Perspective taking as a mechanism through which social comparisons relate to body dissatisfaction

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Perspective Taking as a Mechanism through which Social Comparisons Relate to Body Dissatisfaction

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Abstract

Body dissatisfaction has been linked with a range of adverse outcomes including depression, low self-esteem and eating pathology. While current research has identified many factors that are associated with the development and maintenance of body dissatisfaction, the inability of some prevention and intervention programs to meet their goals suggests that a number of other contributing factors are yet to be identified. The current thesis argues that social perspective taking, and specifically third person perspective taking, represents a cognitive-developmental mechanism that is implicated in the development of body dissatisfaction. Further, it proposes that social perspective taking acts as a mechanism through which social comparisons relate to body dissatisfaction. Using a series of interview and questionnaire measures, these relationships were examined in a sample of 102 students aged between 8 and 14 years. Overall, the findings did not support the proposed hypotheses, with social perspective taking failing to share a significant relationship with body dissatisfaction or social comparisons. In contrast, a significant relationship was found between social comparisons and body dissatisfaction, whereby higher rates of social comparisons related to body dissatisfaction. These findings suggest that social perspective taking does not represent a key cognitive-developmental mechanism in the development of body dissatisfaction. These findings are discussed along with future research and study limitations.

Introduction and Overview

Body dissatisfaction (i.e. a critical view of one's own physical appearance) has been of great interest to researchers for many years, with a common focus on the negative effects this can have during the adolescent years, particularly for females (e.g., Botta, 1999; Durkin & Paxton, 2002; Durkin, Paxton & Sorbello, 2007; Paxton, Eisenberg & Neumark-Sztainer, 2006; Pon, Miralini, Mohd Nasir, 2004; Shroff & Thompson, 2006; Stice, Spangler & Agras, 2001; Stice & Whitenton, 2002). In fact, there has been a considerable increase in body dissatisfaction research over the last two decades with publications on the subject almost doubling in this time (Cash & Smolak, 2011). Research indicates that current prevalence rates of body dissatisfaction are high among adolescents, both male and female, and that such body dissatisfaction has been associated with a number of negative outcomes for psychological health and social wellbeing (Halliwell & Harvey, 2006; Ricciardelli & McCabe, 2004; Stice & Whitenton, 2002). This has promoted research that aims to identify possible contributors to the aetiology of body dissatisfaction in the hope of informing effective intervention and prevention programs (Clark & Tiggemann, 2008; Stice & Whitenton, 2002; Thompson & Stice, 2001).

While much of the earlier available research focused on the development of body dissatisfaction during adolescence, more recent findings indicate that body dissatisfaction also presents at a much younger age. As such, there is now an increased focus on determining the potential contributors to the development of body dissatisfaction in children (Blowers, Loxton, Grady-Flesser, Occhipinti & Dawe, 2003; Clark & Tiggemann, 2008; Dohnt & Tiggemann, 2006; Ricciardelli & McCabe, 2001b). In addition, the substantial increase in male body image issues seen over the last two decades, as well as the increase in ideal male body representations in the media, has led to a growth in research on body image concerns and outcomes among male populations

across different age groups (Baird & Grieve, 2006; Halliwell & Harvey, 2006; Hargreaves & Tiggemann, 2009; Lawler & Nixon, 2011; Presnell, Bearman & Stice, 2003; Ricciardelli & McCabe, 2001a; Ricciardelli, McCabe & Banfield, 2000; Ricciardelli, McCabe, Mussap & Holt, 2009; Slater & Tiggemann, 2010; Stanford & McCabe, 2002). For example, the findings from a longitudinal study by Mellor, Fuller-Tyszkiewicz, McCabe & Ricciardelli (2010a) looking at body dissatisfaction and self-esteem across age and gender, indicated that while a high percentage of adult women experience body dissatisfaction (48.8%), so too do a large portion of adult males (35.3%).

While sociocultural influences and engagement in social comparisons have been consistently identified as precursors to body dissatisfaction across gender and age group, the mechanisms which facilitate these two processes are yet to be fully determined (Dittmar & Howard, 2004; Jones, 2004; Lawler & Nixon, 2011; Leahey, Crowther & Mickelson, 2007; Myers & Crowther, 2009). Common factors that are implicated in these relationships and the development and internalisation of body image dissatisfaction include the influences of peers, parents and the media – also known as the tripatriate model (Hutchinson & Rapee, 2007; Jones & Crawford, 2006; Jones, Vigfusdottir & Lee, 2004; Keery, van de Berg & Thompson, 2004; Lawler & Nixon, 2011; McCabe & Ricciardelli, 2001b; McCabe, Ricciardelli & Ridge, 2006; Presnell et al., 2003; Ricciardelli et al., 2000; Shroff & Thompson, 2006). Furthermore, engagement in social comparisons and internalisation of sociocultural messages are not consistently seen in children prior to the age of eight, suggesting that the development of social cognitive functioning during preadolescence may be involved in facilitating these processes (Gardner, Sorter & Friedman, 1997; Martin & Kennedy, 1993; Thelen, Powell, Lawrence & Kuhnert, 1992).

A specific social cognitive development that advances substantially during preadolescence (i.e. between the ages of 10 and 13 years) is social perspective-taking, which denotes the ability to consider another's thoughts, feelings and points of view (Selman, 1971a). A number of studies have considered the way in which others' opinions, or perceived opinions, influence an individual's view of their own body; however, the specific construct of perspective taking has not been considered in such research. Nevertheless, findings from available research indicate that if one perceives that others may view one's physical appearance in a negative manner, this can subsequently increase one's own body dissatisfaction (Jones & Crawford, 2006; Lawler & Nixon, 2011; Levine, Smolak & Hayden, 1994; McCabe et al., 2006; Slater & Tiggemann, 2010).

Perceived pressure to be thin represents a common contributor to body dissatisfaction outcomes in both adolescent boys and girls (Halliwell & Harvey, 2006; Presnell et al., 2003; Ricciardelli & McCabe 2001a; Ricciardelli & McCabe, 2004; Stice & Whitenton, 2002; Wertheim, Paxton, Schutz, & Muir, 1997). A study by Ricciardelli and McCabe (2001a), which included a total of 587 boys and 598 girls between the ages of 12 and 15 years, examined the effects of sociocultural influences on body dissatisfaction. The presence and impact of perceived encouragement to lose weight (girls) or gain muscle (boys) from the participants' mother, father, best friends and the media were examined. In both males and females, body dissatisfaction was increased when there was perceived pressure to lose weight or gain muscle from parents, friends and the media. This effect was moderated by self-esteem for boys and independent of self-esteem in girls.

It could be argued that perceiving pressure from others can only occur if the individual first has social perspective taking ability, which allows an individual to consider the views of others and make inferences about their expectations, thoughts and opinions. However, despite perspective taking capacity being alluded to in some of the

literature examining the development of body dissatisfaction, its exact role in this process is yet to be directly investigated or determined (Lindberg, Hyde & McKinley, 2006; Park, DiRaddo & Calogero, 2009).

In order to further our understanding of the constructs discussed above, and their relationships with one another, this thesis will present the argument that social perspective taking represents a key cognitive process in the development and onset of body dissatisfaction in pre-adolescence. Furthermore, the way in which social perspective taking influences the relationship between engagement in social comparisons and body dissatisfaction will also be examined. Based on previous findings, engagement in social comparisons is argued to predict increased rates of body dissatisfaction among children of the same age group for both females and males (Myers & Crowther, 2009; Schutz, Paxton & Wertheim, 2002). More specifically, an individual's level of engagement in social comparisons will be explored in the current thesis, as well as the level at which these comparisons make the person feel better or worse about themselves. A hypothesis will also be proposed regarding the possibility that perspective taking acts as a moderator in the relationship between engagement in social comparisons and body dissatisfaction.

The limited research available linking these constructs together gives rise to the possibility that the negative impact of social comparisons and internalisation of sociocultural messages take full effect only when social perspective taking has been developed in the latter stages of childhood. Therefore, it is proposed in this thesis that the more advanced forms of social perspective taking, which commonly emerge between the ages of 7 and 12 years (Selman, 1980), acts as a facilitator by which negative views of the self can be attributed to others, and therefore create a sense of body dissatisfaction within the individual. If this is the case, ways in which this negative influence can be managed,

can be explored and applied to advance research in the area in an effort to reduce rates of body dissatisfaction among pre-adolescents.

Finally, the differences between each of these constructs across gender will also be explored with the prediction that social comparisons and body dissatisfaction will present in higher rates in females than males. Given the lack of extensive empirical evidence surrounding some of the proposed hypotheses, the literature that is available will be closely examined and evaluated to predict possible outcomes. In the event that arguments cannot be empirically justified, due to a lack of available literature, a research question will be proposed.

The arguments put forth in this thesis will be presented and developed using a comprehensible structure. Given that questions have been raised about exactly what constitutes body dissatisfaction, prevalence rates in the community among both genders, the age at which it presents and factors that contribute to its development will be outlined in Chapter 1. Empirical data and research surrounding these issues will also be reviewed. The aim of reviewing this literature will be to establish answers to the above questions, particularly those surrounding the age of onset of body dissatisfaction and consistent factors that have been found to act as contributors to its development. The review will also act to identify and evaluate inconsistencies or gaps in the literature that may limit the researchers' ability to draw decisive conclusions. For example, the discrepancies in methodology seen in the few available studies exploring body dissatisfaction in pre-adolescence, make it difficult to draw clear-cut conclusions regarding the age at which body dissatisfaction most commonly presents and the contributors to its development.

In Chapter 2, the presentation and age of emergence of social comparisons are considered, including an outline of empirical evidence linking social comparisons and body dissatisfaction. The conclusion drawn here is that social comparisons represent an

important contributing factor to rates of body dissatisfaction at different ages, with middle childhood (i.e. between the ages of 7 and 12 years) representing the common age of emergence for both constructs. Chapters 3 and 4 then explore perspective taking in-depth, arguing that social perspective taking represents a core cognitive feature in the development of body dissatisfaction. More specifically, third person perspective taking abilities are hypothesised to share a relationship with higher rates of body dissatisfaction. An exploratory model including these mechanisms, and proposing the potential moderating effect of perspective taking, is outlined and relevant hypotheses are put forth. In Chapter 4 the study testing these hypotheses is presented, and the findings are discussed in Chapter 5.

Chapter 1: Body Dissatisfaction

Body image is a term that describes an individual's feelings, thoughts and beliefs about their physical appearance. It is formed not only on the basis of a person's view of their own appearance, but also on how they believe others might view them (Cash, 2011). For example, external sociocultural influences such as weight-related comments from friends and family, perceived pressure to be thin, and media portrayals of ideal body shape and size, have all been found to contribute in both positive and negative ways to body image outcomes (McCabe et al., 2006; Presnell et al., 2003; Stice & Whitenton, 2002; Wertheim et al., 1997). Unlike the terms self-esteem, identity and self-confidence, body image does not pertain to general feelings of self-worth but simply to an individual's view of his or her *physical* appearance, with an overall negative view of one's own physical appearance referred to as body dissatisfaction.

Body dissatisfaction has been linked to a number of psychopathological conditions which include, but are not limited to, depression, anxiety, body dysmorphic disorder and eating disorders (Botta, 1999; Harrison, 2000; Harrison & Cantor, 1997; Nezlek, 1999; Stice, 2002; Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Wertheim & Paxton, 2011). In particular, body dissatisfaction represents a strong predictive factor in outcomes of depression and eating pathology, and these relationships have been consistently demonstrated in adolescent populations (Stice, 2002). While a number of studies have not found a significant link between body dissatisfaction and eating disorder symptoms (Gardner, Stark, Friedman, & Jackson, 1999; Keel, Fulkerson, & Leon, 1997; Vohs, et al., 2001), the majority of studies indicate that body dissatisfaction contributes to both the onset and maintenance of eating disorder symptoms (Cooley & Toray, 2001; Field, Camargo, Taylor, Berkey & Colditz, 1999; Graber, Brooks-Gunn, Paikoff, & Warren,

1994; Halliwell & Harvey 2006; Killen et al., 1994, 1996; Leon, Fulkerson, Perry, Keel, & Klump, 1999; Stice, 2001; Stice & Agras, 1998; Wertheim, Koerner & Paxton, 2001; Wichstrom, 2000), making it one of the strongest and most consistent factors in eating pathology (Stice, 2002). Similarly, body dissatisfaction has been linked to increased rates of depressive symptoms in the long term, as well as higher rates of concurrent depression (Ohring, Graber, & Brooks-Gunn, 2002; Paxton, Norris, Wertheim, Durkin, & Anderson, 2005).

Body dissatisfaction has been most commonly studied in Western society and among female adolescent populations, with at least a quarter of this demographic reporting dissatisfaction with their body (Stice & Whitenton, 2002). However, a large body of research is developing examining body dissatisfaction among adolescent boys, with rates believed to be on the rise for this gender (Jones et al., 2004; Ricciardelli et al., 2009). Furthermore, the previously held notion that body dissatisfaction most commonly *develops* during adolescence is being challenged by findings consistently indicating the presence of body dissatisfaction in middle childhood. As such, this chapter offers an examination of the developmental trajectory of body dissatisfaction, noting relevant age and gender comparisons, as well as contributing factors in its development, and cultural considerations.

Demographic Characteristics and Gender in the Developmental Trajectory of Body Dissatisfaction

Adulthood.

Due to the consistently high rates of body dissatisfaction experienced by adult women over the past 30 years it has long been considered normative for women to experience concerns relating to their bodies (Lindberg et al., 2006). A study conducted by Tiggemann and Pennington (1990) found that the majority (56%) of adult women

experienced body dissatisfaction, as expressed by rating their ideal figure as significantly smaller than their current figure. Conversely, only 27% of men in the same study had an ideal figure smaller than their current figure. However, while this was interpreted by the researchers as higher rates of body dissatisfaction for women than men, it should be noted that a large number of men had an ideal figure larger than their current figure. In fact, 33% of men had ideal figures larger than their actual current figure while only 6% of women had the same. Therefore, 62% of women in the study experienced a discrepancy between the ideal and current figure, compared to a fairly similar 60% for men. As outlined in the Introduction section, more recent studies have also highlighted the high rates of body dissatisfaction in adult populations, with a study of Australian adults between the ages of 20 and 86 years indicating that roughly a third of men (35.3%) and half of women (48.8.%) experience dissatisfaction with their body (Mellor et al., 2010a). However, Mellor et al. found that although rates of body dissatisfaction were higher in women, men placed more importance on their appearance than women.

Women have also been found to demonstrate a strong concern with weight and physical appearance well into their senior years (Pliner, Chaiken, & Fleet, 1990). Using a sample of 322 women aged between 20 and 84 years old, Tiggemann and Lynch (2001) found that body dissatisfaction was present at similar levels across all different age groups, indicating stability across generations. This is despite women generally moving further away from the body image ideal as they get older, a fact which would justify one in thinking that body dissatisfaction would be more likely to *increase* with age. However, the importance placed on physical appearance generally decreased with age in that appearance anxiety decreased in a linear fashion across each age group. Those in the 20 to 29 age group showed the highest levels of appearance anxiety with gradual decreases with each age group thereafter. A similar pattern was seen with self-objectification, whereby

levels were highest for those aged 20-39 years of age, at a medium level for those aged 40 to 69 years of age, and then significantly lower for those aged 70 to 85 years. However, given the cross sectional nature of the study, these results may be reflective of the reduced media influence and different body image ideals of the past, rather than a true reduction in the importance placed on appearance. Despite this, the actual presence of body dissatisfaction across generations was evident, substantiating the need for programs that moderate its negative effects early in life (Wertheim & Paxton, 2011).

Adolescence.

For many years body dissatisfaction has been reported to be highly prevalent among adolescent girls, with many expressing dissatisfaction with their weight and shape (Neumark- Sztainer et al., 2002; Presnell et al., 2003; Stice & Whitenton, 2002; Tiggemann & Pennington, 1990; Wertheim & Paxton, 2011). Rates of body dissatisfaction, and thus unhealthy weight change behaviours, have also been increasing rapidly in male populations over the last few decades with males being more likely to adopt strategies to increase weight and muscle (McCabe & Ricciardelli, 2001b; Ricciardelli et al., 2009). Past studies indicate that the proportion of adolescents experiencing body dissatisfaction is commonly between 24% to 46% for girls and 12 to 26% for boys (Neumark- Sztainer et al., 2002; Presnell et al., 2003; Stice & Whitenton, 2002). However, a study by Ricciardelli and McCabe (2001a) indicated even higher rates, with a very small number of boys and girls reporting being their desired size (16.6% and 12% respectively). A cross-sectional study by Al Sabbah et al. (2009) assessed rates of body weight dissatisfaction in adolescents (aged 11, 13 and 15 years) across 24 countries. The findings from the study indicated that females were more likely to report body weight dissatisfaction than males, with rates for boys between 14.1% and 39.9% and rates for

girls between 34.1% and 61.8%. However, the study only assessed the desire to lose weight, which is only one aspect of body dissatisfaction, and does not account for dissatisfaction with muscles for example, which is more prevalent among males.

Body dissatisfaction in adolescence has also been linked to concerning weight change behaviours, with previous studies indicating that between 38% and 50% of girls utilise dieting and other extreme methods to lose weight (Krowchuck, Kreiter, Woods, Sinal, & DuRant, 1998; Neumark-Sztainer, Story, Falkner, Beuhring & Resnick, 1999; Neumark-Sztainer & Hannan, 2000; Ross & Ivis, 1999; Serdula, Collins, Williamson, Anda, Pamuk, & Byers, 1993; Whitaker et al., 1989). In addition, previous estimates indicate that between 12% and 26% of adolescent males also engage in dieting or other methods to lose weight (Drewnowski, Kurth & Krahn, 1995; Krowchuck et al., 1998; Neumark-Sztainer et al., 1999; Neumark-Sztainer & Hannan, 2000; Ross & Ivis, 1999; Serdula et al., 1993; Whitaker et al., 1989), while up to one third have expressed a desire to be thinner, with another third expressing a desire for increased muscularity (Cafri, Strauss, & Thompson, 2002; Furnham & Caiman, 1998; Ricciardelli & McCabe, 2003).

In a similar vein, Neumark-Sztainer et al. (2002) conducted a study investigating eating patterns and weight concerns among adolescent boys and girls and found that 12.4% of girls and 4.6% of boys adopt extreme strategies in attempts to lose weight. These strategies included fasting, vomiting, diet pills, or laxative abuse in efforts to reach an ideal weight. In another study examining only adolescent boys, 12.4% reported using, or having considered using, steroids or food supplements to increase muscle (Ricciardelli & McCabe, 2003). The above findings highlight not only the high prevalence of body dissatisfaction in adolescent populations, but also the associated weight change behaviours. Furthermore, although rates of body dissatisfaction and weight change

behaviours are consistently higher among females, body image concerns are prominent in both genders during adolescence.

Childhood.

Recent research indicates that high rates of body dissatisfaction are presenting in child populations, and, similar to the age groups discussed above, often across both genders (Neumark- Sztainer et al., 2002; Presnell et al., 2003; Ricciardelli & McCabe 2001a; Stice & Whitenton, 2002; Truby & Paxton, 2002). While this is not a new phenomenon, the age at which body dissatisfaction is developing appears to be earlier than once believed (Clark & Tiggemann, 2008; Tiggemann & Wilson-Barrett, 1998; Truby & Paxton, 2002). Flannery-Schroeder and Chrisler (1996) suggest that children develop an understanding of thin as good and fat as bad well before adolescence. Research also indicates that children rate other children between the ages of 7 and 11 years who are perceived as being obese as having fewer positive relationships and more issues at school (Tiggemann & Wilson-Barrett, 1998). Hence, children associate being overweight with a number of other negative outcomes beyond surface appearance.

Truby and Paxton (2002) used a pictorial scale to interview a sample of 312 children aged between 7 and 12 years. The scale required participants to indicate their perceptions of their actual body size and their satisfaction with this body size. It was found that 42% of girls and 31% of boys expressed a desire to be thinner, and 11% of girls and 15% of boys expressed a desire to be fatter. Moreover, 55% of girls and 45% of boys in this study who expressed a desire to be thinner, also expressed a desire to have a BMI that was below what is considered a healthy and achievable weight for children of their age. In a longitudinal study of 150 girls aged 9-12 years, Clark and Tiggemann (2008) found that 49% reported body dissatisfaction during the initial assessment and this increased to 55%

one year later. Furthermore, the risk factors for body dissatisfaction for girls in this age group, including BMI and internalisation of appearance ideals, were similar to those for adolescents and adults.

Interestingly, an examination of research indicates that the gender differences in rates of body dissatisfaction commonly seen in adult and adolescent samples, are not often present in children prior to the age of 8 years old. This may indicate that body image concerns emerge after this age, around 8-10 years old (Gardner et al., 1997; Thelen et al., 1992), after which period body image concerns and dissatisfaction are found to increase (Gardner et al., 1997; Rolland, Farnhill & Griffiths, 1997; Thelen et al., 1992). More specifically, Thelen et al. (1992) conducted a study of eating and body image concerns among 191 primary school participants. The results indicated that fourth and sixth grade girls showed a significantly higher desire for thinness than the second grade girls, however the difference between the fourth and sixth grade girls was not significant. This desire for thinness was also significantly higher than that seen in their male counterparts, who showed little variation in desire for thinness across grade level. However, this is not unusual given that body dissatisfaction in males is often associated with a desire for increased weight and muscle as opposed to thinness (Frederick et al., 2005; Labre, 2002; Ricciardelli & McCabe, 2004; Stanford & McCabe, 2002; Tiggemann & Pennington, 1990). Questions pertaining to a desire for increased weight and muscle were not included in the study's questionnaire, which was newly designed for the purposes of the study, and was not validated. These factors may account for the lack of relationship between body dissatisfaction and age for male participants.

A study by Dohnt and Tiggemann (2006) considered the presence of body image concerns and dieting awareness in a sample of 128 girls, aged 5-8 years. The findings indicated that although participants reported having a larger than ideal figure, they did not

report feeling ‘dissatisfied’ with their appearance. Given that body dissatisfaction is often signified by a discrepancy between an individual’s actual and ideal figure, these incongruent findings raise questions about the ability for children in this age group to understand the concept of body dissatisfaction.

Several key findings are evident in the studies described above: (1) the onset of body dissatisfaction can occur well before adolescence for males and females, (2) preadolescence represents a very important time in the development of body image concerns and external messages about body image, (3) examining body dissatisfaction in both genders, including prevalence rates and differing presentations for each gender, is increasingly important, (4) although body dissatisfaction has been examined in children below the age of 8 years old, questions remain about the accuracy of these findings, and (5) while onset often occurs at a young age, body dissatisfaction remains prevalent across generations, increasing the need for effective prevention and intervention programs.

Aetiological Factors in the Development of Body Image Dissatisfaction

The aetiology of body dissatisfaction is multifactorial with a combination of psychological factors, physical characteristics and sociocultural factors recognised as contributors to its development (Cash, 2002; Paxton, et al., 2005; van den Berg, Thompson, Obremski-Brandon, & Coovert, 2002). However, while current research has identified many factors that are associated with body dissatisfaction, the inability of a number of prevention and intervention programs to meet their goals suggests that additional significant factors are yet to be identified (Holt & Ricciardelli, 2008). Furthermore, programs targeted at decreasing rates of body dissatisfaction indicate greater effectiveness in groups over the age of 15 years, than those focusing on younger age groups (Stice, Shaw & Marti, 2007).

The effects of BMI and pubertal timing on levels of body dissatisfaction represent two of the most consistent findings throughout the research literature (Ohring et al., 2002; Paxton et al., 2006; Smolak, 2011). Findings of a study by Paxton et al., (2006) indicated that higher rates of BMI was a significant predictor of body dissatisfaction in adolescent males and females, while earlier pubertal maturation has been linked with body dissatisfaction in adolescent females (Ohring et al., 2002). Moreover, past research indicates the contribution of personality attributes (e.g., perfectionism), engagement in social comparisons, internalisation of sociocultural messages (e.g., thin-ideal internalisation), perceived pressure to be thin, and peers' body image ideals, to higher levels of body dissatisfaction among adolescents (Stice & Whitenton 2002; Wertheim et al., 1997; Wertheim & Paxton 2011). On the other hand, support has been variable for the influence of depression, self-esteem, weight related teasing, negative affect, and parental influences on body dissatisfaction (Paxton et al., 2006; Ricciardelli & McCabe, 2001a). While it is important to acknowledge the various potential contributors to body dissatisfaction, it is beyond the scope of the current thesis to outline and review the literature on all of them adequately. Therefore, the focus of this review will be on the internalisation of sociocultural messages (Chapter 1) and engagement in social comparisons (Chapter 2), as they are most relevant to the currently proposed research.

The influence of sociocultural messages on body image.

The three principal sources of sociocultural messages are represented in the Tripartite Influence Model. The Tripartite Influence Model proposes that the most influential contributors to outcomes of body image disturbances and disordered eating are peers, parents and the media (Keery et al., 2004; Shroff & Thompson, 2006). A 48-item questionnaire was developed by Keery et al. (2004) to examine peer, parent and media

influence on outcomes of body dissatisfaction and eating behaviours. Factor analyses revealed that each of the three factors were well-defined and demonstrated high internal consistency (peer = .89; parent = .88; media = .87). This model is also supported by empirical studies showing that perceived importance of peer and family weight norms have been associated with body dissatisfaction in both boys and girls, although the majority of research on the tripartite model has commonly focused on female samples (Dohnt & Tiggemann, 2006; Lawler & Nixon, 2011; Ricciardelli & McCabe, 2001a).

External sociocultural influences such as weight-related comments from friends and family, perceived pressure to be thin, and media portrayals of ideal body shape and size, have all been found to contribute in both positive and negative ways to body image outcomes (McCabe et al., 2006; Presnell et al., 2003; Stice & Whitenton, 2002; Wertheim et al., 1997). In the previously discussed qualitative analysis of the messages adolescents receive about their bodies, McCabe et al. (2006) found that both males and females received positive and negative messages from parents, friends, siblings and the media. However, both the positive and negative messages received by female participants outweighed those received by males. While this may be indicative of an actual discrepancy, it could also represent the greater attention that females place on their appearance and the appearance-related comments of others. Furthermore, females were found to be more likely to interpret the messages they received in a way other than what was originally intended. For example, comments from friends such as 'I'm so jealous, you're so skinny' were considered to be a way of holding someone's weight against them rather than conveying compliments.

