” (1) to “Strongly Agree” (7), assessed the scale items for all other constructs.

4.6. Studies

4.6.1. Pilot Studies

Pilot studies are central to robust research design, assisting researchers with examining the research design on a smaller scale before conducting a full-scale study (Leon et al., 2011). They provide an opportunity to pretest the research instrument and evaluate the feasibility of the research framework (Baker, 1994). Pilot studies also identify any potential problems with the research by trialling groups of respondents similar to the research target population (Van Teijlingen & Hundley, 2001).

The current research conducted two pilot studies to pretest the survey and assess the psychometric properties of the scale items. Each study, adopting a non-probability, convenience sampling method, was implemented in the USA and Australia between May and June 2017. The two countries were selected because of the popularity of non-invasive cosmetic procedures performed there. A 15-minute, self-administered online survey targeted consumer panel members who had prior experience with chemical peels. In line with the population that engages in chemical peels, the sampling frame comprised respondents who varied in age, gender, social class, education, occupation and income. Consequently, respondents who had no prior experience with chemical peels were screened out. A quota of 150 responses was set for each country sample. This complied with the minimum sample size of 100–150 required to achieve a stable maximum likelihood estimation result (Hair et al., 2018). In total, 140 usable responses were collected for each country, as can be seen in Table 4.14.

Table 4.14***Pilot Studies***

Studies	USA Study 1	Australia Study 2
Total number of responses	150	150
Total number of unusable responses	10	10
Total number of usable responses	140	140
Percentage of usable responses	93%	93%

4.6.2. Main Studies

Eight main studies were conducted to assess the research questions as well as the research model and hypotheses. Each study, employing a non-probability, convenience sampling approach, was implemented in the USA, Australia and India between April and October 2018. The three countries were chosen because of the popularity of non-invasive and invasive cosmetic procedures undertaken there.

A 15-minute, self-administered online survey targeted consumer panel members who had previous experience with one of the four cosmetic procedure conditions, as can be seen in Table 4.15. Notably, the USA was selected for every cosmetic procedure condition because of its leadership status in the practice on social media (Hopkins et al., 2020) and its rising demand, with 18 million Americans engaged in cosmetic procedures in 2019 (ASPS, 2019).

Table 4.15***Cosmetic Procedure Conditions***

Condition	Description
Chemical peel Study 1 and Study 2	A chemical peel is a non-invasive procedure in which a chemical solution is applied to remove the outer layer of the facial skin gently. The procedure is effective in removing dead skin and uneven skin pigmentation. This results in smoother, rejuvenated facial skin. The procedure is conducted every one to two months.
Botox Study 3 and Study 4	Botox is a minimally invasive procedure used to reduce facial wrinkles. A chemical solution is injected directly into the facial tissue to block nerve signals and relax muscles. This results in the

	appearance of reduced wrinkles on the skin for a limited time. The procedure is repeated every four months to a year.
Hair transplant Study 5 and Study 6	A hair transplant involves invasive cosmetic surgery to treat hair loss. Hair follicles are removed from a part of the body and surgically grafted to the thinning areas of the scalp. Due to its high costs, it is conducted over a number of sittings to spread out the outlay.
Liposuction Study 7 and Study 8	Liposuction refers to highly invasive cosmetic surgery, whereby a cannula is inserted into the skin to break up stubborn fat deposits from different body parts. The surgical procedure contours various body parts (e.g. abdomen, thighs, buttocks, neck, chin, arms and calves) and improves overall body shape.

The sampling frame, which included respondents who had engaged in a cosmetic procedure nominated by the researchers, varied in age, gender, social class, education, occupation and income. To avoid respondent bias, only one survey under one of the four cosmetic procedure conditions was completed by each respondent. Due to budget constraints and access to the target sample, a quota over 350 was set for each country sample, as can be seen in Table 4.16. This addressed the minimum sample size of 100–150 needed to attain a stable maximum likelihood estimation outcome (Hair et al., 2018).

Table 4.16

Main Studies

Chemical peel April–June 2018	USA Study 1	Australia Study 2
Total number of usable responses	600	600
Botox June–August 2018	USA Study 3	Australia Study 4
Total number of usable responses	550	550
Hair transplant August–October 2018	USA Study 5	India Study 6
Total number of usable responses	350	350
Liposuction August–October 2018	USA Study 7	India Study 8
Total number of usable responses	350	350

4.7. Data Analysis

Statistical software programs from IBM, namely SPSS 26 and AMOS 26, were used in statistical analysis to identify the demographic profiles, examine the research questions and test the hypotheses in the research model. Statistical techniques included descriptive analysis, exploratory factor analysis, correlation analysis, confirmatory factor analysis, analysis of variance, structural equation modelling and cluster analysis. Each of these techniques is outlined and their uses in the research are justified in the following sections.

4.7.1. Exploratory Factor Analysis

Exploratory factor analysis (EFA) is an “exploratory” technique used to determine the principal factors that exist in a data set (Hooper, 2012) and identify a factor structure without imposing a preset structure on the outcome (Child, 1990). The technique assesses correlations among a large number of variables by defining common sets of factors (Hair et al., 2018). The critical indices in EFA as suggested by Hair et al. (2018) are identified as follows:

- Average variance extracted is greater than 0.50 to determine that the convergent validity of the factor is adequate.
- Kaiser’s eigenvalue is more than 1.0 to ensure that the optimal number of retained factors describe constructs in the research model.
- Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO MSA) is higher than 0.60 to verify that the data are suitable for factor analysis.
- Bartlett’s test of sphericity is less than 0.05 to ascertain that variances are equal across all factors and that the correlation matrix is an identity matrix.
- Community that shows the level of variance greater than 0.5 to establish higher variance between each variable.

- Cross-loadings below 0.30 to assess that the scale items only relate to the associated factor.
- A scree plot, which represents the eigenvalues on a graph, to display the number of factors that should be retained.
- Cronbach's alpha is above 0.70 to suggest the internal consistency between the scale items of a factor represents and measures the same factor.

In the two pilot studies and the eight main studies, EFA, using the oblimin rotation with SPSS 26, assessed the factor structures and explored reliability with Cronbach's alpha. Each study consulted the critical indices as stipulated above.

4.7.2. Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is a multivariate statistical technique that examines how well the cluster of scale items fit within a construct. The technique examines the relationships between a set of measured variables, ensuring both internal and external reliability of the scale items by reducing the number of items within a construct (Kumar & Dillon, 1987). CFA offers flexibility in controlling the number of measured variables and their relationship to the underlying latent variable so that the covariance matrix of the measured variables may be scrutinised (Suhr, 2006).

The two-step approach to CFA using the maximum likelihood estimation method assesses the validity and reliability of constructs (Anderson & Gerbing, 1988; Baumgartner & Homburg, 1996). The first step adopts a one-factor congeneric model to refine each construct's psychometric properties (Thompson, 2004). The second step introduces a measurement model incorporating all constructs in the model to seek any further improvement to the model (Thompson, 2004). A variety of goodness-of-fit indices are used to evaluate the assumed factor model and to determine the model fit:

- Parameter estimates are greater than 0.60 to imply that a factor is unidimensional (Garver & Mentzer, 1999).
- Normed chi-square, which is the ratio of the chi-square divided by the degrees of freedom, is less than 3.0 (Bollen, 1989).
- Root mean square error of approximation (RMSEA), which measures the discrepancy between an observed and an estimated covariance matrix, is below 0.08 to suggest an acceptable fit (Hu & Bentler, 1999) and below 0.05 to suggest a good fit (Baumgartner & Homburg, 1996).
- Normal Fit Index (NFI), which compares a model's fit to a nested baseline model, is over 0.90 to be deemed appropriate (Baumgartner & Homburg, 1996).
- Comparative Fit Index (CFI), which is a non-centrality parameter-based index to overcome sample size effects, is greater than 0.90 to indicate an acceptable fit (Baumgartner & Homburg, 1996).
- Goodness-of-fit Index (GFI), which is the squared residuals from prediction compared with the actual data, has no absolute threshold level, although a higher value suggests a better fit (Hair et al., 2018).

4.7.3. Reliability, Average Variance Extracted and Validity

As a result of conducting CFA procedures, the composite reliability and average variance extracted may be calculated. Composite reliability (CR) is the calculation of the degree of uniformity between multiple scale items of a construct (Hair et al., 2018). It is also used to check the internal consistency to ensure all scale items measure the same construct (Fornell & Larcker, 1981). A minimum value of 0.70 is considered adequate (Hair et al., 2018). Composite reliability is computed by the following formula:

$$\text{Construct reliability} = (\sum\lambda)^2 / [(\sum\lambda)^2 + \sum(1-\lambda_j^2)]$$

Average variance extracted (AVE) is a measure of the degree of variance captured by a construct in relation to the level of variance due to measurement error (Fornell & Larcker, 1981). The AVE is estimated by the sum of squares of completely standardised factor loadings and then divided by this sum plus a total of error variances for indicators. The AVE is computed by the following formula:

$$\text{Variance extracted} = \sum\lambda^2 / [\sum\lambda^2 + \sum(1-\lambda_j^2)]$$

Convergent validity demonstrates the strength of the relationship between scale items within a construct (Cole, 1987). Convergent validity is assessed in two ways. First, a benchmark value of the standardised parameter estimate is set (≥ 0.70) for the overall fit of the measurement model and for theoretical consistency (Steenkamp & Van Trijp, 1991). Second, the AVE for each construct that is greater than 0.50 implies convergent validity (Fornell & Larcker, 1981; Hair et al., 2018).

Discriminant validity suggests that two constructs that should not be correlated are in fact not correlated (Brown, 2014). Discriminant validity is assessed in three ways. First, the AVE for each construct should be greater than the squared structural path coefficient between two constructs (Fornell & Larcker, 1981). Second, the correlation between any two constructs that is below 0.80 supports the test (Bagozzi & Heatherton, 1994; Dabholkar et al., 1997; Lings & Greenley, 2005). Third, the correlation between any two constructs plus or minus two standard errors with a confidence interval that is less than the value of 1.0 implies discriminant validity (Bagozzi & Heatherton, 1994).

In the two pilot studies and the eight main studies, the two-step CFA, using the maximum likelihood estimation method with AMOS 26, refined the factor structures and established the

reliability and convergent and discriminant validity of each construct (Hair et al., 2018). Moreover, each study referred to the goodness-of-fit indices and validity tests identified above to achieve this result.

4.7.4. ANOVA

Analysis of variance (ANOVA) is a diagnostic method aimed at identifying whether difference exists between the means of two or more groups (Kao & Green, 2008). Further, Tukey's post hoc test is conducted to examine whether the means between such groups are significantly different (Hair et al., 2010). In the main studies under the Botox, hair transplant and liposuction conditions, ANOVA, using Tukey's post hoc test with SPSS 26, identified and mapped out significant changes in the mean scores for anticipated positive emotions and anticipated negative emotions over shorter-term and longer-term durations. This analysis determined the anticipated emotions in hedonic adaptation to repeated engagement with a cosmetic procedure.

4.7.5. Structural Equation Modelling

Structural equation modelling (SEM) is used to examine the research hypotheses and to measure standardised path coefficients to establish the relative importance of each construct (Schumacker & Lomax, 2004). The SEM method allows researchers to introduce and test hypothesised relationships in one model at the same time (Gerbing & Anderson, 1988).

Multigroup analysis with SEM provides a platform to compare and examine differences among latent variables in various groups (Byrne, 2016; Schmitt, 1982; Vandenberg & Lance, 2000). The critical thresholds in conducting confirmatory factor analysis are also observed for SEM with multigroup analysis (Hair et al., 2018). In the two pilot studies and the eight main studies, SEM, using multigroup analysis with AMOS 26, tested the hypotheses in the research model (Gerbing & Anderson, 1988). Again, each study utilised the goodness-of-fit indices and

validity tests as stipulated earlier to achieve this outcome. This analysis examined hedonic engagement with a cosmetic procedure.

4.7.6. Cluster Analysis

Cluster analysis is an exploratory analysis method of grouping comparable objects when the number of groups is not known to the researchers (Kaufman & Rousseeuw, 2009) Two-step cluster analysis identifies homogeneous groups of cases if the grouping is not known and allows researchers to group respondents based on the identified characteristics they own (Hair et al., 2018). In the main studies under the Botox, hair transplant and liposuction conditions, two-step cluster analysis with SPSS 26 identified a typology of consumer segments based on how they perceived risk in cosmetic procedure engagement.

4.8. Chapter Summary

This chapter focused on the research methodology used in the research design, data collection and analysis across two pilot studies and eight main studies conducted in the USA, Australia and India. The pragmatism paradigm incorporating the mixed-method approach was adopted to develop and refine the research instrument and key constructs in the research. A non-probability, convenience sampling method with an online consumer panel targeted respondents who had prior experience with one of four cosmetic procedure conditions, in a self-administered survey. Exploratory and confirmatory factor analysis identified and confirmed the factor structures for the key constructs. Correlation analysis, composite reliability and average variance scores, calculated from the two-step confirmatory factor analysis, tested the reliability and validity of the constructs. Analysis of variance determined the anticipated positive emotions and anticipated negative emotions in hedonic adaptation to cosmetic procedures. Structural equation modelling using multigroup analysis examined hedonic

engagement with cosmetic procedures. Finally, cluster analysis identified segments of consumers according to their risk profiles as cosmetic procedure users.

Chapter Five

Studies One and Two: Chemical Peel

5.0. Introduction

This chapter introduces the pilot studies as well as Studies One and Two, identifying their research objectives and reporting their findings. As outlined in Chapter Four, the primary objectives of the two studies were to explore factor dimensionality and purify the scale items that represented the key constructs in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB). The studies respectively targeted members of the populations in the USA and Australia who had prior experience with a chemical peel. To achieve the research objectives, the studies assessed the psychometric properties of each construct to ascertain their reliability as well as their convergent and discriminant validity.

5.1. Data Collection

Chemical peels were selected to represent non-invasive cosmetic procedures because of their popularity in the USA and Australia. In 2016, the American Society of Plastic Surgeons (2019) reported that chemical peels were the third most common non-invasive cosmetic procedure, with more than 1,300,000 procedures conducted in that year. Similarly, chemical peels have been observed to be increasingly administered in Australia as an economical procedure for skin rejuvenation (O'Connor et al., 2018).

The qualitative research initiated an extant literature review across the multi-disciplines of psychology, marketing and recreation. The review identified scale items for the emotions constructs, which represented hedonic adaptation relevant to cosmetic procedures. Next, eight focus groups (N = 80) from diverse age, gender, education, occupation and income

backgrounds commented on the scale items. In total, 11 anticipated positive emotion and 11 anticipated negative emotion scale items were shortlisted. Then, two expert panels (N = 9) from academia and the healthcare industry refined and validated the scale items. This resulted in eight anticipated positive emotion and nine anticipated negative emotion scale items, measured on a seven-point Likert-style scale.

The quantitative research implemented a survey, self-administered to online panels, as the research instrument for Pilot Study One (USA) and Pilot Study Two (Australia). Only respondents who had previously undertaken a chemical peel more than once and in the last three years qualified as the target sample. A quota of 150 responses was set for each country sample, following the minimum sample size of 100 required to achieve a stable maximum likelihood estimation result (Hair et al., 2018). In total, 140 usable responses were collected for each country sample, suggesting a completion rate of 93%.

As identified in Chapter Four, 39 scale items represented the seven key constructs in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB). These scale items were examined by exploratory factor analysis (EFA) using the oblimin rotation with SPSS 24 to determine their dimensionality (Hair et al., 2018). The final solution, which identified 26 scale items that tapped into the seven constructs, met the critical criteria of: factor loadings (≥ 0.50); scale item communalities (≤ 0.40); average variance extracted (AVE) (≥ 0.60); Kaiser's eigenvalue (≥ 1.0); Kaiser-Meyer-Olkin measure of sampling adequacy (≥ 0.60); Bartlett's test of sphericity (≤ 0.05); and Cronbach's alpha (≥ 0.70) (Hair et al., 2018). This suggested that it was feasible to proceed with the main studies, commencing with Studies One and Two under the chemical peel condition.

Again, the online survey was self-administered to online panels for Study One (USA) and Study Two (Australia). A quota of 650 responses was set for each country sample, following

the minimum sample size of 100 required to achieve a stable maximum likelihood estimation result (Hair et al., 2018). In total, 600 usable responses were collected for each country sample, suggesting a completion rate of 92%.

5.2. Sample Profiles

The demographic profiles of respondents from the USA and Australia included their gender, age, marital status, education, occupation, working status and annual income. As can be seen in Table 5.1, there were more female respondents from the USA (75%) and Australia (93%) than male respondents. The skew toward more female respondents may be attributed to the fact that more women engage in chemical peels than men. Most respondents from the USA (74%) and Australia (61%) fell within the 21–34 age group. This reflects the popularity of cosmetic products with younger consumers and corroborates findings from previous studies (e.g. Davis, 2013; Pearl & Weston, 2003; Sood et al., 2017; Zuckerman & Abraham, 2008). The largest percentage of American respondents were married (44%), followed by those who were single (30%), whereas the largest percentage of Australian respondents were in a relationship (44%), followed by singles (31%).

The majority of American respondents (70%) held certificates or graduate diplomas while most Australian (66%) respondents held an undergraduate or a postgraduate degree, with both American (65%) and Australian (57%) respondents working in managerial or professional full-time positions. Most American (80%) and Australian (78%) respondents earned under USD\$89,999. This is representative of the population who earned an average annual income of US\$58,829 in the USA (US Bureau of Labour Statistics, 2018) and AU\$85,800 in Australia (Australia Bureau of Statistics, 2017). The demographic profiles suggested some similarity between the samples collected in the USA and Australia.

Table 5.1**Sample Profiles**

Demographics	Study 1 USA (N = 600)	%	Study 2 Australia (N = 600)	%
Gender				
Male	150	25.0%	40	6.7%
Female	450	75.0%	560	93.3%
Age				
Under 20 years	1	0.2%	3	0.5%
21–34 years	441	73.5%	363	60.5%
35–44 years	125	20.8%	180	30.0%
45–54 years	20	3.3%	34	5.7%
55–64 years	13	2.2%	13	2.2%
65 years and above	0	0.0%	7	1.2%
Marital status				
Single	177	29.5%	184	30.7%
In a relationship	130	21.7%	265	44.2%
De facto	27	4.5%	14	2.3%
Married	266	44.3%	137	22.8%
Education				
Certificate	120	20.0%	61	10.2%
Advanced Diploma or Diploma	132	22.0%	63	10.5%
Graduate Diploma or Graduate Certificate	166	27.7%	81	13.5%
Bachelor Degree	30	5.0%	252	42.0%
Postgraduate Degree	152	25.3%	143	23.8%
Occupation				
Manager	168	28.0%	137	22.8%
Retired	6	1.0%	14	2.3%
Professional	220	36.7%	206	34.3%
Clerical Support Worker	38	6.3%	45	7.5%
Craft and Related Trade Worker	12	2.0%	20	3.3%
Technician or Associate Professional	45	7.5%	67	11.2%
Service and Sales Worker	60	10.0%	57	9.5%
Student	23	3.8%	23	3.8%
Plant and Machinery Operator	13	2.2%	10	1.7%
Skilled Agricultural Forestry and Fishery	15	2.5%	21	3.5%
Working status				
Full-time	460	76.7%	430	71.7%
Part-time	79	13.2%	94	15.7%
Casual	29	4.8%	30	5.0%
Not working	32	5.3%	46	7.7%
Income				
Under \$44,999	190	31.7%	98	16.3%
\$45,000 – \$89,999	292	48.7%	368	61.3%
\$90,000 – \$149,999	90	15.0%	106	17.7%
\$150,000 and above	28	4.7%	28	4.7%

5.3. Exploratory Factor Analysis – Dimensionality

Exploratory factor analysis (EFA) determines the principal factors in a data set (Hooper, 2012) and identifies a factor structure (Child, 1990). In the survey, 39 scale items tapped into the seven Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB) constructs. The scale items were subjected to EFA using the oblimin rotation with SPSS 24 to explore their dimensionality (Hair et al., 2018). To address this objective, the samples from the USA (N = 600) and Australia (N = 600) were split in two and the *first* halves of both samples were combined into a pooled sample. This pooled sample (N = 600), which included 300 responses each from both the USA and Australia, was used to conduct EFA.

The criteria used to assess the factor structures included the factor loadings (≥ 0.50); Kaiser's eigenvalue (≥ 1.0); Kaiser-Meyer-Olkin measure of sampling adequacy (≥ 0.60); Bartlett's test of sphericity (≤ 0.05); scale item communalities (≥ 0.40); scree plot; and Cronbach's alpha (≤ 0.70) (Hair et al., 2018). After reiterated rotations, as can be seen in Table 5.2, the final seven-factor solution identified all 39 items, explaining 77.7% of the variance with a Kaiser-Meyer-Olkin measure of sampling adequacy (KMO MSA) of 0.90 and Bartlett's test of sphericity of 0.001, indicating that the factors had stable dimensions (Hair et al., 2018).

The first factor identified eight items that described anticipated positive emotions and was labelled "positive emotions" (PEM). The second factor, with nine items, represented anticipated negative emotions and was named "negative emotions" (NEM). The third factor showed five items that explained desire to engage and was called "desire" (DES). The fourth factor, with four items, represented willingness to act and was named "intention" (INT). The fifth factor showed four items that explained a psychological tendency to evaluate favourably (unfavourably) and was called "attitude" (ATT). The sixth factor identified five items that described self-efficacy and was labelled "perceived behavioural control" (PBC). Finally, the

seventh factor, with four items, encapsulated social others and was termed “subjective norms” (SN).

Cronbach’s alpha was used to test the reliability of the 39 items that represented the seven HEMGB factors with SPSS 24 (Hair et al., 2018). Cronbach’s alpha verifies whether all scale items within a factor are correlated and collectively account for the strength value of that factor (Nunnally, 1978). As can be seen in Table 5.2, the reliability for anticipated positive emotions was 0.92, while it was 0.97 for anticipated negative emotions, 0.92 for desire, 0.95 for intention, 0.95 for attitude, 0.90 for perceived behavioural control and 0.86 for subjective norms. The seven factors demonstrated reliability that was above the critical value of 0.70 and were deemed to be acceptable (Hair et al., 2018; Nunnally, 1978).

Table 5.2
Rotated Component Matrix

	1	2	3	4	5	6	7
Factor 1: Positive emotions (PEM)							
If I succeed in having a CP I will feel:							
• Delighted	0.84						
• Happy	0.82						
• Excited	0.81						
• Pleased	0.81						
• Self-assured	0.80						
• Gratified	0.79						
• Hopeful	0.78						
• Satisfied	0.77						
Factor 2: Negative emotions (NEM)							
If I do not succeed in having a CP I will feel:							
• Unsatisfied		0.92					
• Disappointed		0.92					
• Sad		0.91					
• Regretful		0.91					
• Frustrated		0.90					
• Anxious		0.89					
• Embarrassed		0.89					
• Depressed		0.88					
• Self-critical		0.83					
Factor 3: Desire (DES)							
The intensity of my hope to get next CP			0.90				
The intensity of my desire to get next CP			0.90				
My aspirations to get next CP			0.90				
My desire to get next CP			0.88				
I dream about getting my next CP			0.77				
Factor 4: Intention (INT)							
I intend to have my next procedure				0.95			
I will make an effort to get my next procedure				0.94			
I will invest time and money to get another procedure				0.92			
I plan to do my next procedure				0.92			
Factor 5: Attitude (ATT)							
I thought that doing it would be:							
• Negative-Positive					0.95		
• Unpleasant-Pleasant					0.94		
• Bad-Good					0.93		
• Unsatisfying-Satisfying					0.92		
Factor 6: Perceived behavioural control (PBC)							
I had enough time to get the procedure						0.88	
I had enough opportunities to have the procedure						0.87	
I had enough money to do the procedure						0.81	
I was capable of getting the procedure						0.80	
Doing the procedure was completely up to me						0.75	
Factor 7: Subjective norms (SN)							
Understood why I had to have the procedure							0.88
Most people supported my decision to get the procedure							0.87
Agreed with me about getting the procedure							0.82
Recommended that I have the procedure							0.71
Eigenvalues	10.72	7.08	3.61	3.27	2.68	1.60	1.13
% of variance	27.49	18.16	9.25	8.38	6.88	4.10	2.91
Cronbach's alpha	0.92	0.97	0.92	0.95	0.95	0.90	0.86
KMO MSA							0.89
Bartlett's test of sphericity							
χ^2							11166
df							741
p-value							0.001

Note: Extraction method: principal component analysis; Rotation method: oblimin with Kaiser normalisation

5.4. Confirmatory Factor Analysis – Dimensionality

Confirmatory factor analysis (CFA) assesses how well the cluster of variables fit within a latent variable (Brown, 2014). To achieve this, the *second* halves of the samples from the USA (N = 300) and Australia (N = 300) were combined into a pooled sample. This pooled sample (N = 600) was subjected to the two-step CFA.

The two-step approach to CFA using the maximum likelihood estimation method with AMOS 24 also assesses the validity and reliability of the constructs (Anderson & Gerbing, 1988; Baumgartner & Homburg, 1996). The first step adopts one-factor congeneric models to improve the psychometric properties of each construct and evaluates the models with the goodness-of-fit indices ($\chi^2/df \leq 3.0$; $p \geq 0.05$; RMSEA ≤ 0.08 ; CFI ≥ 0.90 ; NFI ≥ 0.90 ; GFI ≥ 0.90) (Hu & Bentler, 1999). The second step introduces a measurement model that encompasses all constructs to test model fit and guide further refinement to the proposed model. Also, the standardised parameter estimates are considered to increase reliability and decrease measurement error (Hair et al., 2018).

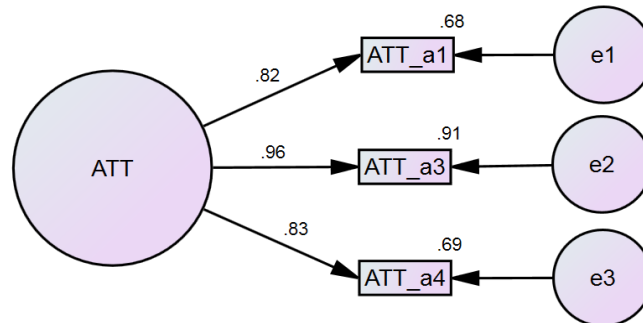
In the first stage of the two-step CFA, one-factor congeneric models were run for each of the seven HEMGB constructs, namely attitude, subjective norms, perceived behavioural control, anticipated positive emotions, anticipated negative emotions, desire and intention. This analysis is outlined and shown in the following section.

5.4.1. Attitude

At the outset, the four-item attitude model had an unacceptable fit, and the modification indices were examined for feasible solutions. One item, namely “*Unpleasant-Pleasant*”, was deleted. Then the goodness-of-fit indices for the three-item model were acceptable ($\chi^2 = 0.08$; $df = 1$; $p = 0.93$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 5.1.

Figure 5.1

One-Factor Congeneric Model for Attitude

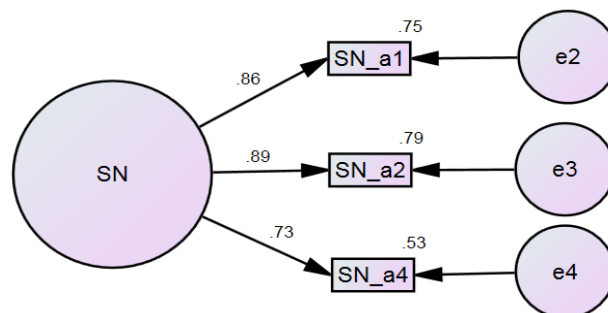


5.4.2. Subjective Norms

The four-item subjective norms model had an unacceptable fit. Thus, the modification indices were consulted to see whether any further refinements could be made. One item, namely “*Most people agreed with me about getting the procedure*”, was removed. Subsequently, as can be seen in Figure 5.2, the goodness-of-fit indices for the three-item model were concluded to be appropriate ($\chi^2=0.44$; $df=1$; $p=0.51$; RMSEA=0.01; CFI=0.99; NFI=0.99; GFI=0.99).

Figure 5.2

One-Factor Congeneric Model for Subjective Norms

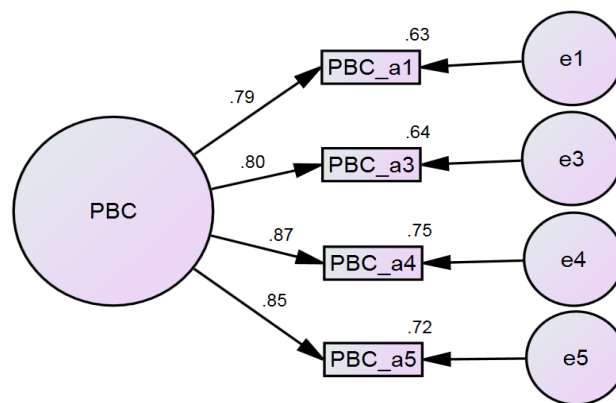


5.4.3. Perceived Behavioural Control

As the five-item perceived behavioural control model had an unacceptable fit initially, the modification indices were reviewed for likely solutions. One item, namely “*I was capable of getting the procedure*”, was eliminated. Subsequently, the goodness-of-fit indices for the four-item model were acceptable ($\chi^2 = 1.69$; $df = 2$; $p = 0.43$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 5.3.

Figure 5.3

One-Factor Congeneric Model for Perceived Behavioural Control

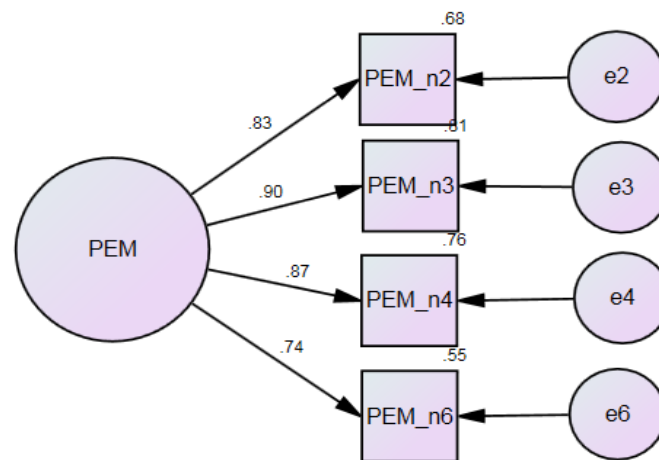


5.4.4. Anticipated Positive Emotions

An unacceptable fit was observed for the eight-item anticipated positive emotions model. After consulting the modification indices, some refinements were made. Four items, namely “*Satisfied*”, “*Gratified*”, “*Excited*” and “*Self-assured*”, were deleted. As can be seen in Figure 5.4, the goodness-of-fit indices for the four-item model were deemed appropriate ($\chi^2 = 0.43$; $df = 2$; $p = 0.80$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 5.4

One-Factor Congeneric Model for Anticipated Positive Emotions

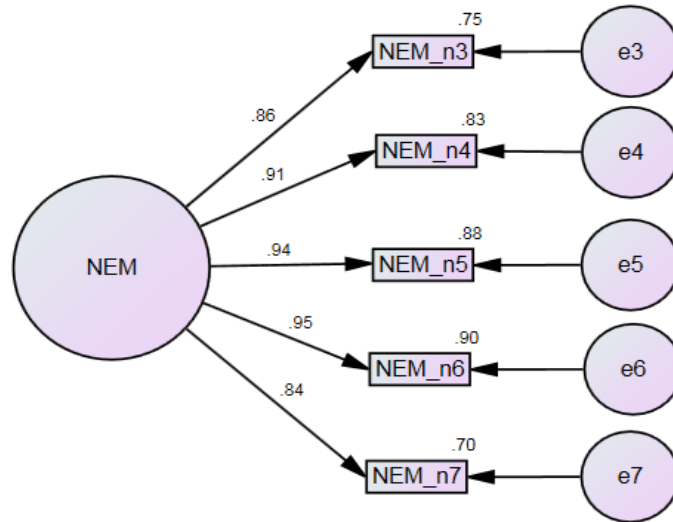


5.4.5. Anticipated Negative Emotions

At the outset, the nine-item anticipated negative emotions model had an unacceptable fit, and the modification indices were examined for feasible solutions. Reiteratively, four items, namely “*Depressed*”, “*Frustrated*”, “*Anxious*” and “*Self-critical*”, were deleted. Then the goodness-of-fit indices for the five-item model were acceptable ($\chi^2 = 5.38$; $df = 5$; $p = 0.37$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 5.5.

Figure 5.5

One-Factor Congeneric Model for Anticipated Negative Emotions

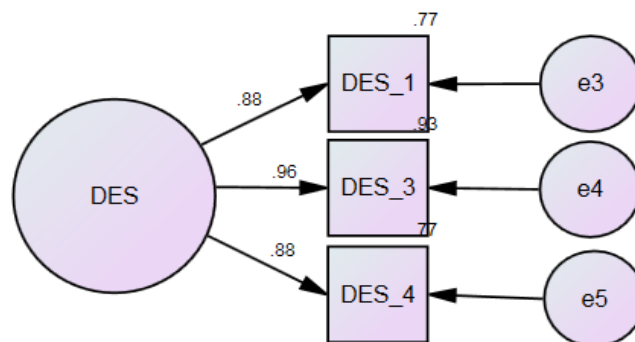


5.4.6. Desire

The four-item desire model had an unacceptable fit. Thus, the modification indices were consulted to see whether any further refinements could be made. One item, namely “*My aspirations for getting my next procedure can be expressed as...*”, was removed. Subsequently, as can be seen in Figure 5.6, the goodness-of-fit indices for the five-item model were concluded to be appropriate ($\chi^2 = 0.06$; $df = 1$; $p = 0.94$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 5.6

One-Factor Congeneric Model for Desire

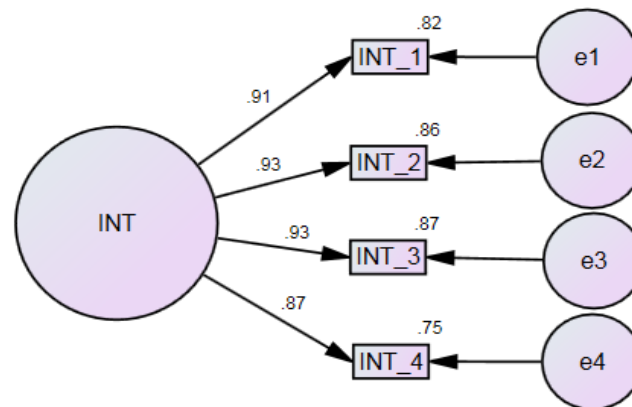


5.4.7. Intention

The four-item intention model was seen to have an acceptable model fit ($\chi^2 = 0.23$; $df = 2$; $p = 0.89$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 5.7. Therefore, the four-item model was assessed as appropriate.

Figure 5.7

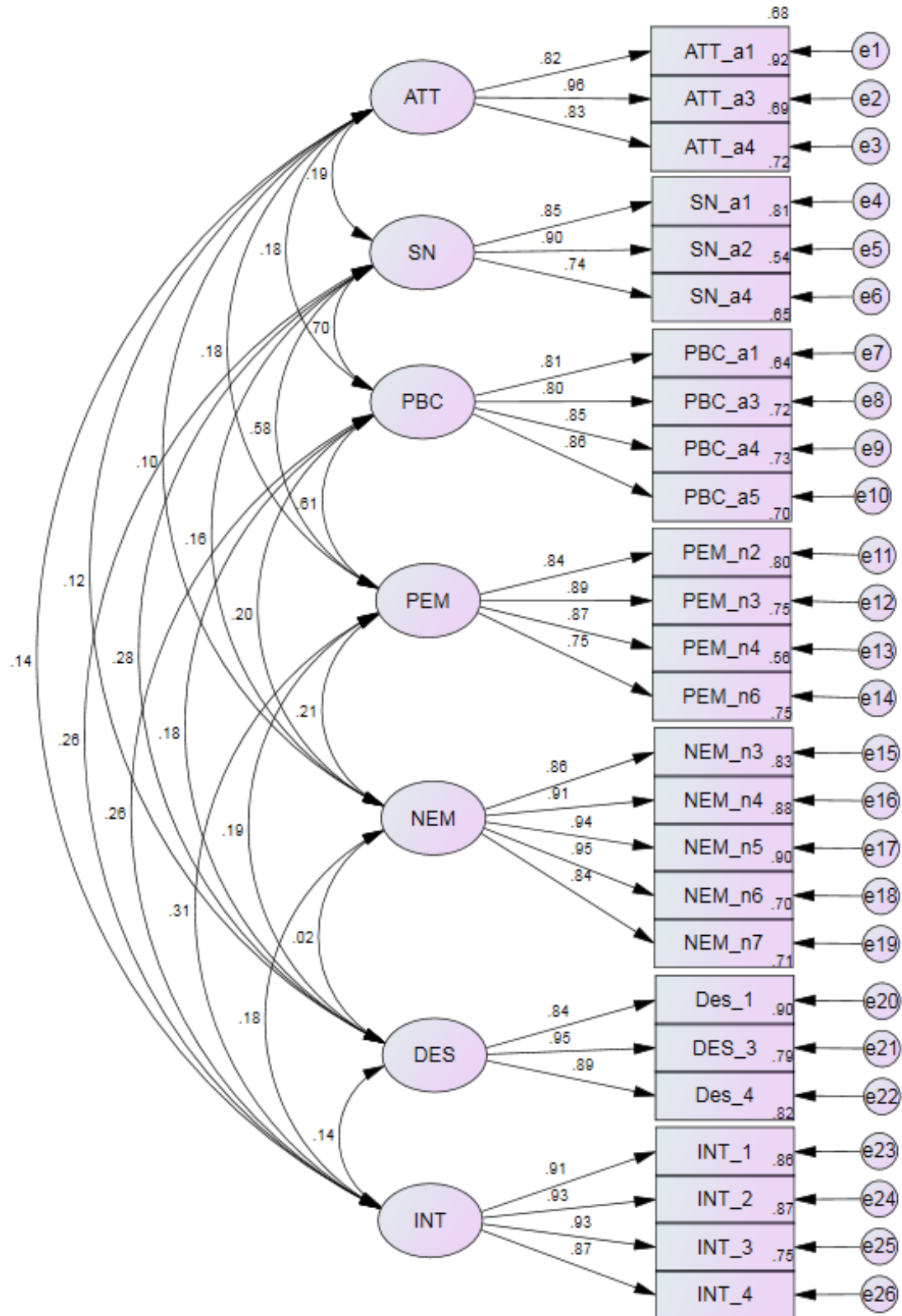
One-Factor Congeneric Model for Intention



In the second step of the two-step CFA, the seven constructs represented by the remaining 26 scale items were introduced into a full measurement model and structural equation modelling with AMOS 24 was conducted. As can be seen in Figure 5.8, the goodness-of-fit indices met the critical thresholds ($\chi^2 = 477.67$; $df = 278$; $p = 0.001$; RMSEA = 0.04; CFI = 0.97; NFI = 0.93; GFI = 0.89). The GFI score (0.89), which fell below the critical value of 0.90, was an exception. However, the model was deemed acceptable because no observable misfit with the values of any other absolute fit indices was observed (Jöreskog & Sörbom, 1996).

Figure 5.8

Measurement Model



5.5. Reliability

The standardised factor loadings and error variances from structural equation modelling with AMOS 24 were used to compute construct reliability and average variance extracted scores. The construct reliability for attitude was 0.90, while it was 0.87 for subjective norms, 0.90 for perceived behavioural control, 0.90 for anticipated positive emotions, 0.96 for anticipated negative emotions, 0.92 for desire and 0.95 for intention, as can be seen in Table 5.3. The critical value of 0.70 was exceeded for all constructs, indicating high reliability for the constructs (Anderson & Gerbing, 1988; Hair et al., 2018). The average variance extracted for attitude was 0.82, while it was 0.69 for subjective norms, 0.68 for perceived behavioural control, 0.70 for anticipated positive emotions, 0.81 for anticipated negative emotions, 0.80 for desire and 0.83 for intention. For all seven constructs, the critical value of 0.50 was exceeded, demonstrating that the data points were spread out from the mean, and from one another (Anderson & Gerbing, 1988; Fornell & Larcker, 1981; Hair et al., 2018).

5.6. Validity

Convergent validity refers to the strength of the relationship between scale items within a construct (Cole, 1987). Convergent validity is assessed in two ways. First, high benchmark values for the standardised parameter estimates (≥ 0.70) indicate an acceptable overall fit of the measurement model and theoretical consistency (Steenkamp & Van Trijp, 1991). The standardised parameter estimates, which ranged from 0.87 to 0.96, exceeded the critical value of 0.70 (Anderson & Gerbing, 1988; Hair et al., 2018), as can be seen in Figure 5.8. Second, each construct should exhibit a high average variance extracted score (≥ 0.50) (Fornell & Larcker, 1981; Hair et al., 2018). As can be seen in Table 5.3, the average variance extracted scores ranged from 0.68 to 0.83 for all constructs. These two tests suggested convergent validity for all seven constructs.

