Developing and Validating a Measure of Body Image for Pregnant Women

By

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Doctor of Psychology (Clinical)

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I am the author of the thesis entitled

*Developing and validating a measure of body image for pregnant women*

submitted for the degree of Doctorate of Psychology (Clinical)

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Abstract

The overall aim of this thesis was to develop a valid measure of body image specifically designed for women transitioning through pregnancy. Study One was a systematic review of qualitative literature exploring women’s body image experiences during pregnancy. The findings of this review highlighted the need to consider body image as being a multifaceted construct, with studies focusing on body image ideals, body (dis)satisfaction, body change, and appearance-related behaviours. Building on the findings from the systematic review completed for Study One, Study Two was a qualitative study that aimed to provide a comprehensive exploration of women’s body image experiences during pregnancy. The qualitative study sought to explore the multifaceted nature of body image as a construct and the context of women’s body dissatisfaction experiences, to offer a more comprehensive evaluation of body image experiences during pregnancy than has previously been completed. The participants were 19 Australian women who were currently pregnant (of variable weeks’ gestation). Thematic content analysis was used to analyse the qualitative data collected from the interviews. The results of this study highlighted five key themes in women’s body image experiences of pregnancy: (1) Women’s body image experiences during pregnancy were complex and changing, and shaped by a number of factors such as the expectations for body change during pregnancy, (2) The functionality of the pregnant body allowed women to negotiate the body changes experienced, (3) Women were surprised by the public nature of the pregnant body and the frequency and directness with which others commented on the pregnant body, (4) Partner support and positive feedback about the pregnant body bolstered body satisfaction, and (5) Women placed high
importance on open communication around weight and body image in antenatal healthcare. Study Three was a quantitative study aimed at developing and validating a measure of body image specifically designed for a pregnant population. This study sought to develop a new measure on the basis of the following: (1) There is significant variability in the reported level of body image disturbance during pregnancy, possibly on account of the predominant focus on body dissatisfaction and lack of consideration of the context of body dissatisfaction in pregnancy, (2) There is a reliance on body image measures validated in non-pregnant populations, and (3) There are many more aspects of body image that are rarely examined in a pregnant context and that lack validated scales for measurement in this population. The Body Image in Pregnancy Scale [BIPS] was designed to tap key facets of body image as a multifaceted construct. Scale development was guided by qualitative data from a series of studies exploring the meaning of women’s body image experiences during pregnancy, and previously established body image measures. The results of this study showed that the BIPS was reliable and valid, and improved upon existing measures of body image utilised in pregnant samples. Confirmatory factor analysis for a sample of 251 pregnant women indicated good fit for a 49-item scale with nine factors: Body Image Ideals, Body Image Importance, Body Dissatisfaction, Body Change (Global and Specific Parts), Appearance Related Behaviours (Appearance and Physical Activity), Sexual Attractiveness, and Functioning of the Body. The BIPS subscale scores demonstrated good internal reliability and convergent validity with measures of body image, self-esteem, and depressive symptomatology. As expected, the BIPS subscales demonstrated weak correlations over time indicating sensitivity to detecting change in body image disturbance. Together, these three
studies highlight the need for a measure of body image specifically designed to capture the complex and nuanced experiences of body image during pregnancy, given the salient aspects of body image differ from non-pregnancy and the need to consider body image as a multifaceted construct, encompassing more than body dissatisfaction. The BIPS measure will be able to be used in clinical practice to screen women potentially at risk of body image disturbances during pregnancy to better enable practitioners to tailor their support to the woman’s unique body image disturbances and improve their wellbeing during the transition to motherhood.
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CHAPTER ONE

Introduction

Body image is conceptualised as the internal representation one has of her/his outer appearance, involving cognitive, behavioural, and perceptual dimensions (Banfield & McCabe, 2002; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Cognitively, body image reflects the thoughts and beliefs one has about her/his own or others’ appearance (Cash, 1990; Cash & Smolak, 2011; Thompson et al., 1999). Examples include the importance one places on her/his appearance and the investment s/he has in her/his body image, the unrealistic body image ideals s/he holds, body dissatisfaction or negative feelings about one’s body, and body shame (Cash, 1990; Cash & Smolak, 2011; Thompson et al., 1999). In contrast, the perceptual dimension of body image focuses on the accuracy of an individual’s judgments of her/his own weight, size, and shape in comparison to her/his actual individual proportions, for example the overestimation of the size and shape of the stomach (Banfield & McCabe, 2002; Cash, Wood, Phelps, & Boyd, 1991; Thompson et al., 1999). Behavioural aspects of body image relate to how an individual may avoid certain interactions that may expose her/his body image or result in an evaluation of appearance, how s/he may engage in the checking of appearance, compare herself/himself to others on the basis of appearance, or engage in behaviours such as exercise or cosmetic surgery to improve one’s appearance (Thompson et al., 1999).

Disturbances of body image can thus take on several forms; for example, extreme dissatisfaction with appearance, perceived fatness, constant appearance
checking, and fear of appearance-related judgment (Jarry & Ip, 2005). Body image disturbance may also differ in its focus, whether it be on specific body parts or features, several parts, or perhaps more global (Wertheim, Paxton, & Blaney, 2009). This introductory chapter demonstrates that although body image disturbances are common, particularly for women, and there are a variety of models to explain the causes, correlates, and consequences of body image disturbances in the general population, these models do not appear to adequately explain the body image experiences of pregnant women. Following a brief discussion of some key inconsistencies in findings that arise in the context of pregnancy when these models are used, a series of studies are proposed in order to investigate how women’s body image in pregnancy differs from non-pregnancy, and establish how these specific body image experiences and disturbances can be assessed and contextualised.