Peers can also influence an individual's own body image concerns through a shared preoccupation with appearance related issues. For example, dieting behaviour, weight and shape ideals, and value on slimness are often shared amongst peer groups and

can result in body dissatisfaction (Ricciardelli & McCabe, 2001a; Wertheim et al., 1997). These behaviours and values are often the focus of appearance-based conversations and teasing, and such interactions affect levels of body dissatisfaction in both adolescent girls and boys (Jones et al, 2004; Presnell et al., 2003). Furthermore, these effects have even been demonstrated after psychological variables, family variables and BMI have been taken into account (Paxton, Schutz, Wertheim, & Muir, 1999).

However, when considered, family variables are also found to play an influential role in the development of body dissatisfaction and body change strategies. As discussed in the Introduction section of this thesis, Ricciardelli and McCabe (2001a) conducted a study of 587 boys and 598 girls aged between 12 and 15 years of age exploring sociocultural influences on body dissatisfaction. A more detailed examination of their findings indicates that perceived pressure to lose weight from mother was the most influential predictor of weight loss strategies and body dissatisfaction in both genders. Conversely, perceived pressure from fathers to lose weight only predicted body dissatisfaction in boys and did not predict weight change behaviours in either gender.

Finally, exposure to and internalisation of media images have also been consistently associated with increases in body dissatisfaction (Dittmar & Howard, 2004; Dohnt & Tiggemann, 2006; Groesz, Levine, & Murnen, 2009; Wertheim et al., 1997). In particular, it is the media's portrayal of unrealistically thin bodies as being attractive and ideal (the thin-ideal) that has been identified as one of the most influential contributors to body image issues among women (Dittmar & Howard, 2004; Groesz et al., 2002; Wertheim et al., 1997), while the muscular-ideal contributes to rates of body dissatisfaction among men (Engeln-Maddox, 2005; Hargreaves & Tiggemann, 2009; McCabe & Ricciardelli, 2001b).

Media beauty ideals and cultural considerations.

The effects of media image portrayals are largely determined by two key factors: (1) the extent to which the person internalises the standards of attractiveness set by the media and takes them on as their own and, (2) the adoption of behaviours aimed at achieving those standards (Thompson & Stice, 2001). Previous studies have demonstrated how this 'ideal' body representation is presented in the media, internalised by women and then how this internalisation contributes to body image dissatisfaction (Groesz et al., 2002). A forty year analysis of the models depicted in magazines and pageants in North America found that female models have consistently remained below the normal, healthy weight, despite females in Western society increasing in weight over this time (Spitzer et al., 1999). Furthermore, a meta-analytic review by Groesz et al. found that women's body image was considerably more negative after exposure to media images of thin models, than when exposed to images of average or plus size models. This effect was greater for participants under 19 years of age.

These findings are consistent with the notion that body dissatisfaction is the result of a discrepancy between the person's actual body characteristics and the body characteristics that they desire – which are often a representative of cultural beauty norms (Wertheim & Paxton, 2011). Consequently, with the current beauty norm for females in Western society being one of thinness, and the current average weight and shape being much larger than the beauty norm, vulnerability to body dissatisfaction is increasing (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999; Wertheim, Paxton, & Blaney, 2004). Information from the Australian Bureau of Statistics (ABS) website indicated that the average height (162.1cm) and weight (70.1kgs) for Australian women in 2007-8

resulted in a BMI of 26.7 – which is in the overweight category (ABS, 2012; National Institute of Health, n.d.).

Furthermore, discrepancies have also been identified in male populations, with the size and shape of the average Western man differing from the muscular ideal that is depicted in Western media (Hargreaves & Tiggemann 2009). Australian males who participated in the National Health Survey (ABS, 2012) also recorded an average BMI in the overweight category (BMI =27.5, height = 176cm, weight = 85.2kgs). In addition, the percentage of male and female Australian adults in the obese weight range has increased from 19% in 1995 to 24% in 2007-8 (ABS, 2012). This is in contrast to the media representation of female models and beauty pageant winners who have become progressively thinner over the last five decades, while the media representations of males have become more muscular (Leit, Pope & Gray, 2000; Spitzer, Henderson & Zivian, 1999). However, it should be noted that BMI does not allow for the differentiation between individual levels of body fat or muscle mass, and therefore may overestimate body fat in muscular athletes, or may underestimate body fat in elderly women who have lost muscle mass (National Institute of Health, n.d.).

In addition to adult adoption of beauty ideals, previous findings indicate that media internalisation can occur at a very young age, with girls as young as 6 years adopting the thin ideal (Dohnt & Tiggemann, 2006). Dohnt and Tiggemann found that in a sample of 128 primary school aged girls, 46.7% of those in Year one expressed a desire to be thinner. In almost direct contrast, a large number of the participants in the study also noted that they were always happy (45%) or usually happy (48%) with the way they looked. These findings indicate either that a desire to be thin and body dissatisfaction are not necessarily related, or that the participants were too young to accurately comprehend and

interpret what was being asked of them. This highlights the difficulties presented when a number of different methodologies are used to explore similar constructs.

Despite such discrepancies the majority of the literature indicates that exposure to, acceptance of, and internalization of the thin ideal inevitably increases a female's risk of developing body image concerns across age groups (Cash & Henry, 1995; Goldfein, Walsh & Midlarsky, 2000; Thompson et al., 1999). This is due to the fact that the body ideals portrayed in the media, particularly those in Western culture, are ones that cannot be realistically achieved by the average female, resulting in an actual-ideal body discrepancy (Thompson et al., 1999). Body ideals portrayed in the media do not reflect the different body shapes and sizes seen in the general population, and this only adds to the discrepancy. In a similar vein, the media portrayal of an attractive male body is one that is unrealistically muscular, creating the muscular-ideal (Engeln-Maddox, 2005; Hargreaves & Tiggemann, 2009; McCabe & Ricciardelli, 2001b) and the increased rates of male body dissatisfaction may be due to the increased images of muscularity and prevalence of the male ideal represented in the media (Baird & Grieve, 2006; Frederick, Fessler, & Haselton, 2005), or simply representative of the additional attention now given to the male population in relation to this issue. Furthermore, body ideals portrayed in the media do not account for the different body shapes and sizes seen in the general population, which only adds to the discrepancy.

A study by Pope, Olivardia, Boroweicke, and Cohane (2001), indicates support for the former explanation. Pope et al. (2001) analysed the contents of two popular Western magazines (*Glamour* and *Cosmopolitan*) that had been in publication for the previous 40 years, to examine how the rate and representation and the male and female body ideal had changed in this time. The results indicated that there was no significant relationship

between the year of publication and (1) the total number of male images in advertisements; (2) the total number of female images in advertisements; and (3) the number of images in which women were deemed to be undressed. However, it is worth noting that the sheer number of advertisements in each of these categories were substantially higher in 1998 than in 1958, but in all cases the increases were non-linear across the decades, and the increase in advertisements did not necessarily represent an increase in overall percentage when additional advertisements were considered. For example, 49 images of undressed women in 1958/59 represented 12% of the magazines' advertising, while 101 images of undressed women 1993 represented only 10% of the magazines advertising. In contrast, significant increases were seen in the number of undressed males in advertisements in both *Glamour* and *Cosmopolitan*, indicating support for an increased focus on the male ideal body image in Western media.

In addition to increases in the quantity of images, research indicates that over the past five decades male models have also increased in muscularity, resulting in a greater discrepancy between actual and ideal figures in the general population (Leit et al., 2000; Spitzer et al., 1999). More recently, Hargreaves and Tiggemann (2009) examined the body satisfaction of 104 male university students and found that there was a bigger reduction in body satisfaction after exposure to appearance-focused commercials portraying the muscular-ideal as opposed to commercials showing content that was not appearance related. These findings were similar to those of Baird and Grieve (2006) who utilized a sample of 173 male college students to examine the impact of exposure to male models in advertising and its effect on body satisfaction. Participants were assigned to one of two conditions, either viewing advertisements with male models or advertisement with products only (e.g. cologne), and each had to rate their level of body satisfaction before and after the viewing. The findings indicated that exposure to advertisements that included

images of male models led to a reduction in body satisfaction, whereas exposure to advertisements that showed only products did not affect levels of body satisfaction. However, the effect sizes seen in the above study were quite small and it remains unclear how long this reduction in body satisfaction lasts, as no follow up was conducted.

Indeed, studies have also shown that an increase in body dissatisfaction following exposure to an image of a model epitomizing the thin-ideal is not necessarily long lasting, except in females who are already considered vulnerable. For example, Stice et al. (2001) conducted a longitudinal study examining the effects of long term exposure to the media-portrayed thin-ideal by supplying 219 adolescent female participants with a 15 month fashion magazine subscription. Exposure to magazine images was not found to have long term influences on eating behaviours or body satisfaction in girls who experienced body dissatisfaction, had internalised the thin ideal or felt pressure to be thin prior to the study. However, it is possible that the exposure to images of the media-portrayed thin-ideal simply acted to reinforce existing body image issues, even though it did not amplify them. In contrast, those who had limited social support at the beginning of the study reported higher rates of body dissatisfaction and problem eating behaviours after receiving the magazine subscription. This moderating role of social support had not been investigated in short-term experimental exposure studies.

The impact of media ideals is becoming a particularly salient issue for young people with electronic media readily available to children and teens, with the Australian Bureau of Statistics indicating that 96% of households with children under 15 had internet access in 2012-2013 (ABS, 2014). The Australian Communications and Media Authority (ACMA, 2009) estimates also indicate that in 2007 children between the ages of 8 and 11 years spent an average of 30 minutes on the internet each day, while 12-14 year olds spent an average of one hour and 32 minutes online per day. Furthermore, analysis of website

content that is targeted at teens present images of the beauty ideal that is similar to that in other forms of media (Labre &Walsh-Childers, 2003). In addition, time spent on social networking sites such as Facebook and MySpace has been correlated with a greater internalisation of thin ideals, drive for thinness, weight dissatisfaction, and appearance comparisons (Tiggemann & Miller, 2010; Tiggemann & Slater 2014). Empirical findings also indicate that young girls have an increased level of body dissatisfaction and dieting awareness following exposure to appearance, teen or women's magazines, television – including soap operas and music television – and the internet (Anschutz, Engels, Van Leeuwe & van Strien, 2009; Clark & Tiggemann, 2006, 2007; Sands & Wardle, 2003; Tiggemann & Miller, 2010; Tiggemann & Slater, 2014).

Western beauty ideals are now accessible in most parts of the world through various media outlets, with the female thin ideal and male muscular ideal now present in many other non-western regions (McCabe, Fuller-Tyszkiewicz, Mellor, Ricciardelli, Skouteris & Mussap 2011; Mellor, Ricciardelli, McCabe, Yeow, Daliza & Hapidzal, 2010b; Swami et al., 2010). The International Body Project (Swami et al., 2010) which surveyed 7,434 females across 26 countries and 10 major world regions, found that Western media exposure and high socioeconomic-status were linked to higher rates of body dissatisfaction in both Western and developing countries. Furthermore, the desire for girls who are considered to be within a normal weight range to be thinner is one that is seen across a number of countries and cultures including Latin America (McArthur, Holbert & Pena, 2005), Korea (Kim & Yoon, 2000), Malaysia (Pon et al., 2004) and Taiwan (Wong & Huang, 1999). Findings from such studies indicate that between 40% and 75% of women in the normal weight range desire to lose weight. While fewer studies have been conducted looking at body dissatisfaction in male populations of different cultures, preliminary findings suggest that approximately 40% of Latin American males in

the normal weight category also experience a desire to be thinner (McArthur et al., 2005). This is dissimilar to a number of Western studies which indicate that male body dissatisfaction is often represented as a desire to increase muscle rather than lose weight (Jones, 2004; Jones & Crawford, 2006; Ricciardelli & McCabe, 2004).

The above findings highlight the importance of being culturally sensitive when considering analysis and prevention of body image concerns, as the way in which body dissatisfaction is experienced by the individual and expressed within a culture is impacted by the cultural beauty norms. For example, Mellor et al. (2010b) conducted a study exploring the relationships between BMI, body dissatisfaction, body change behaviours and overall mental health using a sample of 513 Malaysian adolescent participants drawn from three different racial groups – ethnic Malays, Indians and Chinese. Self-report measures were used to collect participant information and the results indicated that for all racial groups, adolescent girls were no more likely to engage in weight loss strategies than adolescent boys. This differs from the pattern seen in Western contexts and may be representative of the fact that on average the BMI of Malaysian women are naturally closer to the cultural beauty norm of thinness, resulting in less body dissatisfaction. For example, the Malaysian Adults Nutrition Survey (MANS; Azmi et al., 2009) collected information from 3,441 women and 6,775 men aged 18-59 years over a nine month period, and found that the average BMI for both genders was within the healthy weight range (24.53 & 24.21 respectively). Interestingly, in the study by Mellor et al. (2010b), weight loss and muscle gain behaviours did differ between the three racial groups with Malay and Indian adolescents engaging in such behaviour more than their Indian counterparts. This again highlights the importance of considering racial and cultural underpinnings in research relating to body image.

While the relationship between the internalisation of media body ideals and body dissatisfaction has been consistently supported by empirical findings, causality is not fully understood due to a lack of longitudinal studies. Nor have all of the possible mediators and moderators involved in this relationship been determined. While cultural beauty norms appear to play a vital role, the fact that few men and women develop body dissatisfaction that leads to clinical concerns, despite almost all being exposed to the media's beauty ideals (Durkin & Paxton, 2002), suggests that there are other mechanisms involved in this process that have not yet been identified and addressed (Blechert, Nickert, Caffier, & Tuschen-Caffier, 2009). These mechanisms may act to increase or decrease an individual's vulnerability to developing body image concerns and, given the common onset of body dissatisfaction around preadolescence, are likely to emerge during this critical period.

One mechanism that has been identified as a mediator in this relationship is engagement in appearance related social comparisons (Blowers et al., 2003; Dittmar & Howard, 2004; Engeln-Maddox, 2005; Hargreaves & Tiggemann, 2009; Jones, 2002) - which have also been identified as a direct contributor to body dissatisfaction (Leahey et al., 2007; Lin & Kulik, 2002; Sohn, 2010). As social comparisons represent a central factor in the proposed study, an outline of the processes involved in social comparisons and empirical evidence linking engagement in social comparisons to outcomes of body dissatisfaction will be covered in more detail in Chapter 2.

Summary of Chapter One

Having outlined and reviewed the theoretical underpinnings and empirical evidence concerning the development and maintenance of body dissatisfaction in the current Chapter, a number of points can be noted. Although commonly acknowledged and researched in the adolescent years, body dissatisfaction can be seen to emerge in middle

childhood (Blowers et al., 2003; Clark & Tiggemann, 2008; Dohnt & Tiggemann, 2006; Truby & Paxton, 2002). For many this continues through adolescence (McCabe & Ricciardelli, 2001b; Neumark- Sztainer et al., 2002; Presnell et al., 2003; Ricciardelli et al., 2009; Stice & Whitenton, 2002; Tiggemann & Pennington, 1990) and research indicates that rates of body dissatisfaction remain surprisingly stable throughout adulthood for both females and males, despite a reduction in the importance placed on appearance (Mellor et al., 2010a; Pliner et al., 1990; Tiggemann & Lynch, 2001). Furthermore, despite the high prevalence rates of body dissatisfaction in both males and females, the physical ideal each is trying to obtain is very different and largely based on media representations of the physical 'ideal'. Many girls and women desire a thinner figure, while many boys and men desire a more muscular figure (Baird & Grieve, 2006; Blowers et al., 2003; Dittmar & Howard, 2004; Hargreaves & Tiggemann, 2009; Labre, 2002; Leit et al., 2000; Ricciardelli & McCabe, 2007; Thompson & Stice, 2001; Wertheim et al., 1997).

Additionally, although the trajectory of body dissatisfaction and gender differences have been identified, many of the contributing factors remain unclear. Support has consistently been demonstrated for the contribution of peers, parents and the media in the development of body dissatisfaction (Hutchinson & Rapee, 2007; Jones & Crawford, 2006; Jones et al., 2004; Keery et al., 2004; Lawler & Nixon, 2011; McCabe & Ricciardelli, 2001b; McCabe et al, 2006; Presnell et al., 2003; Ricciardelli et al., 2000; Shroff & Thompson, 2006), while links between BMI, self-esteem, pubertal development, negative affect and body dissatisfaction have also been demonstrated (Ohring et al., 2002; Paxton et al., 2006; Smolak, 2011). However, attempts to address these issue through prevention programs have not successfully reduced rates of body dissatisfaction,

indicating that there are other factors involved that have not yet been addressed (Holt & Ricciardelli, 2008).

The next Chapter will go on to review the relevant findings needed to substantiate the current research proposal. Empirical findings pertaining to the role of social comparisons and body dissatisfaction will be reviewed in order to provide an understanding of this relationship before evaluating the possible role of perspective taking capacity as a mechanism through which social comparisons may influence body dissatisfaction.

Chapter 2: Social Comparisons

One process that emerges prior to adolescence, and has been regularly linked the internalisation of sociocultural messages and body dissatisfaction, is engagement in social comparisons. More specifically, engagement in social comparisons has been shown to mediate the relationship between exposure to media images and increases in body dissatisfaction (Dittmar & Howard, 2004; Engeln-Maddox, 2005; Hargreaves & Tiggemann, 2009). Consequently, there is extensive literature on body dissatisfaction that examines the influence of social comparisons in its formation (Blowers et al., 2003; Dittmar & Howard, 2004; Engeln-Maddox, 2005; Hargreaves & Tiggemann, 2009; Holt & Ricciardelli, 2002; Jones, 2002; Krayer, Ingledew, & Iphofen, 2007; Leahey et al., 2007; Sohn, 2010; Tiggemann & McGill, 2004).

Social comparison theory, developed by Festinger (1954), describes an evaluation of the self in relation to another. Festinger suggested that people compare themselves to others, most commonly those similar to them, in order to meet the desire individuals possess for self-evaluation (Miller, Turnbull, & McFarland, 1988). These comparisons can occur automatically through exposure to and participation in the social environment, and may lead to feelings of inadequacy or satisfaction depending on the type of social comparison in which the individual engages (Collins, 1996; Morse & Gergen, 1970; Salovey & Rodin, 1984; Tesser, Miller, & Moore, 1988; Wills, 1981; Wood, 1989). Furthermore, social comparison theorists have posited that an individual's feelings of uncertainty about their opinions and abilities, can be a key facilitator of engagement in social comparisons (Gibbons & Buunk, 1999).

A number of other motives have been proposed to account for individuals' engagement in social comparisons. The first two of these motives, proposed by Festinger

(1954) in his original theory were (1) self-evaluation – when an individual assesses their present situation, and (2) self-improvement – when an individual improves their present situation. A third motive was then suggested by Wills (1981), (3) self enhancement – comparing oneself to those less fortunate in an attempt to increase self-esteem. Three more motives were later added by Helgeson and Mickelson (1995), and these included (4) common bond – producing bonds with others, (5) altruism – assisting those who are less fortunate, and (6) self-destruction – verifying one's hopelessness.

The consequences of the social comparison, and its influence on body dissatisfaction, are largely determined by the nature of the motive that drives the comparison, which also influences the direction of that comparison (Wheeler & Miyake, 1992; Wood, Giordano-Beech, Taylor, Michela & Gaus, 1994). The three comparison directions that have been identified in body dissatisfaction research are, (1) upward – comparisons with those who are perceived to be closer to the body ideal than the person making the comparison, (2) downward – comparisons with those who are perceived to be further from the body ideal than the person making the comparison, and (3) lateral – those who are perceived to be similar to the person making the comparison (Martin & Gentry, 1997; Martin & Kennedy, 1993; Taylor & Lobel, 1989).

Upward comparisons are generally engaged in when self-improvement is desired. However, if the desired self-improvement is not achieved, this can threaten the individual's self-worth. Conversely, downward comparisons are adopted in an attempt to preserve self-worth (Wood et al., 1994). Existing research in the area of social comparisons indicates that the two most common appearance-related comparison targets are those from the mass media, which represent an upward comparison (e.g., models, television and movie celebrities) and peers, who can encompass all directions of comparison (Wheeler & Miyake, 1992). However, there are also a number of studies

exploring the effects of social comparisons that do not specify the direction of the comparison (Blowers et al., 2003; Fraser, Sproal & Ricciardelli, 2010; Holt & Ricciardelli 2002), making it difficult to draw conclusions from the results.

Age of Emergence of Social Comparisons

The transitional period from childhood to adolescence, represents a time when individuals increase their socialisation outside the family environment. This is also a period when issues of sexuality, identity and relationships emerge and need to be addressed (Erikson, 1963). In line with this increased awareness of social concerns, preadolescence is also believed to be the stage in which social comparisons first appear, supporting its salience as a key age in the development of body image concerns (Holt, 2005).

More specifically, the ages of 10 and 11 years are believed to be particularly important in the emergence of body dissatisfaction that is related to engagement in social comparisons (Blowers et al., 2003; Holt & Ricciardelli 2002; Fraser et al., 2010). In a study including 153 preadolescent girls aged 10 to 13 years, Blowers et al. reported that social comparisons were associated with body dissatisfaction, and also that social comparisons partially mediated the relationship between internalisation of the thin ideal and body dissatisfaction. However, the target of the social comparisons was not specified, preventing conclusions regarding the impact of the direction of the comparison. In a similar vein, Fraser et al. (2010) explored the influence of social comparisons on body dissatisfaction using a sample of girls aged between 8 and 11 years. The findings indicated that engagement in social comparisons with peers was associated with body image concerns.

However, unlike pre-adolescent samples, the link between body dissatisfaction and social comparisons has not been consistently demonstrated in middle childhood samples. In a study of 238 children, Holt and Ricciardelli (2002) found that boys between the ages of 8 and 10 engaged in more social comparisons with adults, while girls of the same age range engaged in more social comparisons with peers. Furthermore, while social comparisons with adults were associated with a preoccupation with muscles and dieting behaviours for boys and girls, social comparisons were not associated with overall body dissatisfaction for either gender. When considered in combination, the above findings suggest that 10 or 11 years of age may represent a time when engagement in social comparisons becomes associated with body dissatisfaction. However, further studies that focus on preadolescence and middle childhood, and also specify the direction of the social comparisons (e.g., upward, downward, lateral) are needed, as this was a short-coming of all of the above studies.

Gender Differences in Social Comparison

As outlined earlier, social comparison theory (Festinger, 1954) suggests that most individuals will compare themselves to those who they view as similar to them. However, findings that have emerged since the development of the theory indicate that women, more so than men, are likely to engage in a combination of lateral and upward comparisons with media images of women who represent the thin-ideal and/or their relevant peers (Engeln-Maddox, 2005; Strahan, Wilson, Cressman, & Buote, 2006). For example, in a study of 112 undergraduate students, 80 of whom were female, Strahan et al. (2006) found that men made more downward than upward comparisons when describing their appearance, while women made significantly more upward comparisons when describing appearance. The direction of the social comparison was also linked with either positive or negative statements relating to appearance. Males who engaged in more downward comparisons

made more positive comments about their bodies, while females who made upward comparisons made more negative comments about their bodies.

Similar to the adult patterns of social comparison engagement, previous research suggests that male adolescents and children are less likely to engage in social comparisons than female adolescents and children. Furthermore, of those who do, the comparisons are more likely to be downward, leading to either positive or neutral body image outcomes (Holt & Ricciardelli, 2002; Ricciardelli & McCabe, 2007; Ricciardelli et al., 2000). Pre-adolescent males are also more likely than females to engage in social comparisons with adults, a behaviour which has been linked to increases in food preoccupation, dieting, and adoption of strategies to increase muscle, but not body dissatisfaction (Holt & Ricciardelli, 2002).

In summary, these findings may help to explain why body dissatisfaction generally has been found to be more common among adolescent girls than adolescent boys. Firstly, the direction of the social comparison appears to be different for each gender, with females favouring neutral and upward social comparisons. Secondly, in instances when males do engage in social comparisons, the outcome of such an engagement appears to be an increase in body change strategies which may or may not be accompanied by heightened levels of body dissatisfaction (Holt & Ricciardelli, 2002). However, although boys and girls differ in their idea of what represents the ideal body and the frequency with which they engage in social comparisons, it seems that the mechanisms involved in the process are the same for both genders (Ricciardelli & McCabe, 2004). This is evident in findings that among those males and females who do engage in upward social comparisons, some form of body image concerns or body change strategies ensue (Halliwell & Harvey, 2006; Holt & Ricciardelli, 2002; Myers & Crowther, 2009).

Empirical Research and Theory Relating Social Comparisons to Body Image Outcomes

The link between appearance –related social comparisons and body dissatisfaction has been demonstrated extensively in cross-sectional and experimental studies exploring the two concepts (Blechert et al., 2009; Fitzsimmons-Craft, Harney, Koehler, Danzi, Riddell, & Bardone-Cone, 2012; Myers & Crowther, 2009; Ricciardelli et al., 2009). Engagement in social comparisons can also act as a mediator between exposure to body image ideals and body dissatisfaction, with research indicating that when men and women compare themselves to the idealized body images presented in the media, it threatens their self-concept (Richins, 1991; Tiggemann & McGill, 2004). For example, the study by Hargreaves and Tiggemann (2009), discussed earlier, demonstrated an instant shift in body satisfaction by exposing 104 male participants to either television commercials containing men who encompassed the muscular ideal, or those that were nonappearance related (i.e. commercials containing men who did not epitomize the muscular ideal). By assessing participants immediately before viewing the commercial and then 5 minutes after the viewing, it was found that participants exposed to the commercials that depicted the muscular ideal increased engagement in upward social comparisons which was associated with more appearance related concerns. This effect was also moderated by the participants' level of appearance orientation, with men who experienced higher levels of appearance orientation proving more likely to engage in upward social comparisons with models depicting the muscular ideal. However, the study design only allowed for the examination of the short-term effects, meaning the long-term outcomes of exposure to such ideals is unclear.