Table 5.3***Reliabilities, Average Variance and Correlations***

Construct	Items	CR	AVE	Correlations					
				ATT	SN	PBC	PEM	NEM	DES
Attitude (ATT)	3	0.90	0.82						
Subjective norms (SN)	3	0.87	0.69	0.19 (0.03)					
Perceived behavioural control (PBC)	4	0.90	0.68	0.18 (0.03)	0.70 (0.49)				
Anticipated positive emotions (PEM)	4	0.90	0.70	0.18 (0.03)	0.58 (0.34)	0.62 (0.38)			
Anticipated negative emotions (NEM)	5	0.96	0.81	0.10 (0.01)	0.16 (0.02)	0.20 (0.04)	0.21 (0.04)		
Desire (DES)	3	0.92	0.80	0.12 (0.01)	0.28 (0.08)	0.28 (0.08)	0.19 (0.04)	0.02 (0.01)	
Intention (INT)	4	0.95	0.83	0.14 (0.02)	0.26 (0.07)	0.26 (0.07)	0.31 (0.10)	0.18 (0.03)	0.14 (0.02)

Note: CR = construct reliability; AVE = average variance extracted; squared correlations in parentheses

Discriminant validity provides evidence that measures of constructs that theoretically should not be highly correlated to each other are, in fact, not found to be highly related to each other (Brown, 2014). Discriminant validity is assessed in three ways. First, the average variance extracted score is compared with the squared structural path coefficient between any two constructs (Fornell & Larcker, 1981). As can be seen in Table 5.3, the average variance extracted (0.68–0.83) was greater than the squared structural path coefficient between any two relevant constructs (0.01–0.38). Second, there should be a low correlation between any two constructs (≤ 0.80) (Bagozzi & Heatherton, 1994; Dabholkar et al., 1997; Lings & Greenley, 2005). Correlations between all constructs met these criteria (0.02–0.70), as can be seen in Table 5.3. Third, the correlation between any two constructs plus or minus two standard errors must have a confidence interval that is less than the value of one (Bagozzi & Heatherton, 1994). The construct correlations ranged from 0.02 to 0.70 and the confidence interval (99%) ranged from 0.17 to 0.76. These three tests implied discriminant validity for all seven constructs.

5.7. Chapter Summary

This chapter explored the factor structures of the key constructs in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB) and assessed whether the constructs demonstrated rigour in their reliability and validity. This research was conducted under the chemical peel condition in Study One (USA) and Study Two (Australia). Having deemed that the constructs exhibited dimensionality and reliability as well as convergent and discriminant validity, it is now possible to proceed to the next studies in order to consider the research questions and test the HEMGB for its hypothesised relationships under various cosmetic procedure conditions.

Chapter Six

Studies Three and Four: Botox

6.0. Introduction

This chapter describes Studies Three and Four, highlighting their research objectives and observing their findings. As Chapter Four has outlined, the main objectives of the two studies were to establish factor dimensionality, refine and validate the scale items for the key constructs, and then evaluate the research questions and hypotheses in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB). The studies respectively sampled members of the populations in the USA and Australia who had prior experience with Botox. To meet the research objectives, the psychometric properties of each construct were determined to confirm their reliability, as well as convergent, discriminant and predictive validity, before the constructs were introduced into the HEMGB to verify their relationships.

6.1. Data Collection

Botox was selected to represent minimally invasive cosmetic procedures due to their high uptake in the USA and Australia. The American Society of Plastic Surgeons (2019) announced a 200% increase since 2000 in minimally invasive procedures such as Botox. Correspondingly, the Australasian College of Cosmetic Surgery reported that consumers spent \$350 million on Botox in 2017 (Miles, 2019).

The research instrument for Study Three (USA) and Study Four (Australia) comprised an online survey that was self-administered to online panels. Only respondents who had previously undertaken Botox more than once and in the last three years qualified for the target sample. Following the minimum sample size of 100 required to achieve a stable maximum

likelihood estimation result (Hair et al., 2018), a quota of 650 responses was set for each country sample. In total, 550 usable responses were collected for each country sample, suggesting a completion rate of 85%.

6.2. Sample Profiles

The demographic profiles of respondents from the USA and Australia included their gender, age, marital status, education, occupation, working status and annual income. As can be seen in Table 6.1, there were more female respondents for the USA (77%) and Australia (93%) than male respondents. Most respondents for the USA (64%) and Australia (65%) fell within the 21–34 age group. This demonstrates the interest that younger consumers have in cosmetic procedures and validates findings from earlier published studies (e.g. Davis, 2013; Pearl & Weston, 2003; Sood et al., 2017; Zuckerman & Abraham, 2008). The largest percentage of American respondents were single (43%), followed by those who were married (36%), whereas the largest percentage of Australian respondents were in a relationship (46%), followed by singles (27%).

A third of American respondents (33%) held advanced diplomas compared to a similar proportion of Australian respondents (32%) who held undergraduate degrees. The majority of American (68%) and Australian (64%) respondents worked in managerial or professional full-time positions. Most American (85%) and Australian (74%) respondents earned under AUD\$89,999. This is representative of the population who earned an average annual income of US\$58,829 in the USA (US Bureau of Labour Statistics, 2018) and AU\$85,800 in Australia (Australia Bureau of Statistics, 2017). The demographic profiles showed some similarity between the samples collected in the USA and Australia.

Table 6.1**Sample Profiles**

Demographics	USA (N = 550)	%	Australia (N = 550)	%
Gender				
Male	129	23.5%	39	7.1%
Female	421	76.5%	511	92.9%
Age				
Under 20 years	7	1.3%	7	1.3%
21–34 years	349	63.5%	359	65.3%
35–44 years	113	20.5%	107	19.5%
45–54 years	68	12.4%	48	8.7%
55–64 years	12	2.2%	17	3.1%
65 years and above	1	0.2%	12	2.2%
Marital status				
Single	236	42.9%	150	27.3%
In a relationship	105	19.1%	252	45.8%
De facto	9	1.6%	19	3.5%
Married	200	36.4%	129	23.5%
Education				
Certificate	64	11.6%	68	12.4%
Advanced Diploma or Diploma	181	32.9%	63	11.5%
Graduate Diploma or Graduate Certificate	65	11.8%	103	18.7%
Bachelor Degree	167	30.4%	178	32.4%
Postgraduate Degree	73	13.3%	138	25.1%
Occupation				
Manager	172	31.3%	141	25.6%
Retired	7	1.3%	13	2.4%
Professional	199	36.2%	211	38.4%
Clerical Support Worker	57	10.4%	50	9.1%
Craft and Related Trade Worker	10	1.8%	6	1.1%
Technician or Associate Professional	46	8.4%	34	6.2%
Service and Sales Worker	42	7.6%	41	7.5%
Student	0	0.0%	32	5.8%
Plant and Machinery Operator	7	1.3%	10	1.8%
Skilled Agricultural Forestry and Fishery	10	1.8%	12	2.2%
Working status				
Full-time	386	70.2%	412	74.9%
Part-time	119	21.6%	79	14.4%
Casual	23	4.2%	26	4.7%
Not working	22	4.0%	33	6.0%
Income				
Under \$44,999	167	30.4%	115	20.9%
\$45,000 – \$89,999	298	54.2%	293	53.3%
\$90,000 – \$149,999	74	13.5%	115	20.9%
\$150,000 and above	11	2.0%	27	4.9%

Chapter Five outlined the exploratory and confirmatory factor analyses conducted in Studies One and Two. From the two studies, the key constructs were deemed to have stable factor

structures as well as acceptable reliability and validity. This justified the decision to proceed directly to confirmatory factor analysis in Studies Three and Four.

6.3. Confirmatory Factor Analysis – Dimensionality

Confirmatory factor analysis (CFA) evaluates whether the cluster of variables fit well within a latent variable (Brown, 2014). To establish this, the samples from the USA (N = 550) and Australia (N = 550) were randomly split in two and the *first* sections of each sample were combined into a pooled sample. This pooled sample (N = 400), which included 200 responses each from the USA and Australia, was used to conduct the two-step CFA.

The two-step approach to CFA using the maximum likelihood estimation method with AMOS 26 also tests the validity and reliability of the constructs (Anderson & Gerbing, 1988; Baumgartner & Homburg, 1996). The first step utilises one-factor congeneric models to refine the psychometric properties of each construct and assesses the models with the goodness-of-fit indices ($\chi^2/df \leq 3.0$; $p \geq 0.05$; $RMSEA \leq 0.08$; $CFI \geq 0.90$; $NFI \geq 0.90$; $GFI \geq 0.90$) (Hu & Bentler, 1999). The second step implements a measurement model that includes all constructs to assess model fit and seek further improvement to the proposed model. Further, the standardised parameter estimates are examined to attain increased reliability and decreased measurement error (Hair et al., 2018).

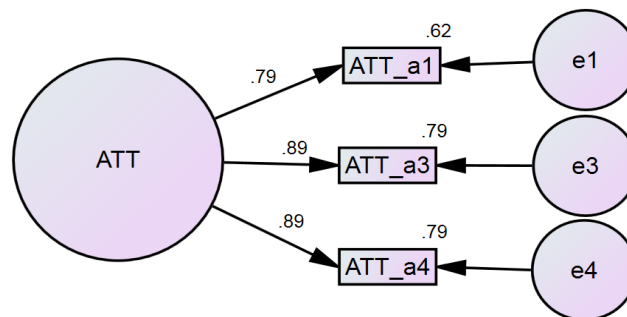
In the first step of the two-step CFA, one-factor congeneric models were used to assess each of the seven HEMGB constructs, namely attitude, subjective norms, perceived behavioural control, anticipated positive emotions, anticipated negative emotions, desire and intention. The following section outlines and illustrates this process.

6.3.1. Attitude

Initially, the four-item attitude model had an unacceptable fit, and the modification indices were examined for possible solutions. One item, namely “*Unpleasant-Pleasant*”, was eliminated. Subsequently, the goodness-of-fit indices for the three-item model were acceptable ($\chi^2 = 0.04$; $df = 1$; $p = 0.95$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 6.1.

Figure 6.1

One-Factor Congeneric Model for Attitude

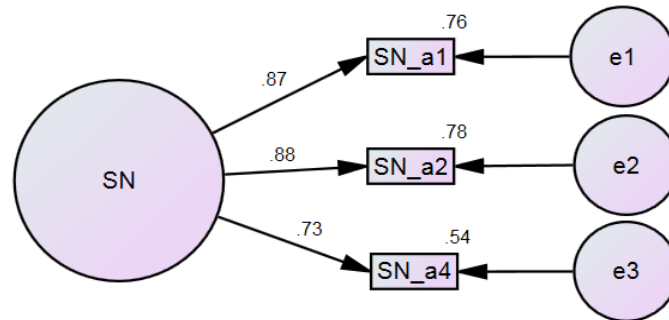


6.3.2. Subjective Norms

The four-item subjective norms model had an unacceptable fit. Therefore, the modification indices were consulted to see whether any further improvements could be made. One item, namely “*Most people agreed with me about getting the procedure*”, was removed. Following this, as can be seen in Figure 6.2, the goodness-of-fit indices for the three-item model were deemed appropriate ($\chi^2 = 0.76$; $df = 1$; $p = 0.78$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 6.2

One-Factor Congeneric Model for Subjective Norms

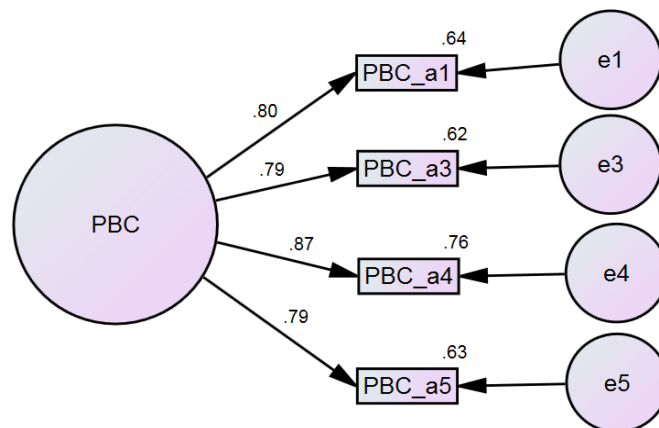


6.3.3. Perceived Behavioural Control

The five-item perceived behavioural control model had an initial unacceptable fit, so the modification indices were considered for possible solutions. One item, namely “*I was capable of getting the procedure*”, was deleted. Subsequently, the goodness-of-fit indices for the four-item model were acceptable ($\chi^2 = 1.84$; $df = 2$; $p = 0.40$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 6.3.

Figure 6.3

One-Factor Congeneric Model for Perceived Behavioural Control

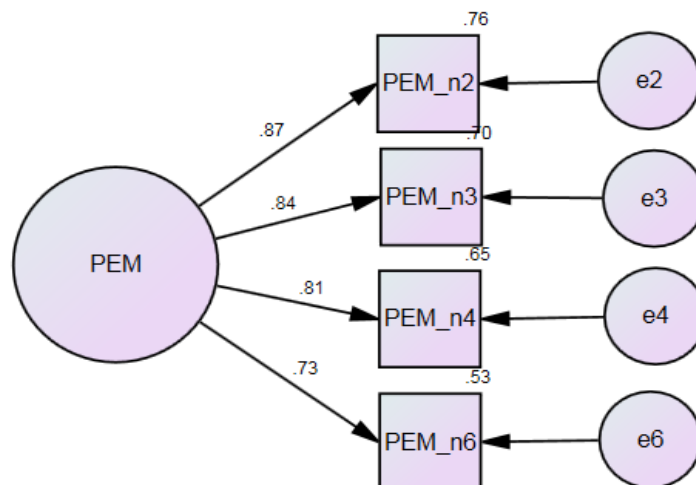


6.3.4. Anticipated Positive Emotions

There was an unacceptable fit for the eight-item anticipated positive emotions model. After examining the modification indices, further refinements were implemented. Four items, namely “*Satisfied*”, “*Gratified*”, “*Excited*” and “*Self-assured*”, were removed. As can be seen in Figure 6.4, the goodness-of-fit indices for the four-item model were assessed as being appropriate ($\chi^2 = 1.36$; $df = 2$; $p = 0.50$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 6.4

One-Factor Congeneric Model for Anticipated Positive Emotions

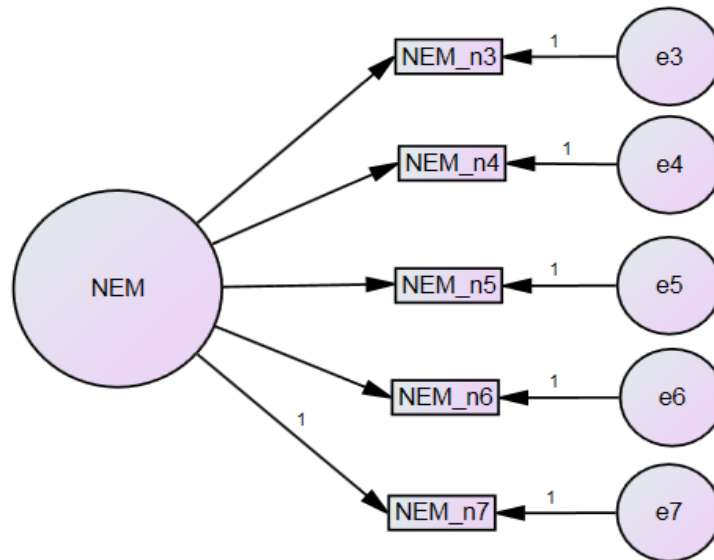


6.3.5. Anticipated Negative Emotions

Initially, the nine-item anticipated negative emotions model had an unacceptable fit, and the modification indices were examined for possible solutions. Reiteratively, four items, namely “*Depressed*”, “*Frustrated*”, “*Anxious*” and “*Self-critical*”, were eliminated. Subsequently, the goodness-of-fit indices for the five-item model were acceptable ($\chi^2 = 4.63$; $df = 5$; $p = 0.46$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 6.5.

Figure 6.5

One-Factor Congeneric Model for Anticipated Negative Emotions

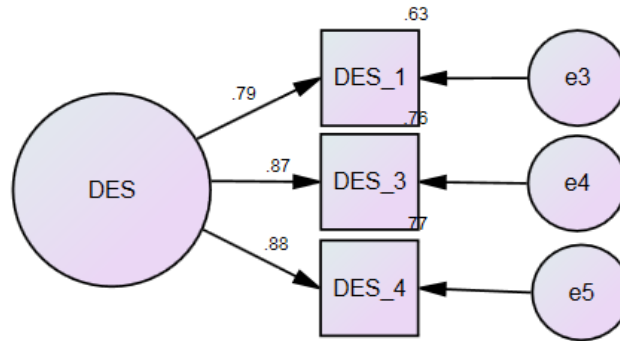


6.3.6. Desire

The four-item desire model had an unacceptable fit. Therefore, the modification indices were consulted to see whether any further improvements could be made. One item, namely “*My aspirations for getting my next procedure can be expressed as...*”, was removed. Following this, as can be seen in Figure 6.6, the goodness-of-fit indices for the three-item model were deemed appropriate ($\chi^2 = 0.03$; $df = 1$; $p = 0.86$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 6.6

One-Factor Congeneric Model for Desire

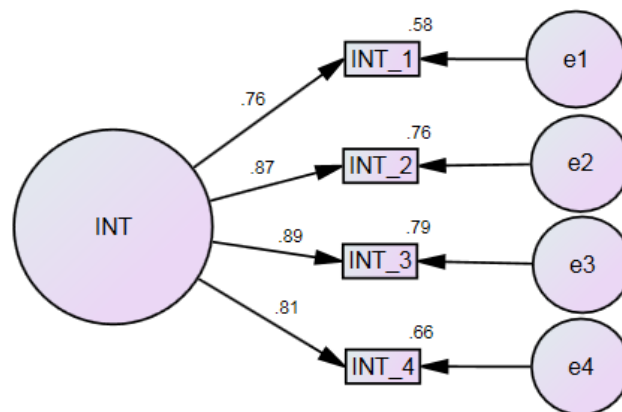


6.3.7. Intention

The four-item intention model had an acceptable model fit ($\chi^2 = 1.06$; $df = 2$; $p = 0.89$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 6.7. Therefore, the four-item model was deemed appropriate.

Figure 6.7

One-Factor Congeneric Model for Intention

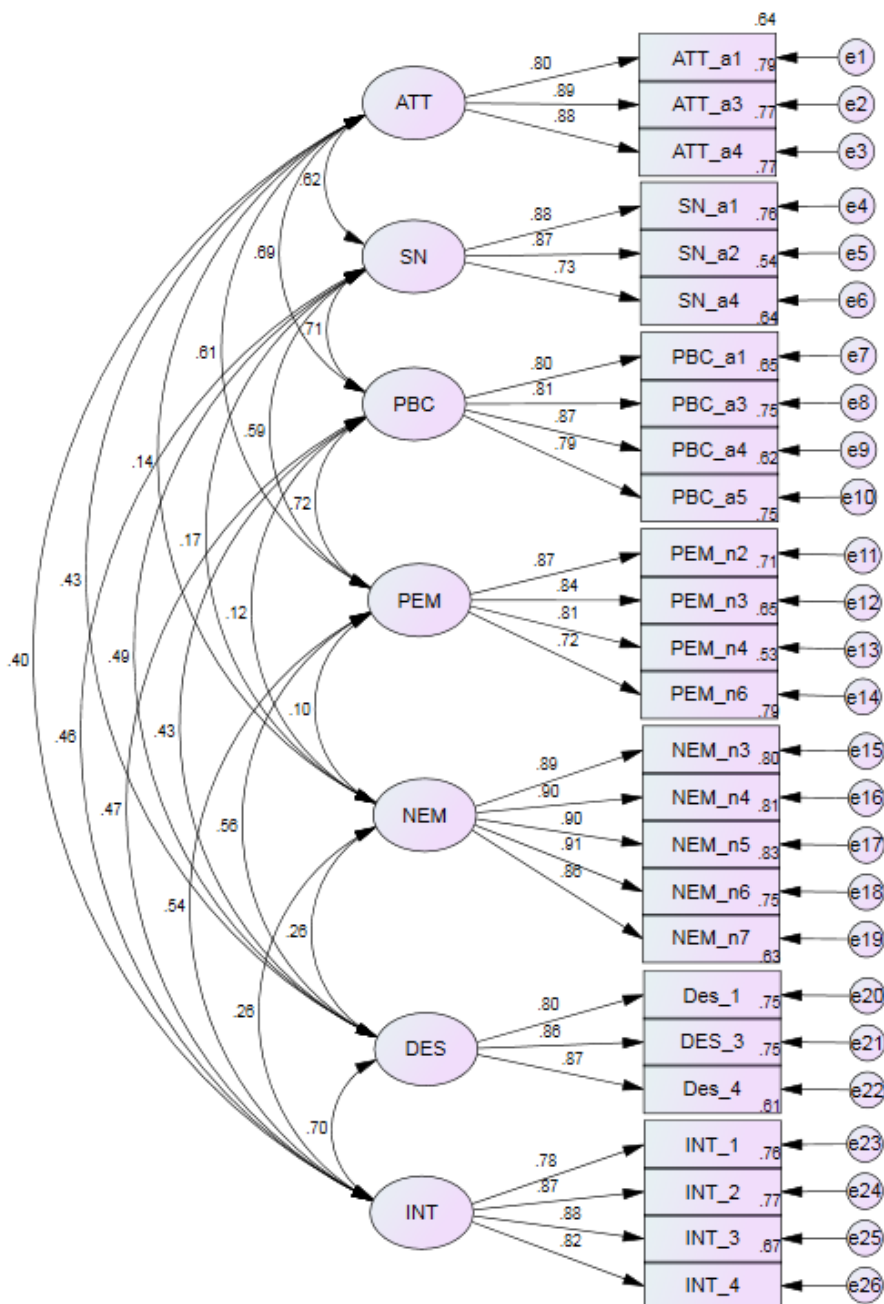


In the second step of the two-step CFA, the resultant 26 scale items, which represented the seven constructs, were introduced into a full measurement model and subjected to structural

equation modelling with AMOS 26, as can be seen in Figure 6.8. The goodness-of-fit indices met the critical thresholds ($\chi^2 = 664.90$; $df = 278$; $p = 0.001$; RMSEA = 0.05; CFI = 0.95; NFI = 0.92; GFI = 0.88). The exception was the GFI score (0.88), which was below the critical value of 0.90. However, the model was assessed as being acceptable because there was no observable misfit with the other values of the absolute fit indices (Jöreskog & Sörbom, 1999).

Figure 6.8

Measurement Model



6.4. Reliability

The standardised factor loadings and error variances from structural equation modelling with AMOS 26 were used to calculate construct reliability and average variance extracted scores. As can be seen in Table 6.2, the construct reliability for attitude was 0.89, while it was 0.87 for subjective norms, 0.89 for perceived behavioural control, 0.88 for anticipated positive emotions, 0.95 for anticipated negative emotions, 0.88 for desire and 0.95 for intention. All seven constructs produced reliability scores greater than the critical value of 0.70, demonstrating reliability for the constructs (Anderson & Gerbing, 1988; Hair et al., 2018). The average variance extracted for attitude was 0.66, while it was 0.69 for subjective norms, 0.66 for perceived behavioural control, 0.66 for anticipated positive emotions, 0.80 for anticipated negative emotions, 0.71 for desire and 0.69 for intention. The critical value of 0.50 was exceeded for all seven constructs, implying that there was a spread of the data points from the mean, and from each other (Anderson & Gerbing, 1988; Fornell & Larcker, 1981; Hair et al., 2018).

6.5. Validity

The strength of the relationship between scale items within a construct indicates convergent validity (Cole, 1987). Convergent validity is tested in two ways. First, standardised parameter estimates with high benchmark values (≥ 0.70) suggest an acceptable overall fit of the measurement model and theoretical consistency (Steenkamp & Van Trijp, 1991). As can be seen in Figure 6.8, the standardised parameter estimates ranged from 0.72 to 0.91, which were greater than the critical value of 0.70 (Anderson & Gerbing, 1988; Hair et al., 2018). Second, each construct should demonstrate a high average variance extracted score (≥ 0.50) (Fornell & Larcker, 1981; Hair et al., 2018). The average variance extracted scores for all constructs

ranged from 0.66 to 0.80, as can be seen in Table 6.2. These two tests suggested acceptable convergent validity for all seven constructs.

Table 6.2

Reliabilities, Average Variance and Correlations

Construct	Items	CR	AVE	Correlations					
				ATT	SN	PBC	PEM	NEM	DES
Attitude (ATT)	3	0.89	0.66						
Subjective norms (SN)	3	0.87	0.69	0.62 (0.39)					
Perceived behavioural control (PBC)	4	0.89	0.66	0.69 (0.48)	0.71 (0.50)				
Anticipated positive emotions (PEM)	4	0.88	0.66	0.61 (0.37)	0.59 (0.35)	0.72 (0.52)			
Anticipated negative emotions (NEM)	5	0.95	0.80	0.14 (0.02)	0.17 (0.03)	0.12 (0.01)	0.10 (0.01)		
Desire (DES)	3	0.88	0.71	0.43 (0.19)	0.49 (0.24)	0.43 (0.18)	0.56 (0.31)	0.25 (0.07)	
Intention (INT)	4	0.95	0.69	0.40 (0.16)	0.46 (0.22)	0.47 (0.22)	0.53 (0.29)	0.26 (0.07)	0.70 (0.50)

Note: CR = construct reliability; AVE = average variance extracted; squared correlations in parentheses

When two constructs that should not be theoretically correlated are in fact not correlated, this implies discriminant validity (Brown, 2014). Discriminant validity is tested in three ways. First, the average variance extracted score is compared with the squared structural path coefficient between any two relevant constructs (Fornell & Larcker, 1981). As can be seen in Table 6.2, the average variance extracted (0.66–0.80) was greater than the squared structural path coefficient between any two relevant constructs (0.01–0.52). Second, there should be a low correlation between any two constructs (≤ 0.80) (Bagozzi & Heatherton, 1994; Dabholkar et al., 1997; Lings & Greenley, 2005). Correlations between all constructs were low (0.10–0.72), as can be seen in Table 6.2. Third, the correlation between any two constructs plus or minus two standard errors must have a confidence interval that is less than the value of one (Bagozzi & Heatherton, 1994). The construct correlations ranged from 0.10 to 0.72 and the confidence

interval (99%) from 0.22 to 0.77. These three tests indicated acceptable discriminant validity for all seven constructs.

6.6. Analysis of Variance – Testing *RQ1a* and *RQ1b*

Analysis of variance (ANOVA) is a diagnostic method aimed at identifying whether difference exists between the means of two or more groups (Kao & Green, 2008). To achieve this, the *second* sections of the split samples from the USA (N = 350) and Australia (N = 350) were utilised.

To address the research questions *RQ1a* and *RQ1b*, anticipated positive and negative emotions before, after and for the next Botox were assessed for hedonic adaptation in each country sample by ANOVA using Tukey's post hoc test with SPSS 26. With the effects of Botox lasting up to four months (King, 2019), significant changes in the mean scores for anticipated emotions were observed over the duration of one year. Botox procedures undertaken less than eight months ago were categorised as shorter-term, and those undertaken over nine months ago as longer-term.

As can be seen in Figures 6.9a and 6.9b, there were significant differences for anticipated positive and negative emotions between the before and after stages in the shorter and longer time frames for the USA, supporting *RQ1a* and *RQ1b*. There were also significant differences for anticipated negative emotions between the after and next stages in the shorter and longer time frames for the USA, again supporting *RQ1b*.

Figure 6.9a

Positive and Negative Emotions – Shorter Term (USA)

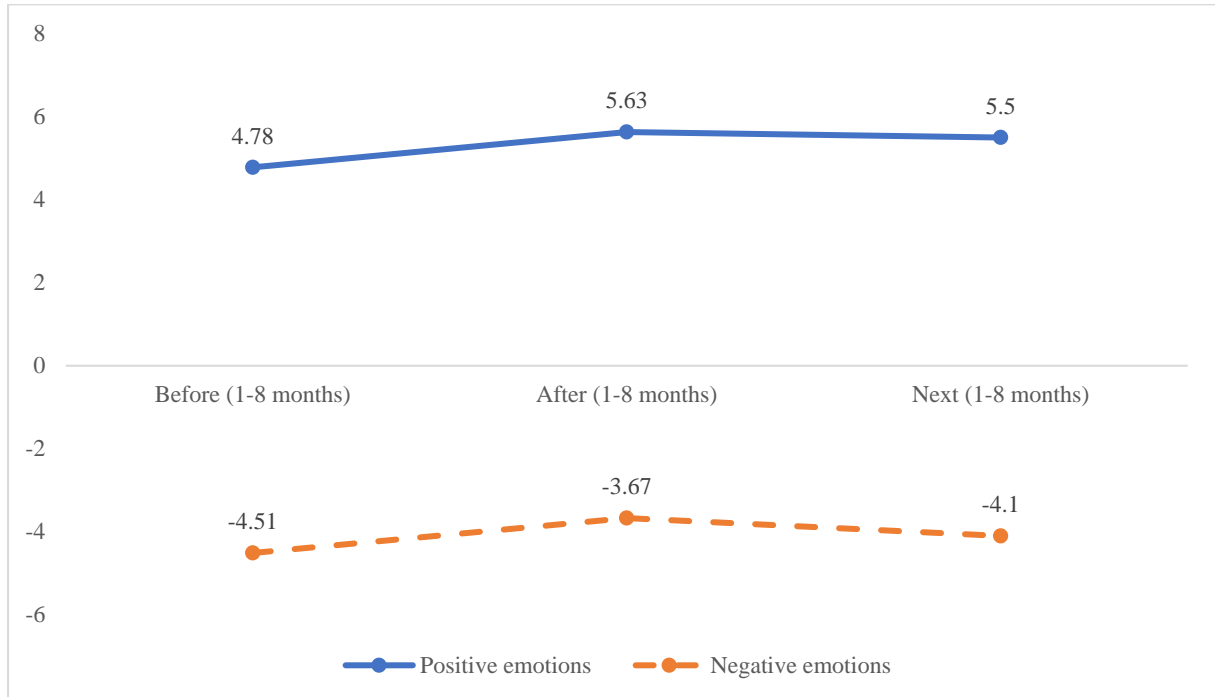


Figure 6.9b

Positive and Negative Emotions – Longer Term (USA)

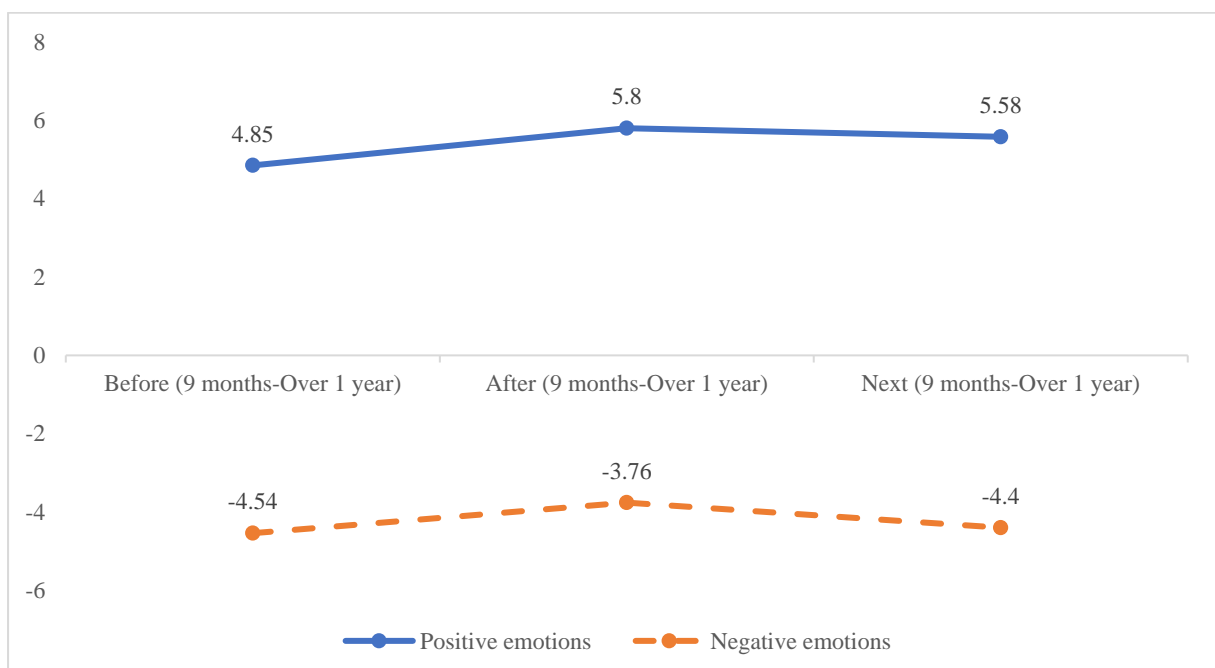


Figure 6.10a

Positive and Negative Emotions – Shorter Term (Australia)

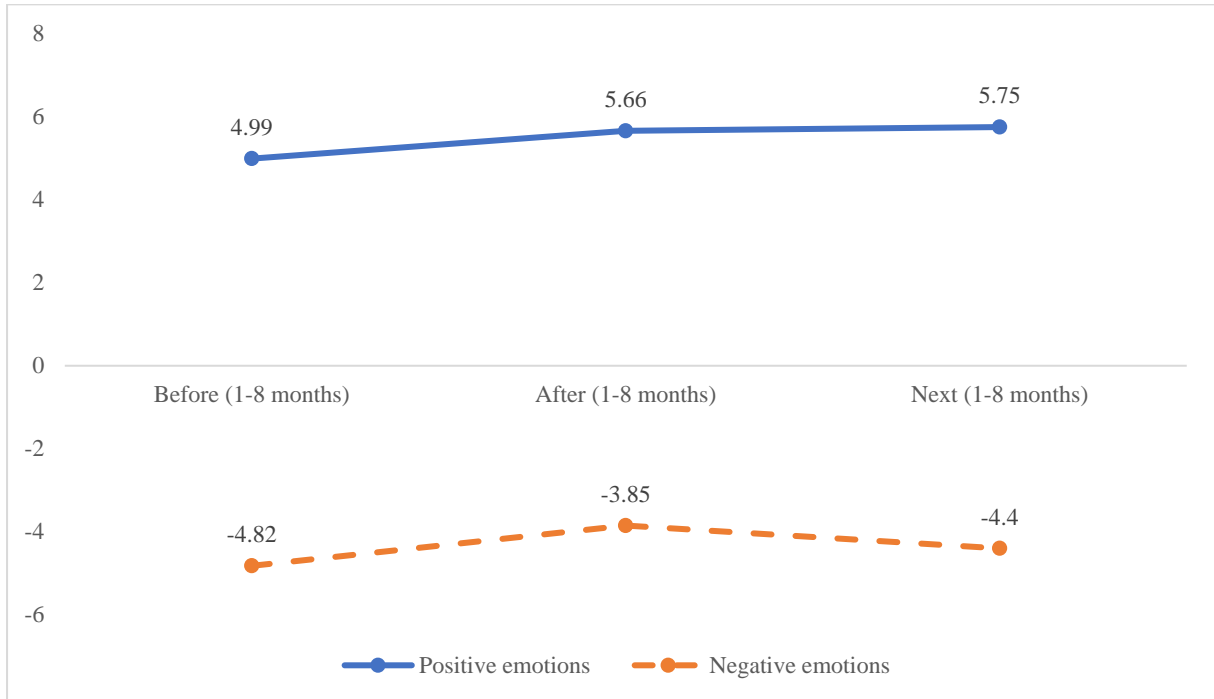
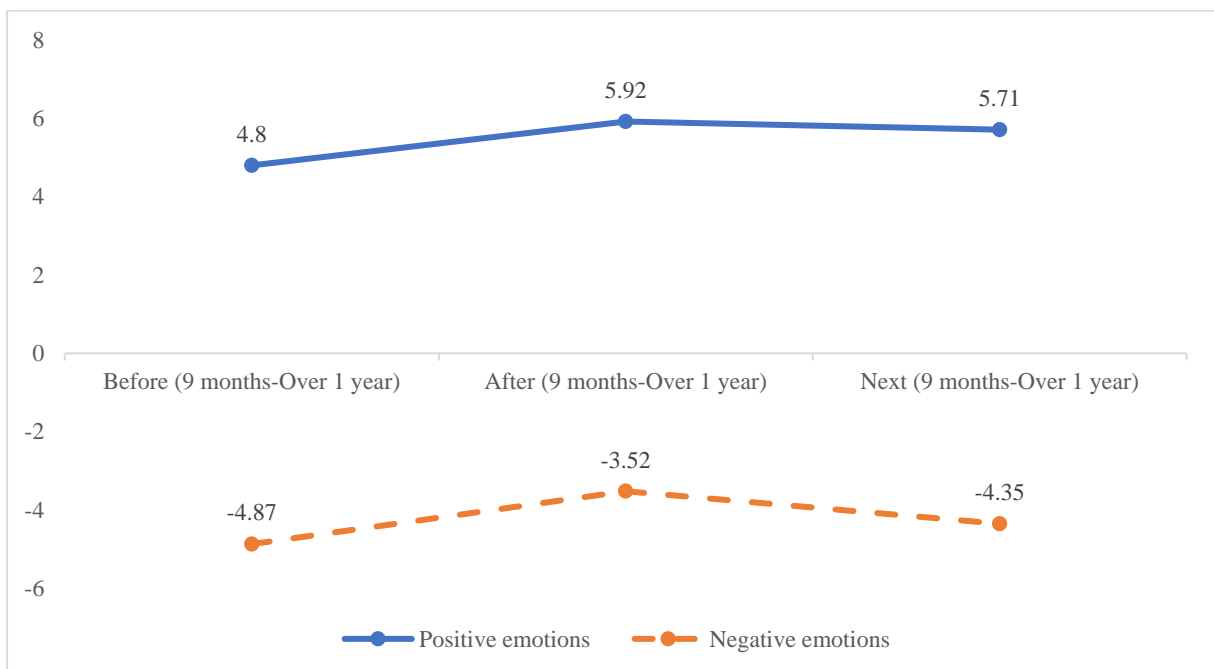


Figure 6.10b

Positive and Negative Emotions – Longer Term (Australia)



Similarly to the USA, significant differences existed for anticipated positive and negative emotions between the before and after stages in the shorter and longer time frames for Australia, supporting *RQ1a* and *RQ1b*, as can be seen in Figures 6.10a and 6.10b. As with the USA, there were significant differences for anticipated negative emotions between the after and next stages in the shorter and longer time frames for Australia, again supporting *RQ1b*.

6.7. Structural Equation Modelling – Testing *H1* to *H6*

Structural equation modelling (SEM) tests the research hypotheses and assesses standardised path coefficients to evaluate the relative importance of each construct (Schumacker & Lomax, 2004). To achieve this, the *second* sections of the split samples from the USA (N = 350) and Australia (N = 350) were utilised.

SEM using multigroup analysis with AMOS 26 estimated the structural models for the USA and Australia. The goodness-of-fit indices addressed the critical criteria ($\chi^2 = 673.49$; $df = 344$; $p = 0.001$; $RMSEA = 0.04$; $CFI = 0.98$; $NFI = 0.96$; $GFI = 0.92$). The model was acceptable as there was no observable misfit with the fit indices (Jöreskog & Sörbom, 1999). The hypothesised relationships in the structural models for the USA and Australia can be seen in Table 6.3.

6.7.1. USA

For American respondents who had previously engaged in Botox, attitude had a significant positive effect on the desire to further engage in Botox ($\beta = 0.15$; $p = 0.05$), supporting *H1*. Subjective norms also had a significant positive effect on the desire to further engage in Botox ($\beta = 0.18$; $p = 0.01$), supporting *H2*. However, perceived behavioural control did not have a significant positive effect on the desire to further engage in Botox, which did not support *H3*. Perceived behavioural control had a significant positive effect on the intention

to further engage in Botox ($\beta = 0.25$; $p = 0.001$), supporting *H4*. Anticipated positive emotions had a significant positive effect on the desire to further engage in Botox ($\beta = 0.32$; $p = 0.001$), supporting *H5a*. Similarly, anticipated negative emotions had a significant positive effect on the desire to further engage in Botox ($\beta = 0.17$; $p = 0.001$), supporting *H5b*. Additionally, desire had a significant positive effect on the intention to further engage in Botox ($\beta = 0.43$; $p = 0.001$), supporting *H6*.

R^2 values above 0.15 suggest that the independent variables collectively are able to explain the percentage of variance in each dependent variable (Hair et al., 2018). The R^2 values for desire and intention were 0.24 and 0.30, respectively. This demonstrated that attitude, subjective norms, perceived behavioural control, anticipated positive emotions and anticipated negative emotions, the independent variables, were able to account for the percentage of variance in desire and intention, the dependent variables.

Table 6.3

Standardised Path Coefficients

Regressed relationship	Beta Value (β)	
	USA (N = 400)	Australia (N = 400)
H1: ATT \rightarrow DES	0.16*	0.20***
H2: SN \rightarrow DES	0.18**	0.19***
H3: PBC \rightarrow DES	-0.15	-0.06
H4: PBC \rightarrow INT	0.25***	0.28***
H5a: PEM \rightarrow DES	0.32***	0.51***
H5b: NEM \rightarrow DES	0.17***	0.08*
H6: DES \rightarrow INT	0.43***	0.65***
R^2 for DES	0.24	0.57
R^2 for INT	0.30	0.72
χ^2	673.49	
<i>df</i>	344.00	
<i>p</i>	0.001	
RMSEA	0.04	
CFI	0.98	
NFI	0.96	
GFI	0.92	

Note: attitude = ATT; subjective norms = SN; perceived behavioural control = PBC; anticipated positive emotions = PEM; anticipated negative emotions = NEM; desire = DES; intention = INT; root mean square

*error of approximation = RMSEA; CFI = comparative fit index; NFI = normed fit index; GFI = goodness-of-fit index. *p < 0.05, **p < 0.01, ***p < 0.001*

6.7.2. Australia

With Australian respondents who had previously engaged in Botox, attitude had a significant positive effect on the desire to further engage in Botox ($\beta = 0.20$; $p = 0.001$), supporting *H1*. Subjective norms also had a significant positive effect on the desire to further engage in Botox ($\beta = 0.19$; $p = 0.001$), supporting *H2*. Again, perceived behavioural control did not have a significant positive effect on the desire to further engage in Botox, which did not support *H3*. However, perceived behavioural control had a significant positive effect on the intention to further engage in Botox ($\beta = 0.28$; $p = 0.001$), supporting *H4*. Anticipated positive emotions had a significant positive effect on the desire to further engage in Botox ($\beta = 0.51$; $p = 0.001$), supporting *H5a*. Likewise, anticipated negative emotions had a significant positive effect on the desire to further engage in Botox ($\beta = 0.08$; $p = 0.05$), supporting *H5b*. Moreover, desire had a significant positive effect on the intention to further engage in Botox ($\beta = 0.65$; $p = 0.001$), supporting *H6*.

Additionally, the R^2 value in explaining desire and intention was 0.57 and 0.72, respectively. This suggested that attitude, subjective norms, perceived behavioural control, anticipated positive emotion and anticipated negative emotion, the independent variables, were able to account for the percentage of variance in desire and intention, the dependent variables.