**Prevalence of Body Image Disturbances**

Body dissatisfaction appears to be very common, particularly in Western cultures (Thompson & Stice, 2001). Although estimated prevalence varies across studies (e.g., Bearman, Presnell, Martinez, & Stice, 2006; Bucchaneri, Arikian, Hannan, Eisenberg, & Neumark-Sztainer, 2013; Fallon, Harris, & Johnson, 2014, Swami et al., 2010), there are several discernible trends with respect to gender- and age-related differences in the prevalence of body disturbances. First, although there is some evidence to suggest that the gap may be diminishing in recent years (e.g., Forbes, Adams-Curits, Rade, & Jaberg, 2001; Mellor, Fuller-Tyszkiewicz, McCabe, & Ricciardelli, 2010), the majority of past research suggests that body image disturbances are more common among girls/women than boys/men (Bearman et al., 2006; Knauss, Paxton, & Alsaker, 2007; Phares, Steinberg, & Thompson, 2004;
Smolak & Levine, 2001; Wertheim et al., 2009). Earlier estimates may have exaggerated the gender difference due to poor understanding of the body image issues that present in males (McCabe & Ricciardelli, 2004a), but these gender differences remain once gender-appropriate measures are used (Fuller-Tyszkiewicz, Skouteris, McCabe, et al., 2012). Furthermore, women are over-represented in several psychological disorders which feature an appearance-related component (American Psychiatric Association, 2013; Forbes et al., 2001), such as Anorexia Nervosa (AN) and Bulimia Nervosa (BN), in which gender differences in diagnosis is far more common for females, with a 10:1 female to male ratio (American Psychiatric Association, 2013). As an exception, Body Dysmorphic Disorder (BDD) has demonstrated a more even distribution, with females and males showing comparable prevalence rates (2.2% and 2.5% for males and females, respectively) (American Psychiatric Association, 2013). Gender differences also exist within the appearance maintenance behaviours adopted by each gender to match up to the prescribed ideals (McCabe & Ricciardelli, 2001; McCabe & Ricciardelli, 2004b; McCabe & Ricciardelli, 2005; Ricciardelli, McCabe, & Banfield, 2000), given the ideal differs for women and men, with a thin body ideal emphasised for women compared to a muscular physique being idealised for males (McCabe & Ricciardelli, 2001; McCabe & Ricciardelli, 2004a).

Second, studies of body image across the life-course highlight that body-related disturbances may have onset at a young age, and persist well into adulthood. Body image issues have been documented for girls as young as six years of age (Ricciardelli & McCabe, 2001a; Smolak, 2004), suggesting that these issues may emerge at this time if not earlier (Smolak, 2004). Experience of body image issues
becomes more common by preadolescence (Clark & Tiggemann, 2008). An Australian based study by Clark and Tiggemann (2008) reported that between 49% and 55% of girls aged between nine and 12 years had concerns about their weight and shape. Further evidence suggests that body image concerns increase in prevalence and severity during adolescence (Bearman et al., 2006; Paxton, Eisenberg, & Neumark-Sztainer, 2006; Tiggemann, 2005), with Ricciardelli and McCabe (2001b) reporting approximately 77% of adolescent females aged between 12 and 16 (Mage= 13.91 years, SD=.92) have a desire to be thinner.

Engagement in a range of appearance-related behaviours is also common, including body checking, disordered eating, purging, use of laxatives, and excessive exercise as a result of heightened body dissatisfaction (Lampard, MacLehose, Eisenberg, Neumark-Sztainer, & Davison, 2014; Lynch, Heil, Wagner, & Havens, 2008; McCabe & Ricciardelli, 2004b; Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006; Stice & Shaw, 2002). High rates of weight management behaviours are documented for adolescent females, with up to 45.8% commonly engaging in dieting (Lampard et al., 2014), 49.7% - 62.7% in unhealthy weight control behaviours (e.g. fasting, restricting, or skipping of meals)(Lampard et al., 2014; Neumark-Sztainer et al., 2006), 6.8% - 21.9% in extreme weight control behaviours (e.g., use of dieting pills, laxatives, or diuretics, and vomiting)(Lampard et al., 2014; Neumark-Sztainer et al., 2006), and up to 83.1% in excessive exercise (Martin, Rhea, Greenleaf, Judd, & Chambliss, 2011).

Longitudinal data suggest that body image disturbances remain high as females progress through adolescence (Wertheim & Paxton, 2011; Wertheim et al., 2009), and young adulthood (Bucchianeri et al., 2013; Eisenberg, Neumark-Sztainer,
& Paxton, 2006; Quick, Eisenberg, Bucchianeri, & Neumark-Sztainer, 2013), with up to 80.5% of women expressing a desire to lose weight (Rodgers, Salès, & Chabrol, 2010). Body dissatisfaction is then stabilised through mid-adulthood (Tiggemann & Lynch, 2001), with up to 80% of middle-aged women reporting a desire to lose weight and up to 74% of women actively engaging in efforts to lose or maintain their weight (McLaren & Kuh, 2004). A decline in concern about one’s appearance is then documented for women as they move towards late adulthood, from approximately age 65 (Reboussin et al., 2000; Tiggemann, 2004). However, Wilcox (1997) cautioned that women in late adulthood still may experience body dissatisfaction given that a ‘double standard of ageing’ exists whereby older women are judged much more harshly on their appearance than their male counterparts. Wilcox (1997) provided evidence of the continued experience of body image disturbance into late adulthood, demonstrating comparable levels of body satisfaction across the lifespan (with subsamples representing different age ranges, from 20 – 80 years of age).