Similarly, women exposed to media images of the thin-ideal also increase their engagement in social comparisons and, subsequently, body dissatisfaction (Myers &

Crowther, 2009; Groesz et al., 2002). More specifically, research indicates that a consistent link exists between body dissatisfaction and upward social comparisons for females during adolescence and adulthood (Myers & Crowther, 2009; Trampe, Stapel & Siero, 2007). However, the direction of this relationship is not clear as some studies have indicated that social comparisons increase levels of body dissatisfaction (Dittmar & Howard, 2004; Engeln-Maddox, 2005; Lin & Kulik, 2002), while others have highlighted that only women with pre-existing body dissatisfaction were adversely affected by exposure to attractive models (Trampe et al., 2007). In fact, Trampe et al. found that women who already experience body dissatisfaction were also affected by images of non-models.

While many studies effectively demonstrate the consequences of upward comparisons (e.g., utilizing images of thin models), there has been little exploration into the effects of downward or lateral comparisons for females. Furthermore, it has been noted that presenting images of only models in experimental conditions does not represent real life scenarios which would allow participants the opportunity to engage in different types of social comparison. To address this Leahey et al. (2007) utilised a diary-completion procedure to assess naturally occurring social comparisons. The 159 female participants were assigned to one of four groups based on their level of body dissatisfaction (low or high) and whether or not they needed to complete the diary task. Two groups (one low body dissatisfaction and one high body dissatisfaction) were then required to complete the diary task whereby a personal alarm would alert them to make a diary entry outlining any recent social comparisons they had engaged in and how this had made them feel. The other two groups (one low body dissatisfaction and one high body dissatisfaction) did not fill in a diary. Consistent with the findings of controlled studies in which the social comparison target was preselected, Leahey et al. found that women with high levels of

body dissatisfaction naturally engaged in more social comparisons, particularly more upward comparisons, than women with lower body dissatisfaction. Moreover, naturally occurring upward social comparisons increased levels of body dissatisfaction in all the groups of women more so than downward comparisons, regardless of the individual's baseline level of body esteem.

These findings challenge one premise of Festinger's (1954) social comparison theory, which suggests that individuals will not continue to make social comparisons if the outcomes damage their self-esteem. In fact, Leahey et al. found a direct contrasting effect, with body image concerns actually *increasing* the likelihood of engagement in upward comparisons rather than diminishing it. However it should be noted that Fesitnger's original theory was concerned with the opinions and abilities of others, rather than their physical appearance. For this reason, it is perhaps not applicable to physical appearance, and this may explain some of the discrepancies.

The continued engagement in upward comparisons seen in the above study may be largely due to the fact that women experience a great deal of exposure to these images both voluntarily (e.g., purchasing fashion magazines), and involuntarily, through the spontaneous exposure in mainstream media and advertising. Such exposure to media images of the body ideals would have been considerably less common in the 1950's when Festinger's (1954) original theory was developed. This is not to say that the thin-ideal was not present during this time, as research indicates that since the 1950's female pageant winners and Playboy models have consistently been women who are below what is considered the normal weight range (Spitzer et al., 1999). However, exposure to these images has increased as we enter an increasingly digital age (ABS, 2011; Tiggemann & Slater, 2014; Wartella, Richert & Robb, 2010). Research shows that we are exposed to substantially higher levels of ideal-body images today, of both men and women, than we

were 50 years ago, with increased exposure to television, magazines, and the internet (ACMA, 2009; Labre & Walsh-Childers, 2003; Pope et al., 2001; Tiggemann & Slater, 2014). The consequence of this increased exposure to media images is that it enhances the likelihood that women will engage in upward social comparisons which have been consistently associated with body dissatisfaction (Durkin et al., 2007; Hargreaves & Tiggemann, 2009).

However, despite consistency in the findings regarding the influence of social comparisons on body dissatisfaction, prevention programs have still been relatively ineffective in reducing body image concerns (Holt & Ricciardelli, 2008). Furthermore, a large number of people who are exposed to the media's notion of the thin ideal do not engage in social comparison, indicating other factors must be involved in this process (Botta, 1999; Lin & Kulik, 2002; Richins, 1991). In addition, individuals create and understand their own meanings about body image from sources beyond social comparisons and media messages by taking on board their perceptions of the expectations and opinions of others garnered from both verbal and non-verbal communications (Cash, 2011).

For example, Presnell et al. (2003) conducted a study involving 531 adolescent boys and girls and found that perceived pressure to be thin from peers predicted increased levels of body dissatisfaction. Interestingly, perceived pressure to be thin from family, the media or dating partners did not predict increases in body dissatisfaction. This may indicate an accurate perception of the pressure peers place on each other to look a certain way, or it may represent the individual's own preoccupation with weight and shape being attributed to their peers. In either circumstance the individual must have the ability to consider that people have perspectives of their own, which differ from those of the individual, in order to be affected in this way. Furthermore, the participants' results

demonstrate their ability to identify that people have different perspectives, as the messages they perceived differed across the sources examined.

In a similar vein, McCabe and Ricciardelli (2001b) explored the effects of weight related messages from the mothers, fathers, peers and the media on 1266 adolescent males and females. Their findings indicated that weight related messages were greater for females than males, and females were more likely to interpret the messages they received as encouragement to lose weight or tone up than their male counterparts. Interestingly, the tendency to perceive the weight-related messages of others was seen in participants as young as 12 years of age – an age at which third person perspective taking is commonly believed to develop (Selman, 1980).

This suggests that there may be underlying mechanisms that have not been identified or addressed but could be facilitating social comparisons and the internalisation of body ideals, and thus ultimately contributing to body dissatisfaction. A greater understanding of these mechanisms and the time at which they develop is the desired outcome of the study proposed at the conclusion of this review. One such mechanism may be perspective taking, which has been found to reach its final and most complex stages of development, which allow for a third person perspective to be considered (Selman, 1980), at a similar time to both body image concerns and social comparison engagement.

Chapter 3: Perspective Taking

Perspective taking represents an important process in development, whereby an individual becomes aware that each person has a mind of their own, and the thoughts, feelings, goals and points of view of others can be both similar and different from one's own (Martin, 2008). More simply, perspective taking denotes the ability to adopt the viewpoint of another by removing them from the self. It also represents a key element of effective communication as it allows a greater understanding of the other person's mental state, and the way in which their beliefs, thoughts and feelings are coordinated (Selman, 1980). An awareness of one's own thoughts, feelings and location in space is referred to as 'first-person perspective', and an awareness and understanding of the thoughts, feelings and location of another represents the 'third-person perspective' (Selman, 1980). However, vast differences exist, in both the development and conceptualisation of physical third-person perspective (i.e., visual perspective of location) and mental third person perspective (i.e., social perspective taking). These differences will be explored in the current chapter, with an emphasis on social perspective taking, at this represents a more complex form of perspective taking and is the focus of the current study.

The Development of Visual Perspective Taking in Early Childhood

A child's earliest understanding of the perspectives of others is represented in their ability to consider the way in which visual views may differ from person to person based on their differing locations in space. Piaget and Inhelder (1956) explored this idea with their Three Mountains Task, a task in which the child is asked to consider the visual perspective of another (a doll), while viewing a model of a mountain. The results indicated that children as old as 7 years of age found it difficult to consider another's visual perspective of the three dimensional model. However, subsequent research on visual

perspective taking has indicated that children at the ages of 4 and 5 years can perform well on conceptually similar tasks to those of the Three Mountain Task (Flavell, Everett, Croft, & Flavell, 1981; Light & Nix, 1983; Moll & Tomasello, 2006).

Some time after the works of Piaget and Inhelder (1956), Flavell (1974) proposed that two distinct developmental levels of visual perspective taking exist. Level 1 is denoted by the individual's ability to infer what objects another person can/cannot see when cues are provided, while Level 2 demonstrates an awareness that an object that is visible to two people in different locations may result in visually different impressions. Flavell et al. (1981) found that 3 year olds were able to complete Level 1 visual perspective taking tasks consistently, while more complex Level 2 tasks were poorly performed. More recent research has indicated that Level 1 visual perspective taking skills are even present in children as young as 2 years of age (Moll & Tomasello, 2006).

However, the visual perspective taking capacity reflected in the above studies only allow the child to consider how an individual might *visually* view something in accordance with their physical location. Selman (1971a) conducted earlier work in this area of visual-perception perspective taking, such as the three mountain task, prior to considering the more complex construct of conceptual-mental perspective taking. It should be noted that the former does not consider the more in-depth elements of the thoughts, emotions, capabilities, expectations and reactions that a person may attribute to a more complex social situation, as is considered in the latter (Selman, 1980). Therefore, the idea that very young children have developed the ability to perspective take can be misleading, as there are vastly different levels of complexity involved in achieving visual-perception perspective taking and types of conceptual-mental perspective taking, such as social perspective taking.

Preadolescence and Adolescence in the Development of Social Perspective Taking

Although the entire development of social perspective taking occurs over many years, it is commonly around preadolescence that a shift is seen to more complex forms of perspective taking, and individuals develop the ability to take on a third person perspective (Inhelder & Piaget, 1958; Selman, 1980). In social perspective taking, a third person perspective represents the motivation and ability to conceptualise the differing thoughts, feelings and points of view of someone separate from the self (Selman, 1980).

Inhelder and Piaget (1958) proposed that around 11 years of age children reach a stage of cognitive development that allows them to take the perspectives of others by conceptualising their thoughts. Following this, an individual becomes more aware of their own identity and more able to consider the self in relation to others and the social world (Coleman & Hendry, 2011). Traditionally, the transition from childhood to adolescence is considered to be a common time for individuals to become more and more concerned with the opinions of others (Bell & Bromnick, 2003), and it has been proposed that this is because it coincides with the development of the cognitive ability to do so (Steinberg, 2005).

Some of the most influential contributions to the understanding and development of the concept of social perspective taking has come from the works of Selman (1971a; 1980). Current theories of perspective taking continue to draw on Selman's work, which proposed that the ability to consider the perspective of another develops across a series of different stages. The most notable of these stages, for the purposes of the current study, is Stage 3, which is usually attained during preadolescence. Stage 3 represents a more complex understanding of the self-other connection, and a time when the individual is able to step out of their own understanding and take-on a third person perspective (Selman, 1980). Interestingly, the age at which Stage 3 perspective taking commonly develops,

between 10 and 15 years of age, also represents the age range in which body dissatisfaction has been consistently found to present in high levels in both boys and girls (Halliwell & Harvey, 2006; Jones, 2004; Keery et al., 2004; Levine et al., 1994; McCabe & Ricciardelli, 2001b; Shroff & Thompson, 2006; See Chapter 2 for full review on body dissatisfaction in adolescence). Furthermore, pre/early adolescence is also the time at which both males and females are regularly engaging in social comparisons and the internalisation of sociocultural messages (Dohnt & Tiggemann, 2006; Selman, 1971a, see Chapters 1 and 2 for further discussion).

Although the relationship between these constructs has not always been directly studied in previous research, a number of theories and some evidence exist that demonstrate the potential relationship between perspective taking and body dissatisfaction. However, in order to explore this connection further a clear understanding of the stages of social perspective taking must first be developed, to represent the basis for which further relationships can be considered.

Social Perspective Taking

As argued above, conceptual-perspective taking, also known as social perspective taking, represents a different and more complex form of cognitive understanding than the widely researched visual-perception perspective taking, with the former being relevant to the current research. The five levels of social perspective taking identified by Selman (1973, 1980) will therefore be introduced and described in detail below, in addition to the 'prereflective' types of perspective taking which are argued to occur prior to Selman's five 'reflective' stages of perspective taking (Martin, 2008). Although the prereflective stages do not signify a time when the thoughts and opinions of others are understood, and therefore cannot contribute to an individual's perceptions of body image and satisfaction,

their inclusion provides a more holistic understanding of perspective taking and provides insight into the psychological (self) and social (others) mechanisms that underlie later stages.

It should also be noted that work has since been conducted to extend the ideas of Selman and the understanding of social perspective taking by exploring the progression of perspective taking into adulthood (Martin, Sokol & Elfers, 2008). The additional stages, proposed by Martin et al. explore the metareflective levels of social engagements, through which ideologies, social and personal identities begin to develop. However, for the purposes of the current study, the original five stages of reflective perspective taking proposed by Selman offer an adequate level of understanding and measurement of the developmental process through which children, preadolescents and adolescents move prior to late adolescence/adulthood, which are most likely to contribute to their understanding of appearance-related opinions of others. Therefore, the additional later levels of social perspective taking, proposed by Martin et al., will not be explored further in the current study.

Pre-reflective perspective taking.

As an extension of Selman's (1980) five stages of perspective taking, Martin et al. (2008) proposed two additional stages of pre-reflective perspective taking that they believed preceded Selman's proposed stages. The first of these stages, known as *perceptual/experiential repetition and resistance*, is described by Martin et al. (2008) as follows:

> 'The central features of this first level are the infant's inarticulate experience of different kinds of resistance in a world of mostly undifferentiated objects and others, and the developmentally acquired, prereflective ability to alter perceptual inputs so as to recreate experiences (usually by reorienting to a previously experienced location and object – e.g., mother's breast, animated crib mobile).' (pg. 309-310)

The second stage, known as *positional possibilities*, signifies a stage when the child is aware of the different situations and interactional sequences of which they are a part, and the way of interacting with others and objects in that situation (e.g., rolling a ball with someone). In other words, the child takes a position in each interactional sequence, which are first assisted but later become unassisted. As outlined by Martin et al. (2008) as the stage progresses the child's interaction patterns become more advanced:

> 'This taking up of positions importantly includes basic prelinguistic remembrance, anticipation, and execution of the conventional actions associated with the positions in question. Toward the end of this stage, the child's ability to move easily between various positions and experiences within routine sequences of social interactivity (e.g., giving and receiving gifts, replete with many of the emotional and behavioral displays commonly associated with such exchanges) enables the child to anticipate the positions and experiences that are typically linked temporally to her own immediate psychosocial location and activity.' (pg. 310)

This represents the child's most primitive understanding of the perspectives of others, in the sense that they begin to consider the positions of other people and objects in their environment, and anticipate and execute appropriate ways of carrying out conventional actions in relation to them. These pre-reflective stages act as precursors to Selman's more complex stage of reflective perspective taking.

Selman's stages of social perspective taking.

Selman (1971ab, 1973, 1980) and colleagues posited that the way in which social situations, interactions and relationships are conceptualised by an individual is underpinned by their level of perspective taking. Selman's stages go beyond just inferring the thoughts and desires of others, as is seen in other perspective taking theories (e.g., false beliefs of understanding/theory of mind), and consider the related and coordinated nature of perspective taking as recursive cognitions (i.e., from the self to others and back again).

This understanding of social perspective taking is an extension of the work of Piaget (1965) and focuses on the cognitively distinct stages of social perspective taking. These stages represent qualitatively distinct ways of comprehending different aspects of an experience, and are stages through which all children pass in a sequential order. And while the sequence of the stages is unwaivering, various physiological and environmental factors may influence the rate at which an individual progresses through the stages. In addition, the stages of perspective taking are integrated hierarchically, meaning that those at lower levels cannot incorporate higher level solutions in interpreting interpersonal issues. Conversely, those with higher-level understanding may occasionally utilise and build on their conceptions from previous stages. At the beginning of this process the self-other differentiation is lacking, representing first person perspective. However, with progression through each stage the child/adolescent begins to develops a more complex understanding of the perspectives of others (perspective taking structure), and the ways in which processes and motives manifest in the minds of others (perspective taking concepts), ultimately leading to third-person perspective. An understanding of the ways in which other human's points of view are related and coordinated enables the adoption of an observer perspective of one's own body – also known as self-objectification (Fredrickson & Roberts, 1997).

Reflective perspective taking.

Selman (1980) identified five key stages in the development of perspective taking. As outlined earlier, these stages go beyond the focus on the physical and observable actions of others, and consider the psychological position of others and the self, through the conceptualisation and interpretation of others' actions, intentions, motives, personality, subjectivity and growth. Selman (1973, 1980), and Selman and Byrne (1974), conducted a series of studies with participants of various ages using both cross-sectional and

longitudinal designs (see Selman 1980 for detailed write-up of each study). The findings from the studies provided strong support for the existence of the perspective taking stages identified by Selman. More specifically, participants were found to progress through the stages in the anticipated sequential order, without any skipping or regression of levels. Furthermore, information shared by participants did not deviate in any way from the existing perspective taking levels outlined by Selman.

The first of these stages, known as Level 0, represents Undifferentiated and Egocentric Perspective Taking and is commonly seen between the ages of 3 and 6 years. At this level children are able to recognise each person as their own distinct physical entity, however the relationship between the physical and psychological experience of the person is confused (e.g., someone is sad *because* they are crying). Understanding of self-awareness and personal change are also limited at this stage, and often linked to an understanding of the physical self, rather than the psychological self (e.g., 'I am good because I am strong'). At this level the individual cannot differentiate between the self and other's points of view, and instead believes that others' views simply align with their own (e.g., they like toys because I like toys).

Stage 1 involves Differentiated and Subjective Perspective Taking and commonly occurs between ages 5 and 9 years. At Level 1 children have a limited awareness of the unique thoughts, opinions and feelings of others (e.g., a lolly makes someone happy). While they begin to develop an understanding of thoughts and motives as underlying mechanisms for actions, they generally take others' explanations of their motives at face value and cannot yet recognise that people can have diverging emotions towards the same event (e.g., happy and sad). At this stage growth in personality is attributed to improvement of skills (e.g., learning a new skill) rather than more in-depth cognitive change (e.g., changing the way one thinks) (Selman, Jaquette, & Bruss-Saunders, 1979).

Selman noted that this stage differs most notably from stage 0 in regards to the individual's newly developed interest in the covert psychological lives of others. Children at this stage cannot yet coordinate the views of others with their own, but they have some knowledge that others possess different motives, behaviours and information to theirs.

Following this, Stage 2 represents Self-reflective/Second person and Reciprocal Perspective Taking and generally develops between ages 7 and 12 years. At this stage in perspective taking the child is able to mentally step into the shoes of another, self-reflect on their own thoughts, actions and feelings, and develop an understanding of two-way reciprocity in social relations (Selman, 1980). The child is able to differentiate between the inner experience of an individual and their outer actions, with an understanding of the inner experience as the reality and the actions as an expression of that reality. However, these self-reflections generally remain isolated, and rarely occur simultaneously from a third person perspective.

It is the two final stages, Stage 3 and Stage 4 that possess the most potential relevance to the emergence of body dissatisfaction as they represent a more complex understanding of the self and others. Stage 3 represents Third-person and Mutual Perspective Taking and commonly develops between the ages of 10 and 15 years. At this level children and adolescents are able to step outside of both their own perspective and the concept of the self, allowing them to take on a third-person perspective. Selman (1980) emphasised that at this stage the individual acknowledges the importance of mutual and coordinated reciprocal perspectives and social exchanges.

> 'There are generated notions of what we might call an "observing ego," such that adolescents do, (and perceive other persons to) simultaneously see themselves as both actors and objects, simultaneously acting and reflecting upon the effects of action on themselves, reflecting upon the self in interaction with the self.' (pg.39)

The ability to take on this third-person perspective allows the individual to step outside of the social interaction and contemplate the perspective of both the self and other. However, in order for the interpersonal interaction to be fulfilling, the subject believes that mutual perspectives must exist, be genuinely shared and coordinated. This allows for greater self-reflexivity in thinking about others and the self, and grants consideration for how the self may be evaluated by others. When considering others' evaluations of the physical self, an observer's perspective is often adopted based on the internalisation of media portrayals of body ideals (Fredrickson & Roberts, 1997; Vandenbosch & Eggermont, 2012). More specifically, self-objectification (i.e. taking on an observer's perspective of one's own body) can occur once third-person perspective taking has developed. Furthermore, given the link between actual-ideal body discrepancies and body dissatisfaction (McKinley, 1998; Mellor, 2010a; Tiggemann & Pennington, 1990; Wertheim & Paxton, 2011), and the current media representations for both genders being incongruent with the general population (ABS, 2012; Hargreaves & Tiggemann, 2009; Leit et al., 2000; Spitzer et al., 1999), an inferred observer's perspective that is based on media representations of body ideals (Vandenbosch & Eggermont, 2012) is likely to lead to body dissatisfaction.

Finally, Level 4 is seen from age 12 years onwards, and sees the development of In-depth and Societal-Symbolic Perspective Taking. At this Stage the person is able to understand the motives, actions, thoughts and feelings of others at a deeper level than is possible at Level 3. The individual recognises these aspects of the self at a more complicated level that may be beyond the comprehension of the "observing ego". Furthermore, an awareness of the multidimensional nature of communication is formed at Level 4 and this facilitates a greater understanding of shared points of view that exist within our social system (Selman, 1980),

> 'At this level, the adolescent or young adult can abstract multiple mutual (generalised other) perspectives to a societal, conventional, legal or moral perspective in which all individuals can share. Each self is believed to consider this shared point of view of the generalised other or social system in order to facilitate accurate communication and understanding.' (pg.40)

The most important aspect of these final stages of perspective taking is that they allow the individual to make inferences about the way others view them and what the outcomes of others' opinions might be. To date, developments in perspective taking ability have been linked to the concept of body dissatisfaction and social comparisons more or less indirectly through constructs such as appearance-based rejection sensitivity (Park, 2007; Park et al., 2009), self-objectification theory (Fredrickson & Roberts, 1997; Vandenbosch & Eggermont, 2012) and objectified body consciousness (McKinley, 1998, 1999; McKinley & Hyde, 1996). Each of these constructs involves the individual taking on an observer's perspective (i.e. third person perspective) to develop conclusions about their own physical appearance. Furthermore, research indicates that when the individual feels their body does not conform to the ideals of the observer, a negative interpretation of their own body often ensues (McKinley, 1998, 1999; McKinley & Hyde, 1996; Muehlenkamp, & Saris-Baglama, 2002; Park, 2007; Park et al., 2009; Tiggemann & Lynch, 2001). Each of these constructs will be examined thoroughly later in this chapter, to further explore the relationship between perspective taking and body dissatisfaction.

However, it should be noted that perspective taking often progresses at different rates depending on individual factors and gender. Some studies have indicated that the development of perspective taking can take longer for males, and it may not be until mid-adolescence that this cognitive ability begins to fully develop. Conversely, the female development of perspective taking commonly occurs earlier, allowing females in their early adolescence to simultaneously consider their own perspectives and the perspectives of others (Van der Graaff, Branje, De Wied, Hawk, Van Lier, & Meeus, 2013). The

difference in rate of development across genders may be representative of the differing level of cerebral cortical development and maturation, which commonly occurs earlier in females (Colom & Lynn, 2004; Silberman & Snarey, 1993). These factors will be considered in the following Chapter.

Perspective Taking and the Role of the Observing Self

So far the role of the observing self has been discussed in the literature relating to body image dissatisfaction, however the specific place that social perspective taking ability has in this relationship has not yet been explored or directly discussed. Perspective taking is a natural cognitive development that begins in childhood and continues into adulthood. However, it seems that adolescents are more likely to focus on the appearance related opinions of others when their conceptual-mental perspective taking skills are new, as opposed to older adults who do not put so much focus on the appearance-related opinions of others (Elkind, 1967; Tiggemann & Lynch, 2001). For example, Tiggemann and Lynch, as noted earlier, explored self-objectification in a sample of 322 women between the ages of 20 and 84 years, and found that self-objectification decreased significantly with increases in age. This is in contrast to adolescent populations, who are regularly found to place a strong emphasis on the appearance-related opinions of others (Hutchinson & Rapee, 2007; Jones, 2004; Jones & Crawford, 2006; Lawler & Nixon, 2011; Levine et al., 1994; Paxton et al., 2005; Presnell et al., 2003; Slater & Tiggemann, 2010). This specific period in a child's life, and the processes that go with it, was described by Elkind (1967) as a phase of adolescent egocentrism, and is signified by the preoccupation adolescents develop with the opinions that others have about their appearance, thoughts and actions. Consequently, adolescents commonly become more self-conscious about these aspects of themselves around this age.

Elkind's model of egocentrism.

The premise behind adolescent egocentrism is that the new-found ability adolescents have to represent the thoughts and feelings of others as separate from their own, means that they often overestimate the amount of focus others place on their own appearance and behaviours, to the point that they can become preoccupied with the idea (Elkind, 1967; Elkind & Bowen, 1979). Elkind describes that "it is this belief that others are preoccupied with his appearance and behaviour that constitutes the egocentrism of the adolescent" (pg. 1030). Therefore, with the development of perspective taking, the awareness shifts from the opinions one has of themselves and focuses on the opinions others have, or are assumed to have, of them. One construct that emerges from Elkind's theoretical model of egocentrism, and shows links to the concept of body image dissatisfaction, is that of the 'imaginary audience'. The imaginary audience is the term used to denote the belief adolescents form that they are the focus of others' attention and scrutiny. This feeling can be present regardless of whether or not a real audience exists, and the imagined scrutiny and attention received is based on the adolescent's own mental preoccupations. Therefore, if an actual-ideal body discrepancy has been previously formed due to internalisation of sociocultural messages and engagement in social comparisons, the development of perspective taking, which allows an awareness of the opinions of others, may contribute to the belief of being the subject of others' appearance-related scrutiny, thus contributing to and maintaining body dissatisfaction. The imaginary audience represents one of two pathways in Elkind's model, with the other being the personal fable – an adolescent's belief of being special and unique – which has less relevance to body dissatisfaction and the current study.

However, while some of the concepts and ideas from Elkind's (1967) original theory remain, the theory has been largely updated to allow adolescents to be viewed in

terms of the notion of individuality and issues of salience to them, rather than a homogenous group that experiences similar issues to adult populations (Arnett, 1997; Bell & Bromnick, 2003; Shucksmith & Hendry, 1998). Furthermore, the gender imbalance identified through the use of egocentrism scales, which indicates higher levels of egocentrism in females, is suggested to be the result of *actual* evaluative pressure and appearance socialisation, rather than changes in formal operational thinking and *imagined* pressure as proposed by Elkind (Ryan & Kuczkowski, 1994). In a review of Elkind's original theory Bell and Bromnick (2003) qualitatively analysed the responses of 346 males and females aged between 14 and 15 years to contest the concept of the imaginary audience. The researchers found that many of the themes and pressures that young people perceived from those around them were based on social realities rather than the construction of an "imaginary" audience. These concerns stemmed from the personal and social consequences that were experienced following evaluation from others. Of note is the recurring themes Bell and Bromnick found in relation to appearance-related concerns and social comparisons. In addition, those adolescents who had the perception of being watched, evaluated and judged by others were the ones who themselves engaged in these behaviours. This highlights the fact that with the development of third person perspective taking, the individual's own way of viewing the world is likely to be applied in some way to their understanding of others' ways of viewing the world. More simply, a person who judges the appearance of others, is likely to perceive that others are also judging their appearance, thus supporting the notion of conclusions built on social realities rather than imaginary audiences.