Finally, to evaluate significant differences in the paths between the USA and Australia, a pairwise parameter comparison using critical ratios for differences between parameters with AMOS 26 was implemented. *H5a* and *H6* were significantly different between the two country samples.

6.8. Chapter Summary

This chapter examined the rigour in the factor structures of the key constructs in the research and evaluated the research questions and hypotheses in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB). This research was conducted under the Botox condition in Study Three (USA) and Study Four (Australia). Having confirmed that the constructs have dimensionality and reliability as well as convergent, discriminant and predictive validity, it is now feasible to advance to the next studies in order to further investigate the research questions and assess the hypothesised relationships in the HEMGB under different cosmetic procedure conditions.

Chapter Seven

Studies Five and Six: Hair Transplants

7.0. Introduction

This chapter introduces Studies Five and Six, outlining their research objectives and describing their findings. As outlined in Chapter Four, the primary objectives of the two studies were to ascertain factor dimensionality, refine and validate the scale items representing the key constructs and, subsequently, assess the research questions and hypothesised relationships in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB). The studies targeted members of the respective populations in the USA and India who had prior experience with a hair transplant. To address the research objectives, the psychometric properties of each construct were evaluated to establish their reliability as well as convergent, discriminant and predictive validity, wherein the constructs were brought into the HEMGB to investigate their relationships.

7.1. Data Collection

Hair transplants were selected to represent invasive cosmetic procedures due to their popularity in the USA and India. Over 25,000 hair transplants were conducted in the USA in 2018 (American Society of Plastic Surgeons, 2019). Similarly, hair transplants were on the rise in India, predominantly due to celebrity endorsements and improved individual finances (Garg et al., 2020)

An online survey self-administered to online panels was selected as the research instrument for Study Five (USA) and Study Six (India). Additionally, data were collected from members of the population at a medical practice in India. Only respondents who had previously undertaken

a hair transplant more than once and in the last three years qualified for the target sample. A quota of 400 responses was set for each country sample, following the minimum sample size of 100 required to achieve a stable maximum likelihood estimation result (Hair et al., 2018). In total, 350 usable responses were collected for each country sample, suggesting a completion rate of 88%.

7.2. Sample Profiles

The demographic profiles of respondents from the USA and India included their gender, age, marital status, education, occupation, working status and annual income. As can be seen in Table 7.1, there were more male respondents for the USA (82%) and India (97%) than female respondents. The skew toward more male respondents may be attributed to the fact that more men engage in hair transplants than women. Most respondents for the USA (61%) and India (65%) fell within the 45–54 age group. This reflects the popularity of hair transplants in older males and corroborates findings from the International Society of Hair Restoration Surgery (2017). The largest percentage of American respondents were in a de facto relationship (38%), followed by those who were married (35%), whereas the largest percentage of Indian respondents were married (96%).

The majority of American (54%) and Indian (52%) respondents held an undergraduate degree, with American (68%) and Indian (53%) respondents working in managerial or professional full-time positions. Most American respondents were in the USD\$90,000 – USD\$149,000 income group (55%), whereas most Indian respondents earned under USD\$44,999 (69%). This is representative of the population who earned an average annual income of US\$58,829 in the USA (US Bureau of Labour Statistics, 2018) and 126,968 rupees in India (Jha, 2021). The demographic profiles suggested some similarity between the samples collected in the USA and India.

As explained in Chapter Six, the key constructs were assessed as having stable factor structures as well as acceptable reliability and validity in the previous four studies. This justified the decision to proceed directly to confirmatory factor analysis in Studies Five and Six.

Table 7.1**Sample Profiles**

Demographics	USA (N = 350)	%	India (N = 350)	%
Gender				
Male	286	81.7%	338	96.6%
Female	64	18.3%	12	3.4%
Age				
21–34 years	21	6.0%	4	1.1%
35–44 years	51	14.6%	40	11.4%
45–54 years	213	60.9%	228	65.1%
55–64 years	65	18.6%	78	22.3%
Marital status				
Single	31	8.9%	7	2.0%
In a relationship	63	18.0%	7	2.0%
De facto	132	37.7%	1	0.3%
Married	124	35.4%	335	95.7%
Education				
Certificate	13	3.7%	8	2.3%
Advanced Diploma or Diploma	19	5.4%	11	3.1%
Graduate Diploma or Graduate Certificate	73	20.9%	2	0.6%
Bachelor Degree	189	54%	183	52.3%
Postgraduate Degree	56	16%	146	41.7%
Occupation				
Manager	150	42.9%	54	15.4%
Retired	10	2.9%	13	3.7%
Professional	88	25.1%	133	38.0%
Clerical Support Worker	30	8.6%	0	0.0%
Craft and Related Trade Worker	19	5.4%	0	0.0%
Technician or Associate Professional	0	0.0%	0	0.0%
Service and Sales Worker	31	8.9%	31	8.9%
Business Owner	0	0.0%	119	34.0%
Skilled Agricultural Forestry and Fishery	22	6.3%	0	0.0%
Working status				
Full-time	312	89.1%	333	95.1%
Part-time	16	4.6%	14	4%
Casual	15	4.3%	3	0.9%
Not working	7	2.0%	0	0.0%
Income				
Under \$44,999	14	4.0%	240	68.6%
\$45,000 – \$89,999	96	27.4%	52	14.9%
\$90,000 – \$149,999	193	55.1%	58	16.6%
\$150,000 and above	47	13.4%	0	0.0%

7.3. Confirmatory Factor Analysis – Dimensionality

Confirmatory factor analysis (CFA) assesses how well the cluster of variables fit within a latent variable (Brown, 2014). To achieve this, the samples from the USA (N = 350) and India (N = 350) were randomly split in two and the *first* sections of each sample were combined into a pooled sample. This pooled sample (N = 300), which included 150 responses each from the USA and India, was used to conduct the two-step CFA.

The two-step approach to CFA using the maximum likelihood estimation method with AMOS 26 also assesses the validity and reliability of the constructs (Anderson & Gerbing, 1988; Baumgartner & Homburg, 1996). The first step adopts one-factor congeneric models to improve the psychometric properties of each construct and evaluates the models with the goodness-of-fit indices ($\chi^2/df \leq 3.0$; $p \geq 0.05$; RMSEA ≤ 0.08 ; CFI ≥ 0.90 ; NFI ≥ 0.90 ; GFI ≥ 0.90) (Hu & Bentler, 1999). The second step introduces a measurement model that encompasses all constructs to test model fit and guide further refinement to the proposed model. Also, the standardised parameter estimates are considered to increase reliability and decrease measurement error (Hair et al., 2018).

In the first stage of the two-step CFA, one-factor congeneric models were run for each of the seven HEMGB constructs, namely attitude, subjective norms, perceived behavioural control, anticipated positive emotions, anticipated negative emotions, desire and intention. This analysis is outlined and shown in the following section.

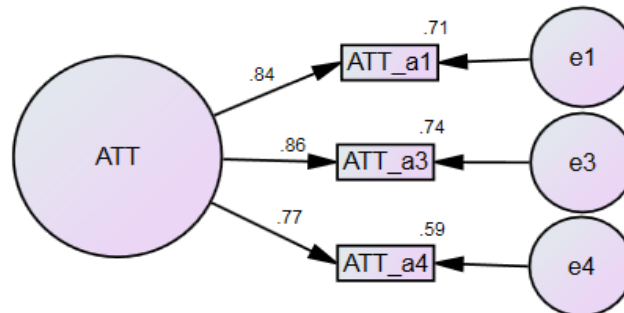
7.3.1. Attitude

At the outset, the four-item attitude model had an unacceptable fit, and the modification indices were examined for feasible solutions. One item, namely “*Unpleasant-Pleasant*”, was deleted.

Then the goodness-of-fit indices for the three-item model were acceptable ($\chi^2 = 0.17$; $df = 1$; $p = 0.68$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 7.1.

Figure 7.1

One-Factor Congeneric Model for Attitude

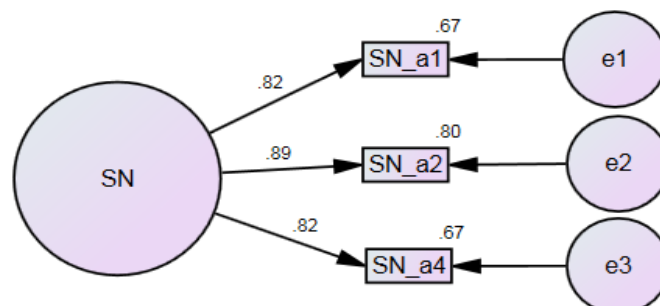


7.3.2. Subjective Norms

The four-item subjective norms model had an unacceptable fit. Thus, the modification indices were consulted to see whether any further refinements could be made. One item, namely “*Most people agreed with me about getting the procedure*”, was removed. Subsequently, as can be seen in Figure 7.2, the goodness-of-fit indices for the three-item model were concluded to be appropriate ($\chi^2 = 0.58$; $df = 1$; $p = 0.81$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 7.2

One-Factor Congeneric Model for Subjective Norms

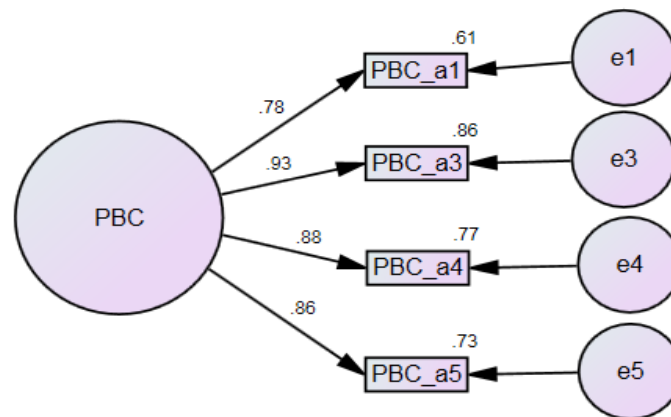


7.3.3. Perceived Behavioural Control

As the five-item perceived behavioural control model had an unacceptable fit initially, the modification indices were reviewed for likely solutions. One item, namely “*I was capable of getting the procedure*”, was eliminated. Subsequently, the goodness-of-fit indices for the four-item model were acceptable ($\chi^2 = 1.87$; $df = 2$; $p = 0.39$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 7.3.

Figure 7.3

One-Factor Congeneric Model for Perceived Behavioural Control

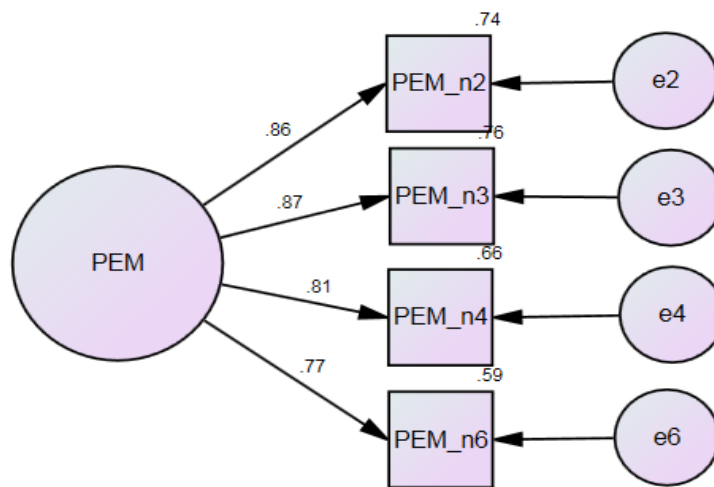


7.3.4. Anticipated Positive Emotions

An unacceptable fit was observed for the eight-item anticipated positive emotions model. After consulting the modification indices, some refinements were made. Four items, namely “*Satisfied*”, “*Gratified*”, “*Excited*” and “*Self-assured*”, were deleted. As can be seen in Figure 7.4, the goodness-of-fit indices for the four-item model were deemed appropriate ($\chi^2 = 1.80$; $df = 2$; $p = 0.40$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 7.4

One-Factor Congeneric Model for Anticipated Positive Emotions

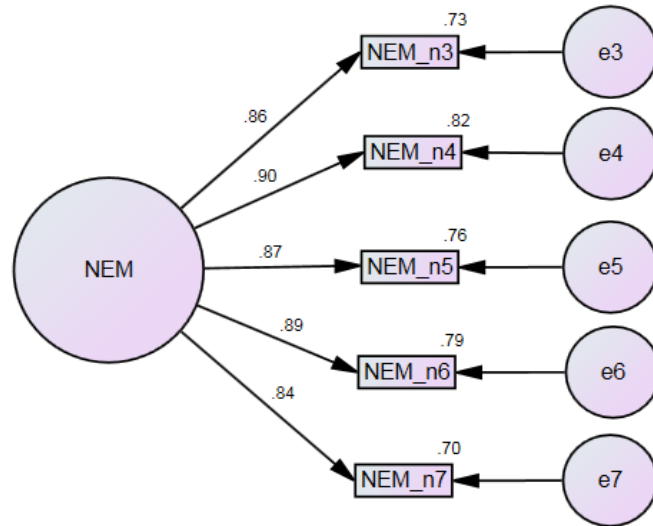


7.3.5. Anticipated Negative Emotions

At the outset, the nine-item anticipated negative emotions model had an unacceptable fit, and the modification indices were examined for feasible solutions. Reiteratively, four items, namely “*Depressed*”, “*Frustrated*”, “*Anxious*” and “*Self-critical*”, were deleted. Then the goodness-of-fit indices for the five-item model were acceptable ($\chi^2 = 5.36$; $df = 5$; $p = 0.37$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 7.5.

Figure 7.5

One-Factor Congeneric Model for Anticipated Negative Emotions

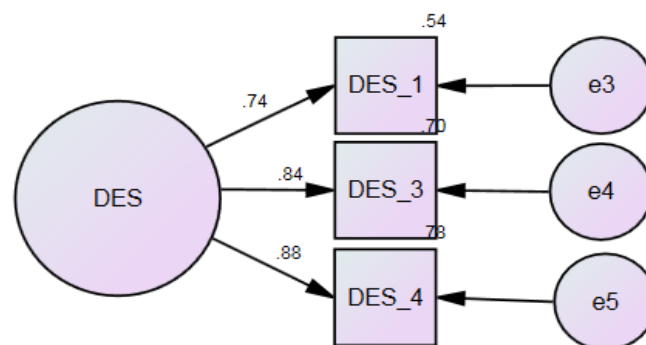


7.3.6. Desire

The four-item desire model had an unacceptable fit. Thus, the modification indices were consulted to see whether any further refinements could be made. One item, namely “*My aspirations for getting my next procedure can be expressed as...*”, was removed. Subsequently, as can be seen in Figure 7.6, the goodness-of-fit indices for the five-item model were concluded to be appropriate ($\chi^2 = 0.25$; $df = 1$; $p = 0.62$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 7.6

One-Factor Congeneric Model for Desire

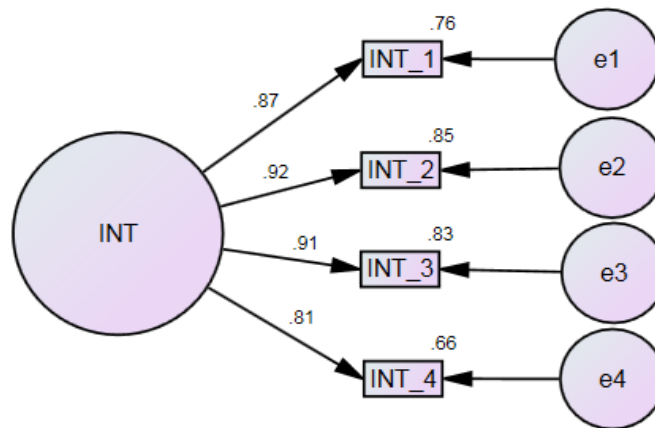


7.3.7. Intention

The four-item intention model was seen to have an acceptable model fit ($\chi^2 = 1.87$; $df = 2$; $p = 0.39$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 7.7. Therefore, the four-item model was assessed as appropriate.

Figure 7.7

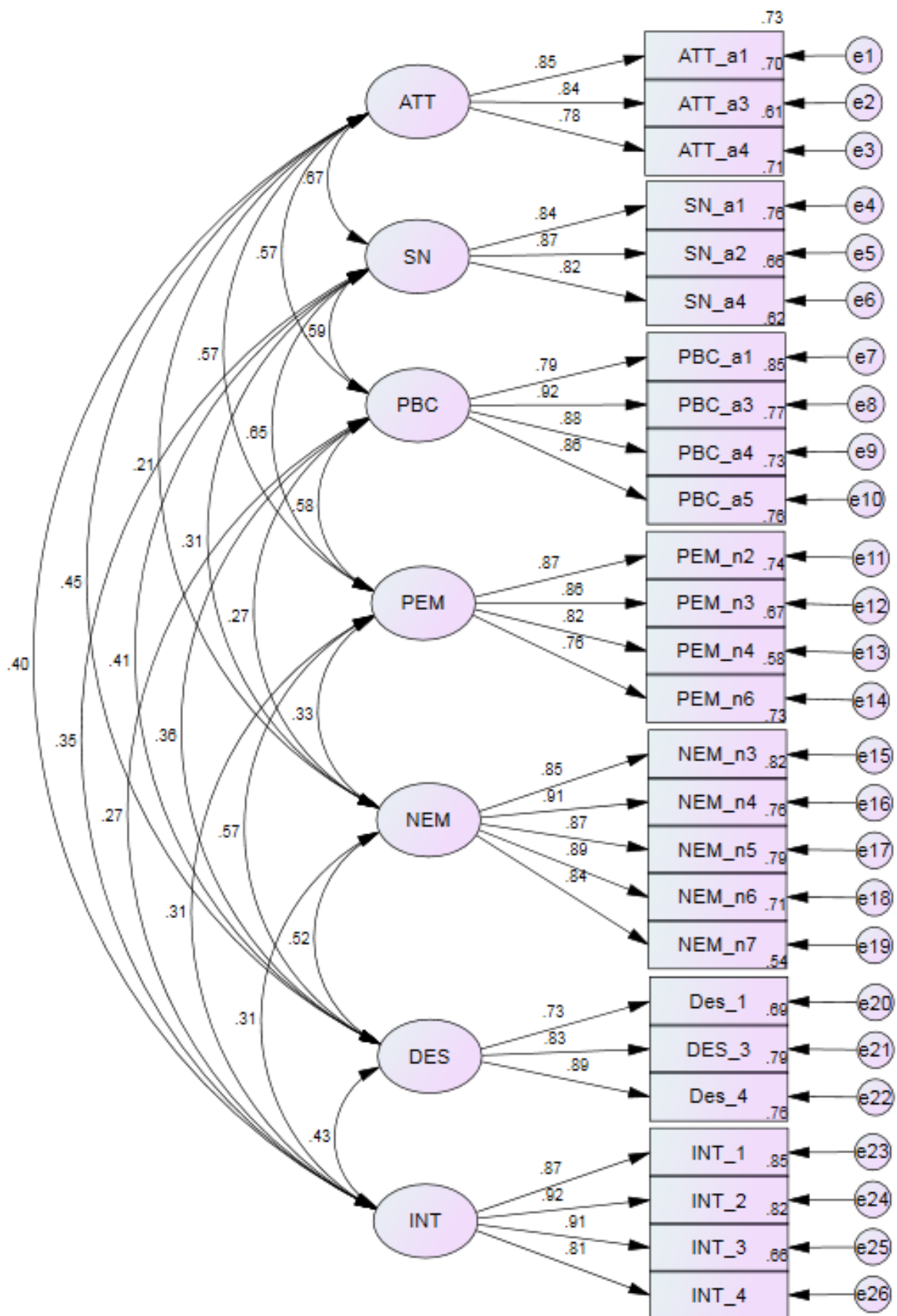
One-Factor Congeneric Model for Intention



In the second step of the two-step CFA, the seven constructs represented by the remaining 26 scale items were introduced into a full measurement model and structural equation modelling with AMOS 26 was conducted. As can be seen in Figure 7.8, the goodness-of-fit indices met the critical thresholds ($\chi^2 = 541.31$; $df = 278$; $p = 0.001$; RMSEA = 0.05; CFI = 0.96; NFI = 0.92; GFI = 0.88). The GFI score (0.88), which fell below the critical value of 0.90, was an exception. However, the model was deemed acceptable because no observable misfit with the values of any other absolute fit indices was observed (Jöreskog & Sörbom, 1999).

Figure 7.8

Measurement Model



7.4. Reliability

The standardised factor loadings and error variances from structural equation modelling with AMOS 26 were used to compute construct reliability and average variance extracted scores. The construct reliability for attitude was 0.86, while it was 0.88 for subjective norms, 0.92 for perceived behavioural control, 0.90 for anticipated positive emotions, 0.94 for anticipated negative emotions, 0.86 for desire and 0.93 for intention, as can be seen in Table 7.2. The critical value of 0.70 was exceeded for all constructs, indicating high reliability for the constructs (Anderson & Gerbing, 1988; Hair et al., 2018). The average variance extracted for attitude was 0.68, while it was 0.71 for subjective norms, 0.74 for perceived behavioural control, 0.69 for anticipated positive emotions, 0.76 for anticipated negative emotions, 0.67 for desire and 0.77 for intention. For all seven constructs, the critical value of 0.50 was exceeded, demonstrating that the data points were spread out from the mean, and from one another (Anderson & Gerbing, 1988; Fornell & Larcker, 1981; Hair et al., 2018).

Convergent validity refers to the strength of the relationship between scale items within a construct (Cole, 1987). Convergent validity is assessed in two ways. First, high benchmark values for the standardised parameter estimates (≥ 0.70) indicate an acceptable overall fit of the measurement model and theoretical consistency (Steenkamp & Van Trijp, 1991). The standardised parameter estimates, which ranged from 0.73 to 0.92, exceeded the critical value of 0.70 (Anderson & Gerbing, 1988; Hair et al., 2018), as can be seen in Figure 7.8. Second, each construct should exhibit a high average variance extracted score (≥ 0.50) (Fornell & Larcker, 1981; Hair et al., 2018). As can be seen in Table 7.2, the average variance extracted scores ranged from 0.67 to 0.77 for all constructs. These two tests suggested convergent validity for all seven constructs.

Table 7.2*Reliabilities, Average Variance and Correlations*

Construct	Items	CR	AVE	Correlations					
				ATT	SN	PBC	PEM	NEM	DES
Attitude (ATT)	3	0.86	0.68						
Subjective norms (SN)	3	0.88	0.71	0.67 (0.45)					
Perceived behavioural control (PBC)	4	0.92	0.74	0.57 (0.32)	0.59 (0.34)				
Anticipated positive emotions (PEM)	4	0.90	0.69	0.57 (0.32)	0.65 (0.43)	0.58 (0.33)			
Anticipated negative emotions (NEM)	5	0.94	0.76	0.21 (0.04)	0.31 (0.09)	0.27 (0.07)	0.33 (0.11)		
Desire (DES)	3	0.86	0.67	0.45 (0.20)	0.41 (0.17)	0.36 (0.13)	0.57 (0.32)	0.52 (0.27)	
Intention (INT)	4	0.93	0.77	0.40 (0.16)	0.35 (0.13)	0.27 (0.07)	0.31 (0.10)	0.31 (0.10)	0.43 (0.18)

Note: CR = construct reliability; AVE = average variance extracted; squared correlations in parentheses

7.5. Validity

Discriminant validity provides evidence that measures of constructs that theoretically should not be highly correlated to each other are, in fact, not found to be highly related to each other (Brown, 2014). Discriminant validity is assessed in three ways. First, the average variance extracted score is compared with the squared structural path coefficient between any two constructs (Fornell & Larcker, 1981). As can be seen in Table 7.2, the average variance extracted (0.67–0.77) was greater than the squared structural path coefficient between any two relevant constructs (0.04–0.45). Second, there should be a low correlation between any two constructs (≤ 0.80) (Bagozzi & Heatherton, 1994; Dabholkar et al., 1997; Lings & Greenley, 2005). Correlations between all constructs met this criteria (0.21–0.67), as can be seen in Table 7.2. Third, the correlation between any two constructs plus or minus two standard errors must have a confidence interval that is less than the value of one (Bagozzi & Heatherton, 1994). The construct correlations ranged from 0.21 to 0.67 and the confidence interval (99%) from 0.35 to 0.82. These three tests implied discriminant validity for all seven constructs.

7.6. Analysis of Variance – Testing *RQ1a* and *RQ1b*

Analysis of variance (ANOVA) is a statistical technique designed to determine mean differences between two or more groups (Kao & Green, 2008). To test this, the *second* sections of the split samples from the USA (N = 200) and India (N = 200) were selected.

In addressing the research questions *RQ1a* and *RQ1b*, anticipated positive and negative emotions before, after and for the next hair transplant were examined for hedonic adaptation in each country sample by ANOVA using Tukey's post hoc test with SPSS 26. Due to the sustained effects of the hair transplant (six months to three years), significant changes in the mean scores for anticipated emotions were observed over a time frame of three years. Hair transplants undertaken up to 23 months ago were classified as shorter term, and those undertaken two to three years ago as longer term.

As can be seen in Figures 7.9a and 7.9b, there were significant differences for anticipated positive and negative emotions between the before and after stages in the shorter and longer time frames for the USA, supporting *RQ1a* and *RQ1b*. There were also significant differences for anticipated negative emotions between the after and next stages in the shorter and longer time frames for the USA, again supporting *RQ1b*.

Figure 7.9a

Positive and Negative Emotions – Shorter Term (USA)

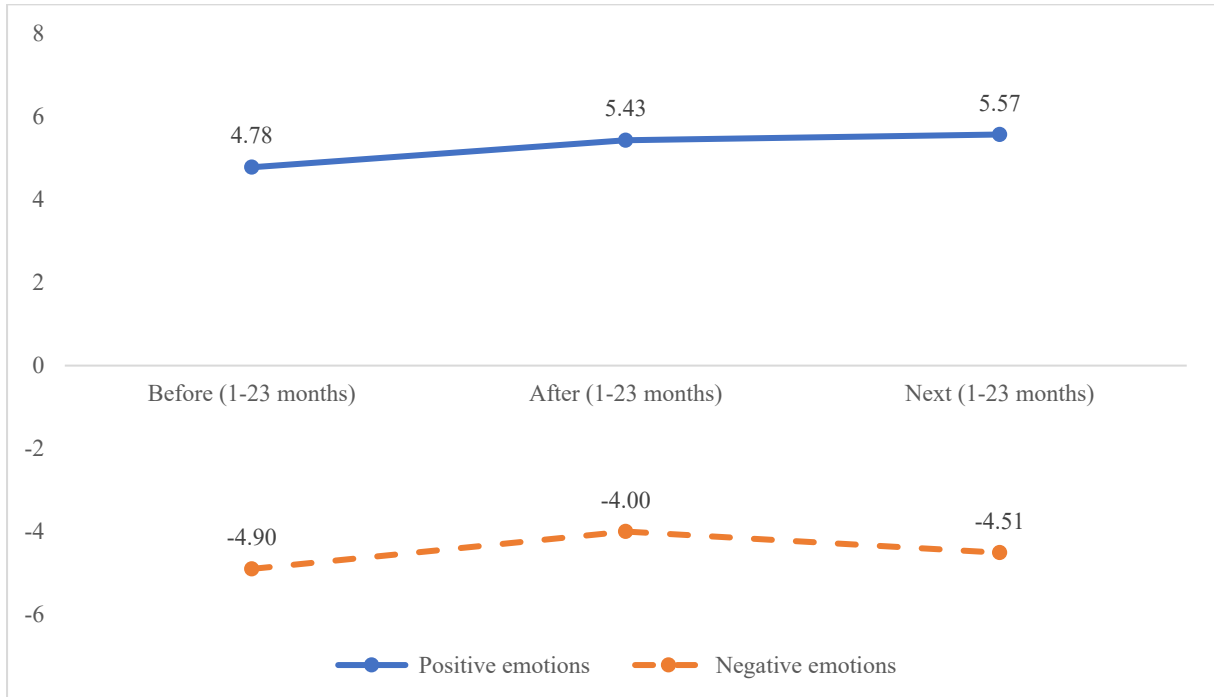


Figure 7.9b

Positive and Negative Emotions – Longer Term (USA)

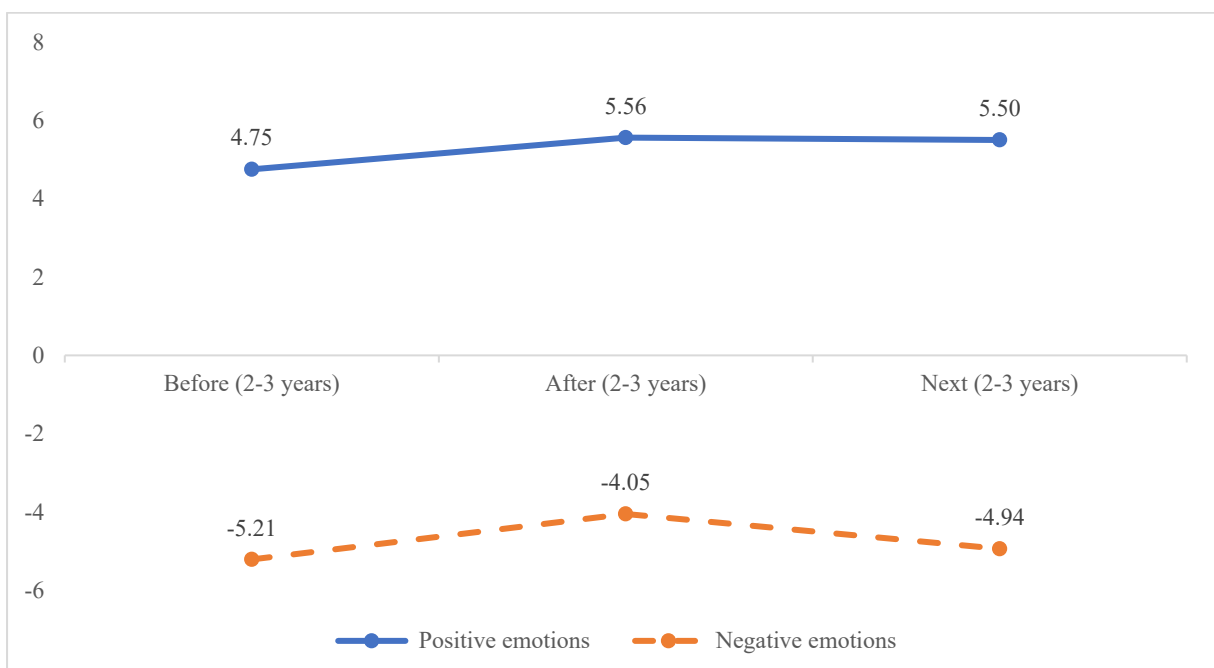


Figure 7.10a

Positive and Negative Emotions – Shorter Term (India)

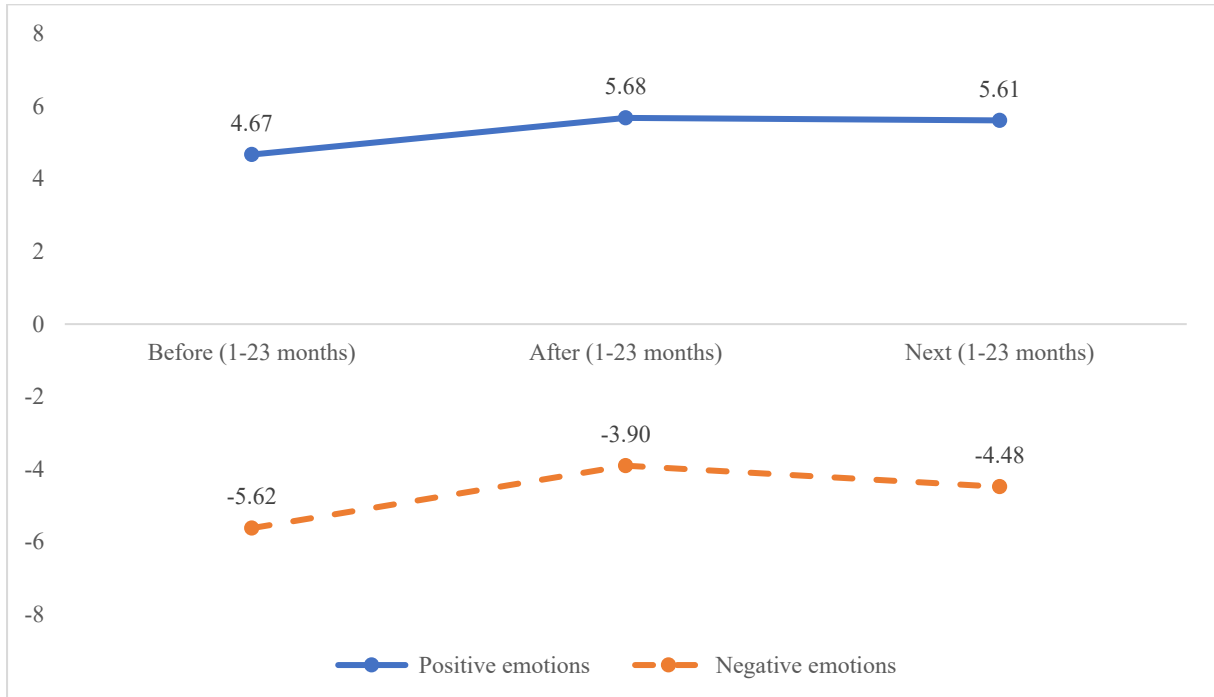
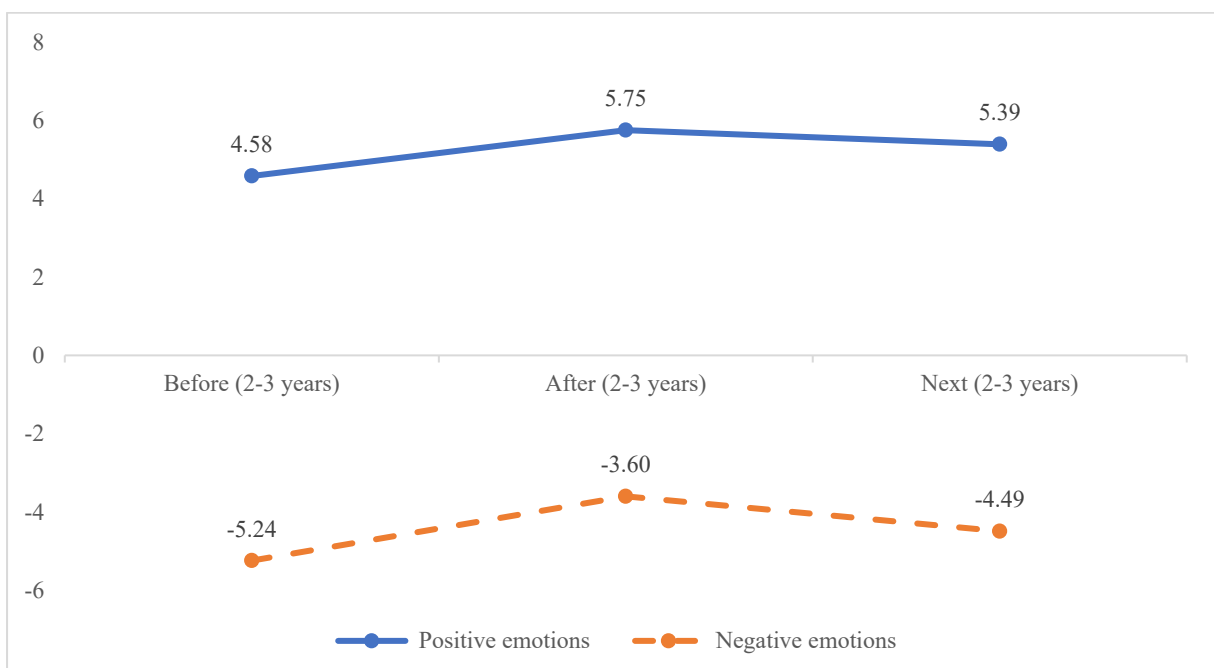


Figure 7.10b

Positive and Negative Emotions – Longer Term (India)



Likewise, as can be seen in Figure 7.10a, significant differences existed for anticipated positive and negative emotions between the before and after stages as well as between the before and next stages of the shorter time frame for India, supporting *RQ1a* and *RQ1b*. These trends were reiterated for anticipated positive and negative emotions in the longer time frame, also supporting *RQ1a* and *RQ1b*, as can be seen in Figure 7.10b.

Following the trend in the USA, significant differences existed for anticipated positive and negative emotions between the before and after stages in the shorter and longer time frames for India, supporting *RQ1a* and *RQ1b*, as can be seen in Figures 7.10a and 7.10b. As with the USA, there were significant differences for anticipated negative emotions between the after and next stages in the shorter and longer time frames for India, again supporting *RQ1b*.

7.7. Structural Equation Modelling – Testing *H1* to *H6*

Structural equation modelling (SEM) examines the research hypotheses and measures standardised path coefficients to establish the relative importance of each construct (Schumacker & Lomax, 2004). To perform this, the *second* sections of the split samples from the USA (N = 200) and India (N = 200) were used.

SEM using multigroup analysis with AMOS 26 examined the structural models for the USA and India. The goodness-of-fit indices met the critical thresholds ($\chi^2 = 653.65$; $df = 344$; $p = 0.001$; RMSEA = 0.04; CFI = 0.96; NFI = 0.92; GFI = 0.86). The GFI score was the exception (0.86), falling below the critical value of 0.90. However, as there appeared to be no observable misfit with the values of any other absolute fit indices, the model was concluded to be acceptable (Jöreskog & Sörbom, 1999). As can be seen in Table 7.3, the structural models for the USA and India demonstrated the hypothesised relationships.

7.7.1. USA

For American respondents who had previously engaged in a hair transplant, attitude had a positive effect on the desire to further engage in a hair transplant ($\beta = 0.17$; $p = 0.05$), supporting *H1*. Subjective norms also had a significant positive effect on the desire to further engage in a hair transplant ($\beta = 0.32$; $p = 0.001$), supporting *H2*. However, perceived behavioural control did not have a significant positive effect on the desire to further engage in a hair transplant, which did not support *H3*. Neither did perceived behavioural control have a significant positive effect on the intention to further engage in a hair transplant, which did not support *H4*. Anticipated positive emotions had a significant positive effect on the desire to further engage in a hair transplant ($\beta = 0.28$; $p = 0.001$), supporting *H5a*. However, anticipated negative emotions did not have a significant positive effect on the desire to further engage in a hair transplant, which did not support *H5b*. Moreover, desire had a significant positive effect on the intention to further engage in a hair transplant ($\beta = 0.62$; $p = 0.001$), supporting *H6*.

R^2 values over 0.15 demonstrate that together, the independent variables are able to account for the percentage of variance in each dependent variable (Hair et al., 2018). The R^2 values for desire and intention were 0.38 and 0.41, respectively. This implied that attitude, subjective norms, perceived behavioural control, anticipated positive emotions and anticipated negative emotions, the exogenous variables, were able to explain the percentage of variance in desire and intention, the endogenous variables.

Table 7.3**Standardised Path Coefficients**

Regressed relationship	Beta Value (β)	Beta Value (β)
	USA (N = 200)	India (N = 200)
H1: ATT \rightarrow DES	0.17*	-0.01
H2: SN \rightarrow DES	0.32***	0.57***
H3: PBC \rightarrow DES	-0.11	-0.19
H4: PBC \rightarrow INT	0.06	0.14*
H5a: PEM \rightarrow DES	0.28***	0.37***
H5b: NEM \rightarrow DES	0.04	0.16**
H6: DES \rightarrow INT	0.63***	0.65***
R ² for DES	0.38	0.56
R ² for INT	0.41	0.53
χ^2		653.07
<i>df</i>		344.00
<i>p</i>		0.001
RMSEA		0.05
CFI		0.96
NFI		0.92
GFI		0.86

Note: attitude = ATT; subjective norms = SN; perceived behavioural control = PBC; anticipated positive emotions = PEM; anticipated negative emotions = NEM; desire = DES; intention = INT; root mean square error of approximation = RMSEA; CFI = comparative fit index; NFI = normed fit index; GFI = goodness-of-fit index. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

7.7.2. India

With Indian respondents who had previously engaged in a hair transplant, attitude did not have a significant positive effect on the desire to further engage in a hair transplant, which did not support *H1*. Subjective norms had a significant positive effect on the desire to further engage in a hair transplant ($\beta = 0.57$; $p = 0.001$), supporting *H2*. Again, perceived behavioural control did not have a significant positive effect on the desire to further engage in a hair transplant, which did not support *H3*. However, perceived behavioural control had a positive effect on the intention to further engage in a hair transplant ($\beta = 0.14$; $p = 0.05$), supporting *H4*. Anticipated positive emotions had a significant positive effect on the desire to further engage in a hair transplant ($\beta = 0.37$; $p = 0.001$), supporting *H5a*. Similarly, anticipated negative emotions had a positive effect on the desire to further engage in a hair

transplant ($\beta = 0.16$; $p = 0.01$), supporting *H5b*. Additionally, desire had a significant positive effect on the intention to further engage in a hair transplant ($\beta = 0.65$; $p = 0.001$), supporting *H6*.

Further, the R^2 values for justifying desire and intention were 0.56 and 0.53, respectively. Thus, attitude, subjective norms, perceived behavioural control, anticipated positive emotions and anticipated negative emotions, the exogenous variables, were able to account for the percentage of variance in desire and intention, the endogenous variables.

To establish whether the paths differed significantly between the USA and India, a pairwise parameter comparison using critical ratios for differences between parameters with AMOS 26 was administered. *H1* and *H6* were significantly different between the two country samples.

7.8. Chapter Summary

This chapter investigated the rigour in the factor structures of the key constructs in the research and assessed the research questions and hypotheses in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB). This research was conducted under the hair transplant condition in Study Five (USA) and Study Six (India). Having deemed that the constructs showed dimensionality and reliability as well as convergent, discriminant and predictive validity, it is now possible to advance to further studies so as to probe the research questions and test the hypothesised relationships in the HEMGB under other cosmetic procedure conditions.