While earlier theories considered body image disturbances to be a Western phenomenon (Thompson & Stice, 2001; Thompson et al., 1999; Tiggemann, 2011), more recent research suggests that these disturbances are also common in non-Western contexts, albeit at potentially lower severity and/or prevalence (Crago & Shisslak, 2003; Fallon et al., 2014; Grabe & Hyde, 2006). Fallon et al. (2014) cautioned that while there may be cultural differences in the body image disturbances experienced, the effect size is likely to be small, as suggested by previous research (Forbes & Frederick, 2008; Frederick, Forbes, Grigorian, & Jarcho, 2007; Grabe & Hyde, 2006). Both Swami et al. (2010) and Fallon et al.
(2014) provided evidence of body dissatisfaction across different cultures tested, with Swami et al. (2010) including subgroups representing ten different world regions and Fallon et al. (2014) distinguishing between six different ethnic groups. Fallon et al.’s (2014) comparison across subsamples of women representing different ethnicities found similar rates of moderate body dissatisfaction for Caucasian (19.4%), African American (23.3%), Hispanic (18.9%), Asian (17.0%), and Native American/Native Hawaiian/Pacific Islander (14.3%) groups. When comparing ethnicities on their preoccupation with being overweight, greater variation was seen between the subsamples, with prevalence rates of Caucasian (17.6%), African American (13.3%), Hispanic (24.3%), Asian (19.1%), and Native American/Native Hawaiian/Pacific Islander (38.1%) (Fallon et al., 2014). Swami et al.’s (2010) large scale international study provided evidence of the presence of body image disturbances across different cultures, with body dissatisfaction reported for subsamples of women sampled from South America, North America, Southeast Asia, South and West Asia, Eastern and Western Europe, and Oceania. Although the findings of Fallon et al. (2014) and Swami et al. (2010) demonstrate much lower prevalence estimates of body image disturbances for women of Caucasian ethnicities, this is likely to be an artefact of the way body dissatisfaction is measured (i.e. whether dissatisfaction is indicated by a score higher or lower than the ‘neutral’ midpoint of a scale, or whether a more conservative cut-off is applied to just include those rating their dissatisfaction as more extreme). Other research seeking to investigate whether cultural differences exist in body image experiences has also shown that body dissatisfaction is common amongst adolescent females of varying ethnicities and cultures, despite differences between cultures sampled in the value
attached to a large or small body (Brokhoff et al., 2012; George & Franko, 2010; McCabe et al., 2012). Thus, while the ideal that an individual strives for may be bound to cultural norms and thus differ across groups, the general concern about meeting this ideal (and resultant body dissatisfaction) appears shared across cultures. Further, reductions in the cultural effects may be due to the Westernization and globalisation of those cultures previously immune (or less likely) to experiencing body image disturbances (Swami, 2015; Swami et al., 2010; Swami & Tovée, 2005).

**Theories of Body Image**

Although the accumulated evidence suggests negligible differences at the country, ethnic, or cultural level (i.e., aggregated data), commonly cited theories in the field still assert the role of sociocultural influences in the development and maintenance of body dissatisfaction at the *individual* level (Fredrickson & Roberts, 1997; Grogan, 2008; Noll & Fredrickson, 1998; Thompson et al., 1999; Tiggemann, 2011). Such an approach accommodates individual differences in severity of body image disturbances. Moreover, even if body image disturbances are commonplace, these models seek to explain the mechanisms by which such disturbances arise. Common aetiological models of body image disturbance, such as the Tripartite Influence Model (Thompson et al., 1999) and Objectification Theory (Fredrickson & Roberts, 1997), emphasize the role of sociocultural influences in promoting to women: (1) the importance of appearance rather than functionality of their bodies, (2) an unrealistic, thin ideal to aspire to, that is reinforced through different sociocultural agencies (e.g., media, peers, friends and family), to create a pressure for females to conform to these body ideals, and (3) how they will be perceived in a social context on the basis of their body’s alignment with this ideal (Thompson et al.,
It is argued that the severity of one’s body image disturbance is likely to depend on the extent to which any - or all - of these three messages are adopted by the individual, and how well they perceive themselves to align with the ideal.