Despite the critique of many elements of Elkind's (1967) original theory, the notion of a heightened awareness of the opinions and ideas of others during adolescence remains, as does the understanding of early adolescence as the time in which sensitivity to

the "imaginary" audience peaks (Elkind & Bowen, 1979; Lapsley, Milstead, Quintana, Flannery & Buss, 1986; Pesce & Harding, 1986). Whether real or imaginary, these conceptions serve to alter the way in which adolescents interact with the world and develop an understanding of others and themselves.

The Role of Social Perspective Taking Capacity in Forming an Understanding of the Physical Self

Park et al. (2009) noted that in the process of forming a body image, people take into account the perspectives of others. These perspectives can be expressed by others explicitly (e.g., through verbal comments about appearance), or can be attributed to another person, following a social comparison with them. This is consistent with many classic theories of the self, such as comparison theory, which also suggest that people form an idea of themselves based partly on the perceptions of others (Harter, 2012; Morse & Gergen, 1970; Park et al., 2009). In order to further explore the notion of how one's own appearance perspectives are impacted by others, Park (2007) introduced the construct of appearance-based rejection sensitivity.

Appearance-based rejection sensitivity.

Appearance-based rejection sensitivity represents "the degree to which individuals anxiously expect to be rejected based on their physical appearance" (Park et al., 2009, p. 108). More specifically, individuals with high appearance-based rejection sensitivity have the dispositional tendency to anxiously expect, readily perceive, and overreact to signs of rejection based on their physical appearance (Park, 2007). It links appearance concerns (intrapersonal) with rejection concerns (interpersonal), making it the first known construct to express this combined influence in an empirically validated way (Park et al., 2009).

More simply, Park et al. (2009) suggest that a person's appearance concerns go beyond intrapsychic concerns in that the person fears that their appearance may lead them to be rejected by others.

Appearance-based rejection sensitivity consists of two components – affective and cognitive. The affective component is represented by the anxiety the individual experiences when they believe they might be rejected based on their appearance, whereas, the cognitive component is the expectation that rejection will occur. This suggests that in order to anticipate the possibility of being rejected an individual must have an awareness and understanding of, or make attributions about, the perspectives of others. It is believed that these two components interact, in that anxiety about appearance related rejection exacerbates the expectations that rejection will occur (Park et al., 2009).

Consequently, consistent with gender differences in body dissatisfaction, women may be more likely than men to link their appearance to overall acceptance, due to the emphasis that is placed on women's appearance in sociocultural messages (Park et al., 2009). In line with this, Park et al. (2009) found that women were more sensitive than men to rejection that was based on appearance and this sensitivity was moderated by the perception that peers' acceptance would be based on appearance. This is consistent with the notion that Western culture places a great emphasis on the measurable attributes of a women's body (e.g., shape, weight) as opposed to the nonvisible aspects (e.g., fitness level, health). This has the potential to make women more aware of how others might be observing them physically – e.g., taking on the observer's perspective (Park et al., 2009).

The anticipation of being rejected by others based on appearance affects the way the individual perceives, processes and applies information they come across that relates to appearance. More specifically, those individuals who are more sensitive to appearance-based rejection are more likely to misinterpret ambiguous cues in a negative way (Park,

2007). For example, Park and Harwin (2010) conducted a study with 79 University students, finding that those with high appearance-based rejection sensitivity reported a more negative interpretation of ambiguous appearance commentary, following a face-to-face interaction with the provider of the commentary.

However, based on their findings, Park et al. (2009) noted that anxious expectations about being rejected by others based on appearance does not necessarily represent a belief that appearance is important, but instead it represents a belief that rejection or acceptance by others is determined by appearance. From these findings it could be suggested that an individual's negative feelings and beliefs about their own appearance may manifest into body dissatisfaction once the individual develops perspective taking capacity which may lead them to perceive scrutiny and rejection from others based on their appearance. For example, Calogero, Park, Rahemtulla and Williams (2010) found that interpersonal concerns about appearance related rejection were linked to symptoms of Body Dysmorphic Disorder and greater acceptance of cosmetic surgery among British University students. Of particular note in the study were the cognitive expectations of being rejected based on appearance that contributed to negative outcomes.

Given that gaining the acceptance of others is particularly important during pre-adolescence and adolescence (Bukowski, Hoza, & Boivin, 1993), and the possibility that people of this age may be attributing rejection to others' perceptions of their physical appearance, offers an important insight into why an emphasis on physical appearance, and thus body dissatisfaction, become so prevalent around this age (Park et al., 2009).

When exploring the presence of appearance-based rejection sensitivity in adolescent populations, links have been found between appearance-based rejection sensitivity and a number of the constructs in the current study including social comparisons and body dissatisfaction. For example, in a sample of 380 male and female

adolescents, Webb, Zimmer-Gembeck and Donovan (2014) found that the relationship between friendship appearance culture and appearance-based rejection sensitivity was moderated by internalisation of appearance ideals, social comparisons and body dissatisfaction. Not surprisingly, one aspect of friendship appearance culture that was associated with heightened levels of appearance-based rejection sensitivity was perceived pressure to be attractive. This again highlights the process of considering others' perspectives regarding appearance during interpersonal interaction.

Furthermore, the links between perspective taking capacity and body dissatisfaction seen in appearance-based rejection sensitivity can also be seen in other constructs that consider the role of cognitive processes in the development of poor body image. For example, the concept of objectified body consciousness denotes the awareness people form about on-lookers' impressions of their physical appearance (Huebner & Fredrickson, 1999; Lindberg et al., 2006; McKinley, 1998, 1999; Noll & Fredrickson, 1998; Spitzack, 1990).

Objectified Body Consciousness and self-objectification.

Similar to appearance-based rejection sensitivity, objectified body consciousness (OBC) describes the process whereby an individual develops an awareness and anxiety about on-lookers' impressions of their physical appearance. OBC has three key components: (1) body surveillance – monitoring and viewing the body as if from an outsider's point of view, (2) body shame – a sense of shame if the body does not meet the societal standards, and (3) appearance control beliefs - a belief that one can control their appearance (Lindberg et al., 2006). It is worth noting that the first of these components centres entirely on perspective taking abilities, and occurs prior to body shame. In cases where OBC is high, the individual will take on a third person perspective in an attempt to

grasp how they appear to others (Huebner & Fredrickson, 1999). In a similar vein, self-objectification stems from objectification theory and denotes the process of internalising an outsider's perspective of the physical self and engaging in a type of body surveillance (Jongenelis, Byrne & Pettigrew, 2014). Both of these processes highlight the role of perspective taking in the development of a physical self-image.

Originally, the construct of OBC was derived from feminist theory which argues that the female body is construed as an object to be observed by males. However, more recent understandings of objectification in Western culture suggest that the mature female body is presented in many different contexts as an object to be evaluated by others – both male and female (Fredrickson, & Roberts, 1997; Tolman & Debold, 1994). Moreover, in an effort to avoid unfavourable appraisals and keep up with cultural body standards, women engage in self-surveillance so as to view themselves as others do (Spitzack, 1990). In other words, women internalise the societal standards of beauty they are presented with and then take an outsider's perspective to observe and evaluate themselves (Fredrickson & Roberts, 1997). However, continual self-surveillance has been found to lead to a number of negative outcomes for women, similar to those for body dissatisfaction. For example, OBC has been linked to disordered eating (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; McKinley, 1999; Noll & Fredrickson, 1998; Slater & Tiggemann, 2002, 2010; Tiggemann & Lynch, 2001; Tiggemann & Slater, 2001), sexual dysfunction (Wiederman, 2000), and low body esteem (McKinley, 1998, 1999; Noll & Fredrickson, 1998).

Consistent with traditional feminist theory, findings indicate that OBC is also considerably more common among females, both adults and children, than males (McKinley, 1998; Lindberg et al., 2006). It is also present at higher levels among adults than among children between the ages of 10 and 11 years old (Lindberg et al., 2006). In addition, while ages 10 and 11 years were once considered surprisingly young ages to be

experiencing body image problems (Woodside & Garfinkel, 1992), OBC appears to present in this age group (Lindberg et al., 2006). Lindberg et al. conducted a study with 319 American children aged between 10 and 11 years. The researchers found that although rates of OBC were lower in the preadolescent sample than previous adult samples, OBC was still prevalent among this age group and linked to dieting behaviours. Furthermore, significant gender differences existed, with girls reporting higher levels of body surveillance than boys, however no significant difference was found between levels of body shame. The presence of OBC in this preadolescent age group is consistent with many of the studies described in this review that recognize preadolescence as an important time in the development of both body image concerns and perspective taking capacity.

Of most salience to the current study is the fact that previous studies outlining the development and outcomes related to OBC place an emphasis on the importance of perspective taking capacity in the development of body dissatisfaction. In fact, perspective taking capacity is an integral part of the OBC model in that it represents the first stage of the process in developing OBC. Subsequently, if an individual does not yet possess the capacity to view themselves from an outsider's perspective (third person perspective) then the body shame associated with not meeting the expected standards will not ensue (Lindberg et al., 2006). Moreover, the inclusion of the three key components of OBC (body surveillance, body shame, appearance control beliefs), and the construct itself, have been empirically validated using samples from different age groups (Lindberg et al., 2006; McKinley & Hyde, 1996).

Consistent in the formation of the self-image, appearance or otherwise, is the notion of perspective taking. Without the ability to take into account the perspectives of others, it is unlikely that the individual would experience appearance-based rejection sensitivity or OBC, and thus, less likely that body dissatisfaction would ensue. On the

other hand, once the ability to take into account the perspectives of others has developed, the person becomes more receptive to sociocultural messages and makes inferences about others' opinions towards them based on their own interpretation of these messages. This indicates that the ability to take on the perspectives of others may act as the mechanism through which social comparisons and sociocultural messages about the ideal body lead to the formation of body image dissatisfaction (Lindberg et al., 2006; Morse & Gergen, 1970; Park, 2007; Park et al., 2009).

However, it is important to note that the links between perspective taking capacity and body dissatisfaction go beyond the concepts of appearance-based rejection sensitivity and OBC. For example, negative commentary from peers relating to appearance has been linked to body dissatisfaction in females (Levine et al., 1994; Oliver & Thelen, 1996). Research indicates that young girls form perceptions about what they believe their friends' body image ideals are and then often adopt those same ideals for themselves. In the study by Dohnt and Tiggemann (2006) discussed in Chapter 1, it was found that pre-adolescent girls were likely to adopt a thin-ideal if they believed that their friends desired the same ideal. However, in order to adopt these ideals they must first gain an understanding of their friends' point of view, which again, develops with perspective taking capacity.

Finally, although social perspective taking has appeared in a number of studies looking into the relationships explored in this review, it has not been directly examined as a cognitive mechanism through which social comparisons and body dissatisfaction increase. Hence, research needs to be conducted to assess this relationship directly and confirm what has been indicated in other studies – that perspective taking plays an integral role in the development of body dissatisfaction. In anticipation that the development of social perspective taking does increase the risk of preadolescents developing body

dissatisfaction, this information can be used to guide the development of prevention and intervention programs and can be further explored in future research.

Chapter 4: An Empirical Study of Perspective Taking, Body Dissatisfaction and Social Comparisons

A review of previous research indicates that consistent links have been identified between engagement in social comparisons and body dissatisfaction. Furthermore, preliminary findings indicate that the development of advanced social perspective taking (e.g., third person perspective) occurs at a similar age to the onset of body dissatisfaction, and appears to play a role in its development and maintenance. However, further research is needed to substantiate this proposition as much of the existing research has explored this potential relationship indirectly. Therefore the current investigation will explore the contribution of perspective taking to outcomes of body dissatisfaction in more detail, while examining the role of social comparisons in this relationship. Of particular salience to the present study is the role that the development of social perspective-taking ability plays in enabling engagement in social comparisons and then contributes to body dissatisfaction (Blechert et al., 2009; Fitzsimmons-Craft et al., 2012; Myers & Crowther, 2009).

Specifically, the proposed investigation aims to expand previous findings establishing the influence of social comparisons in the development of body dissatisfaction while also exploring the possible influence of social perspective taking capacity in this relationship. These constructs are yet to be explored exclusively and directly in the one study despite the evidence suggesting that they share a relationship. Furthermore, the proposed investigation also aims to address some of the shortcomings of previous research by examining both genders and focusing on the key transitional period from childhood to adolescence.

As middle childhood and early adolescence have been identified as important stages in the development of all of the constructs being examined in the current study

(Dohnt & Tiggemann, 2006; Lindberg et al., 2006; Selman, 1971a), participants will include males and females aged 8 to 14 years (inclusive). Gender differences in the engagement of social comparisons, overall body dissatisfaction and social perspective taking capacity will also be considered in the current investigation. Furthermore, BMI and pubertal status will be controlled due to their established associations with body dissatisfaction.

Hypotheses

Based on the above literature review, it is hypothesised that social perspective taking stage and body dissatisfaction will increase with age (*H1*). Higher rates of body dissatisfaction are also anticipated to share a relationship with higher social comparison frequency (*H2*) and higher average perspective taking scores (*H3*). Gender differences will be examined, with females anticipated to have higher rates of body dissatisfaction than males (*H4*). It is also hypothesised that third person social perspective taking (e.g., Global score stage 3 and beyond) will be related to significantly higher levels of social comparison frequency and body dissatisfaction than earlier stages, after BMI and pubertal development have been controlled (*H5*). Finally, following the anticipated support of the above hypotheses, an exploratory moderator model (Figure 4.1) is proposed whereby the relationship between social comparison frequency and body dissatisfaction is moderated by social perspective taking stage.

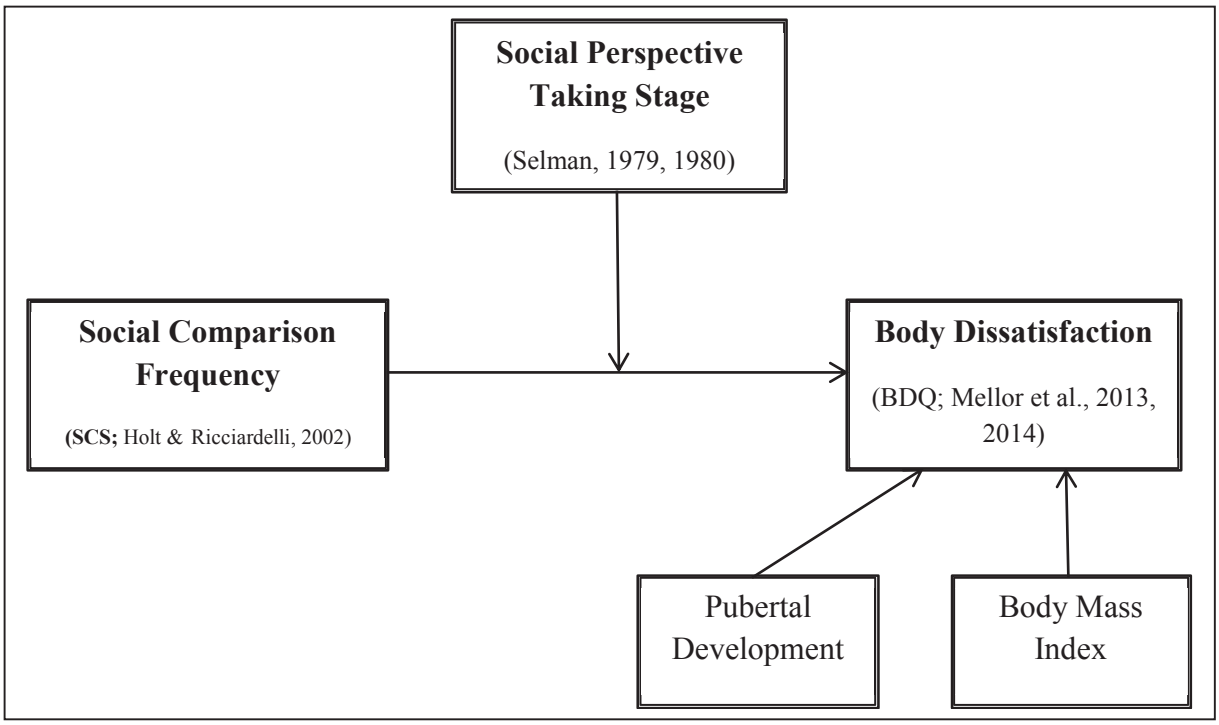

Figure 4.1. Moderation Model Predicting Body Dissatisfaction as Impacted by Social Comparison Frequency and Perspective Taking Stage.

These relationships will be tested by conducting a cross-sectional study of middle childhood, pre-adolescence and adolescence using three age groups (8-10 years, 10-12 years, and 12-14 years).

Method

Participants.

Students from five Primary and two Secondary schools in Eastern Metropolitan Melbourne participated in the current study. The total sample consisted of 102 students aged 8 to 14 years (M = 11.37; SD = .15), including 63 girls (M = 11.20, SD = .18), and 39 boys (M = 11.64; SD = .25). In the Victorian school-system students commence their primary education at 5 or 6 years of age (Prepatory year) and their secondary education at approximately 12 to 13 years of age (Year 7). Of the 102 participants, 22 were in middle

primary (grades 3 and 4), 57 were in later primary (grades 5 and 6) and 23 were adolescents attending secondary school (years 7 and 8). The proposed analyses involves breaking the sample into three age groups (see Chapter 4). Table 4.1 displays the means, standard deviations and gender composition for the three age groups of participants.

Table 4.1

Gender and Age Composition for the Entire Sample

	8-10 year-olds		11-12 year-olds		13-15 year-olds	
	N= 44		N= 41		N=17	
	Boys	Girls	Boys	Girls	Boys	Girls
N	14	30	16	25	9	8
Mean Age	10.05		11.51		13.23	
SD	.12		.06		.14	

Note: Age ranges listed above are inclusive

A target sample of 300 participants was proposed for the current study. A total of 1340 parent and child information and consent packages were handed out to children between the ages of 8 and 14 years (inclusive) to take home, with 103 forms returned, resulting in a response rate of 7.7%. Reasons for parents not responding could be study information packs not reaching home from school, disinclination of parent to have their child participate, non-return of parental consent forms, the child being absent from school during the time when the study was being undertaken, or the child's own desire not to participate. Research project saturation in Melbourne schools at the time of data collection may also have impacted response rates and/or school participation. For example, 190 Primary and High schools in the Melbourne metropolitan region were contacted via phone, email and/or post and invited to participate in the current study. Of those schools contacted only 7 agreed to participate. Data were not collected from those who did not

consent to the study. **I**nformation regarding the participants' age, gender and ethnic and cultural background was collected. While demographic information relating to socioeconomic status was not collected, all schools were in the middle to upper socioeconomic demographic according to public records (*Australian Curriculum, Assessment and Reporting Authority*, http://www.acara.edu.au).

Exclusion criteria.

Children below the age of eight years old were not included in the current study. Previous research indicates that prior to the age of eight years few children have fully developed the ability to think about the self in relation to others (Calero, Salles, Semelman & Sigman, 2013; Selman, 1980). Furthermore, gender differences in body dissatisfaction are not often seen prior to 8 years of age, which may indicate that younger children experience difficulties in comprehending the concepts and measures relating to body dissatisfaction (Gardner et al., 1997; Ricciardelli & McCabe 2001b; Thelen et al., 1992). Given that the child's perspective taking capacity was a key component of the current study, only children eight years of age and over were interviewed.

Materials.

The assessment materials included the Social Understanding Interview (Selman et al., 1979) and a questionnaire set assessing body dissatisfaction, engagement in social comparisons (regarding physical appearance and ability), pubertal development and physical attributes (height and weight). The questionnaires were provided in a booklet form so the order remained constant over the entire sample. Individual measures were chosen based on their relevance to the theoretical constructs of this study, and their

appropriateness for the selected age group. The measures selected will be described in detail below and their psychometric properties will be outlined.

Demographics.

Demographic information including age, gender, grade level, ethnic and cultural background and height and weight (for Body Mass Index calculations – see below) were included in the questionnaire booklet.

Body Dissatisfaction Questionnaire.

Body dissatisfaction was assessed using the revised version of the 6-item Body Image Dissatisfaction Subscale (Mellor et al., 2013, 2014), taken from the Body Image and Body Change Inventory (McCabe & Ricciardelli, 2001a). The revised 9-item scale was used to measure each participant's level of satisfaction with different parts of their body including their body overall, weight/shape, muscles, the lower body, the middle body, the upper body, face, height and hair. Each item asks about the level of satisfaction or feelings about the particular part of the body (e.g., 'Overall, how satisfied are you with your body?' or 'How do you feel about your face?'). Responses were quantified using a 5-point Likert scale whereby 1 was 'very happy' and 5 was 'very unhappy'. Higher scores indicate a greater level of body dissatisfaction. The six item version of the Body Image Dissatisfaction subscale has shown high levels of internal consistency with samples of adolescent females (Cronbach's α = .78 - .92), as well as discriminant and concurrent validity (McCabe & Ricciardelli, 2003). The 9 item scale has also shown good internal consistency with female (Cronbach's α = .76 - .85; Mellor et al., 2013) and male (Cronbach's α = .88 - .95; Mellor et al., 2014) adolescents in different cultural contexts including Australia.

Social Comparison Scale.

Participants' engagement in social comparisons was measured using the Social Comparison Scale (Holt & Ricciardelli, 2002), which draws on the Body Comparison Scale (Fisher & Thompson, 1998) and the Social Comparison Questionnaire (Schutz et al., 2002). The six item scale assesses the frequency and outcome of engaging in social comparisons with peers regarding physical appearance and ability. Each of the six items has two parts. The first part considers the frequency of engagement in social comparisons (e.g., Do you think about how strong you are in comparison with other children your age?') and uses three response options – 'never', 'sometimes', 'always'. Responses were quantified with scores between 1 ('never') and 3 ('always'), and were then totaled for the six items. Higher scores on this aspect of the scale indicate greater frequency of social comparison. The second part of each item assesses the consequences of the engagement ('How does this make you feel?') and includes four possible response options which are quantified as follows: 3 = 'better about myself', 2 = 'in between', 1 = 'worse about myself', and 'not sure' which was not assigned a value. Due to the large number of 'not sure' responses (between 11% and 28%) on each of the items for the outcome aspect of the social comparisons scale, only the frequency portion of the scale was included in the analyses. The scale upon which the Social Comparison Scale is based has demonstrated high internal consistency (Cronbach's α = .80 - .83; Holt & Ricciardelli, 2002, Tatangelo, 2013).

Pubertal Development Scale.

The Pubertal Development Scale (PDS; Petersen, Crocket, Richards & Boxer, 1988) was used as a measure of child/adolescent pubertal development. This self-report

scale consists of items assessing participants' height, body hair growth and skin complexion changes. In addition, gender specific items are also included and assess facial hair growth and voice changes for boys, and breast development and menarche in girls. Examples of items include 'Have you noticed any skin changes, especially pimples?', 'Have you noticed a deepening in your voice?', 'Have you noticed that your breasts have begun to grow?' Responses are rated using a 4 point value system whereby '1' indicates that pubertal development has not yet started in a given area and '4' indicates that pubertal development in this area is complete. The final item, assessing female menarche, also includes a follow-up item which asks participants to state the age at which menstruation began. Given that female menarche is not a gradual process, self-evaluation of first menses onset is considered one of the most reliable measures of pubertal change in females. Therefore, scoring for female pubertal development is weighted around menarche, whereby 'yes' = 4, and 'no' = 1. Conversely, scoring for boys is not weighted around a specific item. Pubertal levels for boys and girls are then quantified by summing the individual item scores. Higher scores on this scale indicate that an individual is further through the pubertal development process. Petersen et al., (1988) report moderate levels of validity when the PDS was compared with the Sexual Maturity Scale (Tanner, 1962; .72-.80) and physicians' ratings (.61-.67). Keel et al., (1997) reported an internal consistency of .65 for girls and .62 for boys.

Body Mass Index.

Height and weight details were collected from each participant to calculate the Body Mass Index (BMI). Scales and a tape measure were made available to students who did not know their correct measurements. Approximately 75% of height measurements were carried out by the researcher, with the remaining 25% of students reporting to know

their height based on recent measurements. Similarly, approximately 60% of participants weighed themselves in the room, while the remaining participants recorded their weight based on their knowledge of recent measurements. BMI was calculated for all participants using the following formula: weight (in kilograms) divided by height (in meters) squared. Final BMI scores were then assessed using the BMI chart for children from the Centres for Disease Control and Prevention (2003), which provides children's weight percentiles based on age in months. An individual who falls above the 85th percentile but below the 95th percentile for their age is categorised as overweight, while those above the 95th percentile for their age are considered obese.

Social Understanding Interview.

Perspective taking ability was evaluated using the *Social Understanding Interview* schedule designed by Selman et al. (1979). As outlined in Chapter 3, social perspective-taking can be assessed through the discussion of hypothetical dilemmas. Each of Selman et al. dilemmas is designed to suit a specific age group and assess interpersonal understanding in one of four broad domains. The four domains include: individuals, close friendships, peer groups and parent-child relations. These domains are associated with their own unique set of issues and concepts, and the person's understandings of these give insight into their current stage of perspective-taking. Ascertaining an individual's stage involves identifying and scoring the themes that are indicative of that stage. To put it simply, a series of dilemmas are presented for each domain and discussion of these dilemmas elicits information from the individual regarding their perspective taking stage.

The story and questions presented in each domain are not important in and of themselves. It is the responses provided by the individual to this content, and the level of cognitive logic and social understanding displayed within these responses, that is of note.

The dilemma and interview questions are designed to prompt further discussion, during which the child's understanding of the interpersonal issues will be represented and explored. This method means that the child's individual limits can be explored fully, and an accurate inference can be made regarding their level of interpersonal understanding. Therefore, while it is possible to assess all of the four domains to offer the most comprehensive description of the child's perspective taking abilities, this is not required as the stages within each domain embody a structure that is mirrored across all domains and thus provides a more general overview of the individual's understanding of the issues with which they are presented. Therefore, only the individual domain was used in the present study as it is the most face-valid at targeting issues relating to the current study. The individual domain will be described in detail below including the stories, issues, and concepts associated with different stage scores as well as the scoring process.