Chapter Eight

Studies Seven and Eight: Liposuction

8.0. Introduction

This chapter describes Studies Seven and Eight, highlighting their research objectives and observing their findings. As Chapter Four has outlined, the main objectives of the two studies were to establish factor dimensionality, refine and validate the scale items for the key constructs, and then evaluate the research questions and hypotheses in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB). The studies respectively sampled members of the populations in the USA and India who had prior experience with liposuction. To accomplish the research objectives, the psychometric properties of each construct were determined to confirm their reliability and convergent, discriminant and predictive validity, before the constructs were introduced into the HEMGB to verify their relationships.

8.1. Data Collection

Liposuction was selected to represent minimally invasive cosmetic procedures due to its high uptake in the USA and India. More than 250,000 liposuction procedures were conducted in the USA in 2018 (American Society of Plastic Surgeons, 2019). Liposuction is also one of the most advanced and competitively priced cosmetic procedures in India, with demand growing annually (Clinicspots Holistic Healthcare, 2018).

The research instrument for Study Seven (USA) and Study Eight (India) comprised an online survey that was self-administered to online panels. Moreover, data were collected from members of the population at a medical practice in India. Only respondents who had previously undertaken liposuction more than once and in the last three years qualified for the target sample.

Following the minimum sample size of 100 required to achieve a stable maximum likelihood estimation result (Hair et al., 2018), a quota of 400 responses was set for each country sample. In total, 350 usable responses were collected for each country sample, suggesting a completion rate of 88%.

8.2. Sample Profiles

The demographic profiles of respondents from the USA and India included their gender, age, marital status, education, occupation, working status and annual income. As can be seen in Table 8.1, there were more female respondents for the USA (60%) and India (58%) than male respondents. Most respondents for the USA (51%) and India (44%) fell within the 45–54 age group. This reflects the interest that older women have in liposuction and reiterates findings from the literature (Kaoutzanis et al., 2017) The largest percentage of American respondents were married (45%), followed by those who were in a de facto relationship (43%), whereas the largest percentage of Indian respondents were married (95%).

The majority of American (36%) and Indian (68%) respondents held an undergraduate degree, with American respondents working in managerial or professional roles (83%) and Indian respondents working in professional or civil service roles (45%) full-time. Most American respondents were in the USD\$90,000 – USD\$149,000 income group (61%), whereas most Indian respondents earned under USD\$44,999 (78%). This is representative of the population who earned US\$58,829 in the USA (US Bureau of Labour Statistics, 2018) and 126,968 rupees in India (Jha, 2021). The demographic profiles exhibited some differences between the samples collected in the USA and India.

As clarified in Chapter Six, the key constructs were deemed to have stable factor structures as well as acceptable reliability and validity in the previous six studies. This supported the decision to proceed directly to confirmatory factor analysis in Studies Seven and Eight.

Table 8.1**Sample Profiles**

Demographics	USA (N = 350)	%	India (N = 350)	%
Gender				
Male	139	39.7%	148	42.3%
Female	211	60.3%	202	57.7%
Age				
21–34 years	27	7.7%	33	9.4%
35–44 years	123	35.1%	49	14.0%
45–54 years	178	50.9%	153	43.7%
55–64 years	22	6.3%	115	32.9%
Marital status				
Single	11	3.1%	4	1.1%
In a relationship	31	8.9%	7	2.0%
De facto	149	42.6%	7	2.0%
Married	159	45.4%	332	94.9%
Education				
Certificate	40	11.4%	0	0.0%
Advanced Diploma or Diploma	32	9.1%	0	0.0%
Graduate Diploma or Graduate Certificate	85	24.3%	6	1.7%
Bachelor Degree	125	35.7%	239	68.3%
Postgraduate Degree	68	19.4%	105	30.0%
Occupation				
Manager	221	63.1%	31	8.9%
Retired	6	1.7%	8	2.3%
Professional	70	20.0%	78	22.3%
Clerical Support Worker	13	3.7%	0	0.0%
Civil Service	0	0.0%	79	22.6%
Housewife	0	0.0%	75	21.4%
Service and Sales Worker	16	4.6%	0	0.0%
Business Owner	0	0.0%	63	18.0%
Skilled Agricultural Forestry and Fishery	24	6.9%	16	4.6%
Working status				
Full-time	277	79.1%	192	54.9%
Part-time	34	9.7%	63	18.0%
Casual	30	8.6%	12	3.4%
Not working	9	2.6%	83	23.7%
Income				
Under \$44,999	24	6.9%	273	78.0%
\$45,000 – \$89,999	87	24.9%	54	15.4%
\$90,000 – \$149,999	214	61.1%	21	6.0%
\$150,000 and above	25	7.1%	2	0.6%

8.3. Confirmatory Factor Analysis – Dimensionality

Confirmatory factor analysis (CFA) evaluates whether the cluster of variables fit well within a latent variable (Brown, 2014). To establish this, the samples from the USA (N = 350) and India (N = 350) were randomly split in two and the *first* sections of each sample were combined into a pooled sample. This pooled sample (N = 300), which included 150 responses each from the USA and India, was used to conduct the two-step CFA.

The two-step approach to CFA using the maximum likelihood estimation method with AMOS 26 also tests the validity and reliability of the constructs (Anderson & Gerbing, 1988; Baumgartner & Homburg, 1996). The first step utilises one-factor congeneric models to further refine the psychometric properties of each construct and assesses the models with the goodness-of-fit indices ($\chi^2/df \leq 3.0$; $p \geq 0.05$; RMSEA ≤ 0.08 ; CFI ≥ 0.90 ; NFI ≥ 0.90 ; GFI ≥ 0.90) (Hu & Bentler, 1999). The second step implements a measurement model that includes all constructs to assess model fit and seek further improvement to the proposed model. Further, the standardised parameter estimates are examined to attain increased reliability and decreased measurement error (Hair et al., 2018).

In the first step of the two-step CFA, one-factor congeneric models were used to assess each of the eight HEMGB constructs, namely attitude, subjective norms, perceived behavioural control, anticipated positive emotions, anticipated negative emotions, past behaviour, desire and intention. The following section outlines and illustrates this process.

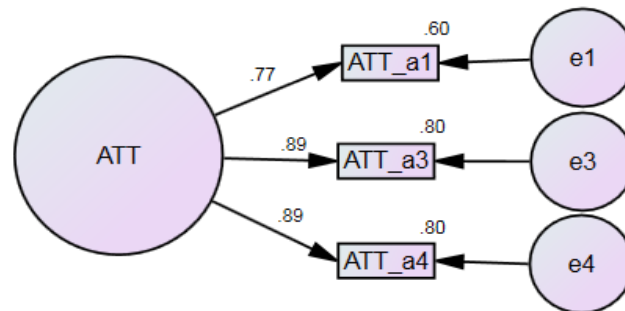
8.3.1. Attitude

Initially, the four-item attitude model had an unacceptable fit, and the modification indices were examined for possible solutions. One item, namely “*Unpleasant-Pleasant*”, was eliminated. Subsequently, the goodness-of-fit indices for the three-item model were acceptable

($\chi^2 = 0.71$; $df = 1$; $p = 0.40$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 8.1.

Figure 8.1

One-Factor Congeneric Model for Attitude

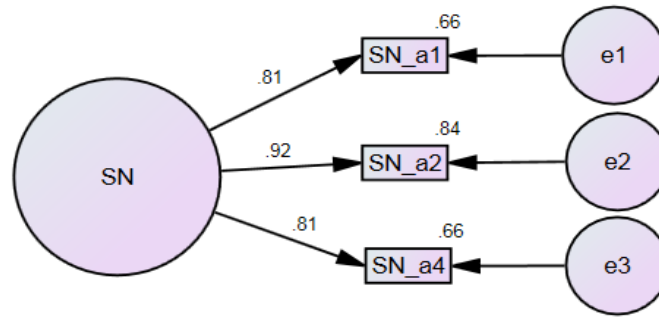


8.3.2. Subjective Norms

The four-item subjective norms model had an unacceptable fit. Therefore, the modification indices were consulted to see whether any further improvements could be made. One item, namely “*Most people agreed with me about getting the procedure*”, was removed. Following this, as can be seen in Figure 8.2, the goodness-of-fit indices for the three-item model were deemed appropriate ($\chi^2 = 0.38$; $df = 1$; $p = 0.54$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 8.2

One-Factor Congeneric Model for Subjective Norms

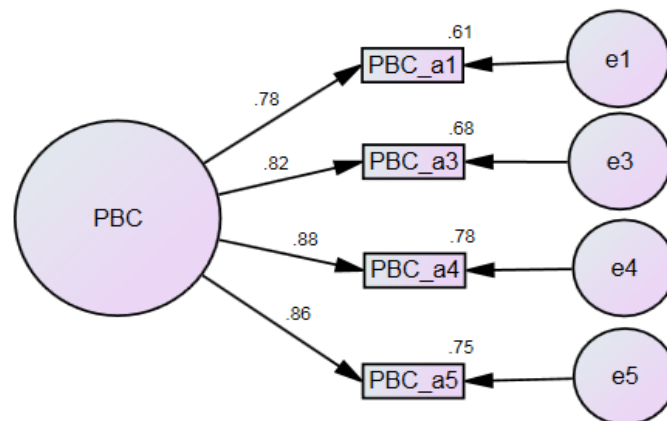


8.3.3. Perceived Behavioural Control

The five-item perceived behavioural control model had an initial unacceptable fit, so the modification indices were considered for possible solutions. One item, namely “*I was capable of getting the procedure*”, was deleted. Subsequently, the goodness-of-fit indices for the four-item model were acceptable ($\chi^2 = 0.68$; $df = 2$; $p = 0.71$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 8.3.

Figure 8.3

One-Factor Congeneric Model for Perceived Behavioural Control



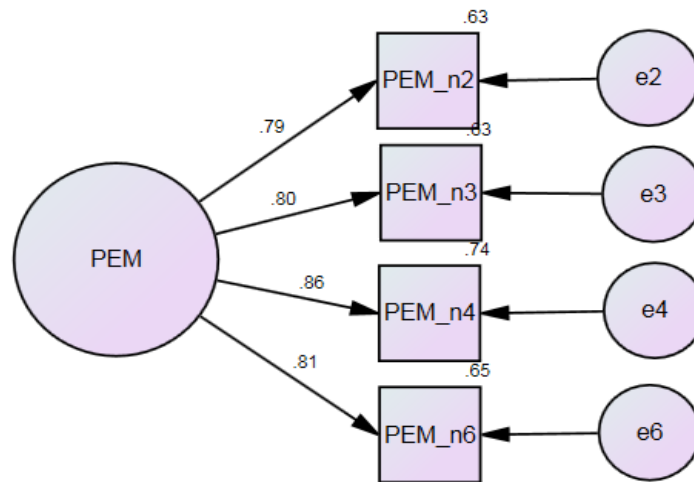
8.3.4. Anticipated Positive Emotions

There was an unacceptable fit for the eight-item anticipated positive emotions model. After examining the modification indices, further refinements were implemented. Four items,

namely “*Satisfied*”, “*Gratified*”, “*Excited*” and “*Self-assured*”, were removed. As can be seen in Figure 8.4, the goodness-of-fit indices for the four-item model were assessed as being appropriate ($\chi^2 = 0.91$; $df = 2$; $p = 0.63$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 8.4

One-Factor Congeneric Model for Anticipated Positive Emotions

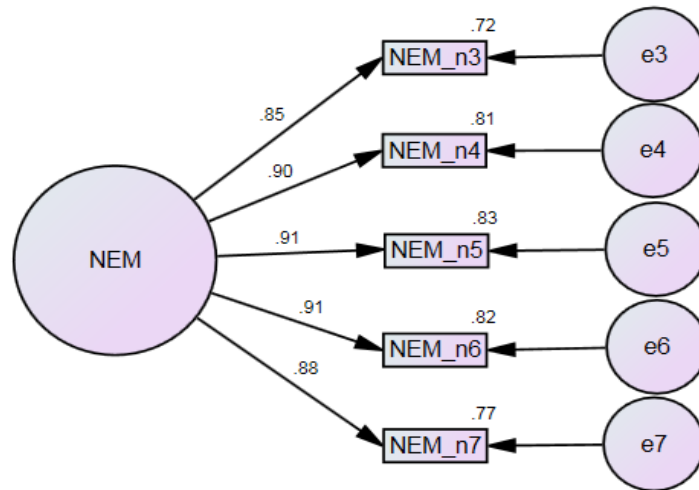


8.3.5. Anticipated Negative Emotions

Initially, the nine-item anticipated negative emotions model had an unacceptable fit, and the modification indices were examined for possible solutions. Reiteratively, four items, namely “*Depressed*”, “*Frustrated*”, “*Anxious*” and “*Self-critical*”, were eliminated. Subsequently, the goodness-of-fit indices for the five-item model were acceptable ($\chi^2 = 4.36$; $df = 5$; $p = 0.50$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 8.5.

Figure 8.5

One-Factor Congeneric Model for Anticipated Negative Emotions

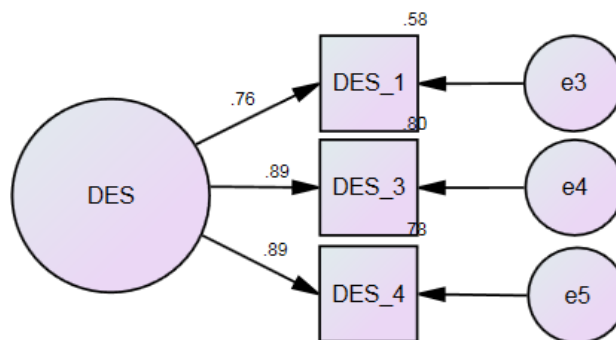


8.3.6. Desire

The four-item desire model had an unacceptable fit. Therefore, the modification indices were consulted to see whether any further improvements could be made. One item, namely “*My aspirations for getting my next procedure can be expressed as...*”, was removed. Following this, as can be seen in Figure 8.6, the goodness-of-fit indices for the five-item model were deemed appropriate ($\chi^2 = 0.36$; $df = 1$; $p = 0.24$; RMSEA = 0.03; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 8.6

One-Factor Congeneric Model for Desire

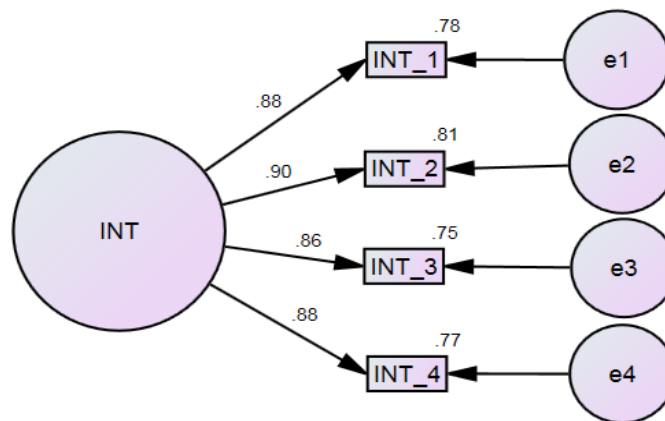


8.3.7. Intention

The four-item intention model had an acceptable model fit ($\chi^2 = 1.23$; $df = 2$; $p = 0.54$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 8.7. Therefore, the four-item model was deemed appropriate.

Figure 8.7

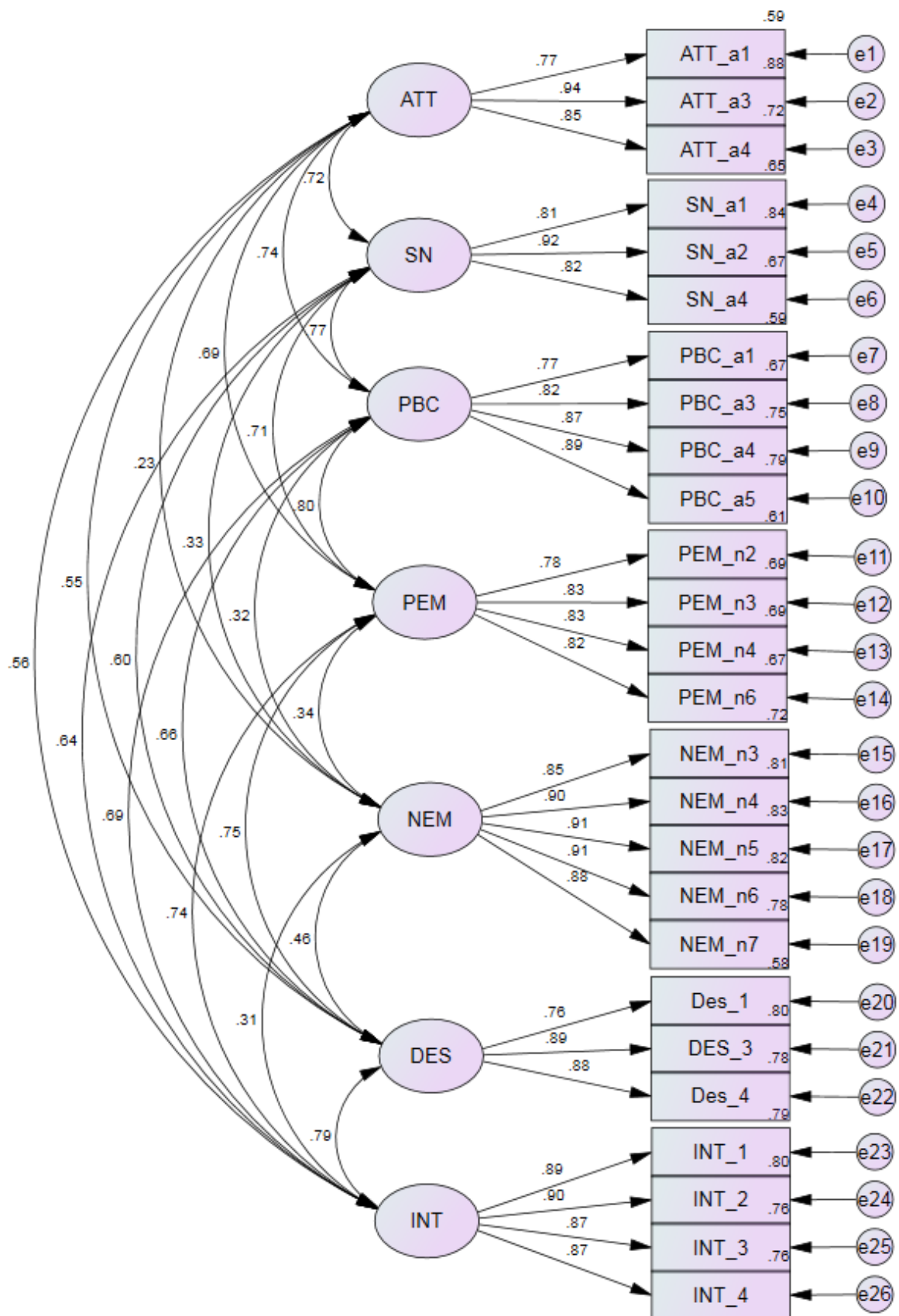
One-Factor Congeneric Model for Intention



In the second step of the two-step CFA, the resultant 26 scale items, which represented the seven constructs, were introduced into a full measurement model and subjected to structural equation modelling with AMOS 26, as can be seen in Figure 8.8. The goodness-of-fit indices met the critical thresholds ($\chi^2 = 633.37$; $df = 278$; $p = 0.001$; RMSEA = 0.06; CFI = 0.95; NFI = 0.92; GFI = 0.87). The exception was the GFI score (0.88), which was below the critical value of 0.90. However, the model was assessed as being acceptable because there was no observable misfit with the values of the other absolute fit indices (Jöreskog & Sörbom, 1999).

Figure 8.8

Measurement Model



8.4. Reliability

The standardised factor loadings and error variances from structural equation modelling with AMOS 26 were used to calculate construct reliability and average variance extracted scores. As can be seen in Table 8.2, the construct reliability for attitude was 0.89, while it was 0.88 for subjective norms, 0.90 for perceived behavioural control, 0.89 for anticipated positive emotions, 0.95 for anticipated negative emotions, 0.88 for desire and 0.93 for intention. All seven constructs produced reliability scores greater than the critical value of 0.70, demonstrating reliability for the constructs (Anderson & Gerbing, 1988; Hair et al., 2018). The average variance extracted for attitude was 0.73, while it was 0.72 for subjective norms, 0.70 for perceived behavioural control, 0.66 for anticipated positive emotions, 0.79 for anticipated negative emotions, 0.72 for desire and 0.78 for intention. The critical value of 0.50 was exceeded for all seven constructs, implying that there was a spread of the data points from the mean, and from one another (Anderson & Gerbing, 1988; Fornell & Larcker, 1981; Hair et al., 2018).

8.5. Validity

The strength of the relationship between scale items within a construct indicates convergent validity (Cole, 1987). Convergent validity is tested in two ways. First, standardised parameter estimates with high benchmark values (≥ 0.70) suggest an acceptable overall fit of the measurement model and theoretical consistency (Steenkamp & Van Trijp, 1991). As can be seen in Figure 8.8, the standardised parameter estimates ranged from 0.76 to 0.94, which were greater than the critical value of 0.70 (Anderson & Gerbing, 1988; Hair et al., 2018). Second, each construct should demonstrate a high average variance extracted score (≥ 0.50) (Fornell & Larcker, 1981; Hair et al., 2018). The average variance extracted scores for all constructs

ranged from 0.66 to 0.79, as can be seen in Table 8.2. These two tests suggested acceptable convergent validity for all seven constructs.

Table 8.2

Reliabilities, Average Variance and Correlations

Construct	Items	CR	AVE	Correlations					
				ATT	SN	PBC	PEM	NEM	DES
Attitude (ATT)	3	0.89	0.73						
Subjective norms (SN)	3	0.88	0.72	0.72 (0.52)					
Perceived behavioural control (PBC)	4	0.90	0.70	0.74 (0.54)	0.77 (0.60)				
Anticipated positive emotions (PEM)	4	0.89	0.66	0.69 (0.48)	0.71 (0.50)	0.80 (0.64)			
Anticipated negative emotions (NEM)	5	0.95	0.79	0.23 (0.05)	0.33 (0.11)	0.32 (0.10)	0.34 (0.11)		
Desire (DES)	3	0.88	0.72	0.55 (0.30)	0.60 (0.36)	0.66 (0.43)	0.75 (0.56)	0.46 (0.21)	
Intention (INT)	4	0.93	0.78	0.56 (0.31)	0.64 (0.40)	0.69 (0.48)	0.74 (0.55)	0.31 (0.10)	0.79 (0.62)

Note: CR = construct reliability; AVE = average variance extracted; squared correlations in parentheses

When two constructs that should not be theoretically correlated are in fact not correlated, this implies discriminant validity (Brown, 2014). Discriminant validity is tested in three ways. First, the average variance extracted is compared with the squared structural path coefficient between any two constructs (Fornell & Larcker, 1981). As can be seen in Table 8.2, the average variance extracted (0.66–0.79) was greater than the squared structural path coefficient between any two relevant constructs (0.05–0.64). Second, there should be a low correlation between any two constructs (≤ 0.80) (Bagozzi & Heatherton, 1994; Dabholkar et al., 1997; Lings & Greenley, 2005). Correlations between all constructs were low (0.23–0.80), as can be seen in Table 8.2. Third, the correlation between any two constructs plus or minus two standard errors must have a confidence interval that is less than the value of one (Bagozzi & Heatherton, 1994). The

construct correlations ranged from 0.23 to 0.80 and the confidence interval (99%) from 0.35 to 0.84. These three tests indicated acceptable discriminant validity for all seven constructs.

8.6. Analysis of Variance – Testing *RQ1a* and *RQ1b*

Analysis of variance (ANOVA) is a diagnostic method aimed at identifying whether difference exists between the means of two or more groups (Kao & Green, 2008). To achieve this, the *second* sections of the split samples from the USA (N = 200) and India (N = 200) were utilised.

To address the research questions *RQ1a* and *RQ1b*, anticipated positive and negative emotions before, after and for the next liposuction were assessed for hedonic adaptation in each country sample by ANOVA using Tukey's post hoc test with SPSS 26. As there were prolonged impacts of liposuction (six months to three years), significant changes in the mean scores for anticipated emotions were noted over a three-year duration. Liposuction undertaken up to 23 months ago was categorised as shorter term, and that undertaken two to three years ago as longer term.

As can be seen in Figures 8.9a and 8.9b, there were significant differences for anticipated positive and negative emotions between the before and after stages in the shorter and longer time frames for the USA, supporting *RQ1a* and *RQ1b*. There were also significant differences for anticipated negative emotions between the after and next stages in the shorter and longer time frames for the USA, again supporting *RQ1b*.

Figure 8.9a

Positive and Negative Emotions – Shorter Term (USA)

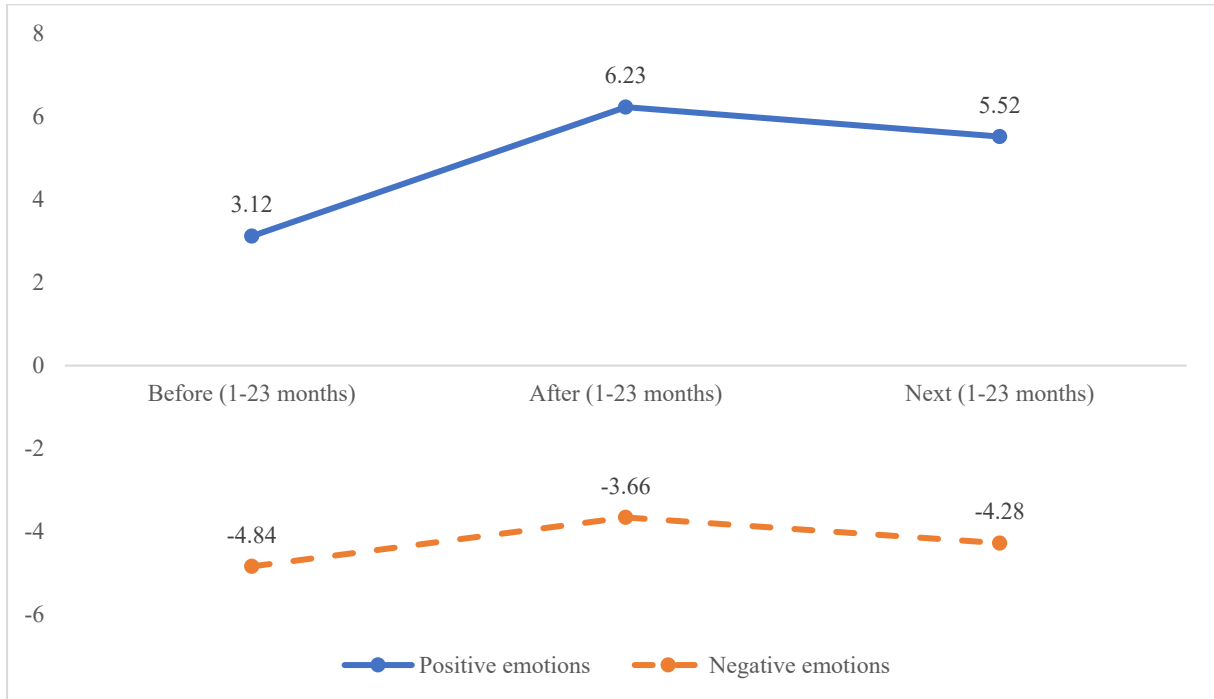


Figure 8.9b

Positive and Negative Emotions – Longer Term (USA)

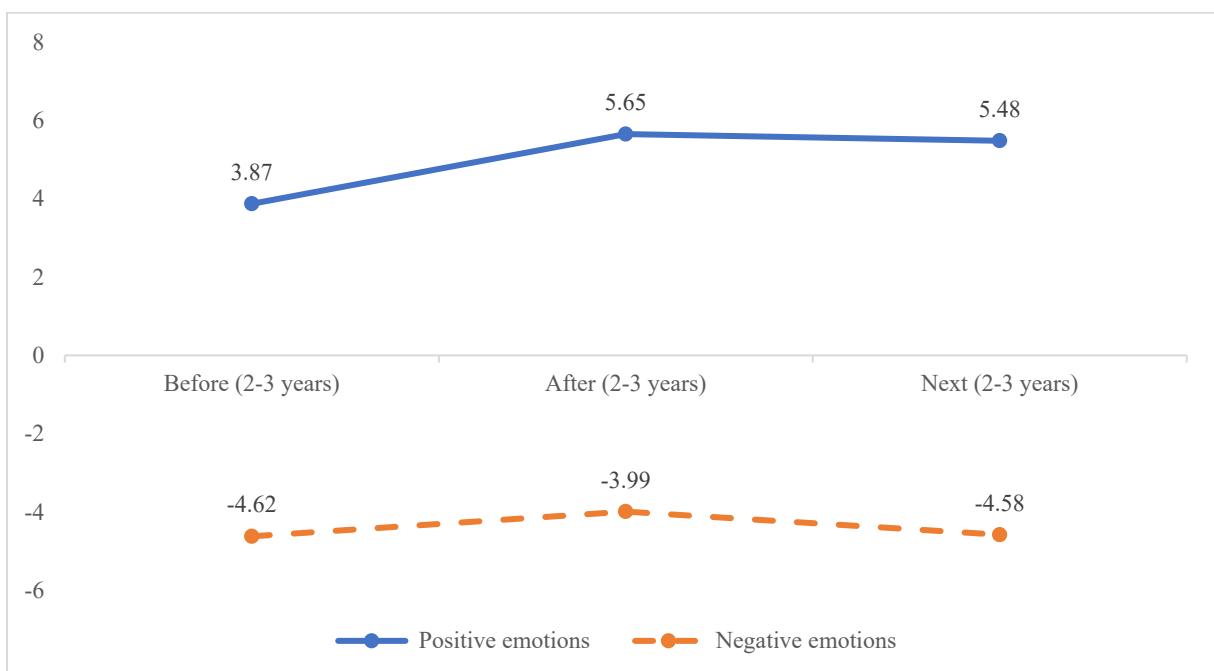


Figure 8.10a

Positive and Negative Emotions – Shorter Term (India)

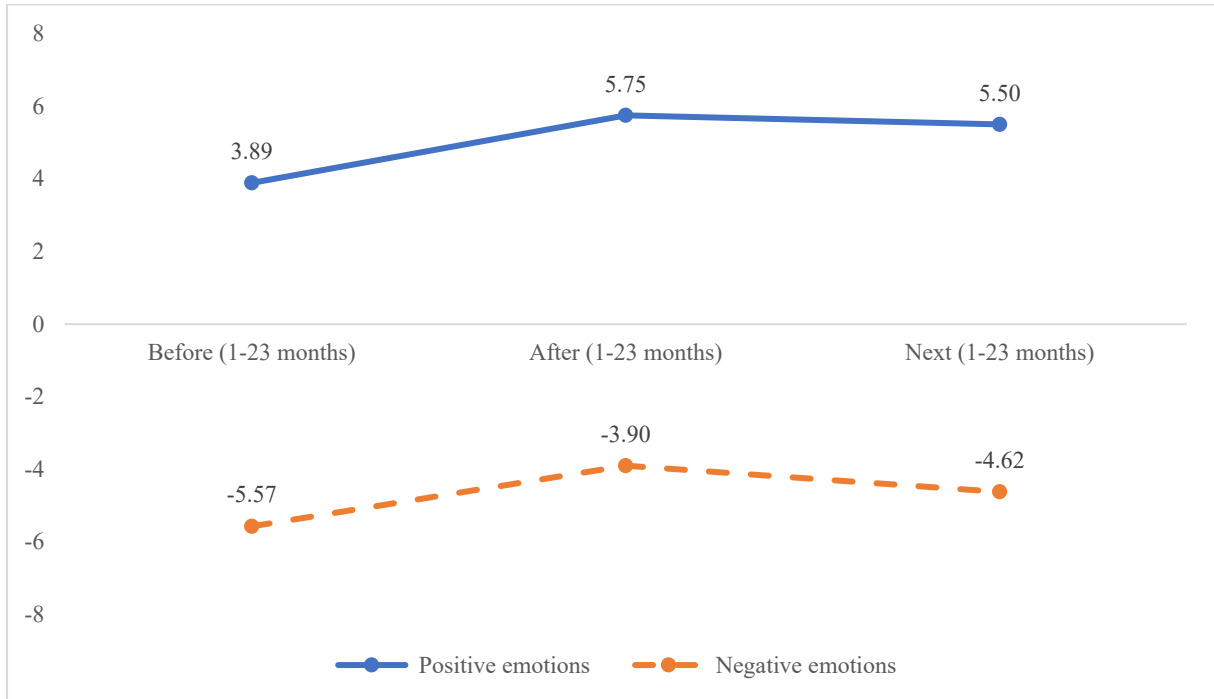
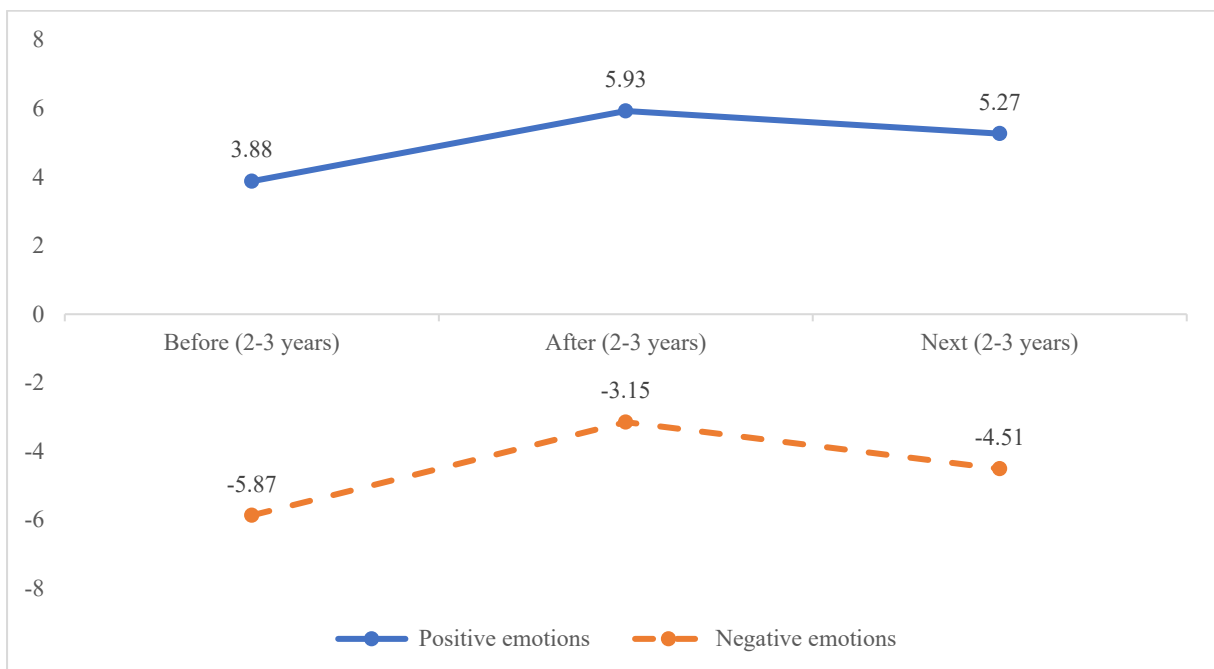


Figure 8.10b

Positive and Negative Emotions – Longer Term (India)



Similarly to the USA, significant differences existed for anticipated positive and negative emotions between the before and after stages in the shorter and longer time frames for India, supporting *RQ1a* and *RQ1b*, as can be seen in Figures 8.10a and 8.10b. As with the USA, there were significant differences for anticipated negative emotions between the after and next stages in the shorter and longer time frames for India, again supporting *RQ1b*.

8.7. Structural Equation Modelling – Testing *H1* to *H6*

Structural equation modelling (SEM) tests the research hypotheses and assesses standardised path coefficients to evaluate the relative importance of each construct (Schumacker & Lomax, 2004). To achieve this, the *second* sections of the split samples from the USA (N = 200) and India (N = 200) were utilised.

SEM using multigroup analysis with AMOS 26 estimated the structural models for the USA and India. The goodness-of-fit indices addressed the critical criteria ($\chi^2 = 532.71$; $df = 344$; $p = 0.001$; RMSEA = 0.03; CFI = 0.97; NFI = 0.93; GFI = 0.89). The exception was the GFI score (0.89), which was marginally below the critical value of 0.90. However, no misfit was observed for the values of the other absolute fit indices and the model was deemed to be appropriate (Jöreskog & Sörbom, 1999). The hypothesised relationships in the structural models for the USA and India can be seen in Table 8.3.

8.7.1. USA

For American respondents who had previously engaged in liposuction, attitude did not have a significant positive effect on the desire to further engage in liposuction, which did not support *H1*. Subjective norms had a significant positive effect on the desire to further engage in liposuction ($\beta = 0.19$; $p = 0.01$), supporting *H2*. However, perceived behavioural control

did not have a significant positive effect on the desire to further engage in liposuction, which did not support *H3*. Perceived behavioural control had a significant positive effect on the intention to further engage in a cosmetic procedure ($\beta = 0.11$; $p = 0.01$), supporting *H4*. Anticipated positive emotions had a significant positive effect on the desire to further engage in liposuction ($\beta = 0.49$; $p = 0.001$), supporting *H5a*. Similarly, anticipated negative emotions had a significant positive effect on the desire to further engage in liposuction ($\beta = 0.29$; $p = 0.001$), supporting *H5b*. Additionally, desire had a significant positive effect on the intention to further engage in liposuction ($\beta = 0.88$; $p = 0.001$), supporting *H6*.

Table 8.3

Standardised Path Coefficients

Regressed relationship	Beta Value (β)	Beta Value (β)
	USA (N = 200)	India (N = 200)
H1: ATT → DES	0.01	0.01
H2: SN → DES	0.19*	0.20*
H3: PBC → DES	0.04	0.06
H4: PBC → INT	0.11*	0.21***
H5a: PEM → DES	0.49***	0.36***
H5b: NEM → DES	0.29***	0.25***
H6: DES → INT	0.88***	0.65***
R ² for DES	0.49	0.41
R ² for INT	0.87	0.59
χ^2	532.71	
<i>df</i>	344.00	
<i>p</i>	0.001	
RMSEA	0.04	
CFI	0.98	
NFI	0.93	
GFI	0.89	

*Note: attitude = ATT; subjective norms = SN; perceived behavioural control = PBC; anticipated positive emotions = PEM; anticipated negative emotions = NEM; desire = DES; intention = INT; RMSEA = root mean square error of approximation; CFI = comparative fit index; NFI = normed fit index; GFI = goodness-of-fit index. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$*

R² values above 0.15 suggest that the independent variables collectively are able to justify the percentage of variance in each dependent variable (Hair et al., 2018). The R² values for desire and intention were 0.49 and 0.87, respectively. This demonstrated that attitude,

subjective norms, perceived behavioural control, anticipated positive emotions and anticipated negative emotions, the independent variables, were able to explain the percentage of variance in desire and intention, the dependent variables.

8.7.2. India

With Indian respondents who had previously engaged in liposuction, attitude did not have a significant positive effect on the desire to further engage in liposuction, which did not support *H1*. Subjective norms had a significant positive effect on the desire to further engage in liposuction ($\beta = 0.20$; $p = 0.05$), supporting *H2*. Again, perceived behavioural control did not have a significant positive effect on the desire to further engage in liposuction, which did not support *H3*. However, perceived behavioural control had a significant positive effect on the intention to further engage in liposuction ($\beta = 0.21$; $p = 0.001$), supporting *H4*. Anticipated positive emotions had a significant positive effect on the desire to further engage in liposuction ($\beta = 0.36$; $p = 0.001$), supporting *H5a*. Likewise, anticipated negative emotions had a significant positive effect on the desire to further engage in liposuction ($\beta = 0.25$; $p = 0.001$), supporting *H5b*. Moreover, desire had a significant positive effect on the intention to further engage in liposuction ($\beta = 0.65$; $p = 0.001$), supporting *H6*.

Additionally, the R^2 value in explaining desire and intention was 0.41 and 0.59, respectively. This suggested that attitude, subjective norms, perceived behavioural control, anticipated positive emotion and anticipated negative emotion, the independent variables, were able to account for the percentage of variance in desire and intention, the dependent variables.

To ascertain significant differences in the paths between the USA and India, a pairwise parameter comparison using critical ratios for differences between parameters with AMOS 26 was conducted. *H5a* was significantly different between the two country samples.

8.8. Chapter Summary

This chapter examined the rigour in the factor structures of the key constructs in the research as well as evaluating the research questions and hypotheses in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB). This research was conducted under the liposuction condition in Study Seven (USA) and Study Eight (India). Having confirmed that the constructs have dimensionality and reliability as well as convergent, discriminant and predictive validity, it concludes the investigation of the research questions and assessment of the hypothesised relationships in the HEMGB under different cosmetic procedure conditions.

Chapter Nine

Studies Three, Five and Seven: Risk and emotions

9.0. Introduction

This chapter draws from the pilot study as well as Studies Three, Five and Seven to fulfil the research objectives. As Chapter Four has outlined, the main objectives of these studies were to establish factor dimensionality, refine and validate the scale items for the key constructs, and then address the research questions. The studies respectively targeted members of the population in the USA who had prior experience with chemical peels, Botox, hair transplants or liposuction. To achieve the research objectives, the studies assessed the perceived risk dimensions and derived profiles of cosmetic procedure users. These risk profiles were used to explore emotions over time and the moderating influences the profiles had on desire and intention toward cosmetic procedure engagement.

9.1. Data Collection

As explained in Chapter Four, chemical peels, Botox, hair transplants and liposuction were selected as representative of the range of non-invasive and invasive cosmetic procedures available in the marketplace. The USA was selected for each of these cosmetic procedure conditions because of its leadership status in the practice on social media (Hopkins et al., 2020) and its rising demand, with 18 million Americans engaged in cosmetic procedures in 2019 (ASPS, 2019). Specifically, the American Society of Plastic Surgeons (ASPS) has observed a 200% increase in minimally invasive procedures such as Botox since 2000 (ASPS, 2019). The society has also reported performing more than 25,000 hair transplants and 250,000 liposuction procedures in the USA in 2018 (ASPS, 2019).