Objectification Theory places female bodies in a sociocultural context where sexual objectification is common and women are evaluated in terms of their body, and valued for its use to others (Fredrickson & Roberts, 1997; Grogan, 2008; Noll & Fredrickson, 1998). It is this shared experience of being sexually objectified by others in society, and being held to a standard of sexual appeal and attractiveness, that contributes to women internalising others’ perspectives of their physical appearance, evaluating their own selves in terms of their bodies and appearance rather than other non-observable, competence-based attributes (such as health, fitness, stamina, and strength, see Noll & Fredrickson, 1998), and incorporating this into their sense of self (Fredrickson & Roberts, 1997). Consequently, this results in a habitual monitoring of, and preoccupation with, one’s body and appearance (Fredrickson & Roberts, 1997). Objectification Theory hypothesises that women are most at risk of self-objectification during their reproductive years because the female body changes to become reproductively mature, and this body is more likely to be observed and evaluated for its sexual appeal to others in the context of reproductive potential as a mate (Fredrickson & Roberts, 1997). However, the extent to which women engage in self-objectification is dependent on their level of internalisation of the ideals and their exposure to contexts that may result in the objectification of their own bodies (Fredrickson & Roberts, 1997).
Fredrickson and Roberts (1997) posit that while the opportunities for women to self-objectify are widespread (given the culture of objectification), women may engage in different levels of self-objectification. Women move through different contexts during their daily lives, some of which may offer some protection from self-objectification (such as being in situations where the importance is placed on one’s competence based attributes) whereas others (such as being in situations that expose considerable portions of one’s body) heighten women’s awareness of the real or imagined evaluation of their bodies by others (Fredrickson & Roberts, 1997). A number of consequences follow on from engagement in self-objectification, including body shame (the experience of negative feelings about one’s body as a result of a discrepancy between how one views their own body and the internalised or cultural ideals, invariably related to standards of attractiveness and thinness that are near impossible to attain), disordered eating symptoms (Calogero & Thompson, 2009; Fredrickson & Roberts, 1997; Noll & Fredrickson, 1998), and lower sexual self-esteem (Calogero & Thompson, 2009). With increased body shame women may experience anxiety about being exposed to situations and interactions where their bodies are likely to be evaluated, engage in frequent body-checking, or engage in behaviours to adjust their bodies and appearance in efforts to match up to the ideals (Fredrickson & Roberts, 1997).

Although similar in its focus on sociocultural determinants of body image disturbances, the Tripartite Influence Model (Thompson et al., 1999) makes several important contributions to predictive models derived from Objectification Theory. First, the Tripartite Influence Model specifically focuses on three key influences that contribute to the development of body image disturbances: parents, peers, and the
mass media (Swami, 2015; Thompson et al., 1999; Tiggemann, 2011). These influences reinforce the idealised thin ideal through comments or actions that support or perpetuate the socially prescribed thin ideal (Thompson & Stice, 2001; Tiggemann, 2011). Second, the model highlights how the pathway between the influences and resulting body image disturbances is mediated by two specific factors, (1) appearance comparison (i.e., to the media represented ideal images or the bodies of others in society such as peers) and, (2) internalisation of societal standards of appearance (i.e., acceptance of the societal ideals as goals for one’s own physical appearance) (Shroff & Thompson, 2006a; Shroff & Thompson, 2006b; Thompson & Stice, 2001; Thompson et al., 1999; Tiggemann, 2011). This model has been supported by a series of studies testing how messages received from sources of social influence, internalisation of the thin ideal, and appearance comparison influence the development of body dissatisfaction and eating disturbances (Cusumano & Thompson, 1997; Keery, van den Berg, & Thompson, 2004; Shroff & Thompson, 2006a; Shroff & Thompson, 2006b; Stice, 2001; Stice & Whitenton, 2002; van den Berg, Thompson, Obremski-Brandon, & Coover, 2002). Despite the thin ideal emphasised by society being unrealistic for most to obtain (Thompson et al., 1999; Tiggemann, 2011), it is adopted so commonly because the pressures are pervasive in nature (Shroff & Thompson, 2006a; Shroff & Thompson, 2006b; Tiggemann, 2011). Vulnerability to the sociocultural pressures posed by the Tripartite Influence Model is determined by a number of factors (biological, social, and psychological), such that not all individuals will necessarily experience body image or eating disturbances (Tiggemann, 2011). For example, higher levels of self-
esteem may protect against the internalisation of the thin ideal and societal pressures to conform to the ideals (Tiggemann, 2011).

As detailed above, existing research largely supports the framework proposed by sociocultural theories (i.e. sociocultural pressures lead to the internalisation of the thin ideal which contributes to individuals developing body dissatisfaction and engaging in appearance related behaviours). Body image disturbances may then increase risk for a number of adverse psychological consequences in populations of women, including depressive symptoms (Fuller-Tyszkiewicz, Skouteris, Watson, & Hill, 2012a; Stice, 2001; Stice & Bearman, 2001), eating disorder symptomatology (Stice, 2001; Stice & Bearman, 2001), impaired self-esteem (Davison & McCabe, 2006), and obesity (Neumark-Sztainer et al., 2006).

The sociocultural theories discussed above are premised on a specific portion of the population, being Westernised women (Frederick et al., 2007; Tiggemann, 2011), but may be less relevant in other subsamples of the population. It is unknown whether individuals who are less able to meet the ideal are subject to these standards (from society and from themselves), and what impact this has as the discrepancy widens between ideal and actual body shape and size. Individuals belonging to groups where the thin ideal is less relevant (e.g., elderly women, women whom are pregnant or in the postnatal period, and those who have experienced significant changes to their appearance as a result of injury or disfigurement) may be at greater risk of body image disturbances if they retain these ideals that are even more unrealistic for them. Alternatively, it is possible that individuals may be relatively less likely to experience body image disturbances if that they may reject the thin ideal on account of it being irrelevant to their own body image, or modify their body.
image ideals (or downgrade importance) to better reflect reality. Such findings are useful for better understanding who is most at risk, and what factors may facilitate malleability in acceptance of ideals. Research exploring body image experiences has begun to focus on less extensively studied populations where there is a move away from the thin ideal, whether it be in lesbian, gay, bisexual, and transgender groups (Davids, Watson, Nilsson, & Marszalek, 2015; Huxley, Halliwell, & Clarke, 2015; Polimeni, Austin, & Kavanagh, 2009), populations with injury or disfigurement (Rumsey, Clarke, & White, 2003; Rumsey, Clarke, White, Wyn-Williams, & Garlick, 2004), or by natural physiological changes such as with elderly women (Reboussin et al., 2000; Tiggemann, 2004; Tiggemann & Lynch, 2001; Tiggemann & McCourt, 2013), and more recently - but less extensively studied - in pregnant populations (Clark, Skouteris, Wertheim, Paxton, & Milgrom, 2009; Duncombe, Wertheim, Skouteris, Paxton, & Kelly, 2008; Skouteris, Carr, Wertheim, Paxton, & Duncombe, 2005). This thesis focuses on pregnancy because: (1) it is a population under-represented in the literature, and (2) past findings in this population have been inconsistent.