The individual domain.

The Individual domain is evaluated and scored for four key issues relating to the individual's understanding of persons. The four issues include 1) subjectivity (i.e., covert properties of persons, such as thoughts, feelings, and motives), 2) self-awareness (i.e., awareness of the self's ability to observe own thoughts and actions), 3) personality (i.e., stable or predictive character traits), and 4) personality change (i.e., how and why people change). These issues are discussed using standardised questions and follow-up probes. Which story and questions are presented to the child will depend on their age. *The Puppy Story* is suitable for children aged up to 10, while the *Ping-Pong Story* can be used for children aged 9 years or older. Each story has its own set of standardized questions that match the unique content and issues presented in the story. To allow for space limitations, only the content, questions and issues related to each stage of the *Ping Pong Story* are provided here. Information for the *Puppy Story* is available in Appendix A.

The Ping-Pong Story

Keith, 10, and Jerry, 8, live across the street from each other and are good friends, even though Keith is older. They have a lot in common, but Keith especially likes playing ping-pong at Jerry's house. However, Keith always wins, and finally one day when he beats Jerry 21 to 10, Jerry throws down his paddle and says that's it. There's no sense in his playing ping-pong anymore because he always loses.

He and Keith argue, Keith saying he should keep trying, Jerry saying you don't know what it feels like to lose all the time. Keith says, "You don't want me to think you're a poor sport, do you?" Jerry says it's not being a poor sport; it's just no fun for him when he never wins. Keith says, "Think about me. If you won't play with me, where am I going to play? No one else has a ping-pong table." They argue louder and louder, and Jerry's 11- or 12-year-old sister, Jean, and her friends, Lisa and Ellen, come in to see what's the matter. When the boys tell Jean, she says she can see that they both have a point. Why don't they not play ping-pong with each other for a little while, and she will let Jerry practice with her. Then maybe when he gets better, he could try playing with Keith again. At first Jerry says that wouldn't do any good. Finally, Jean suggests that maybe it's time to try playing with Keith again. Jerry says he doesn't think he's good enough and he doesn't want to lose. Jean says he'll never know if he doesn't try. So they play.

At the beginning of the game, Jerry says that if he loses this time, he'll give up ping-pong for good. Keith claims he's out of practice, says Jerry really has gotten a lot better. Jerry wins and is all excited, but Lisa says, "Wow, Keith, you sure didn't do very well." Jerry stops leaping around and says, "You were just out of practice, right? You didn't let me win, did you?"

After the participant reads the above story to themselves they are asked a number of standardised questions designed to assess each issue. Some questions are mandatory while others can be used at the interviewer's discretion if more clarification is required.

The issue of *conceptions of subjective reactions and their relation to each other* (or *subjectivity*) considers an individual's understanding of the covert properties of others. For example, at Stage 0, overt behaviour and physical experience are believed to define subjective experience and psychological states rather than the other way around. At Stage 1, there is difficulty understanding that individuals can have more than one thought, feeling or motive toward a social situation at a time. Conflicting orientations within one individual are recognised at Stage 2, with a further understanding that overt appearance can differ from inner-self. At stages 3 a third person conception emerges and the subjective self can be observed and reflected upon from the perspective of others, while Stage 4 allows for the integration of Stage 3 concepts (for example, the understanding that new psychological states can emerge from mixed emotions and states - e.g., ambivalence). An example of questions assessing this issue include, "If Jerry is smiling after finding out that Keith let him win does that mean he is happy?" "Is a person always happy when you

see him smiling?" "Could a person look happy on the outside but be sad on the inside?" "How is that possible?"

The issue of *self-awareness* is defined by conceptions of persons being able to observe the feelings/intentions of self and others with differing levels of intricacy and self-reflection. The individual begins with little understanding of self-awareness (Stage 0), taking the thoughts, feelings and motives of others at face value with limited capacity to understand that others can hide their feelings (Stage 1). The understanding that feelings can be hidden is assessed with the question, "*Suppose Jerry finds out that Keith let him win and he says to Keith, "I never cared about ping-pong anyway." Why might he say something like that?*" At Stage 2 the child has some sense of self-awareness in that he/she can reflect on their subjective experience and fool the self, but only by not paying attention to and/or forgetting their inner experience. The question "*Could Jerry fool himself into thinking he didn't care about the game? How could he do that?*" assesses the child's ability to use different perspectives in considering their subjective experience. At Stage 3, a third-person perspective emerges, allowing the individual to observe and reflect upon their subjective experience from an observer perspective. However, this occurs at one level – conscious awareness (e.g., a person can only fool themselves if they consciously decide to). An understanding of the unconscious is recognised at Stage 4, allowing the individual to attribute overt behaviours to psychological processes beyond a person's own awareness.

The issue of *personality* considers the participant's understanding of the traits and motives that characterize each individual. Moving through the stages personality is understood in terms of physical characteristics (Stage 0), abilities and skills (Stage 1), feelings or mood (Stage 2) and a stable set of character traits (Stage 3). At Stage 4,

personality is understood as an amalgamation of character traits and values, which can present differently depending on the situation.

Finally, the issue of *personality change* considers the conceptions of fluidity of personality across time and situation, and often occurs parallel to the *personality* stages. In the earlier stages, personality change is understood in terms of physical growth (e.g., getting bigger; Stage 0), acquisition of new skills (Stage 1), and changing of habits through the intended adjustment of moods and motives (Stage 2). At Stage 3 a distinction is made between personality and habits, and personality is considered relatively stable, whereas Stage 4 allows recognition for the many changes that may occur in personality.

Scoring.

Recorded interviews are transcribed and each issue-concept is given a single stage score that reflects the highest reliable stage identified. For example, the issue *personality*, Stage 2, is associated with 3 concepts that indicate an understanding that personality is represented by interpersonally-directed actions, moods (i.e. opposed moods signify personality conflict), and/or underlying motives that are controlled by the individual. If the participant demonstrates Stage 2 conceptions 75% of the time then the issue is scored as indicative of Stage 2. This same scoring method is then used for all the remaining issues. Once each of the four issues (subjectivity, self-awareness, personality and personality change), are given a stage score they are then averaged to compute an overall average score. The Global Score allows for an estimate of the perspective-taking stage at which the child is functioning (see Selman et al., 1979; Selman, 1980). This average score can be used to apply a Global Stage Score using the following method (Selman et al., 1979):

> 'Compute the Global Stage Score which is either a pure or major/minor Stage based on the subject's Average Issue Score. Basically, a subject receives credit for having a minor global stage if the major global stage (n) is exceeded by .25 to .49 of a Stage. From .50 to .75 the major stage is the higher of the two in question (n + 1) with the minor stage (n) being

the lower. A pure Stage is given for scores from (n) .76 to n + 1+) .24.' (pg. 351)

Both the average and/or global score can be used for analyses depending on the research question being proposed and the type of analysis. For example, Selman et al. (1979) explained that global stage scores may be preferable when measuring a specific social behavior. Alternatively, average scores may provide a more accurate representation of perspective taking level as minor differences between scores will not be amplified by the Global Score categorization process (e.g., an average score of 2.74 will be categorized as 3(2), whereas an average issue score of 2.75 will be categorized as 3). Comparison between the global stage score and average scores are discussed further in the results section, and the group of scores used have been noted before each analysis.

Procedure

After approval was granted from Deakin University Human Research Ethics Committee, the Department of Education and Early Childhood Development (DEECD), and the Catholic Education Office Melbourne (CEOM), the principals of 120 Primary and 70 Secondary schools in Eastern, Northern, Southern and Western Metropolitan Melbourne were contacted via post and provided with a summary of the study's objectives and procedure, along with an invitation to participate. Principals were then contacted by phone and asked whether their school would like to participate in the project. During each phone call principals were also given the opportunity to ask further questions about the project and to be sent a copy of the questionnaires and interview to be used in the study.

Schools whose principals agreed to participate ($N = 7$) were then visited by the researcher and appropriate aged students were given plain language statements and consent forms to read and take home to parents. The plain language statement had separate sections for the child and parent to read, which offered the same information but differed in use of age appropriate language. Students who completed a consent form, and whose

parent completed a consent form, returned the forms to their school. Students partaking in the study then met with the researcher who explained the study and the requirements of them in more detail. Students were informed of their right to opt out of the study at any stage. At each school, the questionnaire was completed by the participant first, followed by the Social Understanding Interview. Each student completed the questionnaire individually to ensure confidentiality, and the researcher was available to answer questions about the questionnaire during this time. The questionnaires were presented in a set booklet form and remained constant across schools. The Social Understanding Interview was conducted in a private room located at the school. No-one but the student and researcher were present during the interview. All interviews were digitally recorded for later transcription and coding. All data were collected between the months of March 2013 and August 2014.

Results

Data screening.

Missing values analysis.

Preliminary data screening revealed one case (Case 23) with extreme missing data (approximately 35%). This case was removed from the analyses. Three items from the Pubertal Development Scale contained high levels of missing data (19%, 6.9%, and 8.8%), with all other remaining variables having less than 5% missing data. Of the missing PDS items, only 3 cases had data missing from 3 PDS items, with the remaining cases having responses missing from 2 items or less only. Missing Values Analysis indicated that data was Missing Completely at Random (MCAR; $X^2 = 477.477$, $df = 436$, $p = .083$), therefore Expectation Maximisation was used to replace missing values in the

dataset. This technique is a more sophisticated technique of data replacement than mean substitution and more objective than using prior knowledge (Tabachnick & Fidell, 2013).

Screening for univariate and multivariate outliers.

Data were then screened for univariate outliers within groups, using a z score criteria of ±3.29. Two univariate outliers were identified, Case 24 who had a BMI substantially higher than other participants (BMI of 49), and Case 44 whose body dissatisfaction score was substantially higher than other participants (body dissatisfaction score of 45; BMI of 21). Case 24 was removed from further analyses, as a BMI of 49 represents extreme obesity, which is seen in only a very small percentage of the population (ABS, 2012; National Institute of Health, n.d.). The removal of this case does not reduce the generalizability of results (Tabachnick & Fidell, 2013). Conversely, Case 44 was retained as body dissatisfaction represents a key variable in the present study. Data were then screened for multivariate outliers using Mahalanobis Distance. Seven IV's were entered in the analysis, yielding a critical Mahalanobis value of 24.32 at the $p<0.001$ level. No multivariate outliers were identified for the entered variables.

Assumptions of normality.

The assumption of normality was assessed through an examination of absolute skew and kurtosis. Following extensive Monte Carlo testing of the effects of skew and kurtosis, Curran, West and Finch (1996) concluded that absolute skew scores within the range of -2.0 to +2.0, and kurtosis scores within the range of -7.0 to +7.0, are unlikely to distort the results. No kurtosis scores were found to be outside this range. However, body dissatisfaction had a positive skew that exceeded these boundaries ($z = 3.867$), and BMI had a positive skew that exceeded these boundaries ($z = 2.529$), indicating non-normal distributions. Square root transformations were conducted on the BMI variable, with

logarithmic transformation conducted on the body dissatisfaction variable. Subsequent analysis of absolute skew and kurtosis scores indicated that body dissatisfaction and BMI no longer violated the assumptions of normality following transformation. Analyses were conducted using both transformed and untransformed values. As both methods yielded similar results, the untransformed results have been reported for ease of understanding. Where minor differences were identified in the pattern of results, the transformed data have been reported and this has been noted.

Reliability analyses.

The reliabilities of the measure for body dissatisfaction was analysed within the grouping variable of perspective-taking (Stages 1, 2(1), 2, 2(3), 3(2), 3), given that body dissatisfaction is expected to vary according to developments in social understanding. It follows that based on these developments the consistency, or rather coherency, with which participants answer items will vary within this levels of analysis. Measures of reliability (Cronbach's alpha) for the Body Dissatisfaction Scale are provided below for the sample as a whole, and then within perspective taking stages. Stages 1(0), 1(2), 3(4) and 4(3) did not yield a measure of reliability, and are therefore not reported, as each stage contained 1 participant or less. Measures of reliability (Cronbach's alpha) for pubertal development and social comparison frequency are provided for the sample as a whole, as these measures are not expected to vary with level of social understanding. Scales with reliability values equal to or above .70 were deemed to be adequate (Cicchetti, 1994).

Body Dissatisfaction Scale.

Reliability for the body dissatisfaction scale was consistently high across the sample and within perspective taking stages. More specifically, the reliability co-efficient was excellent across the entire sample ($\alpha = .91$). Reliability was also consistently high

across perspective taking stages, Stage 1 (α = .90), Stage 2(1) (α = .84), Stage 2 (α = .91), Stage 2(3) (α = .90), Stage 3(2) (α = .92) and Stage 3 (α = .94).

Social comparison frequency and pubertal development.

The Pubertal Development Scale also demonstrated adequate reliability (α = .73). The social comparison frequency scale did not reach a reliability value of .70 or above, however this is a psychometrically validated scale which showed moderate reliability in this sample (α = .66).

Preliminary analyses.

Perspective taking and age.

Table 4.2 provides summary data for perspective-taking and age. Of note is that the cell sizes across age groups were quite small when broken down by perspective taking stage. Therefore, analysis within, and comparison between, each of the age groups originally proposed in Chapter 4 (e.g., 8-10, 11-12 and 12-15 years of age) were deemed inappropriate. Therefore, comparisons across perspective taking stages were analysed independent of age group in subsequent analyses. Given that the cell sizes for perspective taking are also small in some cases ($N < 5$), stages were grouped accordingly when analysed in relation to the dependent variables. The details of each grouping are outlined in subsequent analyses.

Table 4.2

Perspective Taking By Age Group

	Age Group			
	8-9.11	10-11.11	12-15	
PT Stage	N (Percentages)			Total
Stage 1(0)	1 (100%)	0	0	1
Stage 1	3 (100%)	0	0	3
Stage 1(2)	0	1 (100%)	0	1
Stage 2(1)	3 (30)	6 (60)	1 (10%)	10
Stage 2	5 (12%)	28 (68%)	8 (20%)	41
Stage 2(3)	3 (14%)	12 (57%)	6 (29%)	21
Stage 3(2)	2 (29%)	3 (42%)	2 (29%)	7
Stage 3	0	5 (31%)	11 (69%)	16
Stage 4(3)	0	0	1 (100%)	1

The age configuration within each major and minor stage provides a test of the structural qualities of perspective taking. Specifically, lower levels of perspective taking should be predominant in younger participants, with a trend towards higher levels of perspective taking as age increases. In this sample, 75% of individuals with a perspective taking major score of 1 are from the youngest age group (8 to 10 years); whereas 58% of individuals with a perspective taking major of 3 or above are from the oldest age group (12 to 15 years). This pattern is consistent with and satisfies a structural model of cognitive development (Inhelder & Piaget, 1958; Selman, 1980).

Perspective taking, social comparison frequency, body dissatisfaction and control variables.

Table 4.3 presents a summary of the descriptive statistics for all of the variables included in the current study. The table presents the means and standard deviations of each variable, in addition to the means of standard deviations of each variable across each major perspective taking stage. As only one participant recorded a major stage 4 score, this case was absorbed into the major stage 3 scores.

Table 4.3

Means (standard deviations) for Social Comparison Frequency, Body Dissatisfaction and Control Variables Across Perspective Taking Stages.

	Means (standard deviations)				
Perspective taking stage	Stage 1	Stage 2	Stage 3	Total	Range
N	5	72	24	101	
Social comparison frequency	4.40(3.05)	5.03(2.56)	4.13(2.01)	4.78(2.47)	0-10
Body dissatisfaction	31.40(6.77)	36.78(6.90)	33.91(8.70)	35.83(7.46)	9-45
Body Mass Index	17.45(3.17)	18.55(3.09)	18.87(2.87)	18.57(3.03)	12-27
Pubertal development	11.67(1.87)	10.53(3.12)	11.41(3.36)	10.80(3.13)	5-20

Correlates of perspective taking, social comparison frequency, body dissatisfaction, pubertal development, age and BMI.

Correlations were calculated between body dissatisfaction, social comparison frequency, average perspective taking scores and Global perspective taking scores. Because BMI and pubertal development have been consistently linked to body dissatisfaction, these variables were also included in the analyses. Table 4.4 summarises the results of these analyses.

Table 4.4

Correlations Between Social Comparison Frequency, Body Dissatisfaction, Perspective Taking (global and averages), BMI and Pubertal Development.

	Age	BD	SCF	PT_AV	PT_GLB	BMI
Age	1					
Body Dissatisfaction (BD)	.163	1				
Social comparison frequency (SCF)	.142	.264**	1			
Perspective taking (average) (PT_AV)	.457**	.004	-.002	1		
Perspective taking (global) (PT_GLB)	.453**	.028	-.002	.974**	1	
Body Mass Index (BMI)	.341**	.150	-.005	.129	.115	1
Pubertal Development (PD)	.410**	.333**	.210*	.084	.080	.243*

Note: $N = 101$; *p<.05, **p<.01. Untransformed variables have been used here so that the true direction of the relationships can be considered

Table 4.4 indicates that perspective taking and age are significantly, positively correlated. However, no significant relationship exists between age and body dissatisfaction, resulting in only partial support for hypothesis 1. In support of hypothesis 2, a small positive correlation exists between social comparison frequency and body dissatisfaction, whereby higher frequency of social comparisons is related to higher levels of body dissatisfaction. However, contrary to expectations, perspective taking did not share a significant relationship with body dissatisfaction, indicating a lack of support for hypothesis 3. Conversely, a moderate positive correlation was found between body dissatisfaction and pubertal development, in that higher scores on pubertal development are related to higher body dissatisfaction. Pubertal development is also significantly positively correlated with social comparison frequency and BMI, however in both cases the strength of the relationship is weak. Finally, Global perspective taking and average perspective taking scores share a strong significant correlation, providing support for the use of the variables interchangeably depending on the type of analyses.

Group difference developmental hypotheses.

Gender differences.

Table 4.5 presents the scores by gender for all of the variables that will be used in the main analyses.

Table 4.5

Means (SD's) for Age, Body Dissatisfaction (BD), Social Comparisons (SCF), Perspective Taking (PT), BMI & Pubertal Development (PD) Across Gender.

	Age	BD	SCF	PT	BMI	PD	*N*
Males	11.68(1.57)	17.49(5.86)	4.57(2.38)	2.16(.57)	18.83(2.45)	10.06(2.87)	39
Females	11.20(1.43)	18.60(8.32)	4.92(2.54)	2.19(.42)	18.40(3.35)	11.26(3.22)	62

A chi square test of independence was performed to examine the relationship between gender and average perspective taking stage. The relation between these variables was not significant, χ^2 (8, N = 101) = 8.33, p = .40, indicating no association between gender and average perspective taking stage.

Contrary to the expectations proposed in hypothesis 4, a one-way analysis of variance (ANOVA) indicated that there were no statistically significant differences between males and females on average perspective taking scores (F[1, 99] = .089, p = .766), social comparison frequency (F [1, 99] = .474, p = .493) or body dissatisfaction (F [1, 99] = .530, p = .468). Furthermore, no significant differences were found between males and females on BMI (F[1,99] = .462, p = .498), pubertal development (F[1,99] = 3.620, p = .060) and age (F[1,99] = 2.063, p = .154).

Separate correlations for males and females were calculated between body dissatisfaction, social comparison frequency, average perspective taking scores and Global perspective taking scores. Because BMI and pubertal development have been consistently linked to body dissatisfaction, these variables were also included in the analyses. Table 4.6 and 4.7 summarise the results of these analyses.

Table 4.6

Correlations Between Social Comparison Frequency, Body Dissatisfaction, Perspective Taking (global and averages), BMI, Age and Pubertal Development for Males.

	Age	BD	SCF	PT_AV	PT_GLB	BMI
Age	1					
Body Dissatisfaction (BD)	.057	1				
Social comparison frequency (SCF)	.309	.488**	1			
Perspective taking (average) (PT_AV)	.595**	-.074	.007	1		
Perspective taking (global) (PT_GLB)	.607**	.009	.065	.986**	1	
Body Mass Index (BMI)	.372*	-.086	.127	.111	.093	1
Pubertal Development (PD)	.442**	.305	.221	.052	.095	-.082

Note: $N = 39$; *p<.05, **p<.01. Untransformed variables have been used here so that the true direction of the relationships can be considered

Table 4.7

Correlations Between Social Comparison Frequency, Body Dissatisfaction, Perspective Taking (global and averages), BMI, Age and Pubertal Development for Females.

	Age	BD	SCF	PT_AV	PT_GLB	BMI
Age	1					
Body Dissatisfaction (BD)	.239	1				
Social comparison frequency (SCF)	.056	.169	1			
Perspective taking (average) (PT_AV)	.352**	.047	-.012	1		
Perspective taking (global) (PT_GLB)	.326**	.040	-.060	.960**	1	
Body Mass Index (BMI)	.326**	.233	-.054	.153	.142	1
Pubertal Development (PD)	.457**	.337**	.191	.103	.068	.402**

Note: $N = 62$; *p<.05, **p<.01. Untransformed variables have been used here so that the true direction of the relationships can be considered

Table 4.6 and 4.7 indicate that perspective taking and age are significantly, positively correlated for both genders. However, no significant relationship exists between age and body dissatisfaction for either gender. In partial support of hypothesis 2, a moderate positive correlation exists between social comparison frequency and body dissatisfaction for males, whereby higher frequency of social comparisons is related to higher levels of body dissatisfaction. In contrast, the weak relationship between social comparison frequency and body dissatisfaction for females is not significant. The

difference between the male and female correlations between social comparison and body dissatisfaction was significant, Z = 1.7154, p<.05. Contrary to expectations, perspective taking did not share a significant relationship with body dissatisfaction for either males or females, indicating a lack of support for hypothesis 3. Conversely, a moderate positive correlation was found between body dissatisfaction and pubertal development for females, in that higher scores on pubertal development are related to higher body dissatisfaction. No significant correlation was found for males. Despite this the different between the correlations was not significant, Z = 0.1687, p = 0.4330. Pubertal development is significantly positively correlated with BMI for girls only, and the strength of the strength of the relationship is moderate. In contrast, the correlation between pubertal development and BMI is very weak and not significant for males, and the difference between the male and female correlation is significant, Z = 2.4031, p = 0.0081. Finally, Global perspective taking and age shared a significant positive relationship for both genders, however the difference in correlations was significant, Z = 1.7297, p = <.05. Global perspective taking scores and average perspective taking scores share a strong significant correlation for males and females, however the difference between the correlations is significant, Z = 2.1532, p = <.01.

Perspective taking, social comparisons and body dissatisfaction.

In testing hypothesis 5 - whether body dissatisfaction and social comparison frequency would differ across perspective taking stages - a one-way MANCOVA was conducted. MANCOVA is recommended when there are multiple dependent variables to protect against type 1 error (Tabachnick & Fidell, 2013). Prior to running the MANCOVA, perspective taking scores were grouped based on major scores, and frequencies were run to determine whether adequate numbers were present in each group

to allow for analysis. A requirement of MANOVA analyses is that all cells have a greater number of cases than dependent variables (Tabachnick & Fidell, 2013). The first three major perspective taking stages included adequate numbers (Stage 1, N = 5; Stage 2, N = 72, Stage 3, N = 23), however only one participant had a Stage 4 score. Given that third-person perspective taking is the focus of the current study, and this ability begins to develop at Stage 3, the single Stage 4 score was absorbed into the Stage 3 group on the basis that this group would represent participants who had the third person perspective taking ability. The new grouped variable met the assumption of normality. As outlined by Selman et al. (1979), Global Stage scores may be preferable to use in analyses when predicting a specific type of social behaviour. Furthermore, MANCOVA analysis allows for the exploration of effect across groups, which cannot be achieved when using the average perspective taking scores.

A One-Way multivariate analysis of covariance (MANCOVA) was performed with two dependent variables: Body Dissatisfaction and Social Comparison Frequency. Adjustment was made for two covariates, pubertal development and BMI, as scores on body dissatisfaction have been found to vary as a function of these two constructs, although there was no association between BMI and body dissatisfaction in these data. Covariates were judged to be adequately reliable for covariance analysis. Gender was not included as a covariate because between group differences were not identified in this sample. Perspective taking global stage was entered as the independent variable, with scores within the variable grouped into Stages 1, 2 and 3. The total number of participants included in the analyses was 101.

Contrary to expectations, the MANCOVA was not significant, Wilks' $\lambda = .910$, $F(4, 190) = 2.29$, $p = .061$, partial $\eta^2 = .045$, indicating greater within-group than between-

group differences. Table 4.8 summarises the univariate *F* values for the two dependent variables.

Table 4.8

Multivariate Analysis of Covariance (MANCOVA) for Perspective Taking Stages on Measures of Social Comparison Frequency and Body Dissatisfaction, After Controlling for BMI and Pubertal Development.

Dependent variable measures	*F*	*p*	Effect size
Body dissatisfaction	1.72	.184	.035
Social Comparison Frequency	1.87	.159	.038

Note: $N = 101$

As Table 4.8 demonstrates, the main effect of perspective taking stage on body dissatisfaction was not significant. The covariate BMI was unrelated to body dissatisfaction, $F(1,101) = .749$, $p = .389$, partial $\eta^2 = .008$, whereas the covariate pubertal development was related to body dissatisfaction, $F(1,101)$, $p = <.01$, partial $\eta^2 = .083$. Similarly, Table 4.8 shows that the main effect of perspective taking stage on social comparison frequency was not significant. The covariate BMI was unrelated to social comparison frequency, $F(1,101) = .379$, $p = .540$, partial $\eta^2 = .004$, whereas the covariate pubertal development was related to social comparison frequency, $F(1,101)$, $p = <.05$, partial $\eta^2 = .060$. It appears that variations in body dissatisfaction and social comparison frequency are better accounted for by pubertal development rather than perspective taking stage or BMI. The η^2 effect sizes shown in Table 4.8 indicate small effects on measures of social comparison frequency and body dissatisfaction. Around 4% of the variance in body dissatisfaction and social comparison frequency can be explained by perspective taking stage.

Social comparison frequency and perspective taking in the prediction of individual body dissatisfaction.