The qualitative research initiated an extant literature review across the multi-disciplines of psychology, marketing and recreation. The review initially identified scale items for the perceived risk and emotions constructs pertinent to cosmetic procedures. Then, eight focus groups (N = 80) from diverse age, gender, education, occupation and income backgrounds offered suggestions for the most popular cosmetic procedures and commented on the scale items. In total, six non-invasive and invasive cosmetic procedures, 24 perceived risk, 11 anticipated positive emotions and 11 anticipated negative emotions scale items were shortlisted. Next, two expert panels (N = 9) from academia and the healthcare industry considered the popular procedures and refined the scale items. This resulted in two non-invasive and two invasive cosmetic procedures as well as 20 perceived risk, eight anticipated positive emotions and nine anticipated negative emotions scale items, measured using a seven-point Likert-style scale.

The quantitative research implemented a survey, self-administered to online panels, as the research instrument for the pilot study and three main studies in the USA. Only respondents who had previously undertaken a chemical peel, Botox, hair transplant or liposuction more than once and in the last three years qualified for the target sample. Each respondent only completed one survey to avoid respondent bias. In total, 140 usable responses were collected under the chemical peel condition (pilot study), 550 responses under the Botox condition (Study 3), 350 responses under the hair transplant condition (Study 5) and 350 responses under the liposuction condition (Study 7) in the USA. This addressed the minimum sample size of 100 to achieve a stable maximum likelihood estimation result (Hair et al., 2018).

9.2. Pilot Study – Chemical Peel

The dimensionality, reliability and validity of anticipated positive emotions and anticipated negative emotions have already been assessed and reported in Chapters Five to Eight. As

identified in Chapter Four, 20 scale items represented the five perceived risk dimensions, namely physical, financial, performance, social and psychological risk. As these were existing scale items that were adapted for the research context, they were directly examined by confirmatory factor analysis (CFA). The technique assesses how well the cluster of variables fit within a latent variable (Brown, 2014). To achieve this, the sample from the pilot study in the USA (N = 140) was subjected to CFA.

CFA using the maximum likelihood estimation method with AMOS 26 implements one-factor congeneric models to improve the psychometric properties of each construct and evaluates each model with the goodness-of-fit indices ($\chi^2/df \leq 3.0$; $p \geq 0.05$; RMSEA ≤ 0.08 ; CFI ≥ 0.90 ; NFI ≥ 0.90 ; GFI ≥ 0.90) (Hu & Bentler, 1999). The technique also utilises the standardised parameter estimates generated to assess the validity and reliability of the constructs (Anderson & Gerbing, 1988; Baumgartner & Homburg, 1996).

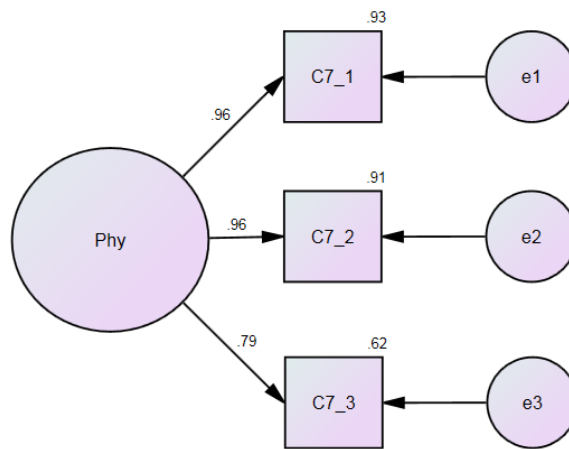
One-factor congeneric models were run for each of the five perceived risk dimensions, namely physical, financial, performance, social and psychological risk. The following section describes and illustrates this process.

9.2.1. Physical Risk

At the outset, the four-item physical risk model had an unacceptable fit. This prompted a review of the modification indices for feasible solutions. One item, namely “*I thought the procedure would cause me some physical harm*”, was deleted. Subsequently, the goodness-of-fit indices for the three-item model met the critical thresholds ($\chi^2 = 2.11$; $df = 1$; $p = 0.15$; RMSEA = 0.09; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 9.1. Although an exception was the RMSEA score (≥ 0.08), there was no other misfit with the rest of the goodness-of-fit indices and the model was deemed acceptable.

Figure 9.1

One-Factor Congeneric Model for Physical Risk

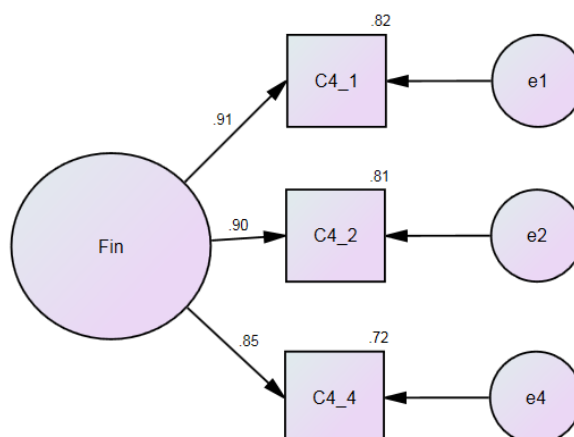


9.2.2. Financial Risk

The initial fit of the four-item model for financial risk was not acceptable, and the modification indices were consulted to see whether any refinements could be made. One item, namely “*The procedure would involve financial loss for me*”, was removed. As can be seen in Figure 9.2, the goodness-of-fit indices for the three-item model were concluded to be appropriate ($\chi^2 = 0.73$; $df = 1$; $p = 0.39$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 9.2

One-Factor Congeneric Model for Financial Risk

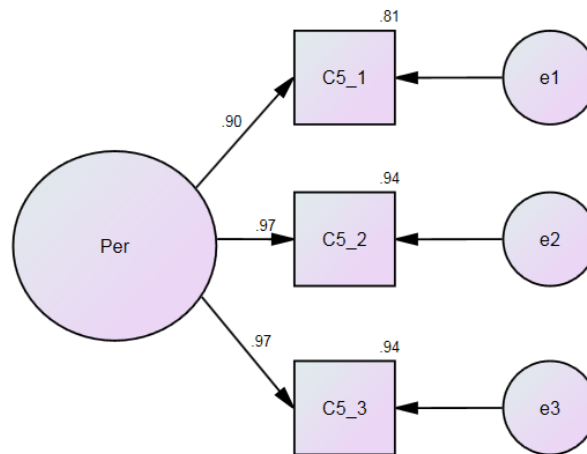


9.2.3. Performance Risk

The four-item performance risk model had an unacceptable fit at the start. The modification indices suggested omitting one item, namely “*The procedure would not live up to expectation*”. When this was done, the goodness-of-fit indices for the three-item model addressed the critical values ($\chi^2 = 1.55$; $df = 1$; $p = 0.21$; RMSEA = 0.06; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 9.3.

Figure 9.3

One-Factor Congeneric Model for Performance Risk

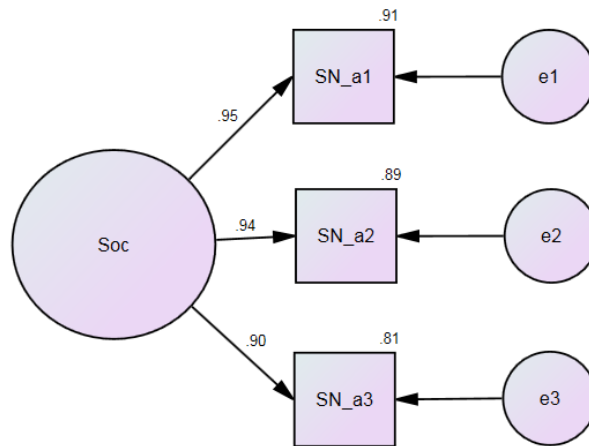


9.2.4. Social Risk

The four-item model for social risk did not fit well. After examining the modification indices, an improvement was made. One item, namely “*Most people important to me endorse their recommendation that I have the procedure*”, was eliminated. As can be seen in Figure 9.4, the goodness-of-fit indices for the three-item model were assessed as being appropriate ($\chi^2 = 0.53$; $df = 1$; $p = 0.47$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99).

Figure 9.4

One-Factor Congeneric Model for Social Risk

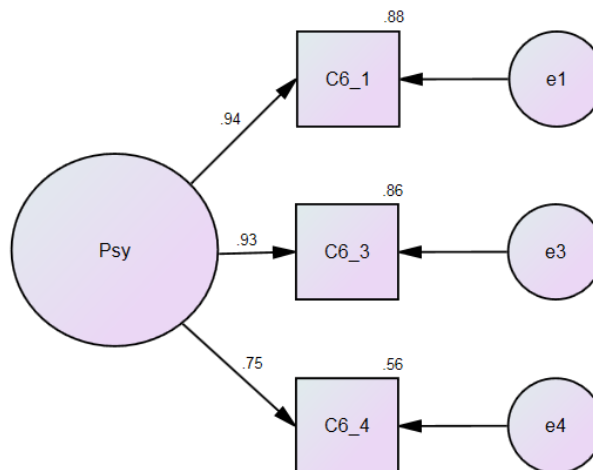


9.2.5. Psychological Risk

Initially, the four-item psychological risk model had an unacceptable fit, and the modification indices were inspected for likely solutions. One item, namely “*I felt uneasy when thinking about doing the procedure*”, was deleted. Then the goodness-of-fit indices for the three-item model fulfilled the critical thresholds and were evaluated as being acceptable ($\chi^2 = 0.63$; $df = 1$; $p = 0.43$; RMSEA = 0.01; CFI = 0.99; NFI = 0.99; GFI = 0.99), as can be seen in Figure 9.5.

Figure 9.5

One-Factor Congeneric Model for Psychological Risk



Reliability and average variance extracted scores for the five perceived risk dimensions were computed with the standardised factor loadings and error variances from structural equation modelling with AMOS 26. As can be seen in Table 9.1, the construct reliability for physical risk was 0.93, while it was 0.92 for financial risk, 0.96 for performance risk, 0.95 for social risk and 0.91 for psychological risk. The acceptable value (≥ 0.70) was exceeded for all perceived risk dimensions, indicating high reliability for the constructs (Anderson & Gerbing, 1988; Hair et al., 2018). The average variance extracted for physical risk was 0.82, while it was 0.78 for financial risk, 0.90 for performance risk, 0.87 for social risk and 0.77 for psychological risk, as can be seen in Table 9.1. For all five perceived risk dimensions, the acceptable value (≥ 0.50) was exceeded, demonstrating that the data points were spread out from the mean, and from one another (Anderson & Gerbing, 1988; Fornell & Larcker, 1981; Hair et al., 2018).

Convergent validity refers to the strength of the relationship between scale items within a construct (Cole, 1987). Convergent validity is assessed in two ways. First, high benchmark values for the standardised parameter estimates (≥ 0.70) indicate an acceptable overall fit of the measurement model and theoretical consistency (Steenkamp & Van Trijp, 1991). The standardised parameter estimates ranged from 0.75 to 0.97 (Anderson & Gerbing, 1988; Hair et al., 2018), as can be seen in Figures 9.1 to 9.5. Second, each construct should exhibit a high average variance extracted score (≥ 0.50) (Fornell & Larcker, 1981; Hair et al., 2018). As can be seen in Table 9.1, the average variance extracted scores ranged from 0.77 to 0.90 for all constructs. These two tests suggested convergent validity for all five perceived risk dimensions.

Table 9.1***Reliabilities, Average Variance and Correlations***

Construct	Items	CR	AVE	Correlations			
				PhR	FiR	PfR	SoR
Physical risk (PhR)	3	0.93	0.82				
Financial risk (FiR)	3	0.92	0.78	0.70 (0.49)			
Performance risk (PfR)	3	0.96	0.90	0.72 (0.52)	0.81 (0.66)		
Social risk (SoR)	3	0.95	0.87	0.35 (0.12)	0.46 (0.21)	0.44 (0.19)	
Psychological risk (PyR)	3	0.91	0.77	0.72 (0.52)	0.73 (0.53)	0.78 (0.61)	0.38 (0.14)

Note: CR = construct reliability; AVE = average variance extracted; squared correlations in parentheses

Discriminant validity provides evidence that measures of constructs that theoretically should not be highly correlated to each other are, in fact, not found to be highly related to each other (Brown, 2014). Discriminant validity is assessed in three ways. First, the average variance extracted score is compared with the squared structural path coefficient between any two constructs (Fornell & Larcker, 1981). As can be seen in Table 9.1, the average variance extracted (0.77–0.90) was greater than the squared structural path coefficient between any two relevant constructs (0.14–0.66). Second, there should be a low correlation between any two constructs (≤ 0.80) (Bagozzi & Heatherton, 1994; Dabholkar et al., 1997; Lings & Greenley, 2005). Correlations between all constructs met this criteria (0.35–0.81), as can be seen in Table 9.1. Third, the correlation between any two constructs plus or minus two standard errors must have a confidence interval that is less than the value of one (Bagozzi & Heatherton, 1994). The construct correlations (0.35–0.81) at the confidence interval (99%) were acceptable (0.28–0.83). These three tests implied discriminant validity for all five perceived risk dimensions.

9.3. Study Three – Botox

9.3.1. Cluster Analysis – Risk Profiles

The final 15 scale items that represented the five perceived risk dimensions were used to generate the risk profiles of Botox users. To achieve this, the sample from Study Three in the USA (N = 550) was subjected to two-step cluster analysis with SPSS 26. Two-step cluster analysis identifies homogeneous groups of cases if the grouping is not known, enabling respondents to be grouped based on the identified characteristics they own (Hair et al., 2018). The resultant two-cluster solution best fitted the data for consumers under the Botox condition, as can be seen in Table 9.2.

Daring image crafters exhibited low physical, financial, performance, social and psychological risk. The majority had undergone Botox recently (under eight months) and a third had done it twice. The segment mostly constituted women within the 21–34 year age group, with equal representations being single and married. A large percentage were either professionals or managers who held a bachelor degree and earned \$45,000 – \$89,999.

Timid image seekers depicted high physical, financial, performance, social and psychological risk. For most, their Botox experience was less recent (between nine months and two years) but a third had undergone it three times. Predominantly women within the 21–34 year age range comprised the segment, although the majority were single. Professionals and managers who earned \$45,000 – \$89,999 also made up the segment; however, the majority held an advanced diploma/Diploma.

Table 9.2***Risk Profiles of Botox Users***

	Daring Image Crafters (N = 208)		Timid Image Seekers (N = 342)	
	Frequency	Per cent	Frequency	Per cent
Gender				
Female	169	81.3	252	73.7
Male	39	18.8	90	26.3
Age				
21–34 years	127	61.0	229	67.0
35–44 years	51	24.5	62	18.1
45–54 years	25	12.0	43	12.6
55 years and over	5	2.4	9	2.6
Marital status				
Single	83	39.9	153	44.7
In a relationship	44	21.2	70	20.4
Married	81	38.9	119	34.8
Occupation				
Manager	62	29.8	110	32.2
Agricultural/Forestry/Fishery	4	1.9	6	1.8
Retired	2	1.0	5	1.5
Professional	72	34.6	127	37.1
Clerical Support	30	14.4	27	7.9
Craft/Related Trade	23	11.1	40	11.6
Service/Sales	15	7.2	27	7.9
Education				
Certificate/Diploma	109	52.4	201	58.8
Bachelor Degree	59	28.4	108	31.6
Postgraduate Degree	40	19.2	33	9.6
Income				
Under \$44,999	64	30.8	103	30.1
\$45,000 – \$89,999	104	50.0	194	56.7
\$90,000 and above	40	19.2	45	13.1
Recent cosmetic procedure				
Under 8 months ago	123	59.1	156	45.6
Between 9 months and 2 years	85	40.9	186	54.4
Usage cosmetic procedure				
Once	42	20.2	58	17.0
Twice	63	30.3	85	24.9
3 times	57	27.4	108	31.6
4 times	28	13.5	65	19.0
Over 5 times	18	8.7	26	7.6

9.3.2. Analysis of Variance – Testing RQ1a and RQ1b

Next, anticipated positive and negative emotions pre-, post- and toward the next Botox were determined by analysis of variance (ANOVA) using Tukey’s post hoc test with SPSS 26 to address *RQ1a* and *RQ1b*. ANOVA is a statistical technique designed to determine mean differences between two or more groups (Kao & Green, 2008). Significant changes in the mean scores for anticipated emotions were assessed, with Botox procedures conducted under eight months ago labelled as shorter term, and those conducted over nine months ago as longer term, as can be seen in Figure 9.6.

Figure 9.6a

Daring Image Crafters – Positive and Negative Emotions – Shorter Term

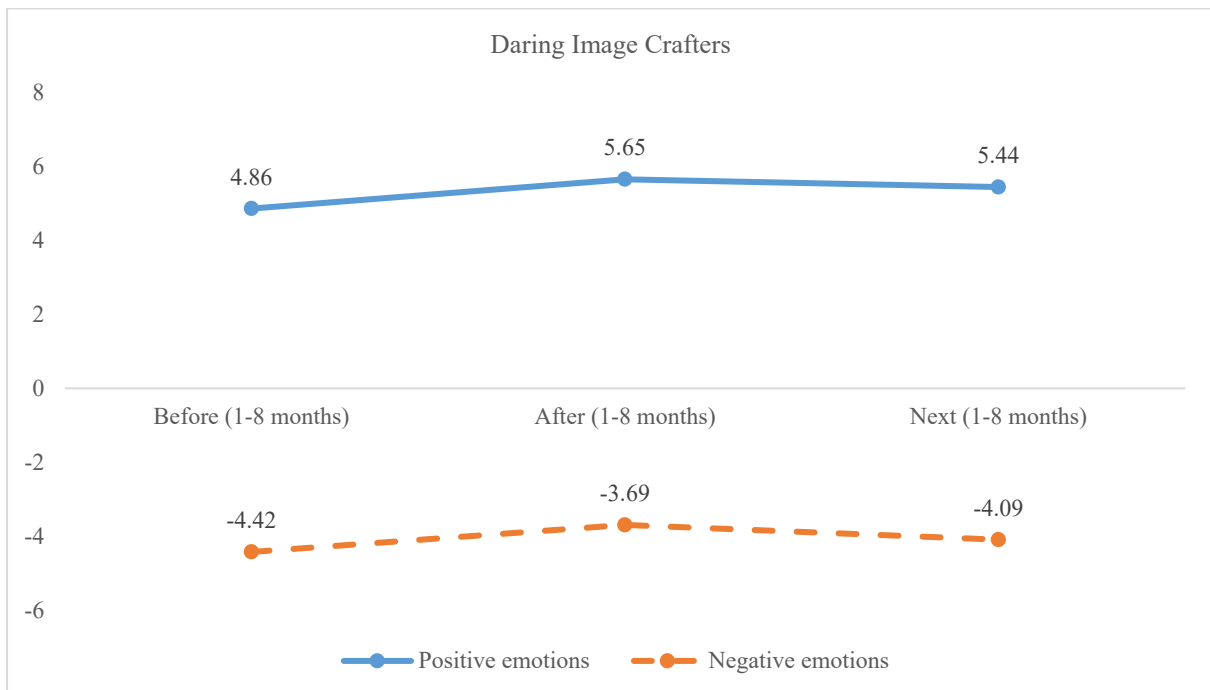
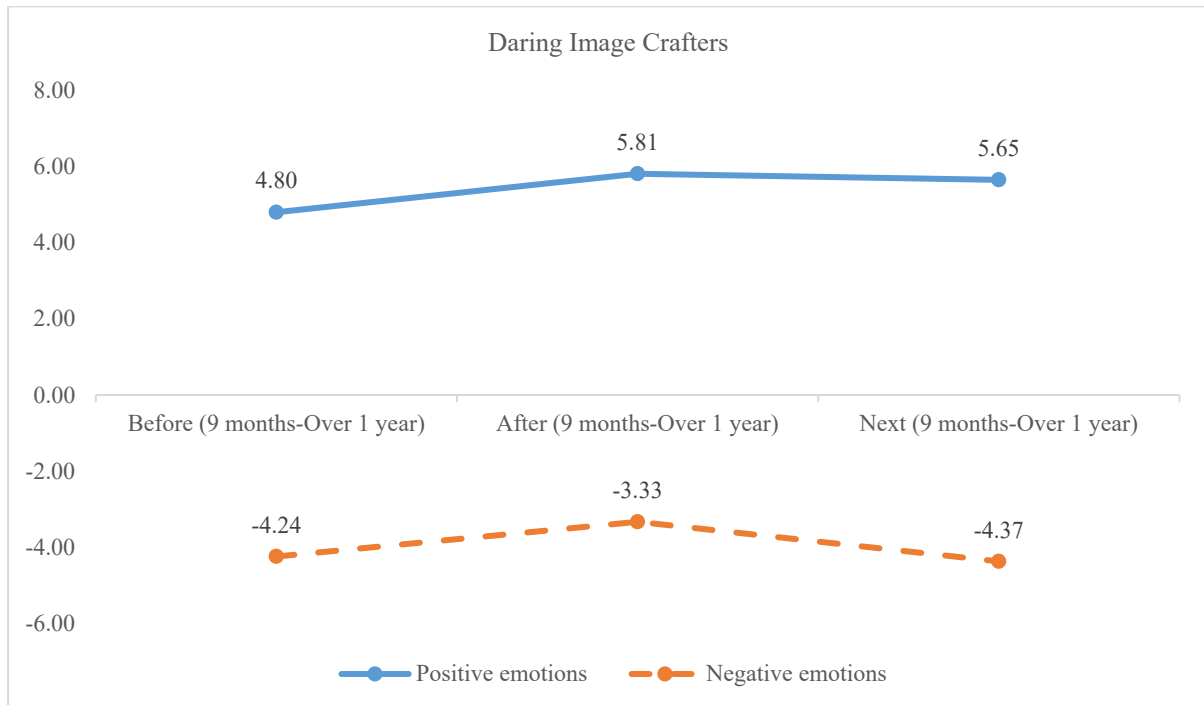


Figure 9.6b

Daring Image Crafters – Positive and Negative Emotions – Longer Term



For both daring image crafters and timid image seekers, anticipated positive emotions in the shorter term demonstrated a similar trend, first hovering around the neutral baseline of ± 4 , rising significantly after Botox and then basking in this state of anticipation for the next procedure. This trend was also evident for daring image crafters in the longer term, supporting *RQ1a*.

For both daring image crafters and timid image seekers, anticipated negative emotions in the longer term exhibited a corresponding trend, starting around the neutral baseline of ± 4 , reducing significantly after the procedure and returning significantly to the baseline in expectation of the next procedure. This trend was also observed for daring image crafters in the shorter term, supporting *RQ1b*.

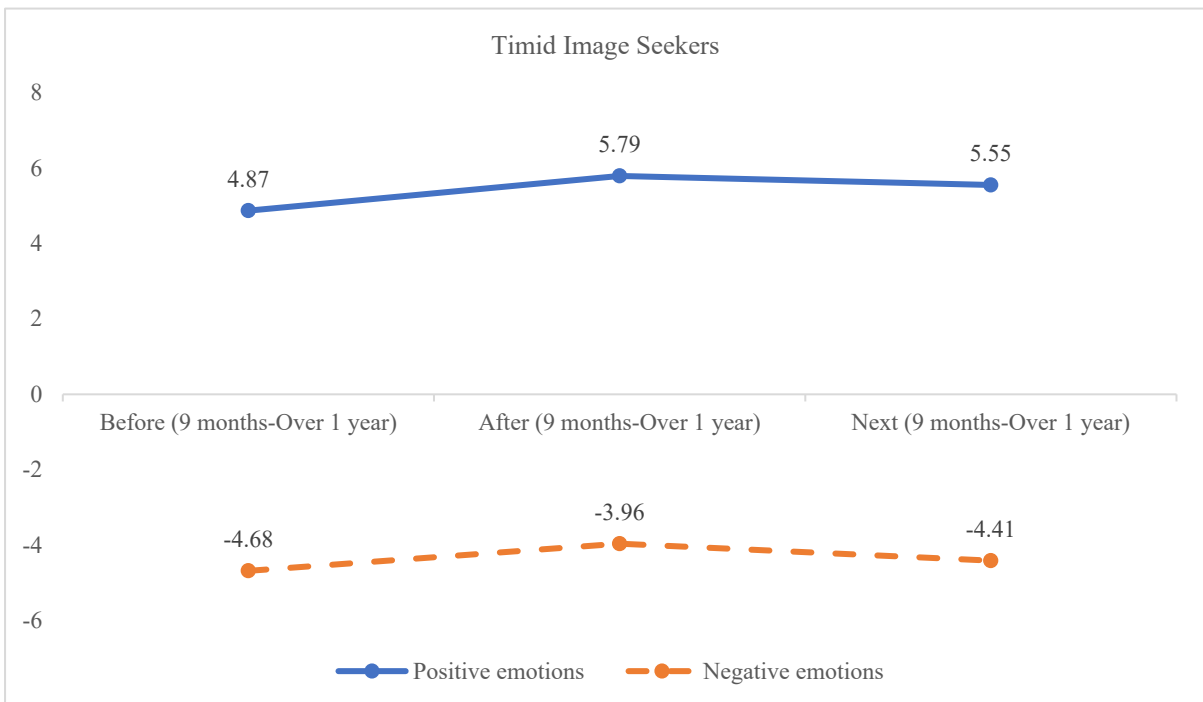
Figure 9.6c

Timid Image Seekers – Positive and Negative Emotions – Shorter Term



Figure 9.6d

Timid Image Seekers – Positive and Negative Emotions – Longer Term



9.3.3. Structural Equation Modelling – Testing RQ2

Then, the moderating impacts of perceived risk on the desire-intention relationship were investigated by structural equation modelling (SEM) using multigroup analysis with AMOS 26 to address RQ2. SEM examines the research hypotheses and measures standardised path coefficients to establish the relative importance of each construct (Schumacker & Lomax, 2004). The model had an acceptable fit ($\chi^2/df \leq 2.18$; $p \geq 0.001$; RMSEA ≤ 0.05 ; CFI ≥ 0.98 ; NFI ≥ 0.97 ; GFI ≥ 0.96). Desire produced a significant and positive effect on the intention to undergo Botox for daring image crafters ($\beta = 0.52$; $p \leq 0.001$) and timid image seekers ($\beta = 0.55$; $p \leq 0.001$). However, the chi-square difference test between the unconstrained model (M1) and the constrained model (M2) indicated that the two groups were invariant. As they were not significantly different at the model and path level, this suggested that perceived risk did not moderate the desire-intention relationship, which did not support RQ2.

9.4. Study Five – Hair Transplant

9.4.1. Cluster Analysis – Risk Profiles

The 15 scale items that tapped into the five perceived risk dimensions were utilised to create the risk profiles of hair transplant users. To achieve this, the sample from Study Five in the USA (N = 350) was subjected to two-step cluster analysis with SPSS 26. The resultant three-cluster solution best fitted the data for consumers under the hair transplant condition, as can be seen in Table 9.3.

Daring image crafters demonstrated low physical, financial, performance, social and psychological risk. The majority had undertaken a hair transplant recently (under 23 months) and done it twice. The segment mostly comprised men within the 45–54 year age group who were in de facto relationships. A notable representation was made up of managers who held a bachelor degree and earned \$90,000 – \$149,999.

Approval-seeking socialites were characterised by low physical, financial, performance and psychological risk but high social risk. Most had engaged in a hair transplant once and recently (under 23 months). Also, the segment largely included married men within the 45–54 year cohort. Again, more than half the segment were managers who possessed an undergraduate education and fell within the \$90,000 – \$149,999 income bracket.

Timid image seekers showed high physical, financial, performance, social and psychological risk. Although the majority had gone through a hair transplant recently (under 23 months), they had only done so once. Once again, mostly men within the 45–54 year age range who were in de facto relationships comprised the segment. The majority were either managers or professionals with a bachelor degree who earned \$90,000 – \$149,999.

Table 9.3***Risk Profiles of Hair Transplant Users***

	Daring Image Crafters (N = 174)		Approval-Seeking Socialites (N = 58)		Timid Image Seekers (N = 118)	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Gender						
Female	34	19.5	12	20.7	18	15.3
Male	140	80.5	46	79.3	100	84.7
Age						
21–34 years	14	8.0	5	8.6	2	1.7
35–44 years	24	13.8	10	17.2	17	14.4
45–54 years	103	59.2	34	58.6	76	64.4
55 years and over	33	19.0	9	15.5	23	19.5
Marital status						
Single	19	10.9	7	12.1	5	4.2
In a relationship	97	55.8	25	43.1	73	61.9
Married	58	33.3	26	44.8	40	33.9
Occupation						
Manager	76	43.7	32	55.2	42	35.6
Agricultural/Forestry/Fishery	11	6.3	4	6.9	7	5.9
Retired	5	2.9	0	0	5	4.2
Professional	40	23.0	11	19.0	37	31.4
Clerical Support	13	7.5	4	6.9	13	11.0
Craft/Related Trade	12	6.9	2	3.4	5	4.2
Service/Sales	17	9.8	5	8.6	9	7.6
Education						
Certificate/Diploma	52	29.9	20	34.4	5	4.2
Bachelor Degree	94	54.0	28	48.3	67	56.8
Postgraduate Degree	28	16.1	10	17.2	18	15.3
Income						
Under \$44,999	7	4.0	3	5.2	5	4.2
\$45,000 – \$89,999	48	27.6	17	29.3	30	25.4
\$90,000 and above	119	68.4	38	65.5	83	70.4
Recent cosmetic procedure						
Under 23 months	110	63.2	40	69.0	73	61.9
Over 2 years	64	36.8	18	31.0	45	38.1
Usage cosmetic procedure						
Once	68	39.1	27	46.6	58	49.2
Twice	69	39.7	14	24.1	37	31.4
3 times	36	20.7	17	29.3	22	18.6
4 times	1	0.6	0	0	1	0.8

9.4.2. Analysis of Variance – Testing RQ1a and RQ1b

Next, ANOVA adopting Tukey’s post hoc test with SPSS 26 assessed the anticipated positive and negative emotions pre-, post- and toward the next hair transplant in order to address *RQ1a* and *RQ1b*. As can be seen in Figure 9.7, significant changes in the mean scores for anticipated emotions were noted, with hair transplants undergone under 23 months ago labelled as shorter term, and those undergone two to three years ago as longer term.

Figure 9.7a

Daring Image Crafters – Positive and Negative Emotions – Shorter Term

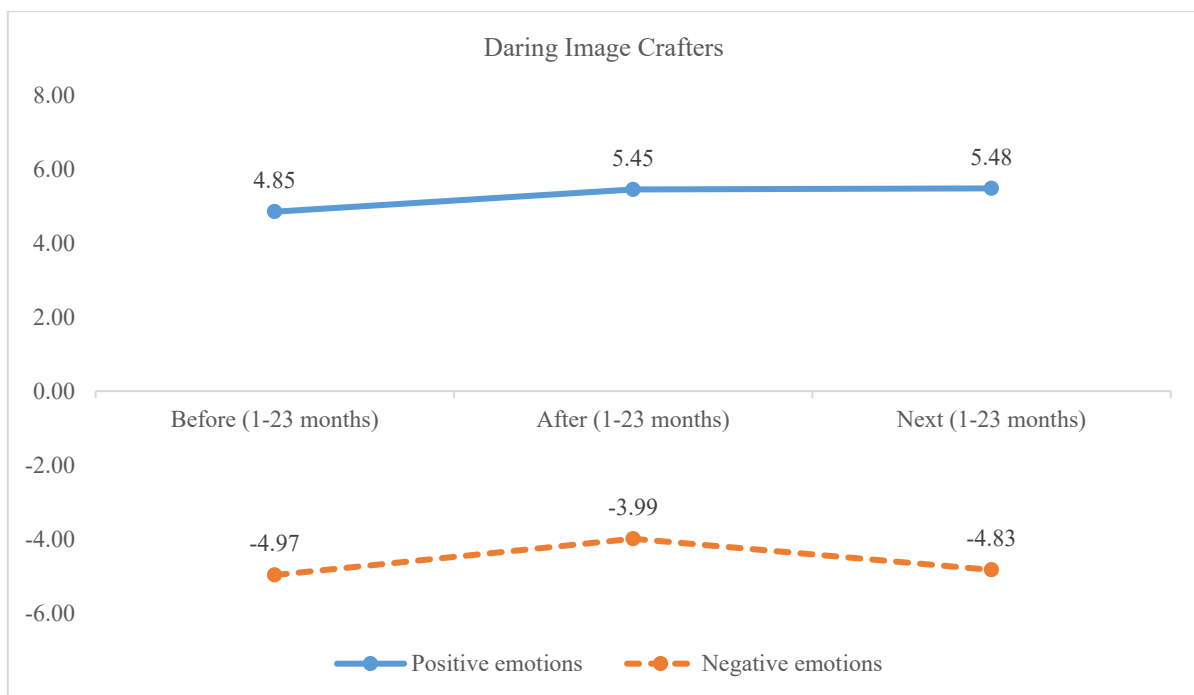
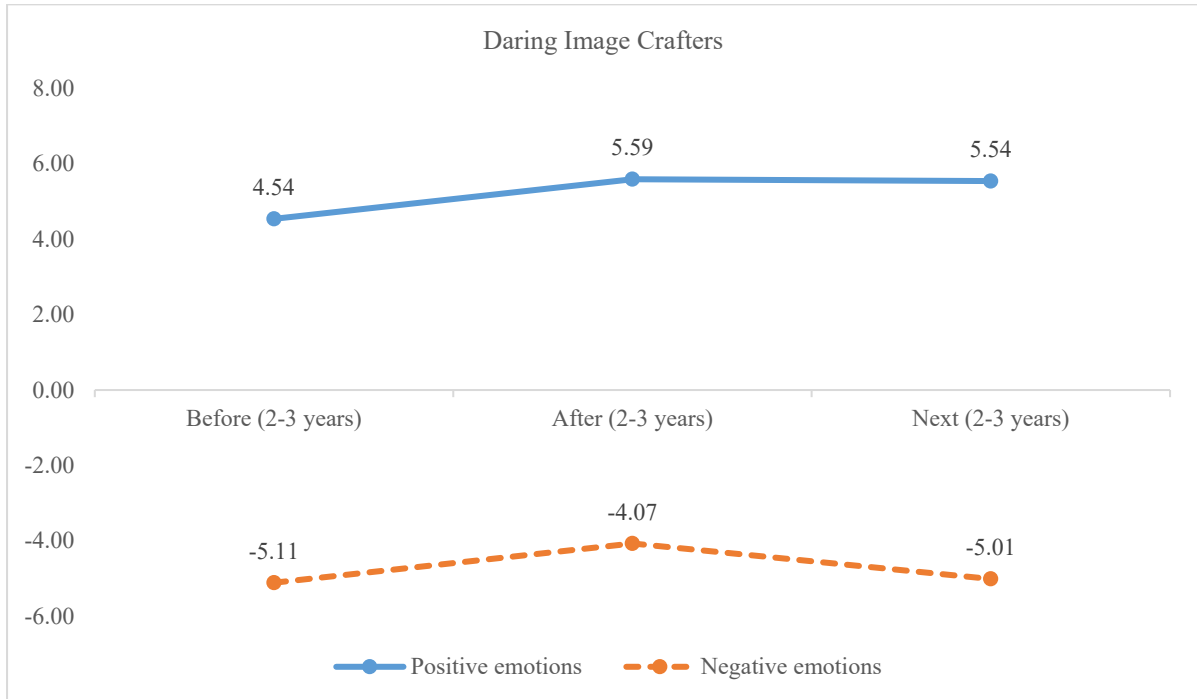


Figure 9.7b

Daring Image Crafters – Positive and Negative Emotions – Longer Term



For daring image crafters, approval-seeking socialites and timid image seekers, anticipated positive emotions in the shorter term presented a consistent movement, lingering around the neutral baseline of ± 4 , increasing significantly after the hair transplant, and staying in this state in eagerness for the next procedure, addressing *RQ1a*.

Figure 9.7c

Approval-Seeking Socialites – Positive and Negative Emotions – Shorter Term

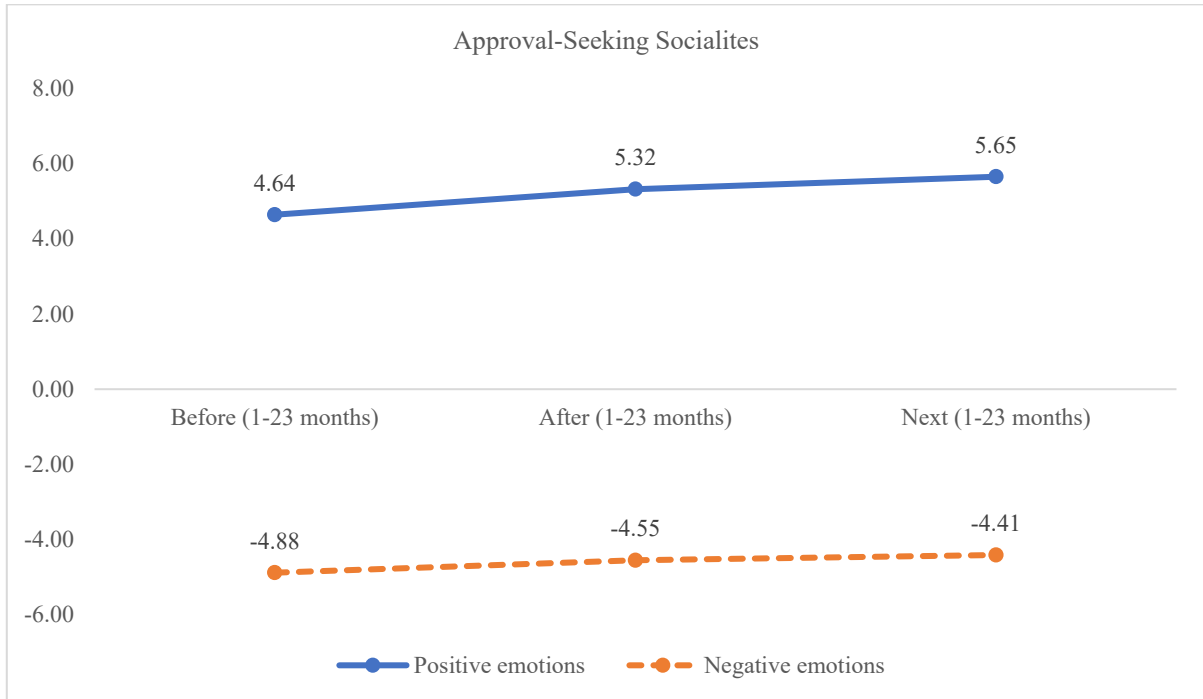
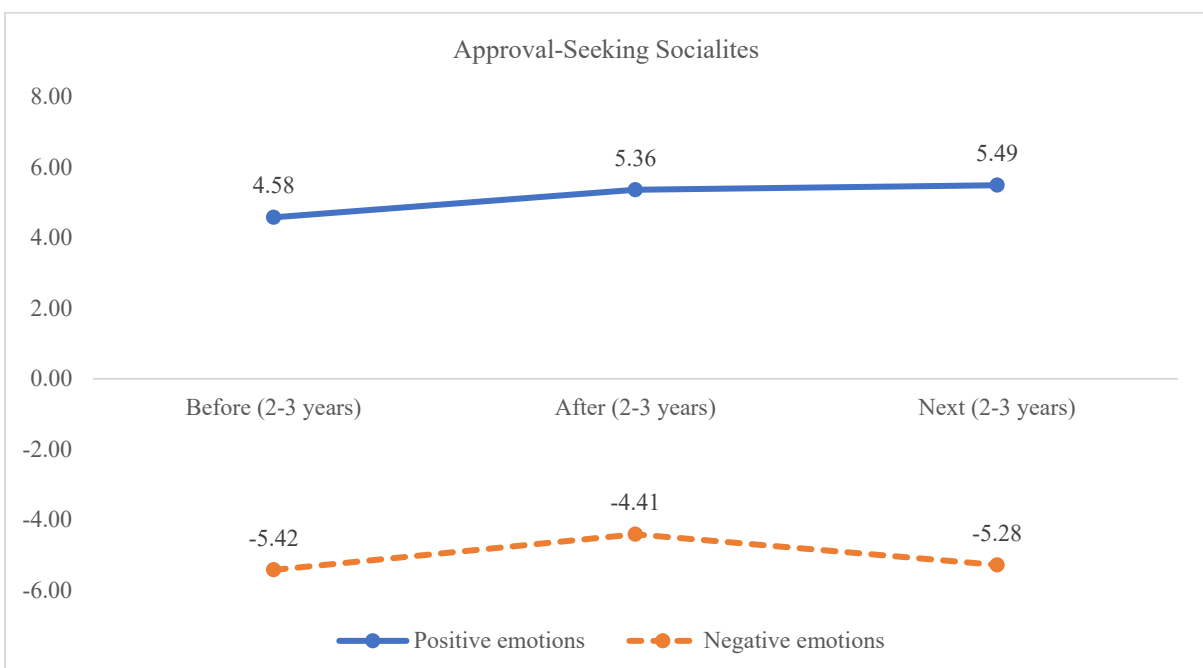


Figure 9.7d

Approval-Seeking Socialites – Positive and Negative Emotions – Longer Term



Anticipated negative emotions for daring image crafters in the shorter term started at the neutral baseline of ± 4 , lessened significantly after the procedure and reverted significantly to the baseline in expectation of the next procedure. Anticipated negative emotions for timid image seekers in the shorter term began around the neutral baseline of ± 4 , reduced significantly after the procedure and then increased significantly, but not to the baseline, in waiting for the next procedure, addressing *RQ1b*.