**Pregnancy and Body Image**

Pregnancy is a potential challenge to the body image theories discussed above in that there are rapid, significant physiological changes across a relatively short 40 week period (Skouteris, 2011; Skouteris et al., 2005; Tiggemann, 2004), and these natural physiological changes push women further from the thin ideal (Clark et al., 2009; Duncombe et al., 2008; Grogan, 2008). Weight gain during pregnancy is both expected and required, with sufficient weight gain required to maintain optimal wellbeing for the unborn child and mother (Dipietro, Millet, Costigan, Gurewitsch,
& Caulfield, 2003; Hill et al., 2013). The impact that these significant physiological changes have on the woman’s body image during pregnancy may depend on the extent to which they engage in the ideal, whether the ideal is altered, and whether physical appearance remains a key priority (Tiggemann, 2011). Little is known about how pregnancy fits within models of body image posed by sociocultural theories (Watson, Broadbent, Fuller-Tyszkiewicz, & Skouteris, 2015b). For example, it is unclear whether appearance remains a priority during this period and thus the pressure remains (Watson et al., 2015b). It is also unclear whether the thin ideal is still emphasized for pregnant women by those close to them and in society that view the external changes to the pregnant body, and whether women then consequently change their engagement in social situations where their pregnant body may be viewed or judged on the basis of the comparison of their body to the thin ideal (Watson et al., 2015b). Adding to the complexity of a woman’s body image experiences across pregnancy is the presence of a range of other changes that impact her wellbeing, for example the physical symptoms of morning sickness, hormonal fluctuations, variation in mood experiences coinciding with these hormonal changes, changes to her interactions and relationship with her partner and others, and adaptation to the role of being a mother (Fuller-Tyszkiewicz, Skouteris, et al., 2012a; Skouteris, 2011).

**Aims and Thesis Outline**

As will be discussed throughout this thesis (see the systematic review of the qualitative literature presented in Chapter Two and the discussion of the qualitative piece exploring women’s body image experiences during pregnancy presented in Chapter Three), accumulated empirical evidence of body image experiences during
pregnancy have been inconsistent, and reliant upon body image measures validated in non-pregnant contexts. A key challenge then for research into pregnancy-related body image is to understand whether and how body image issues differ across pregnancy and non-pregnancy. As detailed in Chapters Two and Three, body image issues differ for pregnant women, and this has serious implications for measurement of body image. Thus, the present thesis uses a variety of methods (systematic review of the current literature and qualitative exploration) to uncover the key components of body image during pregnancy (Chapters Two, Three, and Five), and uses this information to develop and validate a measure for use in this population (Chapters Four and Five). Thus, the overall aim of this thesis is to develop a valid measure of body image to enable the accurate assessment of women’s body image disturbances during pregnancy. The steps to achieving this overall aim were threefold:

1. To comprehensively explore women’s experiences of body image as a multifaceted construct during pregnancy.

2. To develop a measure of body image disturbance that captures the rich and nuanced experiences of body image during pregnancy.

3. To test and validate a measure of body image specifically designed for the assessment of body image disturbances during pregnancy.

This thesis is comprised of a series of studies and publications. The first aim is addressed through Chapters Two and Three that present a systematic review of the existing qualitative literature exploring women’s body image experiences during pregnancy and a qualitative study to comprehensively explore body image as a multifaceted construct for a pregnant sample. Aims two and three build on the findings presented from studies pertaining to the first aim. The second and third aims
are addressed in Chapters Four and Five with a study aiming to construct a more appropriate measure and evaluate women’s specific body image experiences during pregnancy. The thesis is organised as follows: Chapter Two, a study published in *Body Image* in 2015 (Watson, Broadbent, Fuller-Tyszkiewicz, & Skouteris, 2015a), aimed to systematically review current qualitative literature exploring the meaning of body image for women during pregnancy. A qualitative study (published in *Women and Birth* in 2015) discussed in Chapter Three sought to address the gaps in the literature highlighted by the systematic review in Chapter Two. The study aimed to conduct a more comprehensive qualitative exploration of body image experiences during pregnancy, with an emphasis on qualitative methods to better understand the range and nuances of women’s body image experiences (Watson et al., 2015b).