To further examine the relationship between social comparison frequency, perspective taking and body dissatisfaction proposed in hypothesis 5, a hierarchical multiple regression was conducted. As no significant results were found between these three constructs when using global stage scores, regression was conducted to allow the use of average perspective taking scores. Prior to conducting a hierarchical multiple regression, the relevant assumptions of this statistical analysis were tested. The sample size of 101 was deemed adequate given only two independent variables were included in the analysis (Tabachnick & Fidell, 2013). The assumptions of singularity and multicolinearity were also met as pubertal development and social comparison frequency were not highly correlated (see Table 4.4). Extreme univariate outliers identified in the initial data screening were removed (as described earlier in this chapter). An examination of the Mahalanobis distance scores indicated no multivariate outliers. The original regression model included BMI and average perspective taking stage, however neither of these variables correlated significantly with body dissatisfaction (see Table 4.4), thus violating the assumption of linearity. As such, BMI and perspective taking stage were not included in the final analyses. The assumptions of normality and homscedasticity were not satisfied as this would have involved using the transformed body dissatisfaction variable and thus violating the assumption of linearity. Therefore, the original body dissatisfaction variable was used. Given that the assumption of normality is violated in the current analyses, results should be treated with caution.

A two stage hierarchical multiple regression was conducted with Body Dissatisfaction as the dependent variable. Pubertal development was entered at stage one of the regression to control for the impact of pubertal status on body dissatisfaction

outcomes. Social comparison frequency was entered at stage 2. Intercorrelations between the multiple regression variables were reported in Table 4.4 and the regression statistics are in Table 4.9.

Table 4.9

Summary of Hierarchical Regression Analysis for Variables Predicting Body Dissatisfaction

Variable	β	*t*	sr^2	*R*	R^2	ΔR^2
Step 1				.33	.11	
Pubertal development	.33	3.52**	.11			
Step 2				.39	.15	.04
Pubertal development	.29	3.05**	.08			
Social comparisons	.20	2.13*	.04			

Note: $N = 101$; *$p<.05$, **$p<.01$

The hierarchical multiple regression revealed that at stage one, pubertal development contributed significantly to the model, $F(1,99) = 12.37$, $p<.01$, and accounted for 11.1% of the variation in body dissatisfaction. Introducing social comparison frequency explained an additional 3.9% of variation in body dissatisfaction, and the change in R^2 was significant, $F(1,98) = 4.52$, $p<.05$. When both independent variables were included in stage two of the regression model, both were significant predictors of body dissatisfaction. The most important predictor of body dissatisfaction was pubertal development, which uniquely explained 8% of the variation in body dissatisfaction. Together the two independent variables accounted for 15% of the variance in body dissatisfaction.

Given that the above findings only provide partial support for the proposed hypotheses, and no relationship was found between perspective taking and body dissatisfaction, the moderation model proposed in Figure 4.1 as an exploratory hypothesis was not tested. In addition, separate hierarchical regressions were not conducted for each gender as both the male and female correlations revealed an inadequate number of significant relationships to meet the prerequisites for hierarchical regression. Further discussion of the above findings is included in Chapter 5.

Chapter 5: Discussion

The primary aim of the current study was to explore the socio-cognitive changes that occur throughout middle-childhood and preadolescence, and how they relate to body dissatisfaction. This is an important issue given the high rates of body dissatisfaction identified in adolescent populations, and the many psychopathological outcomes that are linked to poor body image including depression, anxiety and eating disorders (Botta, 1999; Durkin & Paxton, 2002; Durkin et al., 2007; Paxton et al., 2006; Pon et al., 2004; Shroff & Thompson, 2006; Stice et al., 2001; Stice & Whitenton, 2002). Furthermore, limited research exists exploring the relationship between the above constructs in the age group targeted in this study, despite the acknowledgement of this age period as key to the development of social perspective taking, social comparison engagement and body dissatisfaction (Blowers et al., 2003; Clark & Tiggemann 2008; Fraser et al., 2010; Holt & Ricciardelli 2002; Selman, 1980; Selman et al., 1979; Tiggemann & Wilson-Barrett, 1998; Truby & Paxton, 2002). It was hypothesised that engagement in social comparisons would relate to heightened levels of body dissatisfaction. It was also proposed that the later stages of social perspective taking, which allow for third person perspective taking, would be associated with higher levels of body dissatisfaction. More specifically, taking into account the perspectives of others was argued to be a core mechanism by which social comparison engagement is associated with body dissatisfaction. Therefore, it was hypothesised that engagement in social comparisons pertaining to physical appearance and physical ability would be related to body dissatisfaction, while different levels of social perspective taking were anticipated to moderate this relationship, as depicted in Figure 4.1 (Chapter 4).

A number of hypotheses were also developed regarding the trajectory of social perspective taking, social comparison engagement and body dissatisfaction across age

groups, in addition to hypotheses regarding gender differences that may present when considering rates of body dissatisfaction. Information pertaining to participants' pubertal development and BMI's were also collected and controlled, with the expectation that they would relate to body dissatisfaction given that both of these factors have been found to consistently influence rates of body dissatisfaction in past research (Clark & Tiggemann, 2008; Holt & Ricciardelli, 2002; Ohring et al., 2002; Paxton et al., 2006; Ricciardelli et al., 2000; Smolak, 2011). These interrelated hypotheses allow for the analysis of the potential social processes, cognitive developments and physical changes that relate to the development of body dissatisfaction. The findings relating to these issues are discussed further in the current chapter and the possible implications for research in this area are discussed. Limitations of the current study are also identified, and suggestions for future research in the area are put forth.

The Developmental Trajectory of Body Dissatisfaction

Prevalence rates of body dissatisfaction across age groups: Review and interpretation of the current findings.

The level of body dissatisfaction experienced by participants – as assessed by self-reporting dissatisfaction in nine different areas of one's physical appearance - was expected to be higher with each ascending age group. This outcome was anticipated, in part, due to the changes in social perspective taking stage that occur throughout childhood, preadolescence and adolescence (Selman, 1980). However, while higher levels of perspective taking were seen in older participants, the same was not seen in the relationship between age and body dissatisfaction. The current findings showed that body

dissatisfaction did not significantly increase across the broad age range studied (8 to 14 years inclusive) for either males or females.

The lack of a relationship between age and body dissatisfaction in the current study is in contrast to previous research discussed in Chapter 1, which documents the rates of body dissatisfaction in middle childhood as being between 31% and 55% for males and females (Clark & Tiggemann, 2008; Truby & Paxton, 2002), while rates in adolescence have been documented as being around 24% to 88% for females and 12% to 84% for males (Neumark-Sztainer et al., 2002; Presnell et al., 2003; Ricciardelli & McCabe, 2001a; Stice & Whitenton, 2002). Although the lower estimates of previous studies paint a picture of inconsistency, the upper level estimates suggest that body dissatisfaction occurs at much higher rates during adolescence, than during middle childhood. In contrast, retrospective analysis of the current data indicate that, in total, only 1.6% of female participants and 0% of male participants experienced high rates of body dissatisfaction, as signified by average responses of 'a bit unhappy' or 'very unhappy' on the body dissatisfaction questionnaire. This suggests that the sample had very low rates of body dissatisfaction, and therefore there as little chance for variability with age to be identified..

The absence of a relationship between age, and perspective taking stage, and body dissatisfaction in the current study raises questions regarding the age range and cognitive-developmental period during which body dissatisfaction is most likely to increase. While the majority of research in this area highlights preadolescence as an increasingly important age period in the development of body dissatisfaction (Gardner et al., 1997; Thelen et al., 1992; Tiggemann & Wilson-Barrett, 1998; Truby & Paxton, 2002), the current findings indicate that there is no significant difference between rates of body dissatisfaction experienced at 8 or 9 years of age and at 13 or 14 years of age. This is more representative of previous studies that have found consistency across age groups exist when low levels of

body dissatisfaction are found, as highlighted by the percentiles outlined in the above paragraph. In a similar vein, participants in the current study recorded relatively low levels of body dissatisfaction and this may in part explain the consistency across age groups.

The discrepancies in rates of body dissatisfaction in the current sample and in previous research, may be representative of the many varying methodologies and measures used in the exploration of body dissatisfaction. For example, while previous studies (Levine et al., 1994; McArthur et al., 2005; Tiggemann & Pennington, 1990; Truby & Paxton, 2002) have used pictorial measures to assess body dissatisfaction in child, adolescent and adult samples, the use of a questionnaire in the current study may have provided a greater level of depth into the understanding of rates and types of body dissatisfaction. This is supported by a study of 5-8 year old girls and body image concerns by Dohnt and Tiggemann (2006) discussed in Chapter 1, who found that participants reported having a larger than ideal figure, but did not report feeling 'dissatisfied' with their appearance. This indicates that when prompted, individuals may desire a smaller figure, but this does not necessarily represent body dissatisfaction. Alternatively, the children in the study may have been too young to fully understand the concept of body dissatisfaction. In addition, the use of a pictorial scale requires participants to compare themselves to those in the images, which may be creating an immediate rise in body dissatisfaction due to the comparison that must first occur to reach a response. Previous research indicates that viewing images of an 'ideal' body representation can result in immediate decreases in body satisfaction (Baird & Grieve, 2006; Dalley, Bunnk & Umit, 2009; Dittmar & Howard, 2004; Durkin & Paxton, 2002; Durkin et al., 2007; Hargreaves & Tiggemann, 2009; Sohn, 2010; Stice et al., 2001). In fact, artificially created social comparisons and viewing of the 'ideal' body in an experimental setting, as opposed to those which are naturally occurring, are believed to have negative, short term impacts for

body dissatisfaction (Hargreaves & Tiggemann, 2009). Therefore it is possible that a measure which presents images of normal and underweight individuals to participants, could result in an overrepresentation of the true levels of body dissatisfaction in those participants.

In contrast, the body dissatisfaction measure in the current study did not require children to view any images of 'ideal figures'. Furthermore, questions pertaining to engagement in social comparisons were presented *after* those relating to body dissatisfaction, to ensure that the constructs were considered separately. This may account for the relatively lower levels of body dissatisfaction seen in the current sample. Such varying research methods and measures used in each study, raise ongoing questions about the broad nature of body dissatisfaction, what it actually represents, and how it can best be measured, highlighting the need for a unified view and consensus on this construct. Furthermore, Bell and Bromnick (2003) argue that increased rates of body dissatisfaction and analysis are not the result of only internal components of the individual, but are also representative of the additional and real pressures placed on children and adolescents from external sources.

While the absence of an age-effect is inconsistent with the hypothesis tested here, it links with a number of previous studies which also demonstrate the lack of an age-effect when considering body image development through childhood and adolescence (Halliwell & Harvey, 2006). While most researchers suggest that preadolescence is an important period for socio-cognitive development (Choudhury, Blakemore & Charman, 2006; Dohnt & Tiggemann, 2006; Fett et al., 2014; Lindberg et al., 2006; Pesce & Harding, 1986; Selman, 1971a; Steinberg, 2005; Surtees & Apperly, 2012), body image (Blowers et al., 2003; Clark & Tiggemann, 2008; Ricciardelli & McCabe 2001b) and both normative and disorder-based perspectives (American Psychiatric Association, 2013), this position has

been challenged in light of the current study and other research indicating that body dissatisfaction is not necessarily more frequent in adolescence than in middle childhood (Halliwell & Harvey, 2006; Kostanski, Fisher & Gullone, 2004; Martin & Gentry, 1997; Ohring et al., 2002; Rolland et al., 1997; Stice & Whitenton, 2002; Thelen et al., 1992; Tiggemann & Pennington, 1990). A more detailed examination of the research related to these discrepant views assists in the process of incorporating the current findings and clarifying areas for future research.

For example, in a sample of 507 participants, Halliwell and Harvey (2006) assessed rates of body dissatisfaction as part of a larger study exploring disordered eating patterns in male and female adolescents aged 11 to 16 years. Their findings indicated that rates of body satisfaction did not correlate with participants' age. Similarly, Stice and Whitenton (2002) conducted a longitudinal investigation on the risk factors for body dissatisfaction in girls between 11 and 15 years of age. Their results indicated that after a 1 year period, participants experienced both increases *and* decreases in body dissatisfaction, with the strongest predictors of increases being perceived pressure to be thin, thin ideal internalisation and social supports deficits. In addition, another longitudinal study found rates of body dissatisfaction actually *decreased* from early adolescence to mid-adolescence (Ohring et al., 2002). This is similar to the findings of Rolland et al. (1996) who found that more girls reported wanting to be thinner in Grades 3 and 4 than in Grades 5 and 6, indicating a potential drop in body dissatisfaction with age.

There is also evidence of the existence of gender differences in the trajectory, development and presentation of body dissatisfaction from middle childhood through to pre-adolescence and adolescence. For example, Tiggemann and Pennington (1990) found that while adolescent and adult females demonstrated a significant difference between actual and ideal figures, this was not true for males of the same age. In contrast, children

aged 9- 10 years of age in the same study all reported their current figures to be larger than their ideal – indicating gender consistency in childhood but not later stages of development. In a similar vein, Thelen et al. (1992) found no grade differences regarding body image concerns for 2nd, 4th and 6th grade boys. In contrast, 4th and 6th grade girls were found to have more body image related concerns than 2nd grade girls. However, as outlined in Chapter 1, Tiggemann and Pennington (1990) did not consider the male desire for a *larger* figure as a representation of body dissatisfaction.

Again, the variations in results seen in the above findings may be due, in part, to the many different measures used in studies exploring body dissatisfaction. While the potential issues with pictorial scales were outlined earlier in this Chapter, of those studies reviewed as part of the current project a wider variety of different measures were used to assess body dissatisfaction. These include studies utilising pictorial scales (Bedford & Johnson, 2006; Clark & Tiggemann, 2008; Dohnt & Tiggemann, 2006; Kostanski & Gullone, 1998; Rolland et al., 1997; Schur, Sanders & Steiner, 2000; Tiggemann & Wilson-Barrett, 1998), scales relating to eating disorders and more specifically 'feeling fat' as an indicator of body dissatisfaction (Botta, 1999; Durkin et al., 2007; Jones, 2004), individual items designed for the specific study (Hargreaves &Tiggemann, 2004), semi-structured interviews (McCabe et al., 2006), and finally items assessing satisfaction with individual body parts – some of which have been designed as gender specific (Mellor et al., 2010a; Mellor et al., 2013; Neumark-Sztainer et al., 2002; Ohring et al., 2002; Paxton et al., 2006; Presnell et al., 2003; Ricciardelli & McCabe, 2001a; Stice & Whitenton, 2002; Stice et al., 2001). Although each of these studies claims to be measuring body dissatisfaction, the different approaches used in doing so act to reduce the clarity of the construct and its presentation.

Alternatively, the lack of support for an age-effect found in the above studies, may signify that the most notable change in rates of body dissatisfaction occur outside of the studied age ranges. Previous studies exploring rates of body dissatisfaction indicate that older adolescence may represent a peak point in development. For example, Durkin and Paxton (2002) conducted a study examining the factors that predict vulnerability in rates of body image satisfaction amongst Grade 7 (N = 116) and Grade 10 (N = 125) girls, following exposure to idealised female media images. Even prior to exposure, Grade 10 girls recorded significantly lower levels of body satisfaction than Grade 7 girls, indicating important changes may occur in levels of body satisfaction later than the ages surveyed in the present study. Similar results were found by Jones (2004), with girls and boys in Year 10 reporting higher levels of body dissatisfaction than those in Year 7. Interestingly, those same Year 10 students displayed a slight drop in body dissatisfaction in Year 11. Moreover, Jones utilised a 9-item scale assessing satisfaction with specific body parts to determine rates of body dissatisfaction, similar to the one used in the present study, with the addition of altered versions for boys and girls.

In the current study participants were only asked to consider their own perspective of their appearance when considering body dissatisfaction and did not have to consider those of others. Perhaps questions regarding how they felt others view their physical appearance may have offered more insight into age-related socio-cognitive changes in relation to appearance that were not captured here. Although participants in the current study may not have yet internalised the perspective of others, it would be helpful to track the existence of social perspective taking in relation to physical appearance as a starting point for further studies to consider if and how this progresses over time in relation to body dissatisfaction. Having a socio-cognitive construct that connects with age is important, because age as a factor allows for the identification of which developmental

period to study. However, the findings of the current study suggest that in order to capture the age range during which significant changes in body image occur, a broader range of participants may be needed.

Control variables (BMI and pubertal development) and body dissatisfaction.

A number of other discrepancies exist between the findings of the current study and those of previous research, perhaps the most notable of which being that BMI and body dissatisfaction shared no relationship for either males or females. Again, this is in contrast to a large body of previous literature which indicates that BMI is one of the strongest predictive factors for levels of body dissatisfaction in both men and women, with higher BMI's commonly associated with increased body dissatisfaction (Clark & Tiggemann, 2007, 2008; Jones et al., 2004; Keel et al., 1997; Lunner, Wertheim, Thompson, Paxton, McDonald & Halvaarson, 2000; McArthur et al., 2005; Ohring et al., 2002; Paxton et al., 2006; Schur et al., 2000; Swami et al., 2010). Furthermore, links between BMI and body dissatisfaction have been demonstrated across age and gender. A study on the trajectory of body image in girls between 9 and 12 years of age, found that higher BMI predicted worsening body image 1 year later (Clark & Tiggemann, 2007, 2008). This relationship has also been found in adolescent girls, whereby significantly higher BMI's are found in girls with body dissatisfaction when compared to the BMIs of those who do not report body dissatisfaction (Lunner et al., 2000; Ohring et al., 2002; Paxton et al., 2006). Similarly, this effect has been found to continue into adulthood for both males and females (Haas, Pawlow, Pettibone & Segrist, 2012). However, a study by Kostanski et al. (2004) of children and adolescents, found that while body dissatisfaction shared a linear relationship with BMI for females, males reported body dissatisfaction when their BMI was either lower or higher than normal. This highlights the female focus on thinness, while the male focus is more on muscularity, rather than purely weight.

The lack of a relationship between BMI and body dissatisfaction in the current study is perhaps not surprising, given only 17% of the participant BMI's for the current study were outside of a healthy range, with less than one third of those 17% (e.g., 5% of the entire sample) falling into the obese category. This is in contrast to recent health surveys, which indicate that approximately 25% of Australian children between the ages of 5 and 17 years of age were in the overweight-obese category in 2007-8 (ABS, 2009). A potential reason that this commonly occurring rate of childhood obesity was not demonstrated in the sample of the current study, could be because participants were made privy to the focus of the study through the Plain Language Statement, and those who had current issues with weight or appearance chose not to participate due to discomfort they may feel answering questions on such topics.

The other control variable, pubertal development, did however demonstrate a positive relationship with body dissatisfaction, whereby higher rates of body dissatisfaction were related to further progression in pubertal development, however this relationship was only significant for females Therefore, even though the vast majority of children were in the normal weight to underweight category, and this did not relate to their levels of body dissatisfaction, pubertal changes did relate to higher levels of body dissatisfaction for females as was expected based on previous findings (Byely, Archibald, Graber & Brooks-Gunn, 2000; Williams & Currie, 2000). However, the pubertal level for Stage 1 participants is higher than for later stages (Table 5.3), which is in contrast to the expected relationship between age and pubertal development, and age and social perspective taking. This anomaly may be a result of the very small number of Stage 1 participants (5 in total) in the current study. Furthermore, the current study aimed to provide a more specific analysis of body dissatisfaction, beyond those provided by age, in examining the maturational factors underlying its development. While pubertal

development represents a physical maturational factor that is more specific than age, the focus of this study was on the influence of socio-cognitive factors, such as perspective taking, and its relationship with body dissatisfaction, and this is discussed later in the current chapter.

Gender Differences in Rates of Body Dissatisfaction.

It was hypothesised that gender differences would exist when considering rates of body dissatisfaction, and this would be more pronounced as age increased. However, the original proposal for data analysis, which included making gender comparisons across 3 different age groups (8-10 years, 10-12 years, 12-14 years), was not possible because of the small number of participants in each age category. Therefore gender differences were looked at across the whole group.

The findings showed that, contrary to expectations, gender differences did not exist for any of the variables measured – including body dissatisfaction. This finding is inconsistent with an extensive amount of previous research which indicates notable gender differences exist in the rates of body dissatisfaction reported by males and females, with females generally experiencing higher rates of body dissatisfaction (Gardner et al., 1999; Green & Pritchard, 2003; Halliwell & Harvey, 2006; Hargreaves & Tiggemann, 2004; Keel et al., 1997; McCabe et al., 2006; McCabe & Ricciardelli, 2001b; Mellor et al., 2010a; Neighbors & Sobal, 2007; Neumark-Sztainer et al., 2002; Pliner et al., 1990; Rolland et al., 1997; Tiggemann & Pennington, 1990; Tiggemann & Wilson-Barrett, 1998; van de Berg, Paxton, Keery, Wall, Guo & Neumark-Sztainer, 2007).

Studies also consistently indicate that women report less satisfaction with their bodies and experience larger discrepancies between their actual and ideal figures than

their male counterparts (Green & Pritchard, 2003; McCabe & Ricciardelli, 2001b; Neighbors & Sobal, 2007; Neumark-Sztainer et al., 2002; Tiggemann & Pennington, 1990). This effect is also seen across cultures, with adolescent girls in five out of six Latin American countries examined reporting significantly higher levels of body dissatisfaction than their male counterparts (McArthur et al., 2005).

Gender differences also exist with other appearance related constructs that are linked with body dissatisfaction. Halliwell and Harvey (2006) found gender differences within a group of 11-16 year olds, whereby females reported higher levels of body dissatisfaction, in addition to higher levels of peer comparison, dieting and food preoccupation, perceived pressure to lose weight and internalization of sociocultural attitudes towards appearance when compared to adolescent boys. Using qualitative analysis, McCabe et al. (2006) also found that adolescent females reported receiving many more appearance related messages than adolescent males, which may be contributing to heightened rates of body dissatisfaction. Furthermore, studies exploring the effects of exposure to idealised media images in adolescents have found that this leads to an increase in body dissatisfaction for girls but not for boys (Hargreaves & Tiggemann, 2004). Similarly, van de Berg et al. (2007) conducted a large study on adult males and females and found that women reported higher rates of body dissatisfaction than males, and females' heightened levels of body dissatisfaction were related to exposure to media images – an effect which was not seen in males. Even children and preadolescents report similar gender discrepancies, with Rolland et al. (1997) finding that 50% of girls and 33% percent of boys between the ages of 8 and 12 years old reported wanting to be thinner. Tiggemann and Wilson-Barrett (1998) assessed children's figure ratings in a sample of 7 to 12 year old boys and girls and also found that girls rated their ideal figure as smaller than their actual figure. This same effect was not seen for boys in the sample.

However, a number of the studies listed above did not account for the fact that many males may experience body dissatisfaction because they desire a *larger* figure, which is more in line with the muscular ideal (McCabe & Ricciardelli, 2001b; Phillips & de Man, 2010). When the desire for a larger body size is considered, rates of body dissatisfaction among female and males middle childhood participants (7 to 12 years old) are found to be similar (Truby & Paxton, 2002). The use of a body dissatisfaction measure in the current study that allowed participants to indicate dissatisfaction without specification of whether it be regarding desired increases or decreases in size, may explain the lack of a gender difference.

Furthermore, there have been studies on age groups similar and younger than those used in the present study which demonstrated no significant gender differences in rates of body dissatisfaction (Flannery-Schroeder & Chrisler, 1996; Gardner et al., 1997; Thelen et al., 1992; Truby & Paxton, 2002). Such findings may represent the participants' difficulty understanding the concepts being assessed, or offers insight into the age at which body dissatisfaction begins to present. Finally, it should be noted once again that the overall levels of body dissatisfaction for the current sample were quite low, and this may have also impacted the impression that a gender difference does not exist.

Body Dissatisfaction and Social Perspective Taking

It was argued that in the development of body dissatisfaction an individual requires a level of reflexive social perspective taking, which allows the individual to make inferences about another's thoughts, ideas and opinions relating to their own physical appearance. From this basis it was proposed that the development of social perspective taking, and specifically the later stages of perspective taking, would facilitate the development of poor body image, and therefore share a relationship with it. The

importance of this process in the development of body dissatisfaction has been noted indirectly in theories of objectification, appearance-based rejection sensitivity, and body consciousness (Jongenelis et al., 2014; Lindberg et al., 2006; Park, 2007; Park et al., 2009). However, to the best of the author's knowledge, this relationship had not been studied directly prior to the current project.

The ability to consider the cognitive perspectives of others is one that corresponds with Stage 3 of Selman's (1980) interpersonal understanding theory, and occurs between the ages of 10 and 15 years (Martin, 2008; Selman, 1971a; 1980). This is in contrast to Stage 2 and prior stages, at which point of socio-cognitive development children do not have a clearly established physical and subjective differentiation (Stage 0), do not yet have a sense of how others may view them (Stage 1), and are unable to conceptualise the perspectives of others.

In contrast to previous research focusing merely on the age at which children develop body dissatisfaction, the current study sought to consider a more complete socio-cognitive process –in particular third person social perspective taking – as a mechanism that contributes to rates of heightened body dissatisfaction. It was anticipated that this may, in part, account for some of the large variations in levels of body dissatisfaction seen across different age groups in previous studies (Clark & Tiggemann, 2008; Neumark-Sztainer et al., 2002; Presnell et al., 2003; Ricciardelli & McCabe, 2001a; Stice & Whitenton, 2002; Truby & Paxton, 2002), suggesting that perhaps another age-related process was involved in its development.

As anticipated, there was a positive relationship between social perspective taking and age for both males and females. This was demonstrated with the natural sequence of social perspective taking, whereby each stage occurs in a sequential ascending order

across age groups, indicating that a proportion of the participants had a level of perspective taking that would allow for third person perspective taking. This is consistent with Selman (1980) and Inhelder and Piaget's (1958) theory of cognitive development which notes the predicted progression of development from early childhood to adolescence and adulthood.

Contrary to expectations the current study did not find any support for a significant relationship between social perspective taking and body dissatisfaction in any of the analyses conducted. More specifically, the rates at which participants experienced body dissatisfaction did not differ significantly across social perspective taking stages (e.g., Stage 1, 2, 3 & 4). These findings indicate that perspective taking stage does not seem to relate to an individual's rate of body dissatisfaction. However, in an unusual development, body dissatisfaction presented at very low levels in the entire sample which may have impacted the results.