Figure 9.7e

Timid Image Seekers – Positive and Negative Emotions – Shorter Term

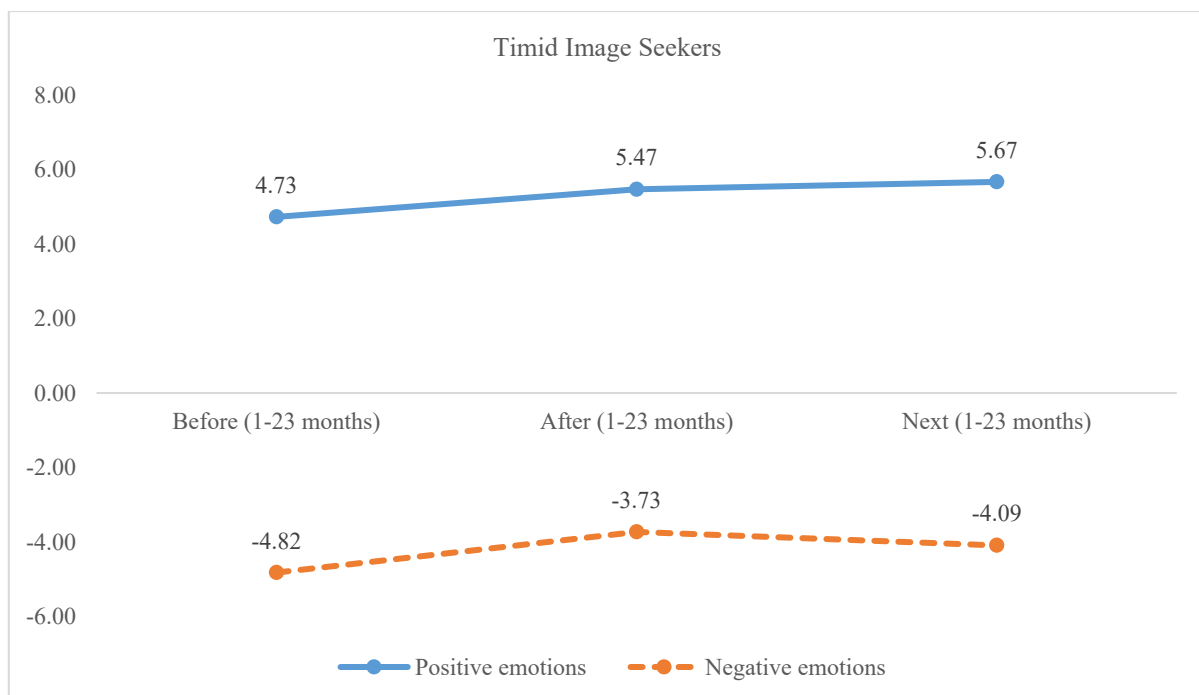
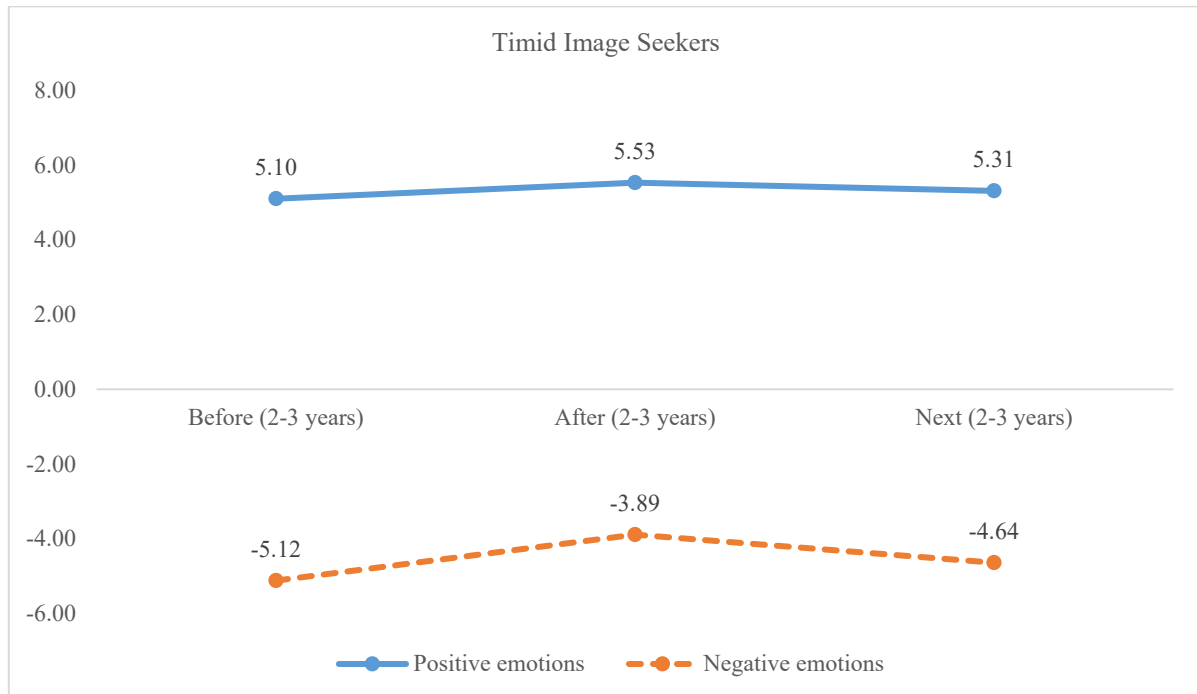


Figure 9.7f

Timid Image Seekers – Positive and Negative Emotions – Longer Term



9.4.3. Structural Equation Modelling – Testing RQ2

Perceived risk and its moderating effects on the desire-intention relationship were assessed by SEM using multigroup analysis with AMOS 26 to address RQ2. The model fit was acceptable ($\chi^2/df \leq 1.43$; $p \geq 0.01$; $RMSEA \leq 0.04$; $CFI \geq 0.99$; $NFI \geq 0.96$; $GFI \geq 0.94$). Desire produced a significant and positive effect on the intention to undergo a hair transplant for daring image crafters ($\beta = 0.56$; $p \leq 0.001$), approval-seeking socialites ($\beta = 0.68$; $p \leq 0.001$) and timid image seekers ($\beta = 0.64$; $p \leq 0.001$). Nevertheless, the chi-square difference test between the unconstrained model (M1) and the constrained model (M2) showed the three groups to be invariant. As they did not differ significantly at the model and path level, this implied that perceived risk did not moderate the desire-intention relationship, which did not support RQ2.

9.5. Study Seven – Liposuction

9.5.1. Cluster Analysis – Risk Profiles

The 15 scale items that represented the five perceived risk dimensions were used to generate the risk profiles of liposuction users. To achieve this, the sample from Study Seven in the USA (N = 350) was subjected to two-step cluster analysis with SPSS 26. The resultant three-cluster solution best fitted the data for consumers under the liposuction condition, as can be seen in Table 9.4.

Approval-seeking socialites displayed low physical, financial, performance and psychological risk but high social risk. For the majority, liposuction was recent (under 23 months) and once, although nearly a third had done it twice. In the main, the segment included equal numbers of women within the 35–44 year and 45–54 year age groups who were married or in de facto relationships. A large representation comprised managers who held a bachelor degree or graduate diploma/certificate and earned \$90,000 – \$149,999.

Mainstream image adopters had moderate levels of physical, financial, performance, social and psychological risk. Most had undertaken liposuction once and recently (under 23 months). The segment mainly included women who were in the 45–54 year cohort and either married or in a de facto relationship. A notable percentage were managers who had a bachelor degree and fell within the \$90,000 – \$149,999 income bracket.

Timid image seekers presented high physical, financial, performance, social and psychological risk. The majority had underdone their liposuction recently (under 23 months) and once. Women within the 45–54 year age range who were married or in de facto relationships also made up the segment. Again, the majority were managers with a bachelor degree who earned \$90,000 – \$149,999.

Table 9.4***Risk Profiles of Liposuction Users***

Gender	Approval-Seeking Socialites (N = 113)		Mainstream Risk (N = 145)		Timid Image Seekers (N = 92)	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Female	67	59.3	90	62.1	54	58.7
Male	46	40.7	55	37.9	38	41.3
Age						
21–34 years	11	9.7	4	2.8	12	13.0
35–44 years	48	42.5	50	34.5	25	27.2
45–54 years	50	44.2	77	53.1	51	55.4
55 years and above	4	3.5	14	9.7	4	4.3
Marital status						
Single	6	5.3	3	2.1	2	2.2
In a relationship	58	51.3	73	50.3	49	53.2
Married	49	43.4	69	47.6	41	44.6
Occupation						
Manager	76	67.3	85	58.6	60	65.2
Agricultural/Forestry/Fishery	9	8.0	10	6.9	5	5.4
Retired	2	1.8	3	2.1	1	1.1
Professional	17	15.0	38	26.2	15	16.3
Clerical Support	5	4.4	3	2.1	5	5.4
Service/Sales	4	3.5	6	4.1	6	6.5
Education						
Certificate/Diploma	59	52.2	59	40.7	39	42.4
Bachelor Degree	38	33.6	55	37.9	32	34.8
Postgraduate Degree	16	14.2	31	21.4	21	22.8
Income						
Under \$44,999	5	4.4	12	8.3	7	7.6
\$45,000 – \$89,999	28	24.8	37	25.5	22	23.9
\$90,000 and above	80	70.8	96	66.2	63	68.5
Recent cosmetic procedure						
Under 23 months	68	60.2	80	55.2	61	66.3
Over 2 years	45	39.8	65	44.8	31	33.7
Usage cosmetic procedure						
Once	46	40.7	63	43.4	38	41.3
Twice	35	31.0	42	29.0	31	33.7
3 times	19	16.8	20	13.8	14	15.2
4 times	13	11.5	16	11.0	7	7.6
Over 5 times	0	0	4	2.8	2	2.2

9.5.2. Analysis of Variance – Testing RQ1a and RQ1b

Next, anticipated positive and negative emotions pre-, post- and toward the next liposuction were evaluated by ANOVA using Tukey’s post hoc test with SPSS 26 to address *RQ1* and *RQ1b*. Significant changes in the mean scores for anticipated emotions were observed, with liposuction conducted under 23 months ago labelled as shorter term, and that conducted two to three years ago as longer term, as can be seen in Figure 9.8.

Figure 9.8a

Approval-Seeking Socialites – Positive and Negative Emotions – Shorter Term

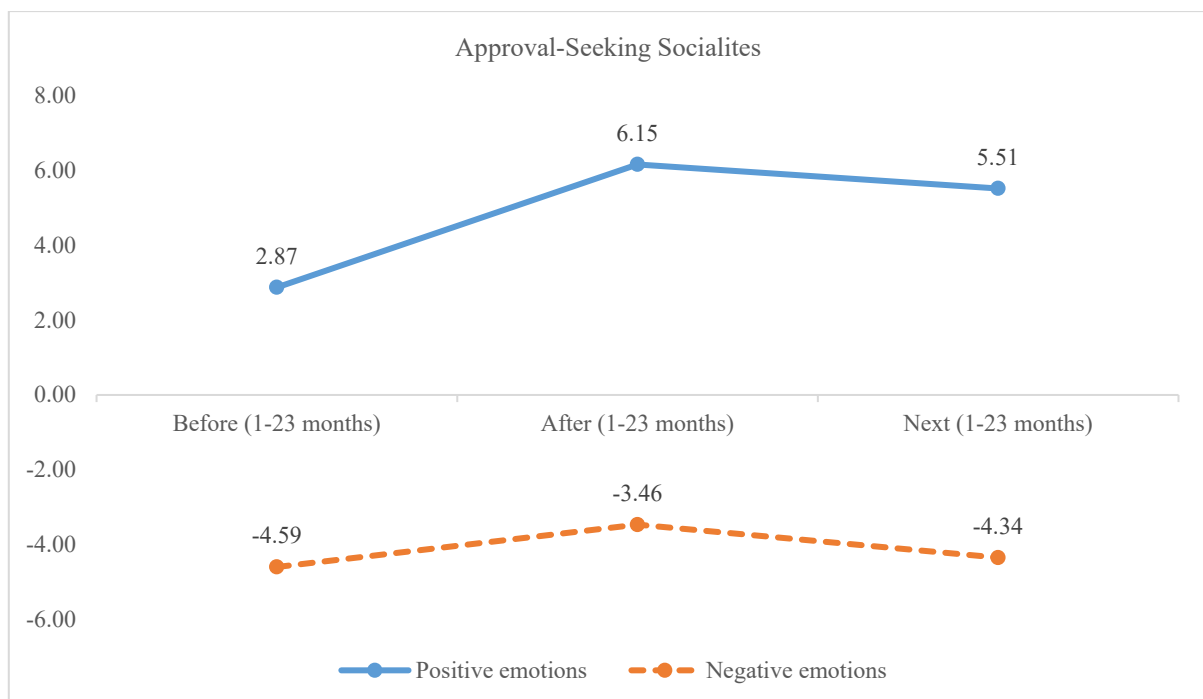
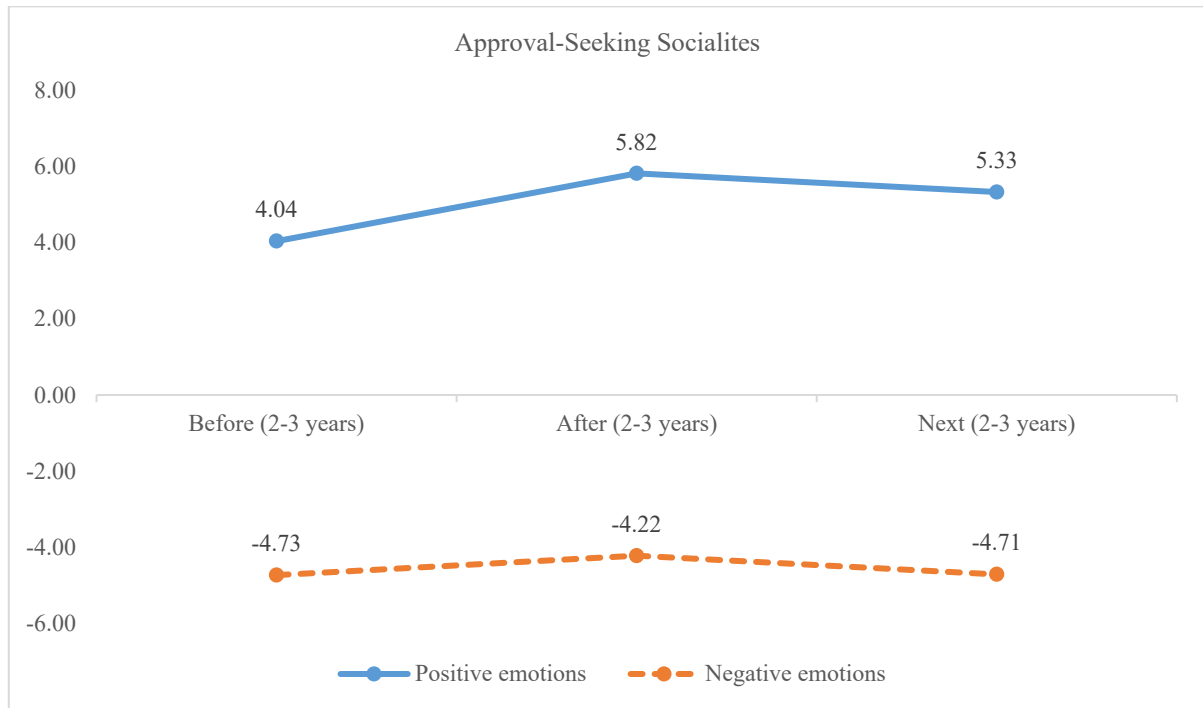


Figure 9.8b

Approval-Seeking Socialites – Positive and Negative Emotions – Longer Term



For approval-seeking socialites, mainstream image adopters and timid image seekers, anticipated positive emotions in the shorter term displayed a comparable trend, beginning well below the neutral baseline of ± 4 , surging significantly after the liposuction and then falling significantly, although remaining above the baseline, in readiness for the next procedure, supporting *RQ1a*.

Figure 9.8c

Mainstream Image Adopters – Positive and Negative Emotions – Shorter Term

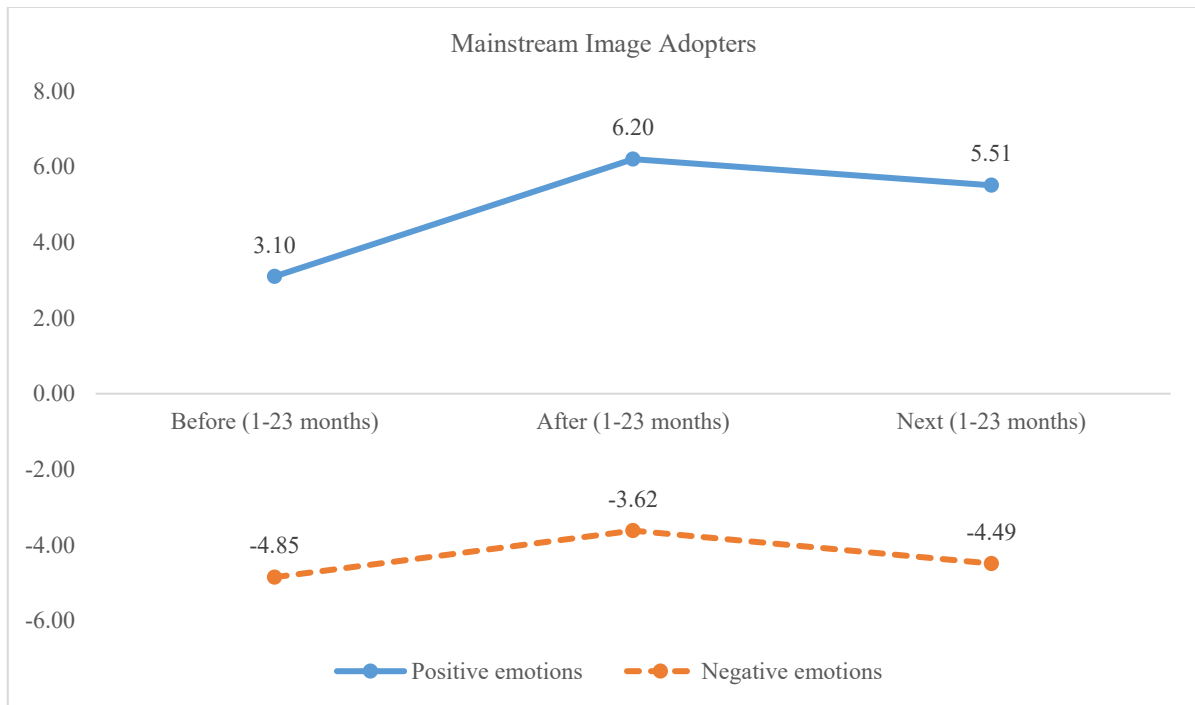
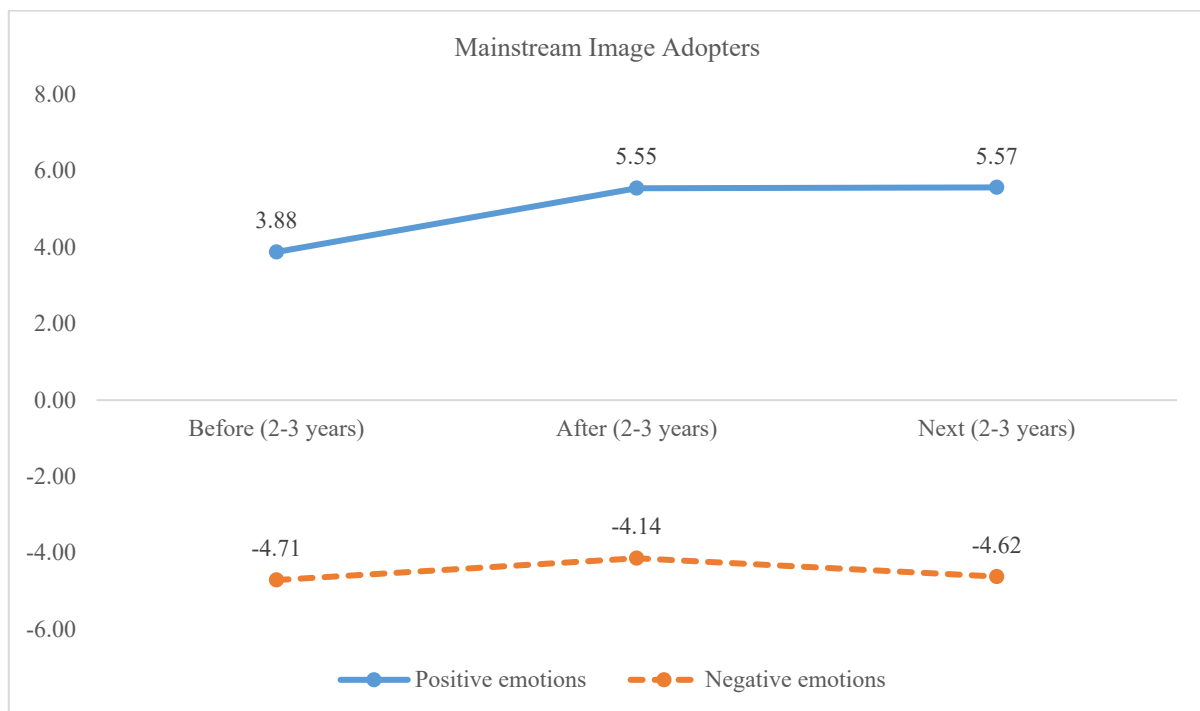


Figure 9.8d

Mainstream Image Adopters – Positive and Negative Emotions – Longer Term



For both approval-seeking socialites and mainstream image adopters, anticipated negative emotions in the shorter term presented a similar trend, starting around the neutral baseline of ± 4 , reducing significantly after the procedure, before rising significantly to the baseline in anticipation of the next procedure. This tendency was also observed for timid image seekers in the longer term, supporting *RQ1b*.

Figure 9.8e

Timid Image Seekers – Positive and Negative Emotions – Shorter Term

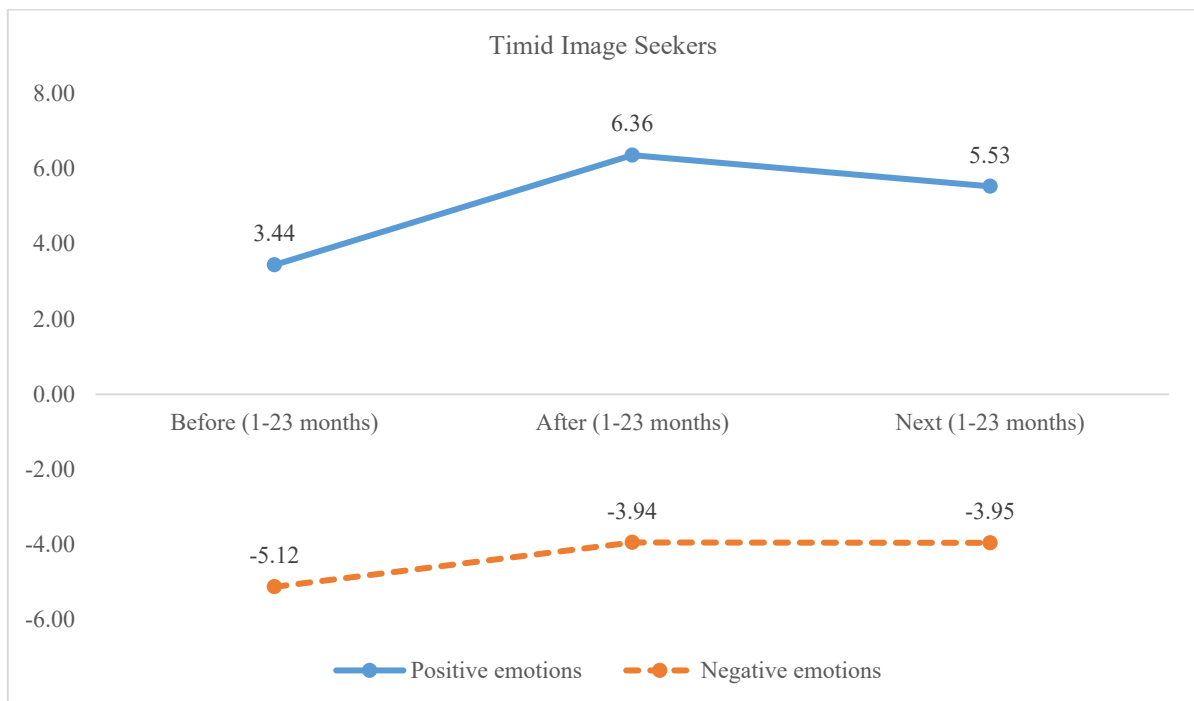
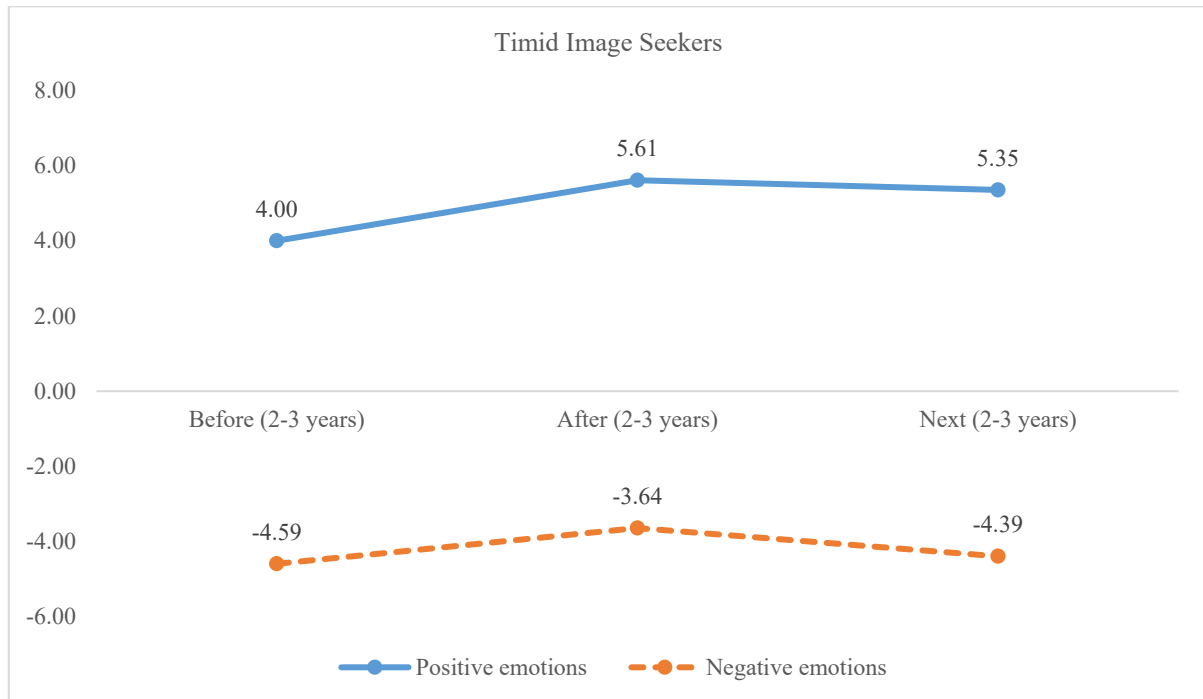


Figure 9.8f

Timid Image Seekers – Positive and Negative Emotions – Longer Term



9.5.3. Structural Equation Modelling – Testing RQ2

The moderating impacts of perceived risk on the desire-intention relationship were investigated by SEM using multigroup analysis with AMOS 26 to address RQ2. The model suggested an acceptable fit ($\chi^2/df \leq 2.16$; $p \geq 0.001$; $RMSEA \leq 0.06$; $CFI \geq 0.96$; $NFI \geq 0.94$; $GFI \geq 0.91$). Desire produced a significant and positive effect on the intention to undergo liposuction for approval-seeking socialites ($\beta = 0.92$; $p \leq 0.001$), mainstream image adopters ($\beta = 0.83$; $p \leq 0.001$) and timid image seekers ($\beta = 0.86$; $p \leq 0.001$). However, the chi-square difference test between the unconstrained model (M1) and the constrained model (M2) indicated that the three groups were invariant. As they were not significantly different at the model and path level, this indicated that perceived risk did not moderate the desire-intention relationship, which did not support RQ2.

9.6. Chapter Summary

This chapter examined the rigour in the factor structures of the perceived risk dimensions and evaluated the research questions posed. The research was conducted under the chemical peel, Botox, hair transplant and liposuction conditions in the pilot study and three main studies in the USA. Having confirmed that the perceived risk dimensions have reliability as well as convergent and discriminant validity, the profiles of cosmetic procedure users were identified. These risk profiles explored emotions over time and the moderating influences the profiles had on desire and intention under different cosmetic procedure conditions.

Chapter Ten

Conclusion

10.0. Introduction

The preceding five chapters described the findings from examining the research questions and testing the hypotheses identified in the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB). This chapter revisits the research objectives and how each of the objectives has been achieved. Next, it summarises and reviews the findings and discusses their theoretical, methodological and managerial implications for hedonic engagement and hedonic adaptation to cosmetic procedures. Finally, the chapter concludes with the limitations of the study and recommends future directions.

10.1. Discussion

Arguably, this is the first research to examine hedonic engagement and hedonic adaptation to cosmetic procedures. The research achieved its three objectives to conceptualise and operationalise hedonic adaptation to repeated hedonic engagement with a cosmetic procedure, to propose a decision-making framework, the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB), and to explain hedonic engagement with a cosmetic procedure and develop a segmentation typology of consumers who engaged with cosmetic procedures according to their perceived risk profile. The method in tracing hedonic adaptation, the HEMGB in predicting hedonic engagement and the risk segmentation typology of cosmetic procedure users have the potential to be applied to a range of procedures undertaken for global hedonic consumption.

The research set out with three objectives. The first objective was to conceptualise and operationalise hedonic adaptation to repeated hedonic engagement with a cosmetic procedure. This was addressed in *RQ1a* and *RQ1b*. The second objective was to propose an empirical decision-making framework that explains hedonic engagement with a cosmetic procedure. This was fulfilled by *H1–H6* in the HEMGB. The third objective was to develop a segmentation typology of consumers who engage with cosmetic procedures according to their perceived risk profile. This was explored in *RQ2*. The findings for each research question and hypothesis are discussed here.

10.1.1. RQ1 – Anticipated Emotions Pre-, Post- and Toward the Next Cosmetic Procedure

RQ1a and *RQ1b* examined how anticipated positive and negative emotions differed significantly at the before, after and for the next engagement with a cosmetic procedure. ANOVA using Tukey’s post hoc test with SPSS 26 was conducted to identify changes in the mean scores for positive and negative emotions.

10.1.1.1. Botox

Botox undertaken less than eight months ago was categorised as shorter term, and that conducted over nine months ago as longer term. For anticipated positive emotions, there were significant differences in the mean scores between the before and after stages in the shorter and longer time frames for the USA and Australia, supporting *RQ1a*. In this instance, there was a significant spike in anticipated positive emotions between the before and after stages, followed by a plateau, as consumers contemplated undergoing Botox again. This suggested that consumers experienced a sustainable emotional “high”, basking in the emotional ecstasy, and not returning to their baseline level, for a period of time after their procedure.

For anticipated negative emotions, there were also significant differences in the mean scores between the before and after stages in the shorter and longer time frames for the USA and Australia, supporting *RQ1b*. In this case, there was a significant decline in anticipated negative emotions between the before and after stages, followed by a significant descent to negativity, while consumers contemplated undertaking Botox again. This implied that although consumers experienced an initial “high”, it was not sustainable as they slid to an emotional “low”, which was frequently below their baseline level after their procedure.

10.1.1.2.Hair Transplant

A hair transplant conducted up to 23 months ago was classified as shorter term, and those undertaken two to three years ago as longer term. As was observed in Botox users, anticipated positive emotions differed significantly between the before and after stages in the shorter and longer time frames for the USA and India, supporting *RQ1a*. A significant spike was followed by a plateau, with consumers not reverting to their baseline level for an extended duration after their hair transplant.

Again, in accordance with the trend observed for Botox users, anticipated negative emotions differed significantly between the before and after stages in the shorter and longer time frames for the USA and India, supporting *RQ1b*. Although there was a significant weakening in negativity, consumers frequently slid to negativity, which was below their baseline level sometime after their hair transplant.

10.1.1.3.Liposuction

Liposuction procedures undergone up to 23 months ago were identified as shorter term, whereas those conducted two to three years ago were considered longer term. Likewise, liposuction users mirrored the same trends as Botox and hair transplant users with their

anticipated positive and negative emotions in the shorter and longer time frames for the USA and India, supporting *RQ1a* and *RQ1b*.

10.1.2. H1 to H6 – Predictors of Desire and Intention to Engage in a Cosmetic Procedure

H1 to *H6* examined hedonic engagement with a cosmetic procedure using a proposed empirical decision-making framework. Structural equation modelling with AMOS 26 was conducted to predict the influence of attitude, subjective norms and perceived behavioural control as well as anticipated positive and negative emotions on desire and, in turn, desire on intention.

10.1.2.1.H1 – Attitude and Desire to Engage in a Cosmetic Procedure

Attitude toward engaging in a cosmetic procedure had a significant and positive influence on the desire to engage in Botox (USA and Australia) and a hair transplant (USA), supporting *H1*. This corroborates past studies that have found a positive attitude-desire relationship (e.g. Esposito et al., 2016; Han et al., 2016; Ketron & Naletelich, 2017; Perugini & Bagozzi, 2001; Richetin et al., 2008; Wu et al., 2016). However, no significant positive relationship between attitude and desire was discerned for a hair transplant (India) and liposuction (USA and India), which did not support *H1*. The non-significant finding affords two theoretical observations. First, as propounded in Perugini and Bagozzi's (2001) model of goal-directed behaviour (MGB), emotions may exert an influence on desire, minimising the influence of attitude on desire. Findings from the current research appear to suggest this. Second, as proposed in Ajzen's (1991) theory of planned behaviour (TPB), attitude may have a direct influence on intention. This direct relationship is supported in some previous studies (e.g. Abd Rahman et al., 2015; Ham et al., 2015; Kudeshia & Kumar, 2017).

10.1.2.2.H2 – Subjective Norms and Desire to Engage in a Cosmetic Procedure

Across all studies, subjective norms regarding beauty bias had a significant and positive influence on the desire to engage in Botox (USA and Australia), a hair transplant (USA and India) and liposuction (USA and India), supporting *H2*. This supports other studies that have observed a positive subjective norms-desire relationship (e.g. Akhlaghi et al., 2015; Choi & Park, 2017; Esposito et al., 2016; Han et al., 2016; Ketron & Naletelich, 2017; Parkinson et al., 2018; Perugini & Bagozzi, 2001; Sood et al., 2017; Wei et al., 2018). The resounding findings underline that in the context of cosmetic procedures, social pressure (Han & Hwang, 2014), input from reality television (Ashikali et al., 2016) and the influence of social media (Kanazawa, 2011) exert a strong impact on the desire to engage in a cosmetic procedure.

10.1.2.3.H3 – Perceived Behavioural Control and Desire to Engage in a Cosmetic Procedure

Across all studies, no significant and positive relationship between perceived behavioural control and desire was produced, which did not support *H3*. This follows some studies that have reported no direct effect in the perceived behavioural control-desire relationship (e.g. Choi & Park, 2017; Fry et al., 2014; Han & Hwang, 2014). An explanation for the non-significant finding is offered and discussed in light of the next hypothesis.

10.1.2.4.H4 – Perceived Behavioural Control and Intention to Engage in a Cosmetic Procedure

Perceived behavioural control had a significant and positive influence on the intention to engage in Botox (USA and Australia), hair transplants (India) and liposuction (USA and India), supporting *H4*. This reiterates previous studies that have noted the positive perceived behavioural control-intention relationship (e.g. Kapetanaki et al., 2014; Prestwich et al., 2008; Quintal et al., 2015; Richetin et al., 2019; Song et al., 2014; Sood et al., 2017). The evident perceived behavioural control-intention relationship has been attributed to negating the

perceived behavioural control-desire relationship (Choi & Park, 2017; Fry et al., 2014; Han & Hwang, 2014). This offers some validation as to why the hypothesised influence of perceived behavioural control on desire was not supported in the current research.

10.1.2.5.H5a – Anticipated Positive Emotions and Desire to Engage in a Cosmetic Procedure

Across all studies, anticipated positive emotions from engaging in a cosmetic procedure had a significant and positive influence on the desire to engage in Botox (USA and Australia), a hair transplant (USA and India) and liposuction (USA and India), supporting *H5a*. This substantiates existing studies that have described the anticipated positive emotions-desire relationship (e.g. Akhlaghi et al., 2015; Esposito et al., 2016; Ketron & Naletelich, 2017; Wei et al., 2018). The findings highlight that positive emotions toward a cosmetic procedure drive the desire for an enhanced body image (Milfelner et al., 2017), increased self-esteem and reduced anxiety (Haiken, 1997; Simis et al., 2002; Wei et al., 2018).

10.1.2.6.H5b – Anticipated Negative Emotions and Desire to Engage in a Cosmetic Procedure

Anticipated negative emotions from not engaging in a cosmetic procedure had a significant and positive influence on the desire to engage in Botox (USA and Australia), hair transplants (India) and liposuction (USA and India), supporting *H5b*. This upholds past studies that have commented on the negative emotions-desire relationship (e.g. Akhlaghi et al., 2015; Esposito et al., 2016; Ketron & Naletelich, 2017; Wei et al., 2018). Again, the findings underscore that a consumer's negative feelings, such as low self-esteem and shame, drive their desire to contemplate undertaking a cosmetic procedure to enhance their body image (Vlahos & Bove, 2016).

10.1.2.7.H6 – Desire and Intention to Engage in a Cosmetic Procedure

Across all studies, the desire to engage in a cosmetic procedure had a significant and positive influence on the intention to engage in Botox (USA and Australia), a hair transplant (USA and India) and liposuction (USA and India), supporting *H6*. This validates other studies that have detected the positive desire-intention relationship (e.g. Chiu & Choi, 2018; Dibb et al., 2013; Esposito et al., 2016; Han et al., 2018; Song et al., 2012). The findings demonstrate that a consumer's aspirations to achieve an enhanced body image in order to be desirable (Axt et al., 2018; Cash, 1981) instigate intention to engage in a cosmetic procedure.

10.1.3. RQ2 – Perceived Risk and Anticipated Emotions of Cosmetic Procedure Users

RQ3 developed a segmentation typology of consumers who engage with cosmetic procedures according to their perceived risk profile. Cluster analysis with AMOS 26 utilised the five dimensions of physical, financial, performance, social and psychological risk to establish homogeneous segments of cosmetic procedure users. Study Three (Botox), Study Five (hair transplant) and Study Seven (liposuction) in the USA were adopted due to the USA's market leadership with cosmetic procedures on social media and the continued rising demand in cosmetic procedure engagement. Consequently, four consumer risk profiles were identified.

10.1.3.1. Timid Image Seekers

Timid image seekers depicted high physical, financial, performance, social and psychological risk. This segment was identified across all of the three USA studies (Botox, hair transplant and liposuction). This emphasised that the segment felt potentially exposed to the physical and performance risks of bruising, infections and undesirable side effects (Richetin et al., 2019), the high financial cost of a procedure (Kearns, 2014), the loss of status within their social network when undergoing a cosmetic procedure (Tam et al., 2012) and psychological distress (Jacobsen

et al., 2004). Timid image seekers experienced higher positive emotions after their Botox, hair transplant or liposuction, which settled on a plateau, suggesting they wanted to dwell on their emotional “high”. Moreover, the segment indicated that their negative emotions were lowered after their procedure. When the effects of the procedure diminished, their negative emotions increased, although they did not revert to the baseline level, implying that they were open to receiving some reassurances in repeating the procedure.

10.1.3.2.Daring Image Crafters

Daring image crafters exhibited low physical, financial, performance, social and psychological risk. This segment was noted in two of the three USA studies (Botox and hair transplant). With generally low risk across all dimensions, the segment showed higher confidence in their decision to undertake a cosmetic procedure (Nahai, 2009) and less apprehension toward the negative outcomes from physical and performance risks (Gabriel et al., 1997). Daring image crafters who undertook Botox or a hair transplant demonstrated positive emotions, which rose after their procedure and remained on a plateau, indicating their satisfaction with the procedure and desire to stay in this elevated state (Alba & Williams, 2013). Further, the segment consistently reported that their negative emotions were reduced after their procedure, reiterating their satisfaction with the procedure. However, their negative emotions reverted to the baseline level once the effects started to wane, highlighting that they craved regular stimulation.

10.1.3.3.Approval-Seeking Socialites

Approval-seeking socialites displayed low physical, financial, performance and psychological risk but high social risk. This segment was observed in two of the three USA studies (hair transplant and liposuction). This underlined that the segment was prepared to engage in cosmetic procedures that were highly invasive for as long as the outcomes fulfilled the beauty

norms in society. For approval-seeking socialites who had undergone a hair transplant or liposuction, there were strong positive emotions immediately following their procedure. Despite the high satisfaction with their procedure, their negative emotions stayed anchored at the baseline level, suggesting they harboured nagging doubts about their body image.

10.1.3.4. Mainstream Image Adopters

Mainstream image adopters showed moderate levels of physical, financial, performance, social and psychological risk. This segment was discerned in only one of the three USA studies (liposuction). Generally, consumers who have attempted weight loss programmes with no results opt for a cosmetic procedure, such as liposuction (Nauhria, 2021). As the motivations to undertake liposuction may be discretionary and aesthetic or mandatory and health related (Nauhria, 2021), this may explain the broad appeal to consumers who engage in the procedure. On the one hand, mainstream image adopters mirrored the positive emotions of timid image seekers, which spiked and eventually fell after they took pleasure in the outcomes. On the other hand, mainstream image adopters followed the negative emotions of approval-seeking socialites, which hovered at the baseline level after the procedure. Plausibly, as mainstream image adopters represented the average consumer in the marketplace, they shared some similar characteristics with the other market segments.

10.1.4. RQ2 – Perceived Risk, Desire and Intention toward a Cosmetic Procedure

RQ2 explored whether perceived risk moderated the impact of desire on intention. Structural equation modelling with AMOS 26 was conducted to assess the desire-intention relationship for the three cosmetic procedures (Botox, hair transplant and liposuction) across the four consumer risk segments. Again, the three studies conducted in the USA were utilised and justified by the USA's market leadership with cosmetic procedures on social media and continued rising demand in cosmetic procedure engagement.