Although individual facets of body image have been explored qualitatively with pregnant women previously, this study is the first to integrate all facets of body image into one study (Watson et al., 2015b). Existing measures validated in non-pregnant populations are insufficient for pregnant women (Fuller-Tyszkiewicz, Skouteris, Watson, & Hill, 2012b; Watson et al., 2015b), and do not capture the complexity and nuances of women’s body image experiences during pregnancy, as identified in the current qualitative study and previous qualitative investigations. Themes extracted from the qualitative data, along with items identified from previously validated measures of body image, were used to inform a new measure of body image specifically designed for pregnant women. The new measure, ‘Body Image in Pregnancy Scale’ [BIPS] was designed to assess body image as a multifaceted construct, with items to tap the different aspects of body image relevant to a pregnant population. Chapter Four presents the detailed methods for the study.
discussed in Chapter Five. Chapter Five presents a study testing the functioning of the BIPS measure through the evaluation of its psychometric properties. The study sought to test the BIPS in a sample of pregnant women and a comparison sample of women who have never been pregnant. The resulting paper from this study focusing on the development and validation of a tailored measure of body image for pregnant women, has been submitted for peer review to *Psychological Assessment*. Finally, Chapter Six presents the general findings of the studies included in this thesis in the context of past research, as well as directions for future research and a general discussion on theoretical and clinical implications.
References


body satisfaction among 2,206 undergraduates. *Sex Roles, 57*(5-6), 317-327. doi:10.1007/s11199-007-9251-z


dissatisfaction mediates the association between body mass index and risky
weight control behaviors among White and Native American adolescent

Weight control beliefs, body shape attitudes, and physical activity among
adolescents. *Journal of School Health, 81*(5), 244-250. doi:10.1111/j.1746-
1561.2011.00585.x

McCabe, M. P., Fuller-Tyszkiewicz, M., Mellor, D., Ricciardelli, L., Skouteris, H.,
& Mussap, A. (2012). Body satisfaction among adolescents in eight different
doi:10.1177/1359105311425274

body image and strategies to both increase and decrease body size among
adolescent boys and girls. *Adolescence, 36*(142), 225-240.

males across the lifespan: A review of past literature. *Journal Of
Psychosomatic Research, 56*(6), 675-685.

timing and extreme body change behaviors among adolescent boys and girls.

parents, peers, and the media on extreme weight change behaviors among


Polimeni, A., Austin, S. B., & Kavanagh, A. M. (2009). Sexual orientation and weight, body image, and weight control practices among young Australian


van den Berg, P., Thompson, J. K., Obremski-Brandon, K., & Coover, M. (2002). The tripartite influence model of body image and eating disturbance: A
covariance structure modeling investigation testing the meditational role of appearance comparison. *Journal Of Psychosomatic Research, 53*(5), 1007-1020. doi:10.1016/S0022-3999(02)00499-3


CHAPTER TWO

Study One: The Meaning of Body Image Experiences During the Perinatal Period: A Systematic Review of the Qualitative Literature

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Abstract

Literature reporting body image disturbances across the perinatal period has produced inconsistent findings, owing to the complexity of body image experiences during pregnancy and the first year postpartum. Existing qualitative data might provide potential avenues to advance understanding of pregnancy-related body image experiences and guide future quantitative research. The present systematic review synthesised the findings of 10 qualitative studies exploring the body image experiences of women through the perinatal period, albeit the majority focused only on pregnancy. Themes emerging included malleability of body image ideals across pregnancy (including the shift from aesthetic to functional concerns about one’s appearance), the salience of stomach and breasts for self-rated body satisfaction, and perceived pressure to limit weight gain across pregnancy in order to return quickly to pre-pregnancy figure following birth. These qualitative findings suggest greater complexity of body image experiences during perinatal period than can be captured by typically used self-report measures.
The meaning of body image experiences during the perinatal period: A systematic review of the qualitative literature.

Body image is conceptualised as the internal representation one has of her/his outer appearance, and comprises attitudinal, behavioural, and perceptual components (Grogan, 2008; Jarry & Ip, 2005). Attitudinal aspects of body image reflect the thoughts, beliefs, and evaluations one has about her/his own or others appearance (Cash & Smolak, 2011; Grogan, 2008). The perceptual dimension of body image focuses on the accuracy of an individual’s judgments of her/his own weight, body size, and body shape (Grogan, 2008). Behavioural aspects of body image relate to efforts made to control or change one’s appearance and/or the extent to which one avoids situations that invite scrutiny from others (Grogan, 2008).

Body image disturbances often arise from the belief that one’s appearance does not align with a desired, or idealised, body shape or size (Grogan, 2008; Tiggemann, 2011). Disturbances of body image can thus take on several forms; for example, extreme dissatisfaction with appearance, perceived fatness, constant appearance checking, and fear of appearance-related judgment (Jarry & Ip, 2005). These disturbances have been consistently linked with adverse psychological consequences, such as depressive symptoms (Fuller-Tyszkiewicz, Skouteris, Watson, & Hill, 2012a), eating disorder symptomatology (Stice, 2001; Stice & Bearman, 2001), impaired self-esteem (Davison & McCabe, 2006), and obesity (Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006).

Across the perinatal period (the period encompassing pregnancy and the first year post-birth), women may reflect on their body image, potentially re-evaluating their appearance-related values in order to adapt to their rapidly changing body
Pregnant women who find this re-evaluation difficult are likely to experience increased body image disturbances (Fuller-Tyszkiewicz et al., 2012a; Fuller-Tyszkiewicz, Skouteris, Watson, & Hill, 2012b; Skouteris, Carr, Wertheim, Paxton, & Duncombe, 2005). This is understandable given the rapid physical changes women experience across the relatively short 40 week period of gestation (Skouteris, 2011; Skouteris et al., 2005; Tiggemann, 2004), and that these natural physiological changes push women further from the socio-culturally prescribed ‘thin ideal’ (Clark, Skouteris, Wertheim, Paxton, & Milgrom, 2009b; Duncombe, Wertheim, Skouteris, Paxton, & Kelly, 2008; Grogan, 2008). It is only in instances where women are able to adopt body image ideals more realistic for a pregnant woman, that body image may improve, presumably via increased acceptance of one’s changing body shape and size (Fuller-Tyszkiewicz et al., 2012b).