The lack of a relationship between body dissatisfaction and social perspective taking is inconsistent with the currently proposed hypothesis. However, some previous studies indicate that a heightened awareness and focus on the perspectives of others may influence aspects of an individual relating to appearance, but not necessarily body dissatisfaction. For example, Vandenbosch and Eggermont (2012) found that self-objectification, known as the internalisation of an observer's view of one's own body, was related to the internalisation of beauty ideals. Furthermore, direct links have been found between self-objectification, disordered eating behaviours, depressive symptoms, appearance self-esteem and self-worth, and appearance anxiety in women (Muehlenkamp & Saris-Baglama, 2002; Noser & Zeigler-Hill, 2014; Slater & Tiggemann, 2002; Tiggemann & Slater, 2001; Tiggemann & Williams, 2011). In a similar vein, appearance-based rejection sensitivity is related to increased consideration and acceptance of cosmetic

surgery (Calogero et al., 2010), restrictive dieting and appearance conditional self-worth in male and female adolescents (Webb & Zimmer-Gembeck, 2014), internalised media ideals in adult men and women (Park et al., 2009), and heightened sensitivity and negative misinterpretation of ambiguous commentary as well as negative affect (Park & Harwin, 2010).

In contrast, a number of studies have produced findings that challenge those of the current study. For example, Forbes, Jobe and Revak (2006) assessed levels of OBC in college women. The researchers found that the way a woman views her body from the perspective of an external observer was related to dissatisfaction with some, but not all, specific body characteristics. In this sense, it may have been useful to specify different body characteristics in the current project. Slater and Tiggemann (2010) considered body image in relation to objectification theory in Australian adolescents between 12 and 16 years of age. They found that both boys and girls in this age group displayed concerns about the way they looked (self-objectification and body shame) and also expressed concerns about how others may view them (appearance anxiety), which in turn related to disordered eating. Despite this being displayed in both boys and girls, all of these factors were more pronounced in females. Similarly, additional studies have identified links between self-objectification and body image issues in young girls (Jongenelis et al., 2014), and in adolescent boys and girls (Knauss, Paxton & Alsaker, 2008). Appearance-based rejection sensitivity has also been linked to body dissatisfaction in male and female adolescents (Webb et al., 2014).

However, it should be highlighted that the way in which perspective taking was measured in the above studies is under the umbrella of a larger concept such as OBC or appearance-based rejection sensitivity – not specifically social perspective taking. The current thesis aimed to conduct a specific exploration of the role of perspective taking and

its relationship with body dissatisfaction, and the way in which this is captured and assessed varies in some ways from the assessment of the constructs outlined above. More specifically, in Selman's perspective-taking task, the goal is simply to identify the ability of the individual to "know the other" (e.g., What is the other thinking or feeling, what do I think and feel, and how can those two perspectives be coordinated?). This approach does not assess the degree to which the self *values* the perspective of the other or takes it into account when evaluating the self. In other words, a child may be able to take the perspective of the other (Selman stage 3), but may not use that information in evaluating the self. In contrast, in the body-image self/other constructs (self-objectification, appearance-based rejection sensitivity, and objectified body consciousness), the individual cares what the other thinks, values it, and uses it to make a judgment about the self (i.e., body satisfaction level). These distinctions may account for some of the differences in findings, as while looking specifically at perspective taking allows for a greater understanding of individual socio-cognitive development, OBC and appearance-based rejection sensitivity give insight into the way perspective taking may be applied in relation to physical appearance.

A question that remains unanswered is which cognitive factors are associated with the emergence of body dissatisfaction and how they influence its development. The research above suggests that a core feature of poor body image, argued here to be one's feelings about their physical appearance, is the perceived view others have of the individual's appearance. The ability to consider the views of others is an ability that occurs before adolescence in most cases, usually in the few years preceding. However, while the cognitive mechanism of social perspective taking followed the anticipated age progression, body dissatisfaction did not show the same expected age progression. This raises additional questions about the construct of body dissatisfaction, the way in which it

presents individually and the way it is measured, rather than simply questions regarding the relationship between social perspective taking and body dissatisfaction. Before discounting the relationship that exists between these constructs, a more detailed understanding of the inconsistencies in the findings of body dissatisfaction should be established.

Furthermore, although a hypothesis was not developed around pubertal development and social perspective taking, it is interesting to note that both of these constructs shared a relationship with age. This would be anticipated as both are age-related developmental constructs that occur in a sequential order. However, pubertal development and social perspective taking do not share a relationship, highlighting that age, and so too physical changes, do not offer an adequate understanding of the more complex cognitive changes that occur at varying rates between childhood and adulthood.

To the author's knowledge, the current study is the only study to have focused directly on the complex socio-cognitive processes that may underlie or influence the development of body dissatisfaction. The current research arose from a larger, and yet still limited, foundation of research that considers the way in which others' perceived views, thoughts and ideas influence an individual's own conceptualisation of their physical appearance. The findings from this study would indicate that more advanced forms of perspective taking do not represent a key developmental mechanism of body dissatisfaction as was originally proposed. However, these findings should be treated with caution in light of the limitations discussed later in this chapter.

The Role of Social Comparisons in Body Dissatisfaction

The link between engagement in social comparisons and increased rates of body dissatisfaction is one that has been regularly demonstrated in the literature across adult and

adolescent samples (Jones, 2002; Leahey et al., 2007; Lin & Kulik, 2002; Myers & Crowther, 2009; Tiggemann & McGill, 2004; Trampe et al., 2007). The ways in which social comparisons have been assessed across different studies varies greatly, however as few studies have considered the relationship between social comparisons and body dissatisfaction in middle childhood samples, a basic self-report measure was utilised in the current study to explore this relationship.

As expected, the current findings indicate that greater engagement in social comparisons is related to increased levels of body dissatisfaction in the overall sample. However, when males and females were considered separately, body dissatisfaction was only related to social comparison frequency for males, not females. Unfortunately, the self-reported *outcomes* for participant's social comparisons could not be used in the current study due to a low response rate. Therefore the link between social comparisons and body dissatisfaction is based on the *frequency* with which they occur. The current findings suggest that higher levels of social comparison frequency relate to higher levels of body dissatisfaction, even after pubertal development is accounted for.

These findings are only partially consistent with a breadth of existing research that notes the influence of social comparisons on body dissatisfaction outcomes, and vice-versa (Blowers et al., 2003; Halliwell & Harvey, 2006; Jones, 2002; Leahey et al., 2007; Lin & Kulik, 2002; Myers & Crowther, 2009; Tiggemann & McGill, 2004; Trampe et al., 2007). Unlike the gender differences noted in the current study, previous research indicates that this effect has been found across a number of age ranges and gender, with other constructs also playing a role in the relationship. For example, a study of 7th and 10th grade males and females found that comparisons with peers and models were strongly related to body dissatisfaction (Jones, 2002). Halliwell and Harvey also examined the frequency with which male and female adolescents compared themselves to peers, and

found that social comparisons were most strongly related to body dissatisfaction among adolescents who already perceived themselves to be overweight. Similarly, Leahey et al. (2007) assessed naturally occurring appearance focused social comparisons by asking adult female participants to complete a diary entry when prompted. Results indicated that women who identified as body dissatisfied prior to the task, engaged in more comparison, and particularly upward comparisons, than body satisfied women. Finally, in contrast to the current findings, Blowers et al. (2003) found that social comparisons influenced the relationship between the internalisation of the thin ideal and body dissatisfaction in girls as young as 10 years of age. In the adolescent population, Schroff and Thompson (2006) assessed social comparisons using an 8-item questionnaire to ask females questions about the frequency and target of their social comparisons. They found that body dissatisfaction and social comparisons were related, however both variables shared a stronger relationship with internalisation of appearance messages than they did with each other.

These findings highlight that although some substantial variations exist in the way in which social comparisons have been examined, the relationship they share with body dissatisfaction transcends these differences and a relationship between the two constructs has consistently been found. Furthermore, it indicates that the relationship between the variables may occur in both directions, with exposure to social comparisons found to increase rates of body dissatisfaction (Lin & Kulik, 2002; Tiggemann & McGill, 2004), and heightened body dissatisfaction or appearance concerns resulting in increased social comparisons, and also increased negative effects of those comparisons (Leahey et al., 2007; Trampe et al., 2007). Finally, the studies outlined above indicate that other variables (e.g., internalisation of the thin ideal), play an important role in the relationship between social comparisons and body dissatisfaction, and should therefore be considered in future research. The lack of information regarding the self-reported outcome for participants

following social comparisons, and the direction of the comparison, may have contributed to the lack of a relationship between body dissatisfaction and social comparisons for females in the current study.

Social Comparisons and Perspective Taking

In order to develop an exploratory moderation model (see Figure 4.1), a relationship between social comparison frequency and social perspective taking was proposed. The exploratory nature of this model acknowledged that limited support existed for the relationship between social comparisons and social perspective taking, even though the relationships between the other variables in the model had been consistently demonstrated in previous research.

It was proposed that social perspective taking would act as a moderator in the relationship between engagement in social comparisons and body dissatisfaction. However, no relationship was found between perspective taking and social comparisons *or* perspective taking and body dissatisfaction, therefore the requirements for a moderation model were not met. This is perhaps not surprising given the above discussion regarding perspective taking and body dissatisfaction, and the lack of supporting existing evidence for a relationship between social comparisons and perspective taking. Although social comparisons represent a factor that relates to body dissatisfaction, this was only true for the males of the current study, and it stands to reason that the cognitive processes behind social comparison engagement link more closely to first person perspectives and internalisation of media ideals, as opposed to the consideration of the perspective of others. More specifically, social comparisons relate less to objective circumstances and more to an individual judging *themselves* in relation to others (Wood, 1989).

Although the majority of previous research suggests that social comparisons increase at a similar time to more advanced forms of social perspective taking (e.g., third person perspective taking), around age 10-12 years, there is also evidence that challenges this assumption. For example Butler (1998) found that social comparisons can occur in children as young as 4 years of age in relation to ability and performance, while by 8 years old children have been found to regularly compare themselves to others based on physical appearance (Holt & Ricciardelli, 2002). To the contrary, third person perspective taking was found in the current study to support the original theory and research indicating that advanced perspective taking begins at a later age, around 10 - 12 years, and develops in a sequential order (Selman, 1980).

Although the findings of the current study did not allow for the exploration of a moderation effect, they still provide useful insight into the lack of a relationship between social comparison frequency and perspective taking. More specifically, the findings suggest that the cognitive processes that exist outside of the current age range studied are more important in the employment of social comparison engagement than perspective taking ability.

General Discussion and Future Research

The findings of the current study indicate that body dissatisfaction, understood here as a negative appraisal of one's own physical appearance, does not necessarily show an age related progression, with similar levels of body dissatisfaction found across middle childhood, preadolescence and adolescence. Conversely, social perspective taking did demonstrate progress in the anticipated sequential order across age groups. As such, this research indicates that there is no clear relationship between body dissatisfaction and social perspective taking. This suggests that the way in which an individual considers and

takes on board the perceived views of others, is not related to their level of body dissatisfaction. However, the suggestion as it has been made in the current research project, puts forth the idea that a child or adolescent, once they have developed third person perspective taking abilities may then start to use this new skill to try and ascertain the views of others. However, because each individual has limited access to the opinions of others, the way in which they interpret or perceive another's opinion is likely to be in some regards, a representation of their own opinion, rather than an accurate interpretation of what the other person is thinking (Gilovich, Medvec & Savitsky, 2000; Surtess & Apperly, 2012).

Therefore, given that the vast majority of participants in this sample displayed quite low levels of body dissatisfaction, it can be suggested that they perceived others to share this favourable view of their appearance. In other words, while it was anticipated that levels of body satisfaction would be negatively impacted by perspective taking abilities, this standpoint did not account for the fact that an existing positive view of oneself may be reinforced by the development of third person social perspective taking ability. Subsequently, to truly ascertain the role of perspective taking in the development of body dissatisfaction, additional studies are needed that incorporate a longitudinal analysis and assess the way in which existing levels of body dissatisfaction/satisfaction are exacerbated or altered following the development of third person perspective taking. Furthermore, the level to which someone had internalised the media's image of the ideal body is likely to act as a mediating factor in this relationship.

While this is the first study to explore directly these issues in relation to perspective taking, they are not new. The notion of perspective taking and its role in an individual's conceptualisation of their physical appearance has been discussed in relation to the concepts of egocentrism, appearance-based rejection sensitivity and OBC

extensively in previous literature (Calogero et al., 2010; Forbes, Jobe & Revak, 2006; Gilovich et al., 2000; Jongenelis et al., 2014; Knauss et al., 2008; Park, 2007; Webb et al., 2014). Much of this literature indicates that the way in which an individual perceives and construes the perspectives of others, has a significant impact on their own view of themselves. Such research provided the foundation for the current research project and offered an opportunity to consider the direct role of perspective taking in these relationships.

A broad framework proposed in this thesis, and one which may be considered in future research, is the potential role of cognitive mechanisms that may be involved in the development of body dissatisfaction. In this model, the core construct is that of third person perspective taking and the conscious awareness of another's way of viewing the world. However, the model presented in the current thesis may be problematic in that it does not allow for other influential mediators that are likely to impact the way in which perspective taking is utilised. For example, individuals who have a heightened sensitivity to negative appraisals (Gilovich et al., 2000; McCabe et al., 2006; Wasylkiw & Williamson, 2013) are more likely to engage their third person perspective taking abilities in a way that takes ambiguous cues and applies them to the opinions of others. Alternatively, an individual with an existing positive sense of self, may enhance this sense of self-worth with the development of perspective taking, as they could attribute their own positive opinions to those of others. Therefore, self-consciousness, internalisation of body ideals and other individual cognitive processes relating to physical appearance, are likely to influence this process but have not been incorporated into the current research project. In this sense, it may also be the early non-conceptual experiences of exposure to overt physical evaluation (e.g., bullying, praise) that inform later understanding and conceptualisation of the opinions of others (Bell & Bromnick, 2003; Fredrickson &

Roberts, 1997; Vandenbosch & Eggermont, 2012). Accounting for these factors in future research will allow a much more thorough analysis of the factors that contribute to body dissatisfaction.

At the same time, it is important to make the distinction between forms of perspective taking, and situations in which they are likely to be elicited, as opposed to those in which first person perspective are likely to be engaged. For example, in cases of open criticism or evaluation, an individual does not have to infer the opinions of others as they are offered for them, with a number of studies finding links between appearance-based teasing and body dissatisfaction (Gardner et al., 1997; Lunner et al., 2000). However, this does not represent a situation in which perspective taking abilities would have to be utilised. For this reason, assessing and controlling for the presence of appearance related teasing is also recommended for future studies.

While the role of engagement in social comparisons was significantly related to body dissatisfaction in the current study, it still only accounted for a small percentage of variance once pubertal development was accounted for. Furthermore, separate gender analyses showed that the relationship between social comparisons and body dissatisfaction was only significant for males. This would suggest that there are still a number of additional factors that need to be explored further. Although some of these, most notably internalisation of media body ideals, have been linked in previous research, much as is the case with the current study, many previous studies demonstrate inconsistent findings when it comes to the factors that do/do not relate to body dissatisfaction.

Study Limitations

It should be acknowledged that the current study suffers from a number of limitations. For example, the study implemented a cross-sectional design. A much more

detailed picture of the development of body dissatisfaction, social perspective taking and social comparison engagement could be gathered by utilizing a longitudinal design. The latter would allow for the progression of body dissatisfaction to be monitored in each individual at different stages of their social perspective taking development. Specifically, the current design only allows for comparison across different groups of individuals in accordance with their perspective taking stage. However, it would be much more informative to know the progression from one Stage to the next over time, and how these impact an individual's body image. In this regard, a longitudinal design would allow for a better understanding of how individual socio-cognitive development impacts a person's view of their physical self. It may be that the assessment of individual continuity and change that this design would allow for, could give rise to what, if any, socio-cognitive factors are implicated in body image development.

A deeper understanding of individual body image progression would also be provided through the use of a longitudinal design. Previous studies on body dissatisfaction, such as those by Clark and Tiggemann (2008), indicated that significant changes in body dissatisfaction can occur in a 1 year time frame during preadolescence. Such individual changes are not assessed when using a cross-sectional design. In addition, for a cross-sectional design, sample sizes of the current study were very small for stages 1 and 4, limiting the analyses that could be performed, and likely contributing to the non-significant relationships found between these stages. This means that key confirmatory and discriminatory data are not available.

Another limitation of the current study is that no measure of media internalisation or the thin ideal internalisation was included. While this was always noted as an important factor in the development of body dissatisfaction, it was considered beyond the scope of the current study to test such a large number of variables given the age of the participants

and time frame allowed for the project. It is anticipated that additional measures would have likely led to high rates of attrition, particularly in the younger participants.

In addition, including children younger than 8 years old would have also been useful to gain a greater understanding of the changes that occur across perspective taking stages. As stated earlier, very few children in the current sample yielded scores representative of Stage 0 or Stage 1 perspective taking. While it was originally suggested that the greatest change was anticipated between Stage 2 and Stage 3, it is possible significant changes at other levels of perspective taking have been missed due to the limited sample size and age restrictions. This notion is supported by the previously discussed results from a study by Thelen et al. (1992) whereby significant differences for a desire for thinness existed between 2nd grade girls and those in grades 4 and 6. However, no difference in desire for thinness was found between 4th and 6th grade girls. Therefore assessing children in younger age groups would have helped to capture potential changes in body image prior to age 8.

The assessment of social perspective taking (i.e., as an interview) also placed an emphasis on the child's verbal abilities. Of course, it is the child's conceptual understanding and cognitive abilities that are proposed to influence body dissatisfaction outcomes. However, the shared demands placed on verbal ability in measuring this aspect of a child's functioning, create a potential confound to the interpretation of these findings. Taking this into consideration, it is possible that children had perspective taking abilities beyond those identified in the assessment, however the limitations in their verbal expression influenced accuracy of results. Including a brief measure of verbal ability (e.g., verbal subtests from the Wechsler Intelligence Scale for Children, 4th Australian edition; Wechsler, 2005) would be a useful addition when assessing social perspective taking ability. This would also allow for a measurement of the child's ability to understand

verbally delivered information, as there is a possibility that children did not understand the questions being asked of them.

Another shortcoming of the present study was the lack of direction specification when considering social comparisons. Literature on this topic indicates that the direction of the comparisons greatly impacts the outcome of the social comparison and its relationship to body dissatisfaction (Engeln-Maddox, 2005; Hargreaves & Tiggemann, 2009; Leahey et al., 2007; Lin & Kulik, 2002; Schutz et al., 2002; Sohn, 2010; Strahan et al., 2006; Taylor & Lobel, 1989; Trampe et al., 2007; Wheeler & Miyake, 1992). However, it is worth noting that a number of other studies that did not include information regarding the direction of the comparisons have also indicated a link between rates of social comparison engagement and body dissatisfaction (Fisher, Dunn & Thompson, 2002; Jones, 2002; Myers & Crowther, 2009), as was the case in the present study for males but not females. A key reason for this limitation was the scope of the study. Real-time recording of natural social comparisons are considered the most accurate way of assessing social comparison directions and their outcomes. However, the target age group and number of constructs for the current study presented challenges in thoroughly assessing rates of social comparison. In this sense the current study allowed a preliminary assessment of social comparison rates in this age group, and their relationship with body dissatisfaction. A recommendation is made for future studies to explore this relationship further in the proposed age group.

When considering the assessment procedure, questionnaires were presented in a fixed order, creating the potential for order effects to confound results. The reliability of the social understanding interview was also not established in the current study. However, it should be noted that there are a number of studies assessing similar aged children to those sampled in the current study, which provide support for the reliability and validity of

this interview (Selman, 1971ab, 1973, 1980). Finally, the generalizability of the current findings is limited, with the majority of the sample being from middle-class, Anglo families. Furthermore, a limited number of 8 year olds were sampled, perhaps due to the nature of some of the questions (e.g., pubertal development scale) and the conditions outlined by the Catholic Education Department of Melbourne that only children 9 years and over could be interviewed. The larger number of female participants, compared to male participants, also means that girls are overrepresented in the current study. It would be informative to know whether a more balanced age and gender sample, with a larger variation of ethnic backgrounds and socioeconomic status would yield similar results.

Despite these limitations, the present study offers some useful insights into the social and cognitive processes that occur throughout middle childhood, preadolescence and adolescence. In exploring the potential contribution of these factors to body dissatisfaction, the current findings indicate that no clear link exists between perspective taking abilities and body dissatisfaction. However, the frequency with which an individual engages in social comparisons is related to higher rates of body dissatisfaction. Although, this relationship has long been documented, limited research exists on this link among the age groups engaged in the current study.

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Appendices

Appendix A: Social Understanding Interview

The Individuals Interview
(Selman et al., 1979)

Instructions – For interviewing younger children on conceptions of individuals we have found the *Puppy Story* preferable, while for older children, adolescents and adults, the *Ping-Pong Story* is better. These same stories are presented in filmstrip form published by Guidance associates.

The Puppy Story
(for children below the age of 9 or 10)

Tom has just saved some money to buy Mike Hunter a birthday present. He and his friend Greg go downtown to try to decide what Mike will like. Tom tells Greg that Mike is sad these days because Mike's dog Pepper ran away. They see Mike and decide to try to find out what Mike wants without asking him right off. After talking to Mike for a while the kids realize that Mike is really sad because of his lost dog. When Greg suggests he get a new dog, Mike says he can't just get a new dog and have things be the same. Then Mike leaves to run some errands. As Mike's friends shop some more they see a puppy for sale in the pet store. It is the last one left. The owner says that the puppy will probably be sold by tomorrow. Tom and Greg discuss whether to get Mike the puppy. Tom has to decide right away. What do you think Tom will do?

Interviewer Questions

Open-ended Probes – What do you think Tom, the boy who is buying the birthday present should do? Why? Have you ever known a boy like Mike, what was he like?

Issue

I. Subjectivity

1. How do you think Mike might have felt it Tom gave him the new puppy
2. If Mike's smiling could still be sad, how is that possible? Could someone look happy on the outside, but be sad on the inside? How is that possible?
3. Could he feel happy and sad at the same time? Have you ever been in a situation where you felt happy and sad at the same time?
4. Could he feel both happy and sad about the new puppy? Could he have mixed feelings? How can feelings be mixed, like happy and sad?
5. Can you ever know another's feelings? When?

Issue

II. Self-Reflection

1. Mike said he never wants to see another puppy again. Why did he say that?
2. Did he mean what he said? Can someone say something and not mean it? How?
3. Do you think Mike would change his mind later? Why? Is it possible that he doesn't know his own mind?
4. Might Mike feel guilty about losing his dog? Why? What is guilt, anyway?
5. Is it possible that Mike doesn't know how he feels? How is that possible?
6. Is it possible to not know your own feelings, even if you think about them?
7. Did you ever think you'd feel one way and then find out you felt another? How could that happen?

8. Can you ever fool yourself? How? What's the difference between fooling yourself and fooling somebody else?

Issue

III. Conceptions of Personality

1. What kind of person do you think Tom is, the boy who had to decide whether or not to get Mike the puppy?
2. Was he a thoughtful (kind) person? What makes a person thoughtful (kind)? How can you tell if a person is thoughtful (kind)? What do you think makes someone become a thoughtful (kind) person?
3. What kind of person is Mike if he doesn't care if the dog is lost? Can you tell what kind of person someone is from a situation like this?
4. How does one get to know someone else's personality? What is a personality? Can someone have more the one personality?
5. Do you think Tom will lose self-esteem if he gets Mike a puppy and he doesn't like it? Why? Does one's self-esteem have anything to do with what kind of person you are?

Issue

IV. Personality Transformation

1. What do you think it will take to change the way Mike feels about losing his old dog Pepper? How long will it take him to get over it? Why? What will it take to make him happy again?
2. If Mike had been older, say 18, do you think he would have acted the same way about losing his dog? Why? How does being older change the way a person acts?
3. If Mike is usually an unhappy kid now, what will he be like when he grows up? Do you think he will change or stay the same? How do people usually change as they get older?
4. If you were Mike's Friend, what would you do to help him get over his lost dog? Anything besides buying him another dog? What might you say to him?

The Ping Pong Story

Keith, 10, and Jerry, 8, live across the street from each other and are good friends, even though Keith is older. They have a lot in common, but Keith especially likes playing ping-pong at Jerry's house. However, Keith always wins, and finally one day when he beats Jerry 21 to 10, Jerry throws down his paddle and says, “That's it! There's no sense in me playing ping-pong anymore because I always lose”.

He and Keith argue, Keith saying he should keep trying, Jerry saying you don't know what it feels like to lose all the time. Keith says, "You don't want me to think you're a poor sport, do you?" Jerry says it's not being a poor sport; it's just no fun for him when he never wins. Keith says, "Think about me. If you won't play with me, where am I going to play? No one else has a ping-pong table." They argue louder and louder, and Jerry's 11- or 12-year-old sister, Jean, and her friends, Lisa and Ellen, come in to see what's the matter. When the boys tell Jean, she says she can see that they both have a point. Why don't they not play ping-pong with each other for a little while, and she will let Jerry practice with her. Then maybe when he gets better, he could try playing with Keith again. At first Jerry says that wouldn't do any good. Finally, Jean suggests that maybe it's time to try playing with Keith again. Jerry says he doesn't think he's good enough and he doesn't want to lose. Jean says he'll never know if he doesn't try. So they play.

At the beginning of the game, Jerry says that if he loses this time, he'll give up ping-pong for good. Keith claims he's out of practice, says Jerry really has gotten a lot better. Jerry wins and is all excited, but Lisa says, "Wow, Keith, you sure didn't do very well." Jerry stops leaping around and says, "You were just out of practice, right? You didn't let me win, did you?"

Interviewer Questions

Open-ended Probes—What do you think is the problem in this story? What do you think the older boy, Keith, did? Do you think he let Jerry win? Why would he do that? Why might he not let Jerry win? Have you ever known a kid (person) like Jerry? What was he like? What do you think made him that way?