10.1.4.1. Botox

Desire produced a significant and positive effect on the intention to undergo Botox for both daring image crafters and timid image seekers. However, the two segments were observed to be invariant, suggesting that perceived risk did not moderate the desire-intention relationship, which did not support *RQ2*.

10.1.4.2. Hair Transplant

Desire produced a significant and positive effect on the intention to undergo a hair transplant for daring image crafters, approval-seeking socialites and timid image seekers. Notwithstanding, the three segments were noted to be invariant, implying that perceived risk did not moderate the impact desire had on intention, which did not support *RQ2*.

10.1.4.3. Hair Transplant

Desire produced a significant and positive effect on the intention to undertake a hair transplant for approval-seeking socialites, mainstream image adopters and timid image seekers. Once again, the three segments were reported to be invariant, indicating that perceived risk did not moderate the desire-intention relationship, which did not support *RQ2*.

The non-significant differences in the moderation of perceived risk in the desire-intention relationship for the consumer risk segments under each cosmetic procedure may be explained by other critical factors. First, past behaviour functioned as a background variable because at the outset, the sample was screened only for respondents who had previous experience with a cosmetic procedure. Second, positive emotions peaked and negative emotions declined following a cosmetic procedure. These critical factors suggested that whether they were risk seeking (daring image crafters), risk averse (timid image seekers) or anywhere between this continuum (approval-seeking socialites and mainstream image adopters), respondents already

had positive experience and favourable inclination, resulting in their similar desire and intention to undertake their next cosmetic procedure.

A summary of the findings that demonstrate support for the research questions and hypotheses in the research model can be seen in Table 10.1.

Table 10.1

Summary of Findings

Hypothesis	Outcome
<i>RQ1 How will anticipated (a) positive emotions and (b) negative emotions differ significantly at the pre-, post- and toward the next engagement with a cosmetic procedure?</i>	<i>Supported</i>
<i>H1 Attitude toward engaging in a cosmetic procedure has a significant and positive influence on desire to engage in a cosmetic procedure</i>	<i>Partially supported</i>
<i>H2 Subjective norms on beauty bias have a significant and positive influence on desire to engage in a cosmetic procedure</i>	<i>Supported</i>
<i>H3 Perceived behavioural control has a significant and positive influence on desire to engage in a cosmetic procedure</i>	<i>Not supported</i>
<i>H4 Perceived behavioural control has a significant and positive influence on intention to engage in a cosmetic procedure</i>	<i>Supported</i>
<i>H5a Anticipated positive emotions from engaging in a cosmetic procedure have a significant and positive influence on desire to engage in the procedure</i>	<i>Supported</i>
<i>H5b Anticipated negative emotions from not engaging in a cosmetic procedure have a significant and positive influence on desire to engage in the procedure</i>	<i>Supported</i>
<i>H6 Desire to engage in a cosmetic procedure has a significant and positive influence on intention to engage in the procedure</i>	<i>Supported</i>
<i>RQ2 What perceived risks associated with engaging in a cosmetic procedure will moderate the relationship between desire and intention to engage in the procedure?</i>	<i>Not supported</i>

10.2. Contribution

10.2.1. Theoretical Implications

The research's first theoretical contribution was to propose a decision-making framework, the Hedonic Engagement Model of Goal-Directed Behaviour (HEMGB), which integrates the affective and cognitive aspects of hedonic consumption. Arguably, this is the first framework to empirically evaluate hedonic engagement with a cosmetic procedure, and it is rigorously assessed under three cosmetic procedure conditions (Botox, hair transplants and liposuction) and across three countries (the USA, Australia and India). As can be seen in Table 10.1, the majority of the hypotheses in the HEMGB were supported across all studies, validating the framework's use in predicting hedonic engagement with a cosmetic procedure. This framework contributes to the decision-making literature, particularly in explaining hedonic engagement with a range of cosmetic procedures. Understanding hedonic engagement in the dynamic beauty industry is vital for researchers in predicting the growing and evolving demands of the marketplace.

The research's second theoretical contribution was to develop a risk segmentation typology of consumers who engaged in a range of cosmetic procedures. Arguably, this is the first segmentation typology to identify consumer segments according to their risk perceptions of engaging with a cosmetic procedure. Timid image seekers were identified in all three studies (Botox, hair transplants and liposuction). Daring image crafters and approval-seeking socialites were identified in two studies and mainstream image adopters in one (liposuction). The four consumer risk segments predicted the desire and intention to engage with a cosmetic procedure, although they were found to be invariant, possibly because they all had positive experience and favourable inclination, driving similar desire and intention to undertake their next cosmetic procedure. This somewhat lends a more sophisticated perspective to the perceived risk and

segmentation literature, presenting the potential to profile users across a range of cosmetic procedures.

10.2.2. Methodological Implications

The research implemented an approach that traces emotions over time in the context of hedonic consumption. It administered a methodology for identifying and tracking anticipated emotions under three cosmetic procedure conditions (Botox, hair transplants and liposuction) and across three countries (the USA, Australia and India). The approach traced the positive and negative emotions of consumers pre-, post- and toward their next cosmetic procedure.

Findings suggested that anticipated emotions for the before, after and next stages under each condition recorded some significant differences, affirming the method's use in determining hedonic adaptation to repeated engagement with a cosmetic procedure. Such an approach gives researchers the opportunity to map out the fluctuating anticipated positive and negative emotions of users across the gamut of cosmetic procedures available in the marketplace. The study contributes to the hedonic adaptation literature, particularly in the context of cosmetic procedure engagement.

10.2.3. Managerial Implications

10.2.3.1. Attitude

Although there were varied findings for the impact that attitude had on the desire to engage in a cosmetic procedure, it is still pertinent to consider the construct for its influence on public opinion (Milfelner et al., 2017). After all, other studies on positive attitude toward cosmetic procedures demonstrate positive perceptions of the practice (e.g. Calogero et al., 2010; Tijerina et al., 2019). In shaping a positive public attitude, the beauty industry has an opportunity to position itself as a professional and socially responsible sector. This will require an integrated

effort by public and private enterprise to implement a system for international accreditation, quality certification for cutting-edge technologies of operation and rehabilitation, qualified specialists and trained personnel, transparency of clinic procedures and statistics, operational reliability of communication lines as well as competitive pricing in the marketplace (Chistobaev & Semenova, 2018). It is important for practitioners to spend more time with their clients to explore their motivation to engage in a cosmetic procedure and their attitude toward such a procedure in the aftermath (Jung & Hwang, 2016).

10.2.3.2. Subjective Norms

Subjective norms produced a significant and positive impact on the desire to engage in a cosmetic procedure. Exploring the role of subjective norms highlights the extent to which the media and society exert pressure in creating beauty ideals and how consumers view themselves (Cluley, 2016; El Jurdi & Smith, 2018; Lim, 2017; Menon, 2019). Studies have commented on the influential role of social media celebrities in endorsing products and increasing market share (Cheung & Yue, 2000). Evidently, social media influencers, such as the Kardashians, are instrumental in shaping consumer perceptions of the beauty industry and cosmetic procedures (Sood et al., 2017).

Given the role of the media in setting and managing consumer expectations, it is imperative for practitioners to communicate on social platforms popular with their clients. Consumer who consult social media sources for information about cosmetic procedures are likely to be more satisfied by its outcomes (Reisenwitz & Fowler, 2018). With the increasing acceptance of cosmetic procedures on social media, practitioners may want to leverage advertising appeals through social media influencers who have already engaged in such procedures.

The Botox studies conducted in the USA and Australia indicated that Australian respondents held significantly higher positive emotions and greater desire to engage in Botox than

American respondents. There is potential for practitioners in Australia to frame communication campaigns with visuals, imagery and messages of projected outcomes that evoke positive emotional appeal (Kwortnik & Ross, 2007). In the USA, there is an opportunity for practitioners to post factual updates of new “tweakments”, referring to more viable, time-efficient and inexpensive non-invasive procedures (Clark, 2008) to counter the erosion of hedonic adaptation. The hair transplant studies conducted in the USA and India observed that Indian respondents held significantly greater desire to engage in a hair transplant than American respondents. In their communication with Indian consumers, practitioners would do well to couch more aspirational messages about hair regrowth, giving hope for improved social and economic prospects.

Notably, in utilising social media, practitioners must be conversant with the legal, contractual, copyright, privacy and ethical obligations to their clients, employees and themselves as healthcare providers. According to the American Society of Plastic Surgeons (ASPS), 50% of cosmetic surgeons currently utilise social media for promotion, while 25% of consumers have called attention to the need for more protocols to track ethical behaviour online (Stevens, 2014). It should be pointed out to practitioners who utilise social media that any negative publicity on this platform has a long shelf life, acting as a deterrent to potential clients (Kluemper et al., 2016). With this in mind, practitioners may want to refer to the Social Media Policy identified by the American Academy of Cosmetic Surgery, Inc. to ensure that they have some understanding of the media tools they employ (AACCS, 2020).

10.2.3.3. Perceived Behavioural Control

Although perceived behavioural control did not impact on the desire to engage in a cosmetic procedure, it had a significant and positive impact on the intention to engage in a cosmetic procedure. How a consumer assesses their skills and competencies influences their perceived

behavioural control over engaging in a cosmetic procedure. Consumers who have lower perceived behavioural control are likely to be unsatisfied with the overall outcome of the procedure (Zhong et al., 2013). Practitioners who can discern what non-volitional factors (i.e. time, money, skills and cooperation from others) are vital to influencing self-efficacy have a real chance of developing customised procedures and services for their clients. For instance, as hair transplants are one of the most expensive cosmetic procedures in India, some practitioners offer a payment schedule to clients who are unable to pay upfront (Nauhria, 2021).

10.2.3.4. Anticipated Emotions

In the main, both anticipated positive and negative emotions exhibited a significant and positive impact on the desire to engage in a cosmetic procedure. This underlined that emotions in repeated engagement with a cosmetic procedure were important in explaining the mood states of consumers. From the study, four positive emotion descriptors were derived, namely pleased, delighted, happy and hopeful, that represented anticipated positive mood states. These emotions referred to general joyful dispositions toward engaging in a cosmetic procedure and reaping its expected outcomes. Conversely, five negative emotion descriptors were derived, namely regretful, sad, unsatisfied, disappointed and embarrassed, that represented anticipated negative mood states. These emotions pinpointed specific darker dispositions that characterised body image dysmorphia and a preoccupation with image enhancement (Strubel & Petrie, 2018). These darker emotions have the potential to trigger an obsession with unrealistic beauty ideals (Cassano, 2019), resulting in further emotional distress. Both the positive and negative descriptors identified in the study may form the basis for a checklist that assists practitioners in detecting a client's positive and negative psychological and social well-being (Armenta et al., 2014; Loewenstein, 2007) prior to undergoing a cosmetic procedure.

Both anticipated positive and negative emotions displayed significant differences at the pre-, post- and toward the next engagement with a cosmetic procedure. Given the adaptation and satiation of emotions over time, it is crucial for practitioners to engage with their clients proactively and imaginatively (Kwortnik & Ross, 2007; Line et al., 2016). Offering monthly incentives actively will induce loyalty by motivating clients to return regularly to the practice. The study also highlighted that consumers experienced an emotional “high”, veering above their happiness baseline and staying in this elevated mood state for some time (Alba & Williams, 2013) after their surgery. The sustained emotions augur well for the beauty industry and reiterate the importance of quality treatments that guarantee long-standing effects for client satisfaction (Chistobaev & Semenova, 2018).

To better manage the emotions of clients, it is imperative that practitioners convey accurate information at each consultation so that reasonable expectations of surgical outcomes are established (Naraghi & Atari, 2016). Although legislation and policy are already in place for invasive cosmetic procedures, these are still lacking for non-invasive cosmetic procedures, whereby psychological evaluations, counselling sessions and cooling-off periods need to be imposed as mandatory practices by all practitioners (Vlahos & Bove, 2016). This would reiterate to consumers a commitment to professional care by the beauty industry.

10.2.3.5. Desire

The desire to engage in a cosmetic procedure presented a significant and positive impact on the intention to engage in the procedure. Scholars have observed the varied goal desires or motives that drive cosmetic procedure engagement. Consumers may seek to reduce anxiety over perceived physical flaws (Sarwer, 2019) and enhance their physical attractiveness (Sullivan, 2001), social acceptance (Braun, 2005; Hart & Wellings, 2002), self-esteem, body image satisfaction and happiness (Yoon & Kim, 2019). It is imperative for practitioners to

identify and better understand their clients' goal desires when engaging in a cosmetic procedure. This will assist practitioners in getting their clients to set realistic expectations for their goals. Such input would also advise practitioners on the various options they could recommend to their clients to achieve the desired results (Sarwer, 2019; Weston, 2008).

Consumers who travel overseas to undertake cosmetic procedures cite the accreditation of hospitals/medical facilities, international certification of doctors, state-of-the-art medical equipment and round-the-clock, high-quality nursing care coupled with the lower costs of healthcare and pre-/post-treatments as deciding factors (Collins et al., 2019). While competing on costs may not be feasible for practitioners in developed countries, adding value to every stage of the process may help to level the playing field.

10.2.3.6. Perceived Risk

In addressing the consumer risk segments of timid image seekers, daring image crafters, approval-seeking socialites and mainstream image adopters, some specific managerial implications are proposed. These recommendations are considered in a value-added framework of hedonic engagement with cosmetic procedures. The framework includes four stages, namely consultative, pre-procedure, procedure and post-procedure. The latter three stages correspond to the joining, consumption and detachment stages as identified by Orava and Tuominen (2002).

Consultative stage: Information seeking is a key strategy for reducing perceived risk and increasing perceived behavioural control (Nam et al., 2019). In this initial stage, websites, such as the American Society of Plastic Surgeons (ASPS, 2019), present consumers with information about the consultation aesthetic, risks and safety, procedure preparation and steps, aftercare and recovery and results, as well as visual animations, before and after photographs and a glossary of terms. However, educating consumers requires equipping them with the

competencies to make decisions based on realistic expectations of outcomes (Burton, 2002). This may be facilitated by engaging consumers in co-creating their customised service with advanced technology.

To illustrate, daring image crafters who present low overall risk are likely to enjoy the challenge of being introduced to new cosmetic procedures, service products and practitioners with expertise. Practitioners would do well to keep them satisfied and engaged in their elevated positive zone with 3D augmented reality (AR) technology that immerses them in new realities and challenges. Alternatively, timid image seekers who display high overall risk tend to draw reassurance from the repeated use of cosmetic procedures, service products and practitioners. Practitioners may allay their risk concerns with 3D virtual reality (VR) technology that revisits procedures and reiterates assurance.

Pre-procedure (joining) and procedure (consumption) stages: In the pre-procedure and procedure stages focused on pre-care and curing, structure and process are key antecedents to consumer satisfaction (Gronroos, 1995). Structure encompasses the physical landscape wherein the service takes place, such as the location, signage, parking, patient admission, food and room (Orava & Tuominen, 2002). Process describes the engagement within the landscape as the service is performed, such as with reception and admission staff, nurses, interns, physicians, anaesthetists and systems (Bendall-Lyon & Powers, 2004). Clearly, implementing quality indicators that benchmark each customer touchpoint is critical to ensure a seamless process that is supported by structure.

Arguably, mainstream image adopters who demonstrate a moderate capacity to handle overall risk will appreciate a combination of existing and new cosmetic procedures, service products and trained practitioners. Practitioners should be aware that as this segment represents the average user, there is a probability that a percentage may switch when induced by competitive

offerings. To sustain consumer loyalty, it is crucial for practitioners to highlight their relevant expertise through membership of accredited medical societies, such as the American Society of Plastic Surgeons (ASPS). Here, members must demonstrate over six years of surgical training after medical school with a minimum of three years in plastic surgery residency training and continue to attend annual medical workshops that address patient safety (ASPS, 2019).

Post-procedure (detachment) stage: In the post-procedure stage focused on curing and post-care, structure and process also operate as key antecedents to consumer satisfaction (Gronroos, 1995). Structure related to patient discharge and process related to aftercare from nurses, interns and physicians, as well as payment/invoicing and making subsequent appointments (Orava & Tuominen, 2002) are critical quality indicators for benchmarking.

The intimate co-creation of a customised experience with a cosmetic procedure offers scope for practitioners to forge an emotional connection with a consumer through branding that encapsulates the ethos of the service provider (Kemp et al., 2012). Such a strategy can counter the typical detachment that the consumer experiences following the procedure. Consumers who resonate with the brand's social responsibility, prestige, service orientation, quality and endorsers are more likely to stay connected and advocate the brand through positive word of mouth (Fullerton & Toossi, 2001).

Generally, approval-seeking socialites who exhibit low overall risk but high social risk are prone to seek confirmation that the cosmetic procedures and service products they choose are trending in social circles. Practitioners should keep the spotlight trained on contemporary procedures and their competency in performing them to reinforce positive word of mouth, particularly on social media. However, it is necessary to reiterate the need for practitioners to

be cognisant of the legal and ethical protocols for engaging with clients and employees on social media platforms.

It is evident that generally, consumers may express some concerns about the possible risks associated with engaging in a cosmetic procedure. The need to highlight realistic results from actual procedures and real-life examples will convey the transparent and ethical approaches adopted by professional practitioners when dealing with the potential risks of cosmetic procedures. It is also critical to make such information readily available to consumers in the marketplace.

10.3. Limitations

Several limitations are identified in the research. First, the research focused on four popular cosmetic procedures (i.e. chemical peels, Botox, hair transplant and liposuction). These four procedures may not be sufficient to represent the gamut of procedures available in the marketplace. Second, the research was undertaken in only three countries (i.e. the USA, Australia and India). Third, the size of each country sample collected fulfilled a relatively small quota (≤ 600) due to budget and time constraints. Thus, how the findings may be generalised to consumers in other countries remains undetermined. Finally, the research was designed as a retrospective study, requiring respondents to look back on their pre- and post-experiences with a cosmetic procedure. While this has the merit of presenting a truthful narrative of human behaviour, it also poses a challenge for respondents who may have forgotten their experiences.

It is evident that subsequent research will need to take into account alternative cosmetic procedures, larger sample sizes and diverse countries to replicate and validate these initial findings. However, given the delimitations of the research, the findings demonstrate that it has achieved its objectives. These were primarily to implement a methodological approach that identified and tracked anticipated emotions in hedonic adaptation, to propose a decision-

making framework that explained hedonic engagement and to develop a risk segmentation typology of cosmetic procedure users.

10.4. Future Directions

Scholars have widely acknowledged that implicit in all consumer decision-making is the element of risk (Ray & Sahney, 2018; Schiffman et al., 2011). The study utilised the five risk dimensions, namely physical, financial, performance, social and psychological, in cluster analysis to identify and label the four consumer risk segments (i.e. timid image seekers, daring image crafters, approval-seeking socialites and mainstream image adopters). However, in the structural model using multigroup analysis that examined the perceived risk for its moderation of desire on intention, perceived risk was operationalised as a global construct, which encompassed the five perceived risk dimensions. It is possible that some of these dimensions may have exerted more (less) significant moderating effects than others, confounding the individual effects of each dimension on the desire-intention relationship. Further, the time risk of inconvenience and opportunity costs in deciding on a cosmetic surgical procedure warrants due consideration for its impact on other perceived risk dimensions. To illustrate, consumers are seeking procedures with quicker implementation and recovery times (Sood et al., 2017). This exerts immense pressure on the research and development costs of new treatments and technology (financial risk), trials for optimal safety standards (physical risk) and practitioner training to deliver successful outcomes (performance and psychological risks). In subsequent research on behaviour toward cosmetic procedures, it may be feasible to isolate each perceived risk dimension to test for its significant moderating effect.

In progressing forward, it would be pertinent to observe whether beauty bias varies culturally and geographically and how this impacts on engagement with cosmetic procedures (El Jurdi & Smith, 2018). Each culture idealises different body types and prioritises different body

attributes for surgery, such as jaw-shaping in South-East Asia, breast augmentation in North America and body-contouring in South America (Cassano, 2019). Dictated by these specific cultural demands for beauty, destinations have started to develop specialities in the field. For instance, Iran has been referred to as the “nose job capital of the world”, and Egypt as a leader in dental and body cosmetics (Cassano, 2019). This opens doors for destinations to position themselves as medical tourism destinations. To illustrate, South Korea, with reportedly the highest number of cosmetic surgeons per capita and the highest rate of cosmetic surgery globally (i.e. one million procedures each year), is dubbed “the world’s plastic surgery capital” (Marx, 2015). Tapping into wellness tourism, India has declared itself a “global health destination” (Collins et al., 2019). This offers a prospect for destinations to differentiate their brands and offerings to global consumers.

Beauty consumption operates as two opposing drivers in identity construction, namely social membership versus distinction. Until now, the body of research has focused on social membership, underlining the role of social identity in shaping beauty ideals, self-identity and beauty consumption (El Jurdi & Smith, 2018). Scholars have called attention to the adverse effects that social membership creates, including anxiety over perceived physical flaws (Sarwer, 2019) and cravings for social acceptance (Braun, 2005; Hart & Wellings, 2002). However, less research has been directed toward distinction and how consumers subvert or reject beauty bias and media authority to make a statement of their own identity. Research on such consumer counterconditioning (Stolier et al., 2020) is sorely required to address issues of beauty stereotyping and bullying, particularly on social media (Felmlee et al., 2020). Findings have the potential to guide the development of social policy and communication aimed at celebrating individuality and dispelling body image dysmorphia.

Current trends suggest that a rising number of consumers are demanding non-invasive and more unconventional cosmetic procedures at a younger age. In the USA, the American

Academy of Facial Plastic and Reconstructive Surgery (AAFPRS, 2019) reported a 22% increase in Botox injections for consumers under the age of 30 in 2018 compared to 2013. These consumers appear to be pursuing regular non-invasive cosmetic procedures earlier in life with the long-term goal of preventing invasive cosmetic procedures in later life (Clark, 2019). The author has also called attention to consumers seeking micro-optimisations that employ the unconventional use of filler in areas other than the cheekbone, such as earlobe tightening to address over-stretching and non-invasive rhinoplasty. The current trend with such procedures is for consumers to look like filtered images of themselves and not an obviously surgically enhanced version of someone else (AAFPRS, 2019). This presents an opportunity for research to probe the Millennials (22- to 37-year-olds) for their anticipated emotions, and goal and implementation desires. Inputs from this cohort are expected to give insights into the future directions that the beauty industry must take.

The COVID-19 pandemic and its subsequent health and safety protocols necessitated the wearing of face masks, social distancing and lockdowns. Working online from home and interfacing via videoconferencing platforms such as Zoom and Microsoft Teams meant that consumers were staring at their own faces for hours, making them aware of their fine lines, wrinkles and double chin and instigating body image dissatisfaction. According to the American Society of Plastic Surgeons (ASPS, 2021), COVID-19 has resulted in a “Zoom-boom” for the beauty industry, with consumers seeing the pandemic as an opportunity to engage in cosmetic procedures and hide their recovery processes under the face masks they were required to wear. Similarly, Asfour et al. (2021) have reported a 57% increase in cosmetic procedure enquiries and attribute this to online work arrangements. It would be timely and opportune for researchers to examine the role of anticipated emotions and goal desires in cosmetic procedures while the pandemic rages on (Padley & Di Pace, 2021).

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Appendices

Appendix A



Focus group participation information sheet

Consumer engagement with cosmetic procedures

Dear Respondent

This research aims to explore critical factors that influence consumer perceptions, attitudes, desires and behaviour toward cosmetic procedures. Findings from the study will help practitioners in the beauty, spa and medical industry to: (1) identify influential factors in consumer decision-making; (2) introduce marketing initiatives designed to attract clients; and (3) evaluate the effectiveness of these marketing initiatives through repeat client engagement.

You have been requested to participate in the focus group, however you are under no obligation to participate should you choose not to and your participation is strictly voluntary. You have the right to withdraw from the study at any time without penalty and prejudice. Your responses will remain completely confidential and your anonymity is assured. The focus group will take place in The Agency (Bld. 408) at Curtin University and will take no more than two hours, with an organised break after 60 minutes.

Curtin University Human Research Ethics Committee (HREC) has approved this study (HRE2017-0209). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on +61 08 9266 9223 or the Manager, Research Integrity on 61 8 9266 7093 or email hrec@curtin.edu.au.

Thank you for your kind participation in the focus group.

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Appendix B



Focus group questions

Consumer engagement with cosmetic procedures

1. What comes to your mind when you think of a **cosmetic procedure**?
2. Provide some **examples** of a cosmetic procedure.
3. Which of these cosmetic procedures would you consider to be **invasive** and **non-invasive**?
4. How appropriate are these descriptors in expressing **anticipated positive emotions** in the context of undertaking a cosmetic procedure?
 - Delighted
 - Gratified
 - Happy
 - Pleased
 - Proud
 - Self-assured
 - Deserving
5. What other descriptors of anticipated positive emotions would you include in this list?
6. How appropriate are these descriptors in expressing **anticipated negative emotions** in the context of undertaking a cosmetic procedure?
 - Disappointed
 - Embarrassed
 - Guilty
 - Regretful
 - Frustrated
 - Sad
 - Self-critical
7. What other descriptors of anticipated negative emotions would you include in this list?

Appendix C



Expert panel questions

Consumer emotions in deciding to undertake a cosmetic procedure

I am a PhD student and would like to invite you to be a member of an expert panel for my research.

My research explores critical emotions that consumers experience when deciding on undertaking a cosmetic procedure. For this purpose, I have conducted an extensive literature review and focus groups to identify a list of descriptors which express positive and negative emotions. These emotions are expected to influence consumer desire and intention to undertake a cosmetic procedure.

Attached is a 1-page survey, which should take approximately 5 minutes to complete. I would greatly appreciate it if you could review descriptors in the survey, which express positive and negative emotions. Do give me your feedback on whether you think each descriptor is 'Appropriate' or 'Not Appropriate' in expressing a relevant emotion in the context of cosmetic procedures.

If you have any questions regarding the research, please do not hesitate to contact me.

I thank you for your kind participation.

Researcher

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INTRODUCTION

The following sections identify descriptors which express **EMOTIONS**. Consider each descriptor and tick whether you think it is 'Appropriate' or 'Not Appropriate' in expressing its relevance to undertaking or not undertaking a cosmetic procedure. Each descriptor should have **one tick only**. Here is an **EXAMPLE**:

Positive Emotion		
Appropriate	Descriptors	Not Appropriate
✓	Happy	

SECTION A

Consider each of the following descriptors which express **POSITIVE EMOTIONS**. Then, tick whether you think each descriptor is 'Appropriate' or 'Not Appropriate' in expressing its relevance in **UNDERTAKING** a cosmetic procedure.

Positive Emotion		
Appropriate	Descriptors	Not Appropriate
	Happy	
	Self-assured	
	Delighted	
	Pleased	
	Gratified	
	I deserved it	
	Satisfied	
	Excited	
	Relieved	
	Hopeful	
	Confident	

SECTION B

Consider each of the following descriptors which express **NEGATIVE EMOTIONS**. Then, tick whether you think each descriptor is 'Appropriate' or 'Not Appropriate' in expressing its relevance in **NOT UNDERTAKING** a cosmetic procedure.

Negative Emotion		
Appropriate	Descriptors	Not Appropriate
	Sad	
	Disappointed	
	Frustrated	
	Self-critical	
	Embarrassed	
	Regretful	
	Ashamed	
	Insecure	
	Unsatisfied	
	Anxious	
	Depressed	

Appendix D



Consumer engagement with cosmetic procedures

Dear Respondent

I am a PhD student with the School of Marketing at Curtin University in Western Australia. My study aims to explore critical factors that influence consumer attitude, perceptions, desire and behaviour toward cosmetic procedures. Findings from the study will help practitioners in the beauty, spa and medical industry to: (1) identify influential factors in consumer decision-making; (2) introduce marketing initiatives designed to attract clients; and (3) evaluate the effectiveness of these marketing initiatives through repeat client engagement.

Attached is a survey which should take approximately 15 minutes to complete. You are under no obligation to participate in the survey and your participation is strictly voluntary. Should you wish to exit from the survey at any time, you are not required to provide an explanation and have the right to withdraw without penalty and prejudice. If you do choose to participate, your responses to the survey will remain completely confidential and your anonymity is assured.

Curtin University Human Research Ethics Committee (HREC) has approved this study (HRE2017-0209). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or should you wish to make a confidential complaint, you may contact the Ethics Officer on +61 08 9266 9223 or the Manager, Research Integrity on 61 8 9266 7093 or email hrec@curtin.edu.au.

It would be much appreciated if you could participate in the survey. Thank you for your kind participation.

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Consent

I have received information regarding this research and have had an opportunity to ask questions. I believe I understand the purpose, extent and possible risks of my involvement in this project and I voluntarily consent to take part.			
[1]	Yes	[2]	No

I have had a chemical peel before:			
[1]	Yes	[2]	No (Please exit the survey)

How strong a goal is it for you to have a chemical peel?					
	<i>Not a goal at all for me</i>	<i>Somewhat a goal for me</i>	<i>A moderate goal for me</i>	<i>A strong goal for me</i>	<i>A very strong goal for me</i>
	1	2	3	4	5

Section A

The following statements relate to your **past experience** with having a chemical peel. Please answer all questions by circling the response that most closely represents your experience.

A1	I have had a chemical peel:				
	<i>Once</i>	<i>Twice</i>	<i>3 times</i>	<i>4 times</i>	<i>Over 5 times</i>
	1	2	3	4	5

A2	The last time I had a chemical peel was:				
	<i>1-5 months ago</i>	<i>6-11 months ago</i>	<i>1 year ago</i>	<i>2 years ago</i>	<i>Over 3 years ago</i>
	1	2	3	4	5

A3	I engage in a chemical peel every:				
	<i>1-5 months</i>	<i>6-11 months</i>	<i>Every year</i>	<i>Every 2 years</i>	<i>Every 3 years or over</i>
	1	2	3	4	5

Think about the **FIRST TIME** you had a chemical peel. The following statements relate to your **attitude** and **perceptions BEFORE** having your **FIRST** chemical peel. For each of the following statements, please circle the response that most closely represents your views.

B1	BEFORE I had my FIRST chemical peel, I thought that doing it would be:						
1	Bad						Good
	1	2	3	4	5	6	7
2	Unpleasant						Pleasant
	1	2	3	4	5	6	7
3	Negative						Positive
	1	2	3	4	5	6	7
4	Unsatisfying						Satisfying
	1	2	3	4	5	6	7

B2	BEFORE I had my FIRST chemical peel, most people important to me:	Strongly Disagree				Strongly Agree		
1	Supported my decision to get the procedure	1	2	3	4	5	6	7
2	Understood why I had to have the procedure	1	2	3	4	5	6	7
3	Agreed with me about getting the procedure	1	2	3	4	5	6	7
4	Recommended that I have the procedure	1	2	3	4	5	6	7

B3	BEFORE I had my FIRST chemical peel, I was convinced that:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Whether or not I did the procedure was completely up to me	1	2	3	4	5	6	7
2	I was capable of getting the procedure	1	2	3	4	5	6	7
3	I had enough money to do the procedure	1	2	3	4	5	6	7
4	I had enough time to get the procedure	1	2	3	4	5	6	7
5	I had enough opportunities to have the procedure	1	2	3	4	5	6	7

B4	BEFORE I had my FIRST chemical peel, I thought about the financial risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The expenses incurred would not be a wise investment	1	2	3	4	5	6	7
2	I was not sure whether I would get my money's worth	1	2	3	4	5	6	7
3	Having the cosmetic procedure would involve financial loss for me	1	2	3	4	5	6	7
4	There were better ways of spending my money than getting the procedure	1	2	3	4	5	6	7

B5	BEFORE I had my FIRST chemical peel, I thought about the performance risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure would not provide the benefits that I expected	1	2	3	4	5	6	7
2	The procedure would not really 'perform' the way it was supposed to	1	2	3	4	5	6	7
3	The procedure could not be relied upon to give me a good outcome	1	2	3	4	5	6	7
4	The procedure would not live up to expectation	1	2	3	4	5	6	7

B6	BEFORE I had my FIRST chemical peel, I thought about the psychological risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	It gave me an unwanted feeling of anxiety	1	2	3	4	5	6	7
2	I felt uneasy when thinking about doing the procedure	1	2	3	4	5	6	7
3	The thought getting the procedure caused me to experience some tension	1	2	3	4	5	6	7
4	I was not sure if having the procedure reflected my style	1	2	3	4	5	6	7

B7	BEFORE I had my FIRST chemical peel, I thought about the physical risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure would not be safe for me	1	2	3	4	5	6	7
2	The procedure would damage my health	1	2	3	4	5	6	7
3	The procedure would adversely affect my appearance	1	2	3	4	5	6	7
4	The procedure could cause me some physical harm	1	2	3	4	5	6	7

Section C – AFTER your FIRST chemical peel

Once again, think about the **FIRST TIME** you had a chemical peel. This time, the following statements relate to your **attitude** and **perceptions** **AFTER** having your **FIRST** chemical peel. For each of the following statements, please circle the response that most closely represents your views.

C1	AFTER I had my FIRST chemical peel, I thought that it was:						
1	Bad						Good
	1	2	3	4	5	6	7
2	Unpleasant						Pleasant
	1	2	3	4	5	6	7
3	Negative						Positive
	1	2	3	4	5	6	7
4	Unsatisfying						Satisfying
	1	2	3	4	5	6	7

C2	AFTER I had my FIRST chemical peel, most people important to me:	Strongly Disagree				Strongly Agree		
1	Supported my decision to get the procedure	1	2	3	4	5	6	7
2	Understood why I had to have the procedure	1	2	3	4	5	6	7
3	Agreed with me about getting the procedure	1	2	3	4	5	6	7
4	Endorsed their recommendation that I have the procedure	1	2	3	4	5	6	7

C3	AFTER I had my FIRST chemical peel, I was convinced that:	Strongly Disagree				Strongly Agree		
1	Doing the procedure was completely up to me	1	2	3	4	5	6	7
2	I was capable of getting the procedure	1	2	3	4	5	6	7
3	I had enough money to do the procedure	1	2	3	4	5	6	7
4	I had enough time to get the procedure	1	2	3	4	5	6	7
5	I had enough opportunities to have the procedure	1	2	3	4	5	6	7

C4	AFTER I had my FIRST chemical peel, I thought about the financial risk:	Strongly Disagree				Strongly Agree		
1	The expenses incurred were not a wise investment	1	2	3	4	5	6	7
2	I was not sure whether I got my money's worth	1	2	3	4	5	6	7
3	The procedure involved financial loss for me	1	2	3	4	5	6	7
4	There were better ways of spending my money than getting the procedure	1	2	3	4	5	6	7

C5	AFTER I had my FIRST chemical peel, I thought about the performance risk:	Strongly Disagree				Strongly Agree		
1	The procedure did not provide the benefits that I expected	1	2	3	4	5	6	7
2	The procedure did not really 'perform' the way it was supposed to	1	2	3	4	5	6	7
3	The procedure could not be relied upon to give me a good outcome	1	2	3	4	5	6	7
4	The procedure did not live up to expectation	1	2	3	4	5	6	7

C6	AFTER I had my FIRST chemical peel, I thought about the psychological risk:	Strongly Disagree				Strongly Agree		
1	It gave me an unwanted feeling of anxiety	1	2	3	4	5	6	7
2	I felt uneasy when thinking about what I had done	1	2	3	4	5	6	7
3	I experienced some tension	1	2	3	4	5	6	7
4	I was not sure if having the procedure reflected my style	1	2	3	4	5	6	7

C7	AFTER I had my FIRST chemical peel, I thought about the physical risk:	Strongly Disagree				Strongly Agree		
1	The procedure was not safe for me	1	2	3	4	5	6	7
2	The procedure damaged my health	1	2	3	4	5	6	7
3	The procedure adversely affected my appearance	1	2	3	4	5	6	7
4	The procedure caused me some physical harm	1	2	3	4	5	6	7

Section D – BEFORE and AFTER your FIRST chemical peel

The following statements relate to your **positive emotions BEFORE** and **AFTER** having your **FIRST** chemical peel. For each of the following statements, please circle the response that most closely represents your views.

D When considering if I **did succeed** with my goal in getting my **FIRST** chemical peel, I **felt**:

D1a	Satisfied BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D1b	Satisfied AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D2a	Pleased BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D2b	Pleased AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D3a	Delighted BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D3b	Delighted AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D4a	Hopeful BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D4b	Hopeful AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D5a	Gratified BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D5b	Gratified AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D6a	Happy BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D6b	Happy AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D7a	Excited BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D7b	Excited AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D8a	Self-assured BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D8b	Self-assured AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

Section E – BEFORE and AFTER your FIRST chemical peel

The following statements relate to your **negative emotions** **BEFORE** and **AFTER** having your **FIRST** chemical peel. For each of the following statements, please circle the response that most closely represents your views.

E	When considering if I did not succeed with my goal in getting my FIRST chemical peel, I felt:
----------	---

E1a	Depressed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E1b	Depressed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E2a	Frustrated BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E2b	Frustrated AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E3a	Regretful BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E3b	Regretful AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E4a	Sad BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E4b	Sad AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E5a	Unsatisfied BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E5b	Unsatisfied AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E6a	Disappointed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E6b	Disappointed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E7a	Embarrassed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E7b	Embarrassed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E8a	Anxious BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E8b	Anxious AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E9a	Self-critical BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E9b	Self-critical AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

Section F – Your NEXT chemical peel

Now, think about having your **NEXT** chemical peel. The following statements relate to your **emotions, desire and intention** to have your **NEXT** chemical peel. For each of the following statements, please circle the response that most closely represents your views.

F1	If I succeed with my goal in having my NEXT chemical peel in the next year, I will feel :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
		1	2	3	4	5	6	7
1	Satisfied	1	2	3	4	5	6	7
2	Pleased	1	2	3	4	5	6	7
3	Delighted	1	2	3	4	5	6	7
4	Hopeful	1	2	3	4	5	6	7
5	Gratified	1	2	3	4	5	6	7
6	Happy	1	2	3	4	5	6	7
7	Excited	1	2	3	4	5	6	7
8	Self-assured	1	2	3	4	5	6	7

F2	If I do not succeed with my goal in having my NEXT chemical peel in the next year, I will feel:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Depressed	1	2	3	4	5	6	7
2	Frustrated	1	2	3	4	5	6	7
3	Regretful	1	2	3	4	5	6	7
4	Sad	1	2	3	4	5	6	7
5	Unsatisfied	1	2	3	4	5	6	7
6	Disappointed	1	2	3	4	5	6	7
7	Embarrassed	1	2	3	4	5	6	7
8	Anxious	1	2	3	4	5	6	7
9	Self-critical	1	2	3	4	5	6	7

F3	In the next year:	<i>Weak</i>				<i>Strong</i>		
1	My desire to have my next chemical peel is...	1	2	3	4	5	6	7
2	My aspirations for getting my next chemical peel can be expressed as	1	2	3	4	5	6	7
3	The intensity of my desire to have my next chemical peel can be described as	1	2	3	4	5	6	7
4	The intensity of my hope for getting my next chemical peel is	1	2	3	4	5	6	7
5	Having my next chemical peel is something I dream about doing	1	2	3	4	5	6	7

F5	Within the next year:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	I plan to do my next chemical peel	1	2	3	4	5	6	7
2	I will make an effort to get my next chemical peel	1	2	3	4	5	6	7
3	I intend to have my next chemical peel	1	2	3	4	5	6	7
4	I will invest time and money to get another chemical peel	1	2	3	4	5	6	7

Section G

The following section contains DEMOGRAPHIC questions that are used to help classify information.

G1	What is your gender?					
	[1]	Female	[2]	Male	[3]	Other (<i>Please specify</i>) _____

G2	What is your age group?					
	[1]	Under 20 years	[2]	21 – 34 years	[3]	35 – 44 years
	[4]	45 – 54 years	[5]	55 – 64 years	[6]	65 years and above

G3	What is your marital status?							
	[1]	Single	[2]	In a relationship	[3]	De Facto	[4]	Married

G4	What country do you reside in?
	Please specify _____

G5 What is your field of occupation?						
	[1]	Manager	[2]	Professional	[3]	Technician or Associate Professionals
	[4]	Skilled Agricultural, Forestry and Fishery Workers	[5]	Clerical Support Workers	[6]	Service and Sales Worker
	[7]	Plant and Machinery Operator and Assemblers	[8]	Craft and Related Trade Workers	[9]	Student
	[10]	Retired	[11]	Other (<i>Please specify</i>) _____		

G6 What is your working status?								
	[1]	Full time	[2]	Part time	[3]	Casual	[4]	Not working

G7 What is the level of your post-secondary school qualifications?						
	[1]	Certificate	[2]	Bachelor Degree	[3]	Advanced Diploma or Diploma
	[4]	Graduate Diploma or Graduate Certificate	[5]	Postgraduate Degree	[6]	Other (Please specify)- _____

G8 What is your personal annual income?								
	[1]	Under A\$44,999	[2]	A\$45,000 – A\$89,999	[3]	A\$90,000 – A\$149,999	[4]	A\$150,000 and above

THANK YOU for taking the time to complete the survey 😊

Appendix E



Consumer engagement with cosmetic procedures

Dear Respondent

I am a PhD student with the School of Marketing at Curtin University in Western Australia. My study aims to explore critical factors that influence consumer attitude, perceptions, desire and behaviour toward cosmetic procedures. Findings from the study will help practitioners in the beauty, spa and medical industry to: (1) identify influential factors in consumer decision-making; (2) introduce marketing initiatives designed to attract clients; and (3) evaluate the effectiveness of these marketing initiatives through repeat client engagement.

Attached is a survey which should take approximately 15 minutes to complete. You are under no obligation to participate in the survey and your participation is strictly voluntary. Should you wish to exit from the survey at any time, you are not required to provide an explanation and have the right to withdraw without penalty and prejudice. If you do choose to participate, your responses to the survey will remain completely confidential and your anonymity is assured.