Quantitative studies have yielded inconsistent findings about the nature of body image disturbances across the perinatal period. While some studies suggest that body dissatisfaction may worsen across pregnancy, with particular periods of risk during early pregnancy (Goodwin, Astbury, & McMeeken, 2000; Skouteris et al., 2005), late pregnancy (Clark et al., 2009b; Duncombe et al., 2008), and through to the postpartum (Rallis, Skouteris, Wertheim, & Paxton, 2007), other findings have instead found that pregnant women experience increased body satisfaction during these periods relative to pre-pregnancy body satisfaction levels (Clark & Ogden, 1999; Loth, Bauer, Wall, Berge, & Neumark-Sztainer, 2011). Methodological variations may contribute to the inconsistencies highlighted above, as many existing studies differed in whether they explored body image longitudinally, cross-
sectionally, or retrospectively, and the stage(s) of pregnancy captured in these designs. The inconsistency of findings may also indicate that the nature of body image during the perinatal period is more complex than can be captured with the body image measures utilised (Fuller-Tyszkiewicz et al., 2012b). Questions asked in these body image measures are validated with non-pregnant samples, and may not emphasise the body parts and concerns that are truly salient during the perinatal period (Fuller-Tyszkiewicz et al., 2012b). Furthermore, the focus on body dissatisfaction in isolation does not allow for consideration of the impact of other components of body image (e.g., ideals) on satisfaction with appearance. Because of their capacity to allow participants to elaborate in their own terms, qualitative studies may provide a richer account of how body image experiences change across the perinatal period.

Although smaller in number, available qualitative studies have been able to explore body image experiences of pregnant women in their own words, rather than relying on accuracy and comprehensiveness of quantitative measures. As detailed more fully in this review, these qualitative studies highlight that pregnant women hold both positive and negative attitudes towards their appearance, report (dis)satisfaction with body areas that are less commonly explored in non-pregnant populations, and emphasise the shift from aesthetic considerations to focus on the functioning and health of their bodies as this relates to their unborn child. However, to date, this research has not been evaluated systematically, and such an undertaking may help progress research in the area of body image during pregnancy. Hence, our aim was to synthesise the findings of qualitative studies investigating the experience of body image across the perinatal period in order to explore the key themes emerging around body image disturbances. The research questions addressed in the systematic review
were: (1) what key themes emerge from the extant qualitative literature; (2) what components of body image are explored in the qualitative literature; and (3) what do the qualitative findings tell us about body image during the perinatal period?

Method

This systematic review was informed by the preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, & Altman, 2010).

Search Strategy

A search was conducted in September of 2014 using the following databases: PsycInfo, PsycArticles, PsycExtra, PsycBooks, CINAHL, Global Health and MedlineComplete. The key word of body image was cross-referenced with the search terms of pregnancy, postpartum, and perinatal. To ensure all variations of these two key concepts were searched, the following words were used as substitutes for body image and pregnancy respectively: body dissatisfaction, body attitudes, body concerns, body preoccupation and perinatal, gestation, mother, and maternal. To ensure only qualitative studies were identified, the search terms qualitative and interviews were also used. Relevant MeSH terms, subject headings, text words, and word variants were used. Manual searches were not introduced in order to avoid selection biases. A full search strategy can be found in the online Supplementary Materials linked to this article.

Eligibility Criteria

Following removal of duplicates, studies were screened for suitability via their titles and abstracts. Eligibility criteria included only peer-reviewed studies published
in the English language and between the years 2000 and 2014. In order to provide a review of the most contemporary literature on body image, the year of publication was restricted to 2000 and beyond. Included papers focused specifically on pregnancy or the postpartum, involved sufficient testing/enquiry of body image disturbances, and involved qualitative methods (e.g., interview, focus group, ethnography). Exclusion criteria included any study that: (1) was not published in English; (2) was not published in a peer-reviewed journal; (3) was not qualitative in methodology; (4) did not focus on participants currently pregnant or in the post-partum; and (5) did not include body image as the main variable of focus. Discrepancies were resolved by consensus by the first three authors or by the fourth author if necessary. All authors then examined the full texts of potential articles to determine eligibility for inclusion in the systematic review.

**Data Abstraction**

Data from the studies were manually collated into matrices in Microsoft Excel to enable a comparison of the studies aims, samples, themes, and conclusions.

**Study Selection and Summary of Included Studies**

The initial search revealed 67 records. After the removal of duplicates and inclusion of relevant studies identified via reference lists, 65 were screened by title and abstract. Following the removal of 45 ineligible articles, 20 were read in full before 10 studies were removed due to being considered ineligible. Ten studies were considered to meet the inclusion criteria and formed the final sample of studies for the systematic review. See Figure 1 for the flowchart of study selection. A full list of excluded studies and their reasons for exclusion can be found in the online
Supplementary Materials linked to this article. Details of the included studies, their methodology, and main outcome findings are summarised in Table 1.