Issue

I. Subjectivity

1. If Jerry wins, but finds out that Keith let him win, how will Jerry Feel? Why? Could he feel more than just____ about winning? Could he feel both happy and upset? Happy that he won, but upset that Keith let him win? How could that be? How can you feel two ways about something?
2. If Jerry is happy about finally winning, but sad that Keith let him win, how would he feel overall? Could he have mixed feelings? What would that mean? Have you ever had mixed feelings about something? Tell me about it? How can feelings be mixed, like happy and sad?
3. If Jerry is smiling even after he finds out that Keith let him win, does that mean he is happy? Is a person always happy when you see him smiling? Could a person look happy on the outside, but be sad on the inside? How is that possible?

Issue

II. Self-Reflection

1. Suppose Jerry finds out that Keith let him win and he says to Keith, "I never cared about ping-pong anyway." Why might he say something like that? Why might he say something he didn't mean?
2. Could Jerry fool himself into thinking he didn't care about the game? How could he do that? (Why couldn't he do that?) Is it ever possible to really fool yourself?
3. Is there a difference between fooling yourself and fooling another person? What is it?
4. If Jerry Tells himself he is going to lose will the affect the way he plays the game? Why would that be?
5. Would it help jerry if he had confidence? Why might confidence help? What is confidence, anyway? (If subject says they don't know, say, a feeling he can do a good job.) How does a person gain confidence? Can you have confidence even if you lose? How?
6. If Keith lets Jerry win, but then Jerry finds out, what will happy to Jerry's confidence? Do you think Jerry might be embarrassed if he finds out that Keith let him win? Why? What does it mean when someone is embarrassed?

Issue

III. <u>Conceptions of Personality</u>

1. What kind of person do you think Jerry is? Does watching how he plays ping-pong with Keith tell you what kind of person he might be? From seeing the way he plays ping-pong, what kind of person do you think he would be in school?
2. Do you think Jerry is poor sport (or a sore loser, stubborn, thin-skinned, overly competitive)? What would that tell you about him? What does it mean when you say a person is a poor sport? What makes a person become a poor sport?
3. Is there a difference between being a poor sport and just being tired of losing? What is the difference?
4. Can Jerry be a poor sport sometimes but other times not make a big deal if he wins or loses? How is that possible?
5. Can there be a different side to Jerry, other than just being a poor sport? Can there be different parts to a person?
6. What kind of personality do you think Jerry has? What does it mean when you say that you know what kind of personality someone has? Can a person have more than one personality? How is that possible?

Issue

IV. <u>Personality Transformation</u>

1. If Jerry is a poor sport now, what will he be like when he grows up? Do you think he will change or will he stay the same? What might make him change? How do people change as they get older?
2. If Jerry was older, do you think he would act the same when he lost at ping-pong? How does being older change the way a person acts?
3. If Jerry knows he is a poor sport, do you think there is any way he can change the way he is? How can a person change themselves?
4. If you were Jerry's friend, how might you help him change from being a poor sport? Anything besides letting him win? What might you say to help him change? Why that?

Appendix B: Questionnaires

Demographics

1. **What is your gender?**
   - ☐ Male
   - ☐ Female

2. **What is your age?**
   _____ years

3. **What grade are you in (please circle)?**
   2 3 4 5 6 7 8 9 10

4. **What is your height?**
   _____ centimetres

5. **What is your weight?**
   _____ kilograms

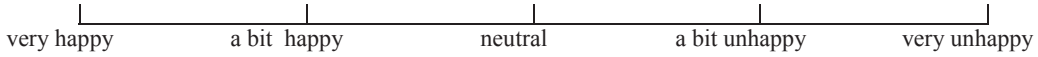
6. **Which of the following best describes your ethnic or cultural background?**
   a) Australian
   b) UK: British, Scottish, Irish, Welsh
   c) New Zealander
   d) Asian
   e) North American: US, Canada
   f) Eastern European
   g) Western European
   h) Southern European/Mediterranean
   i) Other (Please specify)
      _____

Body Dissatisfaction Questionnaire (Mellor et al., 2013, 2014)

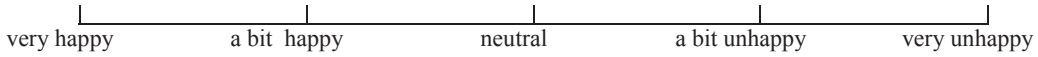
How do you feel about yourself?

We would now like to ask you some questions about how you feel about yourself. Please circle the response to each question that best describes how you feel about yourself.

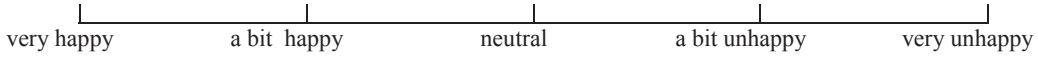
1. Overall, how satisfied are you with your body?



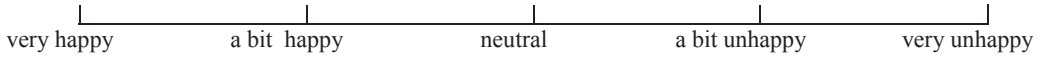
2. How satisfied are you with your weight/shape?



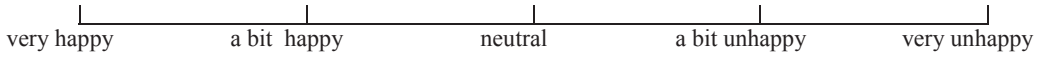
3. How satisfied are you with your muscles?



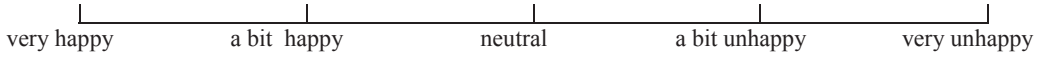
4. How do you feel about your lower body? (e.g., thighs, legs)



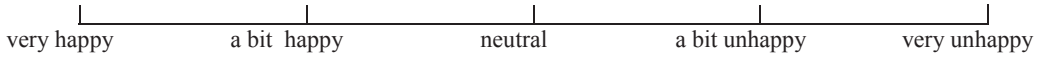
5. How do you feel about your middle body? (e.g., waist, stomach)



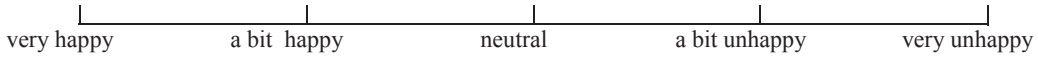
6. How do you feel about your upper body? (e.g., chest, arms)



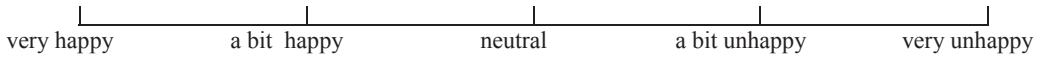
7. How do you feel about your face?



8. How do you feel about your height?



9. How do you feel about your hair?



A Self-Administered Rating Scale for Pubertal Development (Petersen et al., 1988)

Introduction: The next questions are about changes that may be happening to your body. These changes normally happen to different young people at different ages. Since they may have something to do with your view of yourself, do your best to answer carefully. If you do not understand a question or do not know the answer, just mark "I don't know."

Please circle the answer that best relates to you.

1. Would you say that your growth in height:

has not yet begun to spurt	1
has barely started	2
is definitely underway	3
seems completed	4
I don't know	

2. And how about the growth of your body hair?
("Body hair" means hair any place other than your head, such as under your arms.)

Would you say that your body hair growth:

has not yet begun to grow	1
has barely started to grow	2
is definitely underway	3
seems completed	4
I don't know	

3. Have you noticed any skin changes, especially pimples?

skin has not yet started changing	1
skin has barely started changing	2
skin changes are definitely underway	3
skin changes seem complete	4
I don't know	

FORM FOR BOYS:

4. Have you noticed a deepening of your voice?

voice has not yet started changing	1
voice has barely started changing	2
voice changes are definitely underway	3
voice changes seem complete	4
I don't know	

5. Have you begun to grow hair on your face?

facial hair has not yet started growing	1
facial hair has barely started growing	2
facial hair growth has definitely	

started 3
facial hair growth seems complete 4
I don't know

FORM FOR GIRLS:

4. Have you noticed that your breasts have begun to grow?

have not yet started growing 1
have barely started growing 2
breast growth is definitely underway
3
breast growth seems complete 4
I don't know

5a. Have you begun to menstruate (started to have your period)?

yes 4
no 1

5b. If yes, how old were you when you started to menstruate?

age in years

Social Comparison Scale (Holt & Ricciardelli, 2002)

1. Do you think about how **fast** you are in comparison to other children your age?

□**Never** □**Sometimes** □**Often**

How does this make you feel?

□**Better about myself** □**In between** □**Worse about myself** □ **Not sure**

2. Do you think about how **strong** you are in comparison to other children your age?

□**Never** □**Sometimes** □**Often**

How does this make you feel?

□**Better about myself** □**In between** □**Worse about myself** □ **Not sure**

3. Do you think about how **fit** you are in comparison to other children your age?

□**Never** □**Sometimes** □**Often**

How does this make you feel?

□**Better about myself** □**In between** □**Worse about myself** □ **Not sure**

4. Do you think about **how you look** in comparison to other children your age?

□**Never** □**Sometimes** □ **Often**

How does this make you feel?

□**Better about myself** □**In between** □**Worse about myself** □ **Not sure**

5. Do you think about **how muscular** you are in comparison to other children your age?

□**Never** □**Sometimes** □**Often**

How does this make you feel?

□**Better about myself** □**In between** □**Worse about myself** □ **Not sure**

6. Do you think about your **body weight** in comparison to other children your age?

□**Never** □**Sometimes** □**Often**

How does this make you feel?

□**Better about myself** □**In between** □**Worse about myself** □ **Not sure**

Thank you for completing the questionnaire.

Now I will read you a social story and ask you some questions about the story.

Appendix C: Ethics Approval

Deakin University Ethics Approval

Memo

To:	David Mellor & Matthew Fuller-Tyszkiewicz School of Psychology
From:	Secretary - HEAG-H Faculty of Health
CC:	Amanda Lamont
Date:	27 November, 2012
Re:	**HEAG-H 125_ 2012: Perspective taking as a mechanism through which social comparisons lead to body dissatisfaction**

Approval has been given for David Mellor & Matthew Fuller-Tyszkiewicz, of the School of Psychology, to undertake this project for a period of 2 years from 27 November, 2012 with the following condition. The approval end date is 27 November, 2014.

(i) Please provide copy of approval by DEECD and School Principals prior to sampling from that school.

The approval given by the Deakin University HEAG - H is given only for the project and for the period as stated in the approval. It is your responsibility to contact the Secretary immediately should any of the following occur:

- Serious or unexpected adverse effects on the participants
- Any proposed changes in the protocol, including extensions of time
- Any events which might affect the continuing ethical acceptability of the project
- The project is discontinued before the expected date of completion
- Modifications that have been requested by other Human Research Ethics Committees

In addition you will be required to report on the progress of your project at least once every year and at the conclusion of the project. Failure to report as required will result in suspension of your approval to proceed with the project.

HEAG-H may need to audit this project as part of the requirements for monitoring set out in the National Statement on Ethical Conduct in Human Research (2007).An Annual Project Report Form can be found at http://www.deakin.edu.au/hmnbs/research/ethics/ethicssubmissionprocess.php which you will be required to complete in relation to this research. This should be completed and returned to the Administrative Officer to the HEAG-H, Pro-Vice Chancellor's office, Faculty of

CRICOS Provider Code: 00113B

Health, Burwood campus by **Tuesday 20th November, 2012** and when the project is completed.

Human Ethics Advisory Group, Faculty of Health,

Melbourne Burwood Campus, 221 Burwood Highway, Burwood, VIC 3125
Tel 03 9251 7174, email health-ethics@deakin.edu.au
www.deakin.edu.au

Good luck with the project!

Signature Redacted by Library

Steven
Sawyer
Secretary
HEAG-H

CRICOS Provider Code:

Human Ethics Advisory Group, Faculty of Health,

Melbourne Burwood Campus, 221 Burwood Highway, Burwood, VIC 3125
Tel 03 9251 7174, email health-ethics@deakin.edu.au www.deakin.edu.au

Department of Education and Early Childhood Development

Strategy and Review Group

2 Treasury Place
East Melbourne, Victoria 3002
Telephone: +61 3 9637 2000
DX 210083
GPO Box 4367
Melbourne, Victoria 3001

2012_001789

Miss Amanda Lamont
School of Psychology
Faculty of Health
Deakin University
221 Burwood Highway
BURWOOD 3125

Dear Miss Lamont

Thank you for your application of 10 October 2012 in which you request permission to conduct research in Victorian government schools and/or early childhood settings titled *Perspective taking as a mechanism through which social comparisons lead to body dissatisfaction.*

I am pleased to advise that on the basis of the information you have provided your research proposal is approved in principle subject to the conditions detailed below.

1. The research is conducted in accordance with the final documentation you provided to the Department of Education and Early Childhood Development.

2. Separate approval for the research needs to be sought from school principals and/or centre directors. This is to be supported by the DEECD approved documentation and, if applicable, the letter of approval from a relevant and formally constituted Human Research Ethics Committee.

3. The project is commenced within 12 months of this approval letter and any extensions or variations to your study, including those requested by an ethics committee must be submitted to the Department of Education and Early Childhood Development for its consideration before you proceed.

4. As a matter of courtesy, you advise the relevant Regional Director of the schools or governing body of the early childhood settings that you intend to approach. An outline of your research and a copy of this letter should be provided to the Regional Director or governing body.

5. You acknowledge the support of the Department of Education and Early Childhood Development in any publications arising from the research.

6. The Research Agreement conditions, which include the reporting requirements at the conclusion of your study, are upheld. A reminder will be sent for reports not submitted by the study's indicative completion date.

7. If DEECD has commissioned you to undertake this research, the responsible Branch/Division will need to approve any material you provide for publication on the Department's Research Register.

I wish you well with your research study. Should you have further enquiries on this matter, please contact Youla Michaels, Project Support Officer, Research, Evaluation and Analytics Branch, by telephone on (03) 9637 2707 or by email at michaels.youla.y@edumail.vic.gov.au.

Yours sincerely

Signature Redacted by Library

Dr Elvira Vacirca
Acting Director
Research, Evaluation and Analytics Branch

18/01/2013

enc

Catholic Education Office Ethics Approval

Archdiocese of Melbourne

GE13/0009 Project# 1955

20 November 2013

Miss A Lamont 17/87-89
Hotham Street PRESTON VIC
3072

Dear Miss Lamont

I am writing with regard to your research application received on 21 October 2013 concerning your forthcoming project titled **'Perspective taking as a mechanism through which social comparisons lead to body dissatisfaction'**. You have asked approval to involve a Catholic school in the Archdiocese of Melbourne, as you wish to involve students.

I am pleased to advise that your research proposal is approved in principle subject to the

following conditions outlined below.

1. **Pubertal Development Scale section of Questionnaire to be removed for students aged 9 years and below who agree to participate in this project.**

2. The decision as to whether or not research can proceed in a school rests with the school's principal, so you will need to obtain approval directly from the principal of the school that you wish to involve. You should provide the principal with an outline of your research proposal and indicate what will be asked of the school. A copy of this letter of approval, and a copy of notification of approval from the organisation's/university's Ethics Committee, should also be provided.

3. A copy of the approval notification from your institution's Ethics Committee must be forwarded to this Office, together with any modifications to your research protocol requested by the Committee. You may not start any research in Catholic Schools until this step has been completed.

4. A **Working with Children** (WWC) check - or registration with the Victorian Institute of Teaching (VIT) - is necessary for all researchers visiting schools. Appropriate documentation must be shown to the principal before starting the research in the school.

James Goold House, 228 Victoria Parade, East Melbourne VIC 3002 Tel: (+61 3) 9267 0228 Fax: (+61 3) 9415 9325 Correspondence: PO Box 3, East Melbourne VIC 8002 Email: director@ceomelb.catholic.edu.au **www.ceomelb.catholic.edu.au** ABN 85 176 448 204

5. No student is to participate in the research study unless s/he is willing to do so and informed

consent is given in writing by a parent/guardian.

6. Any substantial modifications to the research proposal, or additional research involving use of the data collected, will require a further research approval submission to this Office.

7. Data relating to individuals or the school are to remain confidential.

8. Since participating schools have an interest in research findings, you should consider ways in which the results of the study could be made available for the benefit of the school community.

9. At the conclusion of the study, a copy or summary of the research findings should be forwarded to the Catholic Education Office Melbourne. It would be appreciated if you could submit your report in an **electronic format** using the email address provided below.

I wish you well with your research study. If you have any queries concerning this matter, please contact Ms Mirya ni Maegwin of this Office.

The email address is apr@ceomelb.catholic.edu.au.

Yours sincerely

Signature Redacted by Library

Anna Rados

MANAGER ANALYSIS, POLICY & RESEARCH

Appendix D: Plain Language Statements and Consent Forms

DEAKIN UNIVERSITY
PLAIN LANGUAGE STATEMENT AND CONSENT FORM

An Invitation to Participate in Research

Title of project: Perspective taking as a mechanism through which social comparisons lead to body dissatisfaction.

Dear Student, my name is Amanda Lamont and I am studying for a qualification in psychology at Deakin University. My supervisor is Professor David Mellor.

I am completing a research project as part of my studies and through this project I want to learn more about how children feel about the way they look and whether what they think about other people's ideas, feelings and thoughts influences this. We would like to know how this is related to your own feelings about the way you look. We also want to know if you compare yourself to other people. For example, do you notice different things about the way you look compared to your classmates, or people on TV?

I would like to invite you and the other children in your class to be to be part of my project. We are collecting information from students aged between 8 and 14 years. You are invited to participate in the project because you are in this age group.

Participation in this project will involve you speaking to the researcher (Amanda Lamont) and answering questions about some short stories. One story involves a child's cat being stuck up a tree. This child's friend is a really good climber but their mum also told them that they could not climb the tree. We want to know what you would think and do in this situation. The interview will be audio recorded and will take place after school or at school on a day that is convenient to the school and you.

We would also like you to answer some questions about how happy you are with the way you look. Questions include:

"Overall, how satisfied are you with your body?"

Very happy, A bit happy, Neutral, A bit unhappy, Very unhappy

"How do you feel about your hair?"
Very happy, A bit happy, Neutral, A bit unhappy, Very unhappy

We would also like to ask some questions about how you compare yourself to other people, including those that you know (e.g., friends) and those that you don't (e.g., models in magazines). Questions include:

"Do you think about how strong you are in comparison to other children your age?"

Never , Sometimes , Often

I will also be asking you to complete some questions about growth and to record your height and weight. Questions about growth are different for boys and girls. They include:

"Have you noticed a deepening of your voice?" (Boys)

Voice has not yet started changing, Voice has barely started changing, Voice

"Have you begun to menstruate (started to have your period)?" (Girls)

Yes, No

I will not put your name on any information I collect. Instead we will be asking you to write the first two letters of your first name and last name on the questionnaires, and the name of the school that you attend. All your answers will only be seen by me and my supervisors from Deakin University. All the information about you will be kept in a locked cupboard. Later when I write about what I have learned, only the findings for the whole group of participants will be discussed. No individual will be identifiable.

You do not have to join in this project if you don't want to. If you decide not to, you can tell your parents, your teacher or me and we will not have a problem with your decision. However, if you decide to join in it is OK to change your mind and choose not to take part even if you have started. If you do change your mind, you can tell your parents, your teacher or me. I won't ask any questions about why you changed your mind, and there will be no consequences.

If you feel worried about the project at any time, or have any questions, you can talk to me, your parents or your teacher. You may also contact David Mellor on 9244 3742 or david.mellor@deakin.edu.au.

If you decide to participate in the project, and for some unexpected reason you feel upset, you are able to talk with the school welfare officer or you could also call Kids helpline on 1800 55 1800 to talk about what has upset you.

Thank you for thinking about helping me to find out more about how children your age think and feel. If you are willing to take part, talk it over with your parents who will also have received a letter from me. Please sign the consent form attached to this letter and return it to your teacher.

Miss Amanda Lamont

Professor David Mellor

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Parents

Plain Language Statement

Date:

Full Project Title: Perspective taking as a mechanism through which social comparisons lead to body dissatisfaction

Principal Researcher: Professor David Mellor

Student Researcher: Amanda Lamont

Associate Researcher(s): Matthew Fuller-Tyszkiewicz

This Plain Language Statement and Consent Form is 9 pages long. Please make sure you have all the pages.

1. Your Consent

This Plain Language Statement contains detailed information about a research project that your child is invited to take part in. The purpose of this document is to explain to you as openly and clearly as possible all the procedures involved in this project so that you can make a fully informed decision whether your child is going to participate.

Please read this Plain Language Statement carefully. Feel free to ask questions about any information in the document and to discuss this document with others.

Once you understand what the project is about, and if you agree for your child to take part in it, you will be asked to sign the Consent Form. By signing the Consent Form, you indicate that you understand the information and give consent for your child to participate in the research project.

You will be given a copy of the Plain Language Statement and Consent Form to keep for your records.

2. Purpose and Background

My name is Amanda Lamont and I am completing a Doctor of Psychology qualification at Deakin University. As part of my course I am conducting a research project with Professor David Mellor who is a staff member at Deakin University.

The purpose of the project is to better understand how students feel about the way they look, whether or not they compare themselves to other people (e.g., peers) and whether or not they are able to consider the views, thoughts and opinions of others.

Your child is invited to participate in this research project because we are collecting information from students aged between 8 and 14 years in a number of different schools across Melbourne. A total of 300 students will participate in this project.

Previous studies have shown that beginning at about 8 years of age, many children, teenagers and adults worry about the way they look. We don't know exactly why these worries begin to appear at this age, but we think that it may have something to do with how much children consider the thoughts, feelings and views of others. Therefore, we would like to find out more about this. This information will inform the development of programs designed to prevent the development of body dissatisfaction.

The results of this research will be used to help researcher, Amanda Lamont, obtain a Doctor in Psychology degree.

3. Procedures

If you agree for your child to participate in in this project I will meet with them and ask them to complete a short questionnaire about how they feel about their body, how they are growing and whether they compare themself with other people. For example, questions about how they feel about themself include:

"Overall, how satisfied are you with your body?"

Very happy, A bit happy, Neutral, A bit unhappy, Very unhappy

"How do you feel about your hair?"
Very happy, A bit happy, Neutral, A bit unhappy, Very unhappy

Questions about how they compare themself to other people include:

"Do you think about how strong you are in comparison to other children your age?"

Never , Sometimes , Often

Questions about how they are growing include:

"Have you noticed a deepening of your voice?"

Voice has not yet started changing, Voice has barely started changing, Voice

"Have you begun to menstruate (started to have your period)?"

Yes, No

I will also read your child some short stories and ask some questions about what they would do if they were one of the people in the story. For example, one story is like this '*Julie is best friends with Marie. A new girl recently came to the school and Julie really doesn't like her. Marie knows this but she really likes the new girl and they get along well. The new girl asks Marie to go out with her one day and Julie finds out and is upset.*' I will ask your child how they would respond if they were Julie. These interviews will be audio recorded.

4. Possible Benefits

We cannot guarantee or promise that students or your school will receive any benefits from this project. However, it is hoped that the findings from the project will help us to understand more about how children and adolescents think about their body and different factors that influence this.

5. Possible Risks

We do not envisage that your child will experience any risk or discomfort as a result of participating in the study, but if this should occur, we will ask that you contact the school welfare officer, or contact us to arrange some help. Your child will also be informed of these options and be made aware of the Kids Helpline telephone counselling service.

6. Privacy, Confidentiality and Disclosure of Information

Your child will not be required to write his/her name on the questionnaire; however we will be asking participants to write the first two letters of their first name and last name on the questionnaires, and the name of the school that they attend. We can then use this information to find questionnaires and remove them from the study if you or your child decides that you no longer want to be part of the study.

No-one at school will see your child's answers on the questionnaire. They will be stored at Deakin University and only seen by me (Amanda) and my supervisor (David). They will be disposed of after 6 years.

Students do not have to join in this project. If your child decides not to participate, they can tell you, their teacher or me and we will not have a problem with their decision. Even if your child decides to join in now, it is OK if they choose not to take part at a later time. Your child can do this at any time. No questions will be asked about why they changed their mind, and there will be no consequences. If your child decides not to take part, they will continue with their class work as usual.

If any information from this project is published, it will be provided in such a way that participants cannot be identified. For example, results will be collected and analysed in numbers so that no individual person is identifiable.

7. Results of Project

If you would like to know the final results of the study you may contact the researchers and we will send you a summary upon the completion of the study. Similarly, if you require any further information about the study you may contact us on the telephone numbers included below.

8. Participation is Voluntary

Participation in any research project is voluntary. **If you do not wish for your child to take part they are not obliged to.** If you decide you would like your child to take part and later change your mind, you are free to withdraw from the project at any stage. Any information obtained from you to date will not be used and will be destroyed.

There are no consequences of your decision whether your child should take part or not, or to take part and then withdraw from the study.

Before you make your decision, a member of the research team will be available to answer any questions you have about the research project. You can ask for any information you want. Sign the Consent Form only after you have had a chance to ask your questions and have received satisfactory answers.

If you decide to withdraw from this project, please notify a member of the research team or complete and return the Revocation of Consent Form attached. This notice will allow the research team to inform you if there are any health risks or special requirements linked to withdrawing.

9. Ethical Guidelines

This project will be carried out according to the *National Statement on Ethical Conduct in Human Research* (2007) produced by the National Health and Medical Research Council of Australia. This statement has been developed to protect the interests of people who agree to participate in human research studies.

The ethics aspects of this research project have been approved by the Human Research Ethics Committee of Deakin University.

Approval has also been obtained from the Department of Education and Early Childhood Development.

10. Complaints

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact:

The Manager, Research Integrity, Deakin University, 221 Burwood Highway, Burwood Victoria 3125, Telephone: 9251 7129, research-ethics@deakin.edu.au

Please quote project number: HEAG-H 125_2012.

11. Reimbursement for your costs

Your child will not be paid for their participation in this project.

12. Further Information, Queries or Any Problems

If you require further information, wish to withdraw your child's participation or if you have any problems concerning this project (for example, any side effects), you can contact the principal researcher.

The researchers responsible for this project are:

Amanda Lamont and Professor David Mellor
Faculty of Health, Medicine, Nursing and Behavioural Sciences
221 Burwood Highway, BURWOOD VIC 3125
Contact David Mellor on: 9244 3742/ david.mellor@deakin.edu.au