Curtin University Human Research Ethics Committee (HREC) has approved this study (HRE2017-0209). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or should you wish to make a confidential complaint, you may contact the Ethics Officer on +61 08 9266 9223 or the Manager, Research Integrity on 61 8 9266 7093 or email hrec@curtin.edu.au.

It would be much appreciated if you could participate in the survey. Thank you for your kind participation.

Researcher: Abhi Sood

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School of Marketing, Curtin University

Supervisor: Assoc Prof. Vanessa Quintal

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Phone: +61 8 9266 7588

School of Marketing, Curtin University

Consent

I have received information regarding this research and have had an opportunity to ask questions. I believe I understand the purpose, extent and possible risks of my involvement in this project and I voluntarily consent to take part.			
[1]	Yes	[2]	No

I have had Botox before:			
[1]	Yes	[2]	No (Please exit the survey)

How strong a goal is it for you to have Botox?					
	<i>Not a goal at all for me</i>	<i>Somewhat a goal for me</i>	<i>A moderate goal for me</i>	<i>A strong goal for me</i>	<i>A very strong goal for me</i>
	1	2	3	4	5

Section A

The following statements relate to your **past experience** with having Botox. Please answer all questions by circling the response that most closely represents your experience.

A1	I have had Botox:				
	<i>Once</i>	<i>Twice</i>	<i>3 times</i>	<i>4 times</i>	<i>Over 5 times</i>
	1	2	3	4	5

A2	The last time I had Botox was:				
	<i>1-5 months ago</i>	<i>6-11 months ago</i>	<i>1 year ago</i>	<i>2 years ago</i>	<i>Over 3 years ago</i>
	1	2	3	4	5

A3	I engage in Botox every:				
	<i>1-5 months</i>	<i>6-11 months</i>	<i>Every year</i>	<i>Every 2 years</i>	<i>Every 3 years or over</i>
	1	2	3	4	5

Think about the **FIRST TIME** you had Botox. The following statements relate to your **attitude** and **perceptions BEFORE** having your **FIRST** Botox. For each of the following statements, please circle the response that most closely represents your views.

B1	BEFORE I had my FIRST Botox, I thought that doing it would be:						
1	Bad						Good
	1	2	3	4	5	6	7
2	Unpleasant						Pleasant
	1	2	3	4	5	6	7
3	Negative						Positive
	1	2	3	4	5	6	7
4	Unsatisfying						Satisfying
	1	2	3	4	5	6	7

B2	BEFORE I had my FIRST Botox, most people important to me:	Strongly Disagree				Strongly Agree		
1	Supported my decision to get the procedure	1	2	3	4	5	6	7
2	Understood why I had to have the procedure	1	2	3	4	5	6	7
3	Agreed with me about getting the procedure	1	2	3	4	5	6	7
4	Recommended that I have the procedure	1	2	3	4	5	6	7

B3	BEFORE I had my FIRST Botox, I was convinced that:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Whether or not I did the procedure was completely up to me	1	2	3	4	5	6	7
2	I was capable of getting the procedure	1	2	3	4	5	6	7
3	I had enough money to do the procedure	1	2	3	4	5	6	7
4	I had enough time to get the procedure	1	2	3	4	5	6	7
5	I had enough opportunities to have the procedure	1	2	3	4	5	6	7

B4	BEFORE I had my FIRST Botox, I thought about the financial risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The expenses incurred would not be a wise investment	1	2	3	4	5	6	7
2	I was not sure whether I would get my money's worth	1	2	3	4	5	6	7
3	Having the cosmetic procedure would involve financial loss for me	1	2	3	4	5	6	7
4	There were better ways of spending my money than getting the procedure	1	2	3	4	5	6	7

B5	BEFORE I had my FIRST Botox, I thought about the performance risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure would not provide the benefits that I expected	1	2	3	4	5	6	7
2	The procedure would not really 'perform' the way it was supposed to	1	2	3	4	5	6	7
3	The procedure could not be relied upon to give me a good outcome	1	2	3	4	5	6	7
4	The procedure would not live up to expectation	1	2	3	4	5	6	7

B6	BEFORE I had my FIRST Botox, I thought about the psychological risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	It gave me an unwanted feeling of anxiety	1	2	3	4	5	6	7
2	I felt uneasy when thinking about doing the procedure	1	2	3	4	5	6	7
3	The thought getting the procedure caused me to experience some tension	1	2	3	4	5	6	7
4	I was not sure if having the procedure reflected my style	1	2	3	4	5	6	7

B7	BEFORE I had my FIRST Botox, I thought about the physical risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure would not be safe for me	1	2	3	4	5	6	7
2	The procedure would damage my health	1	2	3	4	5	6	7
3	The procedure would adversely affect my appearance	1	2	3	4	5	6	7
4	The procedure could cause me some physical harm	1	2	3	4	5	6	7

Section C – AFTER your FIRST Botox

Once again, think about the **FIRST TIME** you had Botox. This time, the following statements relate to your **attitude** and **perceptions** **AFTER** having your **FIRST** Botox. For each of the following statements, please circle the response that most closely represents your views.

C1	AFTER I had my FIRST Botox, I thought that it was:						
1	Bad						Good
	1	2	3	4	5	6	7
2	Unpleasant						Pleasant
	1	2	3	4	5	6	7
3	Negative						Positive
	1	2	3	4	5	6	7
4	Unsatisfying						Satisfying
	1	2	3	4	5	6	7

C2	AFTER I had my FIRST Botox, most people important to me:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Supported my decision to get the procedure	1	2	3	4	5	6	7
2	Understood why I had to have the procedure	1	2	3	4	5	6	7
3	Agreed with me about getting the procedure	1	2	3	4	5	6	7
4	Endorsed their recommendation that I have the procedure	1	2	3	4	5	6	7

C3	AFTER I had my FIRST Botox, I was convinced that:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Doing the procedure was completely up to me	1	2	3	4	5	6	7
2	I was capable of getting the procedure	1	2	3	4	5	6	7
3	I had enough money to do the procedure	1	2	3	4	5	6	7
4	I had enough time to get the procedure	1	2	3	4	5	6	7
5	I had enough opportunities to have the procedure	1	2	3	4	5	6	7

C4	AFTER I had my FIRST Botox, I thought about the financial risk:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The expenses incurred were not a wise investment	1	2	3	4	5	6	7
2	I was not sure whether I got my money's worth	1	2	3	4	5	6	7
3	The procedure involved financial loss for me	1	2	3	4	5	6	7
4	There were better ways of spending my money than getting the procedure	1	2	3	4	5	6	7

C5	AFTER I had my FIRST Botox, I thought about the performance risk:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure did not provide the benefits that I expected	1	2	3	4	5	6	7
2	The procedure did not really 'perform' the way it was supposed to	1	2	3	4	5	6	7
3	The procedure could not be relied upon to give me a good outcome	1	2	3	4	5	6	7
4	The procedure did not live up to expectation	1	2	3	4	5	6	7

C6	AFTER I had my FIRST Botox, I thought about the psychological risk:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	It gave me an unwanted feeling of anxiety	1	2	3	4	5	6	7
2	I felt uneasy when thinking about what I had done	1	2	3	4	5	6	7
3	I experienced some tension	1	2	3	4	5	6	7
4	I was not sure if having the procedure reflected my style	1	2	3	4	5	6	7

C7	AFTER I had my FIRST Botox, I thought about the physical risk:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure was not safe for me	1	2	3	4	5	6	7
2	The procedure damaged my health	1	2	3	4	5	6	7
3	The procedure adversely affected my appearance	1	2	3	4	5	6	7
4	The procedure caused me some physical harm	1	2	3	4	5	6	7

Section D – BEFORE and AFTER your FIRST Botox

The following statements relate to your **positive emotions BEFORE** and **AFTER** having your **FIRST** Botox. For each of the following statements, please circle the response that most closely represents your views.

D When considering if I **did succeed** with my goal in getting my **FIRST** Botox, I felt:

D1a	Satisfied BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D1b	Satisfied AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D2a	Pleased BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D2b	Pleased AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D3a	Delighted BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D3b	Delighted AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D4a	Hopeful BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D4b	Hopeful AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D5a	Gratified BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D5b	Gratified AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D6a	Happy BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D6b	Happy AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D7a	Excited BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D7b	Excited AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D8a	Self-assured BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D8b	Self-assured AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

Section E – BEFORE and AFTER your FIRST Botox

The following statements relate to your **negative emotions** **BEFORE** and **AFTER** having your **FIRST** Botox. For each of the following statements, please circle the response that most closely represents your views.

E	When considering if I did not succeed with my goal in getting my FIRST Botox, I felt:
----------	---

E1a	Depressed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E1b	Depressed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E2a	Frustrated BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E2b	Frustrated AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E3a	Regretful BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E3b	Regretful AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E4a	Sad BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E4b	Sad AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E5a	Unsatisfied BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E5b	Unsatisfied AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E6a	Disappointed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E6b	Disappointed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E7a	Embarrassed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E7b	Embarrassed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E8a	Anxious BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E8b	Anxious AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E9a	Self-critical BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E9b	Self-critical AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

Section F – Your NEXT Botox

Now, think about having your **NEXT** Botox. The following statements relate to your **emotions, desire and intention** to have your **NEXT** Botox. For each of the following statements, please circle the response that most closely represents your views.

F1	If I succeed with my goal in having my NEXT Botox in the next year, I will feel:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
		1	2	3	4	5	6	7
1	Satisfied	1	2	3	4	5	6	7
2	Pleased	1	2	3	4	5	6	7
3	Delighted	1	2	3	4	5	6	7
4	Hopeful	1	2	3	4	5	6	7
5	Gratified	1	2	3	4	5	6	7
6	Happy	1	2	3	4	5	6	7
7	Excited	1	2	3	4	5	6	7
8	Self-assured	1	2	3	4	5	6	7

F2	If I do not succeed with my goal in having my NEXT Botox in the next year, I will feel:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Depressed	1	2	3	4	5	6	7
2	Frustrated	1	2	3	4	5	6	7
3	Regretful	1	2	3	4	5	6	7
4	Sad	1	2	3	4	5	6	7
5	Unsatisfied	1	2	3	4	5	6	7
6	Disappointed	1	2	3	4	5	6	7
7	Embarrassed	1	2	3	4	5	6	7
8	Anxious	1	2	3	4	5	6	7
9	Self-critical	1	2	3	4	5	6	7

F3	In the next year:	<i>Weak</i>				<i>Strong</i>		
1	My desire to have my next Botox is	1	2	3	4	5	6	7
2	My aspirations for getting my next Botox can be expressed as	1	2	3	4	5	6	7
3	The intensity of my desire to have my next Botox can be described as	1	2	3	4	5	6	7
4	The intensity of my hope for getting my next Botox is	1	2	3	4	5	6	7
5	Having my next Botox is something I dream about doing	1	2	3	4	5	6	7

F5	Within the next year:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	I plan to do my next Botox	1	2	3	4	5	6	7
2	I will make an effort to get my next Botox	1	2	3	4	5	6	7
3	I intend to have my next Botox	1	2	3	4	5	6	7
4	I will invest time and money to get another Botox	1	2	3	4	5	6	7

Section G

The following section contains DEMOGRAPHIC questions that are used to help classify information.

G1	What is your gender?		
[1]	Female	[2]	Male
[3]	Other (<i>Please specify</i>) _____		

G2	What is your age group?		
[1]	Under 20 years	[2]	21 – 34 years
[3]	35 – 44 years		
[4]	45 – 54 years	[5]	55 – 64 years
[6]	65 years and above		

G3	What is your marital status?						
[1]	Single	[2]	In a relationship	[3]	De Facto	[4]	Married

G4	What country do you reside in?
	Please specify _____

G5 What is your field of occupation?						
	[1]	Manager	[2]	Professional	[3]	Technician or Associate Professionals
	[4]	Skilled Agricultural, Forestry and Fishery Workers	[5]	Clerical Support Workers	[6]	Service and Sales Worker
	[7]	Plant and Machinery Operator and Assemblers	[8]	Craft and Related Trade Workers	[9]	Student
	[10]	Retired	[11]	Other (<i>Please specify</i>) _____		

G6 What is your working status?								
	[1]	Full time	[2]	Part time	[3]	Casual	[4]	Not working

G7 What is the level of your post-secondary school qualifications?						
	[1]	Certificate	[2]	Bachelor Degree	[3]	Advanced Diploma or Diploma
	[4]	Graduate Diploma or Graduate Certificate	[5]	Postgraduate Degree	[6]	Other (Please specify)- _____

G8 What is your personal annual income?								
	[1]	Under A\$44,999	[2]	A\$45,000 – A\$89,999	[3]	A\$90,000 – A\$149,999	[4]	A\$150,000 and above

THANK YOU for taking the time to complete the survey ☺

Appendix F



Consumer engagement with cosmetic procedures

Dear Respondent

I am a PhD student with the School of Marketing at Curtin University in Western Australia. My study aims to explore critical factors that influence consumer attitude, perceptions, desire and behaviour toward cosmetic procedures. Findings from the study will help practitioners in the beauty, spa and medical industry to: (1) identify influential factors in consumer decision-making; (2) introduce marketing initiatives designed to attract clients; and (3) evaluate the effectiveness of these marketing initiatives through repeat client engagement.

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It would be much appreciated if you could participate in the survey. Thank you for your kind participation.

Researcher: Abhi Sood
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Consent

I have received information regarding this research and have had an opportunity to ask questions. I believe I understand the purpose, extent and possible risks of my involvement in this project and I voluntarily consent to take part.			
[1]	Yes	[2]	No

I have had a hair transplant before:			
[1]	Yes	[2]	No (Please exit the survey)

How strong a goal is it for you to have a hair transplant?					
	<i>Not a goal at all for me</i>	<i>Somewhat a goal for me</i>	<i>A moderate goal for me</i>	<i>A strong goal for me</i>	<i>A very strong goal for me</i>
	1	2	3	4	5

Section A

The following statements relate to your **past experience** with having a hair transplant. Please answer all questions by circling the response that most closely represents your experience.

A1	I have had a hair transplant :				
	<i>Once</i>	<i>Twice</i>	<i>3 times</i>	<i>4 times</i>	<i>Over 5 times</i>
	1	2	3	4	5

A2	The last time I had a hair transplant was:				
	<i>6-11 months ago</i>	<i>1 year ago</i>	<i>2 years ago</i>	<i>3 years ago</i>	<i>Over 4 years ago</i>
	1	2	3	4	5

A3	I engage in a hair transplant every:				
	<i>6-11 months</i>	<i>Every year</i>	<i>Every 2 years</i>	<i>Every 3 years</i>	<i>Every 4 years or over</i>
	1	2	3	4	5

Think about the **FIRST TIME** you had a hair transplant. The following statements relate to your **attitude** and **perceptions BEFORE** having your **FIRST** hair transplant. For each of the following statements, please circle the response that most closely represents your views.

B1	BEFORE I had my FIRST hair transplant , I thought that doing it would be:						
1	Bad						Good
	1	2	3	4	5	6	7
2	Unpleasant						Pleasant
	1	2	3	4	5	6	7
3	Negative						Positive
	1	2	3	4	5	6	7
4	Unsatisfying						Satisfying
	1	2	3	4	5	6	7

B2	BEFORE I had my FIRST hair transplant , most people important to me:	Strongly Disagree				Strongly Agree		
1	Supported my decision to get the procedure	1	2	3	4	5	6	7
2	Understood why I had to have the procedure	1	2	3	4	5	6	7
3	Agreed with me about getting the procedure	1	2	3	4	5	6	7
4	Recommended that I have the procedure	1	2	3	4	5	6	7

B3	BEFORE I had my FIRST hair transplant , I was convinced that:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Whether or not I did the procedure was completely up to me	1	2	3	4	5	6	7
2	I was capable of getting the procedure	1	2	3	4	5	6	7
3	I had enough money to do the procedure	1	2	3	4	5	6	7
4	I had enough time to get the procedure	1	2	3	4	5	6	7
5	I had enough opportunities to have the procedure	1	2	3	4	5	6	7

B4	BEFORE I had my FIRST hair transplant , I thought about the financial risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The expenses incurred would not be a wise investment	1	2	3	4	5	6	7
2	I was not sure whether I would get my money's worth	1	2	3	4	5	6	7
3	Having the cosmetic procedure would involve financial loss for me	1	2	3	4	5	6	7
4	There were better ways of spending my money than getting the procedure	1	2	3	4	5	6	7

B5	BEFORE I had my FIRST hair transplant , I thought about the performance risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure would not provide the benefits that I expected	1	2	3	4	5	6	7
2	The procedure would not really 'perform' the way it was supposed to	1	2	3	4	5	6	7
3	The procedure could not be relied upon to give me a good outcome	1	2	3	4	5	6	7
4	The procedure would not live up to expectation	1	2	3	4	5	6	7

B6	BEFORE I had my FIRST hair transplant , I thought about the psychological risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	It gave me an unwanted feeling of anxiety	1	2	3	4	5	6	7
2	I felt uneasy when thinking about doing the procedure	1	2	3	4	5	6	7
3	The thought getting the procedure caused me to experience some tension	1	2	3	4	5	6	7
4	I was not sure if having the procedure reflected my style	1	2	3	4	5	6	7

B7	BEFORE I had my FIRST hair transplant , I thought about the physical risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure would not be safe for me	1	2	3	4	5	6	7
2	The procedure would damage my health	1	2	3	4	5	6	7
3	The procedure would adversely affect my appearance	1	2	3	4	5	6	7
4	The procedure could cause me some physical harm	1	2	3	4	5	6	7

Section C – AFTER your FIRST hair transplant

Once again, think about the **FIRST TIME** you had a hair transplant. This time, the following statements relate to your **attitude** and **perceptions** **AFTER** having your **FIRST** a hair transplant. For each of the following statements, please circle the response that most closely represents your views.

C1	AFTER I had my FIRST hair transplant , I thought that it was:							
1	Bad							Good
		1	2	3	4	5	6	7
2	Unpleasant							Pleasant
		1	2	3	4	5	6	7
3	Negative							Positive
		1	2	3	4	5	6	7
4	Unsatisfying							Satisfying
		1	2	3	4	5	6	7

C2	AFTER I had my FIRST hair transplant , most people important to me:	Strongly Disagree				Strongly Agree		
1	Supported my decision to get the procedure	1	2	3	4	5	6	7
2	Understood why I had to have the procedure	1	2	3	4	5	6	7
3	Agreed with me about getting the procedure	1	2	3	4	5	6	7
4	Endorsed their recommendation that I have the procedure	1	2	3	4	5	6	7

C3	AFTER I had my FIRST hair transplant , I was convinced that:	Strongly Disagree				Strongly Agree		
1	Doing the procedure was completely up to me	1	2	3	4	5	6	7
2	I was capable of getting the procedure	1	2	3	4	5	6	7
3	I had enough money to do the procedure	1	2	3	4	5	6	7
4	I had enough time to get the procedure	1	2	3	4	5	6	7
5	I had enough opportunities to have the procedure	1	2	3	4	5	6	7

C4	AFTER I had my FIRST hair transplant , I thought about the financial risk:	Strongly Disagree				Strongly Agree		
1	The expenses incurred were not a wise investment	1	2	3	4	5	6	7
2	I was not sure whether I got my money's worth	1	2	3	4	5	6	7
3	The procedure involved financial loss for me	1	2	3	4	5	6	7
4	There were better ways of spending my money than getting the procedure	1	2	3	4	5	6	7

C5	AFTER I had my FIRST hair transplant , I thought about the performance risk:	Strongly Disagree				Strongly Agree		
1	The procedure did not provide the benefits that I expected	1	2	3	4	5	6	7
2	The procedure did not really 'perform' the way it was supposed to	1	2	3	4	5	6	7
3	The procedure could not be relied upon to give me a good outcome	1	2	3	4	5	6	7
4	The procedure did not live up to expectation	1	2	3	4	5	6	7

C6	AFTER I had my FIRST hair transplant , I thought about the psychological risk:	Strongly Disagree				Strongly Agree		
1	It gave me an unwanted feeling of anxiety	1	2	3	4	5	6	7
2	I felt uneasy when thinking about what I had done	1	2	3	4	5	6	7
3	I experienced some tension	1	2	3	4	5	6	7
4	I was not sure if having the procedure reflected my style	1	2	3	4	5	6	7

C7	AFTER I had my FIRST hair transplant , I thought about the physical risk:	Strongly Disagree				Strongly Agree		
1	The procedure was not safe for me	1	2	3	4	5	6	7
2	The procedure damaged my health	1	2	3	4	5	6	7
3	The procedure adversely affected my appearance	1	2	3	4	5	6	7
4	The procedure caused me some physical harm	1	2	3	4	5	6	7

Section D – BEFORE and AFTER your FIRST hair transplant

The following statements relate to your **positive emotions BEFORE** and **AFTER** having your **FIRST** hair transplant. For each of the following statements, please circle the response that most closely represents your views.

D When considering if I **did succeed** with my goal in getting my **FIRST** hair transplant , I felt:

D1a	Satisfied BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D1b	Satisfied AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D2a	Pleased BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D2b	Pleased AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D3a	Delighted BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D3b	Delighted AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D4a	Hopeful BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D4b	Hopeful AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D5a	Gratified BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D5b	Gratified AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D6a	Happy BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D6b	Happy AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D7a	Excited BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D7b	Excited AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D8a	Self-assured BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D8b	Self-assured AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

Section E – BEFORE and AFTER your FIRST hair transplant

The following statements relate to your **negative emotions** **BEFORE** and **AFTER** having your **FIRST** hair transplant. For each of the following statements, please circle the response that most closely represents your views.

E When considering if I **did not succeed** with my goal in getting my **FIRST** hair transplant , I felt:

E1a	Depressed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E1b	Depressed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E2a	Frustrated BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E2b	Frustrated AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E3a	Regretful BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E3b	Regretful AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E4a	Sad BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E4b	Sad AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E5a	Unsatisfied BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E5b	Unsatisfied AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E6a	Disappointed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E6b	Disappointed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E7a	Embarrassed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E7b	Embarrassed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E8a	Anxious BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E8b	Anxious AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E9a	Self-critical BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E9b	Self-critical AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

Section F – Your NEXT hair transplant

Now, think about having your **NEXT** hair transplant. The following statements relate to your **emotions, desire and intention** to have your **NEXT** hair transplant. For each of the following statements, please circle the response that most closely represents your views.

F1	If I succeed with my goal in having my NEXT hair transplant in the next year, I will feel :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
		1	2	3	4	5	6	7
1	Satisfied	1	2	3	4	5	6	7
2	Pleased	1	2	3	4	5	6	7
3	Delighted	1	2	3	4	5	6	7
4	Hopeful	1	2	3	4	5	6	7
5	Gratified	1	2	3	4	5	6	7
6	Happy	1	2	3	4	5	6	7
7	Excited	1	2	3	4	5	6	7
8	Self-assured	1	2	3	4	5	6	7

F2	If I do not succeed with my goal in having my NEXT hair transplant in the next year, I will feel:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
		1	2	3	4	5	6	7
1	Depressed	1	2	3	4	5	6	7
2	Frustrated	1	2	3	4	5	6	7
3	Regretful	1	2	3	4	5	6	7
4	Sad	1	2	3	4	5	6	7
5	Unsatisfied	1	2	3	4	5	6	7
6	Disappointed	1	2	3	4	5	6	7
7	Embarrassed	1	2	3	4	5	6	7
8	Anxious	1	2	3	4	5	6	7
9	Self-critical	1	2	3	4	5	6	7

F3	In the next year:	<i>Weak</i>				<i>Strong</i>		
		1	2	3	4	5	6	7
1	My desire to have my next hair transplant is	1	2	3	4	5	6	7
2	My aspirations for getting my next hair transplant can be expressed as	1	2	3	4	5	6	7
3	The intensity of my desire to have my next hair transplant can be described as	1	2	3	4	5	6	7
4	The intensity of my hope for getting my next hair transplant is	1	2	3	4	5	6	7
5	Having my next hair transplant is something I dream about doing	1	2	3	4	5	6	7

F5	Within the next year:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
		1	2	3	4	5	6	7
1	I plan to do my next hair transplant	1	2	3	4	5	6	7
2	I will make an effort to get my next hair transplant	1	2	3	4	5	6	7
3	I intend to have my next hair transplant	1	2	3	4	5	6	7
4	I will invest time and money to get another hair transplant	1	2	3	4	5	6	7

Section G

The following section contains DEMOGRAPHIC questions that are used to help classify information.

G1	What is your gender?					
	[1]	Female	[2]	Male	[3]	Other (<i>Please specify</i>) _____

G2	What is your age group?					
	[1]	Under 20 years	[2]	21 – 34 years	[3]	35 – 44 years
	[4]	45 – 54 years	[5]	55 – 64 years	[6]	65 years and above

G3	What is your marital status?							
	[1]	Single	[2]	In a relationship	[3]	De Facto	[4]	Married

G4	What country do you reside in?					
	Please specify _____					

G5 What is your field of occupation?						
	[1]	Manager		[2]	Professional (IT/Medical/Law/ Banking/ Finance)	[3] Skilled Agricultural, Forestry and Fishery Workers
	[4]	Civil Service		[5]	Sales Worker	[6] Retired
	[7]	Business Owner		[8]	Other (<i>Please specify</i>) _____	

G6 What is your working status?								
	[1]	Full time		[2]	Part time	[3] Casual	[4]	Not working

G7 What is the level of your post-secondary school qualifications?						
	[1]	Certificate		[2]	Bachelor Degree	[3] Advanced Diploma or Diploma
	[4]	Graduate Diploma or Graduate Certificate		[5]	Postgraduate Degree	[6] Other (Please specify)-

G8 What is your personal annual income?								
	[1]	Under Rs. 2,50,000		[2]	Rs. 2,50,001 – Rs. 5,00,000	[3] Rs. 5,00,001 – Rs. 10,00,000	[4]	Over Rs. 10,00,001

THANK YOU for taking the time to complete the survey ☺

Appendix G



Consumer engagement with cosmetic procedures

Dear Respondent

I am a PhD student with the School of Marketing at Curtin University in Western Australia. My study aims to explore critical factors that influence consumer attitude, perceptions, desire and behaviour toward cosmetic procedures. Findings from the study will help practitioners in the beauty, spa and medical industry to: (1) identify influential factors in consumer decision-making; (2) introduce marketing initiatives designed to attract clients; and (3) evaluate the effectiveness of these marketing initiatives through repeat client engagement.

Attached is a survey which should take approximately 15 minutes to complete. You are under no obligation to participate in the survey and your participation is strictly voluntary. Should you wish to exit from the survey at any time, you are not required to provide an explanation and have the right to withdraw without penalty and prejudice. If you do choose to participate, your responses to the survey will remain completely confidential and your anonymity is assured.

Curtin University Human Research Ethics Committee (HREC) has approved this study (HRE2017-0209). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or should you wish to make a confidential complaint, you may contact the Ethics Officer on +61 08 9266 9223 or the Manager, Research Integrity on 61 8 9266 7093 or email hrec@curtin.edu.au.

It would be much appreciated if you could participate in the survey. Thank you for your kind participation.

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School of Marketing, Curtin University

Consent

I have received information regarding this research and have had an opportunity to ask questions. I believe I understand the purpose, extent and possible risks of my involvement in this project and I voluntarily consent to take part.			
[1]	Yes	[2]	No

I have had a liposuction before:			
[1]	Yes	[2]	No (Please exit the survey)

How strong a goal is it for you to have a liposuction?					
	<i>Not a goal at all for me</i>	<i>Somewhat a goal for me</i>	<i>A moderate goal for me</i>	<i>A strong goal for me</i>	<i>A very strong goal for me</i>
	1	2	3	4	5

Section A

The following statements relate to your **past experience** with having a liposuction. Please answer all questions by circling the response that most closely represents your experience.

A1	I have had a liposuction:				
	<i>Once</i>	<i>Twice</i>	<i>3 times</i>	<i>4 times</i>	<i>Over 5 times</i>
	1	2	3	4	5

A2	The last time I had a liposuction was:				
	<i>6-11 months ago</i>	<i>1 year ago</i>	<i>2 years ago</i>	<i>3 years ago</i>	<i>Over 4 years ago</i>
	1	2	3	4	5

A3	I engage in a liposuction every:				
	<i>6-11 months</i>	<i>Every year</i>	<i>Every 2 years</i>	<i>Every 3 years</i>	<i>Every 4 years or over</i>
	1	2	3	4	5

Think about the **FIRST TIME** you had a liposuction. The following statements relate to your **attitude** and **perceptions BEFORE** having your **FIRST** Liposuction. For each of the following statements, please circle the response that most closely represents your views.

B1	BEFORE I had my FIRST liposuction, I thought that doing it would be:						
1	Bad						Good
	1	2	3	4	5	6	7
2	Unpleasant						Pleasant
	1	2	3	4	5	6	7
3	Negative						Positive
	1	2	3	4	5	6	7
4	Unsatisfying						Satisfying
	1	2	3	4	5	6	7

B2	BEFORE I had my FIRST liposuction, most people important to me:	Strongly Disagree				Strongly Agree		
1	Supported my decision to get the procedure	1	2	3	4	5	6	7
2	Understood why I had to have the procedure	1	2	3	4	5	6	7
3	Agreed with me about getting the procedure	1	2	3	4	5	6	7
4	Recommended that I have the procedure	1	2	3	4	5	6	7

B3	BEFORE I had my FIRST liposuction, I was convinced that:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Whether or not I did the procedure was completely up to me	1	2	3	4	5	6	7
2	I was capable of getting the procedure	1	2	3	4	5	6	7
3	I had enough money to do the procedure	1	2	3	4	5	6	7
4	I had enough time to get the procedure	1	2	3	4	5	6	7
5	I had enough opportunities to have the procedure	1	2	3	4	5	6	7

B4	BEFORE I had my FIRST liposuction, I thought about the financial risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The expenses incurred would not be a wise investment	1	2	3	4	5	6	7
2	I was not sure whether I would get my money's worth	1	2	3	4	5	6	7
3	Having the cosmetic procedure would involve financial loss for me	1	2	3	4	5	6	7
4	There were better ways of spending my money than getting the procedure	1	2	3	4	5	6	7

B5	BEFORE I had my FIRST liposuction, I thought about the performance risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure would not provide the benefits that I expected	1	2	3	4	5	6	7
2	The procedure would not really 'perform' the way it was supposed to	1	2	3	4	5	6	7
3	The procedure could not be relied upon to give me a good outcome	1	2	3	4	5	6	7
4	The procedure would not live up to expectation	1	2	3	4	5	6	7

B6	BEFORE I had my FIRST liposuction, I thought about the psychological risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	It gave me an unwanted feeling of anxiety	1	2	3	4	5	6	7
2	I felt uneasy when thinking about doing the procedure	1	2	3	4	5	6	7
3	The thought getting the procedure caused me to experience some tension	1	2	3	4	5	6	7
4	I was not sure if having the procedure reflected my style	1	2	3	4	5	6	7

B7	BEFORE I had my FIRST liposuction, I thought about the physical risk :	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure would not be safe for me	1	2	3	4	5	6	7
2	The procedure would damage my health	1	2	3	4	5	6	7
3	The procedure would adversely affect my appearance	1	2	3	4	5	6	7
4	The procedure could cause me some physical harm	1	2	3	4	5	6	7

Section C – AFTER your FIRST liposuction

Once again, think about the **FIRST TIME** you had a liposuction. This time, the following statements relate to your **attitude** and **perceptions AFTER** having your **FIRST** liposuction. For each of the following statements, please circle the response that most closely represents your views.

C1	AFTER I had my FIRST liposuction, I thought that it was:						
1	Bad						Good
	1	2	3	4	5	6	7
2	Unpleasant						Pleasant
	1	2	3	4	5	6	7
3	Negative						Positive
	1	2	3	4	5	6	7
4	Unsatisfying						Satisfying
	1	2	3	4	5	6	7

C2	AFTER I had my FIRST liposuction, most people important to me:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Supported my decision to get the procedure	1	2	3	4	5	6	7
2	Understood why I had to have the procedure	1	2	3	4	5	6	7
3	Agreed with me about getting the procedure	1	2	3	4	5	6	7
4	Endorsed their recommendation that I have the procedure	1	2	3	4	5	6	7

C3	AFTER I had my FIRST liposuction, I was convinced that:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Doing the procedure was completely up to me	1	2	3	4	5	6	7
2	I was capable of getting the procedure	1	2	3	4	5	6	7
3	I had enough money to do the procedure	1	2	3	4	5	6	7
4	I had enough time to get the procedure	1	2	3	4	5	6	7
5	I had enough opportunities to have the procedure	1	2	3	4	5	6	7

C4	AFTER I had my FIRST liposuction, I thought about the financial risk:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The expenses incurred were not a wise investment	1	2	3	4	5	6	7
2	I was not sure whether I got my money's worth	1	2	3	4	5	6	7
3	The procedure involved financial loss for me	1	2	3	4	5	6	7
4	There were better ways of spending my money than getting the procedure	1	2	3	4	5	6	7

C5	AFTER I had my FIRST liposuction, I thought about the performance risk:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure did not provide the benefits that I expected	1	2	3	4	5	6	7
2	The procedure did not really 'perform' the way it was supposed to	1	2	3	4	5	6	7
3	The procedure could not be relied upon to give me a good outcome	1	2	3	4	5	6	7
4	The procedure did not live up to expectation	1	2	3	4	5	6	7

C6	AFTER I had my FIRST liposuction, I thought about the psychological risk:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	It gave me an unwanted feeling of anxiety	1	2	3	4	5	6	7
2	I felt uneasy when thinking about what I had done	1	2	3	4	5	6	7
3	I experienced some tension	1	2	3	4	5	6	7
4	I was not sure if having the procedure reflected my style	1	2	3	4	5	6	7

C7	AFTER I had my FIRST liposuction, I thought about the physical risk:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	The procedure was not safe for me	1	2	3	4	5	6	7
2	The procedure damaged my health	1	2	3	4	5	6	7
3	The procedure adversely affected my appearance	1	2	3	4	5	6	7
4	The procedure caused me some physical harm	1	2	3	4	5	6	7

Section D – BEFORE and AFTER your FIRST liposuction

The following statements relate to your **positive emotions BEFORE** and **AFTER** having your **FIRST** liposuction. For each of the following statements, please circle the response that most closely represents your views.

D	When considering if I did succeed with my goal in getting my FIRST liposuction, I felt:
----------	---

D1a	Satisfied BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D1b	Satisfied AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D2a	Pleased BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D2b	Pleased AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D3a	Delighted BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D3b	Delighted AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D4a	Hopeful BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D4b	Hopeful AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D5a	Gratified BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D5b	Gratified AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D6a	Happy BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D6b	Happy AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D7a	Excited BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D7b	Excited AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

D8a	Self-assured BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
D8b	Self-assured AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

Section E – BEFORE and AFTER your FIRST liposuction

The following statements relate to your **negative emotions** **BEFORE** and **AFTER** having your **FIRST** liposuction. For each of the following statements, please circle the response that most closely represents your views.

E	When considering if I did not succeed with my goal in getting my FIRST liposuction, I felt:
----------	---

E1a	Depressed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E1b	Depressed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E2a	Frustrated BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E2b	Frustrated AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E3a	Regretful BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E3b	Regretful AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E4a	Sad BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E4b	Sad AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E5a	Unsatisfied BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E5b	Unsatisfied AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E6a	Disappointed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E6b	Disappointed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E7a	Embarrassed BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E7b	Embarrassed AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E8a	Anxious BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E8b	Anxious AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

E9a	Self-critical BEFORE getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7
E9b	Self-critical AFTER getting the procedure						
	<i>Strongly Disagree</i>			<i>Strongly Agree</i>			
	1	2	3	4	5	6	7

Section F – Your NEXT liposuction

Now, think about having your **NEXT** liposuction. The following statements relate to your **emotions, desire and intention** to have your **NEXT** liposuction. For each of the following statements, please circle the response that most closely represents your views.

F1	If I succeed with my goal in having my NEXT liposuction in the next year, I will feel:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
		1	2	3	4	5	6	7
1	Satisfied	1	2	3	4	5	6	7
2	Pleased	1	2	3	4	5	6	7
3	Delighted	1	2	3	4	5	6	7
4	Hopeful	1	2	3	4	5	6	7
5	Gratified	1	2	3	4	5	6	7
6	Happy	1	2	3	4	5	6	7
7	Excited	1	2	3	4	5	6	7
8	Self-assured	1	2	3	4	5	6	7

F2	If I do not succeed with my goal in having my NEXT liposuction in the next year, I will feel:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	Depressed	1	2	3	4	5	6	7
2	Frustrated	1	2	3	4	5	6	7
3	Regretful	1	2	3	4	5	6	7
4	Sad	1	2	3	4	5	6	7
5	Unsatisfied	1	2	3	4	5	6	7
6	Disappointed	1	2	3	4	5	6	7
7	Embarrassed	1	2	3	4	5	6	7
8	Anxious	1	2	3	4	5	6	7
9	Self-critical	1	2	3	4	5	6	7

F3	In the next year:	<i>Weak</i>				<i>Strong</i>		
1	My desire to have my next liposuction is	1	2	3	4	5	6	7
2	My aspirations for getting my next liposuction can be expressed as	1	2	3	4	5	6	7
3	The intensity of my desire to have my next liposuction can be described as	1	2	3	4	5	6	7
4	The intensity of my hope for getting my next liposuction is	1	2	3	4	5	6	7
5	Having my next liposuction is something I dream about doing	1	2	3	4	5	6	7

F5	Within the next year:	<i>Strongly Disagree</i>				<i>Strongly Agree</i>		
1	I plan to do my next liposuction	1	2	3	4	5	6	7
2	I will make an effort to get my next liposuction	1	2	3	4	5	6	7
3	I intend to have my next liposuction	1	2	3	4	5	6	7
4	I will invest time and money to get another liposuction	1	2	3	4	5	6	7

Section G

The following section contains DEMOGRAPHIC questions that are used to help classify information.

G1	What is your gender?					
	[1]	Female	[2]	Male	[3]	Other (<i>Please specify</i>) _____

G2	What is your age group?					
	[1]	Under 20 years	[2]	21 – 34 years	[3]	35 – 44 years
	[4]	45 – 54 years	[5]	55 – 64 years	[6]	65 years and above

G3	What is your marital status?							
	[1]	Single	[2]	In a relationship	[3]	De Facto	[4]	Married

G4	What country do you reside in?
	Please specify _____

G5 What is your field of occupation?						
	[1]	Manager		[2]	Professional (IT/Medical/Law/ Banking/ Finance)	[3] Skilled Agricultural, Forestry and Fishery Workers
	[4]	Civil Service		[5]	Sales Worker	[6] Retired
	[7]	Business Owner		[8]	Other (<i>Please specify</i>) _____	

G6 What is your working status?								
	[1]	Full time		[2]	Part time	[3] Casual	[4]	Not working

G7 What is the level of your post-secondary school qualifications?							
	[1]	Certificate		[2]	Bachelor Degree	[3]	Advanced Diploma or Diploma
	[4]	Graduate Diploma or Graduate Certificate		[5]	Postgraduate Degree	[6]	Other (Please specify)-

G8 What is your personal annual income?											
	[1]	Under Rs. 2,50,000		[2]	Rs. 2,50,001 – Rs. 5,00,000		[3]	Rs. 5,00,001 – Rs. 10,00,000		[4]	Over Rs. 10,00,001

THANK YOU for taking the time to complete the survey ☺

Appendix H



Curtin University

Office of Research and Development

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19-Apr-2017

Name: Vanessa Quintal
Department/School: School of Marketing
Email: Vanessa.Quintal@cbs.curtin.edu.au

Dear Vanessa Quintal

RE: Ethics approval

Approval number: HRE2017-0209

Thank you for submitting your application to the Human Research Ethics Office for the project **Consumer Engagement with Cosmetic Procedures**.

Your application was reviewed through the Curtin University low risk ethics review process.

The review outcome is: **Approved**.

Your proposal meets the requirements described in National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research (2007)*.

Approval is granted for a period of one year from **19-Apr-2017** to **18-Apr-2018**. Continuation of approval will be granted on an annual basis following submission of an annual report.

Personnel authorised to work on this project:

Name	Role
Quintal, Vanessa	CI
Sood, Abhinav	Co-Inv

Standard conditions of approval

1. Research must be conducted according to the approved proposal
2. Report in a timely manner anything that might warrant review of ethical approval of the project including:
 - proposed changes to the approved proposal or conduct of the study
 - unanticipated problems that might affect continued ethical acceptability of the project
 - major deviations from the approved proposal and/or regulatory guidelines
 - serious adverse events
3. Amendments to the proposal must be approved by the Human Research Ethics Office before they are implemented (except where an

- amendment is undertaken to eliminate an immediate risk to participants)
4. An annual progress report must be submitted to the Human Research Ethics Office on or before the anniversary of approval and a completion report submitted on completion of the project
 5. Personnel working on this project must be adequately qualified by education, training and experience for their role, or supervised
 6. Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, that bears on this project
 7. Changes to personnel working on this project must be reported to the Human Research Ethics Office
 8. Data and primary materials must be retained and stored in accordance with the [Western Australian University Sector Disposal Authority \(WAUSDA\)](#) and the [Curtin University Research Data and Primary Materials policy](#)
 9. Where practicable, results of the research should be made available to the research participants in a timely and clear manner
 10. Unless prohibited by contractual obligations, results of the research should be disseminated in a manner that will allow public scrutiny; the Human Research Ethics Office must be informed of any constraints on publication
 11. Ethics approval is dependent upon ongoing compliance of the research with the [Australian Code for the Responsible Conduct of Research](#), the [National Statement on Ethical Conduct in Human Research](#), applicable legal requirements, and with Curtin University policies, procedures and governance requirements
 12. The Human Research Ethics Office may conduct audits on a portion of approved projects.

Special Conditions of Approval

None.

This letter constitutes ethical approval only. This project may not proceed until you have met all of the Curtin University research governance requirements.

Should you have any queries regarding consideration of your project, please contact the Ethics Support Officer for your faculty or the Ethics Office at hrec@curtin.edu.au or on 9266 2784.

Yours sincerely



Dr Catherine Gangell
Manager, Research Integrity