**Data Analysis**

A thematic content analysis was undertaken on the 10 studies included in this review. Thematic content analysis allows for the subjective interpretation of data through the systematic classification process of coding for themes or patterns (Braun & Clarke, 2006). A thematic content analysis was deemed appropriate for the current systematic literature review considering the aim was to interpret the experiences of body image during the perinatal period explored in the 10 included studies. Studies were initially read by the primary author to develop an understanding of the overall body image experiences explored in each of the studies. Further re-reading of the studies enabled the primary author to identify specific themes and organise these into categories to encapsulate similar experiences (i.e., a thematic content analysis). This synthesis produced four distinct themes: (1) body image ideals during the perinatal period; (2) body dissatisfaction across the perinatal period; (3) relevance of specific features of the pregnant body to perinatal body image; and (4) perceived expectations for limited weight gain during pregnancy and increased weight loss in the postpartum. Author 4 also read and analysed the ten studies, and the authors discussed the analyses after the themes had been extracted to ensure that author 1’s interpretations were a reliable representation of the data. Therefore, the themes related to women’s body image experiences across the perinatal period were collaboratively identified and agreed upon.
Results

Study Characteristics

The synthesis of findings is generated from 10 studies (Chang, Chao, & Kenney, 2006; Chang, Kenney, & Chao, 2010; Clark, Skouteris, Wertheim, Paxton, & Milgrom, 2009a; Earle, 2003; Harper & Rail, 2011; Haruna et al., 2010; Johnson, Burrows, & Williamson, 2004; Mills, Schmied, & Dahlen, 2013; Nash, 2012; Patel, Lee, Wheatcroft, Barnes, & Stein, 2005), sampling a total of 172 women. Sample sizes ranged from 6 (Johnson et al., 2004) to 38 (Nash, 2012), with nine of the included studies having samples of 20 participants or less (Chang et al., 2006, 2010; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Haruna et al., 2010; Johnson et al., 2004; Mills et al., 2013; Patel et al., 2005). Studies were published between 2003 and 2013. Three of these studies were conducted in the United Kingdom (Earle, 2003; Johnson et al., 2004; Patel et al., 2005), three in Australia (Clark et al., 2009a; Mills et al., 2013; Nash, 2012), two in Taiwan (Chang et al., 2006, 2010), and one each in Japan (Haruna et al., 2010) and Canada (Harper & Rail, 2011). Two studies used prospective designs (Earle, 2003; Nash, 2012), whereas the remaining studies were cross-sectional. Six of the studies sampled purely pregnant women (Chang et al., 2006, 2010; Harper & Rail, 2011; Haruna et al., 2010; Johnson et al., 2004; Nash, 2012), one study sampled just women in the postpartum (Patel et al., 2005), and three studies conducted interviews with both pregnant women and women in the postpartum (Clark et al., 2009a; Earle, 2003; Mills et al., 2013). Both Mills et al. (2013) and Clark et al. (2009a) used two different samples of women to allow them to interview women in either pregnancy or the postpartum, whereas Earle (2003) tracked one sample of women across the perinatal period (interviewing women at early
pregnancy, late pregnancy, and early during the postpartum). Furthermore, both Mills et al. (2013) and Clark et al. (2009a) interviewed women in late pregnancy (over 30 weeks gestation) and early postpartum (under 10 weeks postpartum). Of the nine studies that provided details of weeks gestation or postpartum of the women participating, five studies involved women in late pregnancy (over 30 weeks gestation) (Chang et al., 2006, 2010; Clark et al., 2009a; Johnson et al., 2004; Mills et al., 2013), one sampled women in mid pregnancy (Haruna et al., 2010), one study focused on the postpartum (Patel et al., 2005), and two sampled women with multiple time points across different phases of the perinatal period (Earle, 2003; Nash, 2012). One study did not provide data regarding weeks’ gestation of the women sampled (Harper & Rail, 2011). Two studies included specific samples of women during the perinatal period, with Patel et al. (2005) sampling individuals with eating disorders and Mills et al. (2013) focusing on a sample of overweight and obese pregnant women, but the majority of studies sampled women who were in the normal weight range, excluded those women with health issues (Chang et al., 2006, 2010), or sampled without consideration of subgroups. Furthermore, of the 10 studies included in the review Johnson et al. (2004) was the only study that exclusively sampled primiparous women. The remaining nine studies included both primiparous and multiparous women, however none of these distinguished between the two groups in their findings.

**Findings**

Four distinct themes were extracted: (1) body image ideals during the perinatal period, (2) body dissatisfaction across the perinatal period, (3) relevance of specific features of the pregnant body to perinatal body image, and (4) perceived expectations
for limited weight gain during pregnancy and increased weight loss in the postpartum. Each theme identified through the thematic content analysis of the ten studies will be discussed in turn.

**Body image ideals across the perinatal period.** Nine studies examined the relationship between body changes and body image ideals during the perinatal period (Chang et al., 2006, 2010; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Johnson et al., 2004; Mills et al., 2013; Nash, 2012; Patel et al., 2005). Johnson et al.’s (2004) sample of pregnant women discussed the contrast between the pregnant body and the ideal, slender body of a non-pregnant woman, emphasizing that awareness of this discrepancy increased their body dissatisfaction during pregnancy. The loss of the ‘normal’ pre-pregnancy body during pregnancy was also reflected in Nash (2012), with this sample of women discussing their active attempts to lose weight before becoming pregnant in an effort to preserve their ideal body when entering into pregnancy. The women’s pre-pregnancy weight control and body image shaped their feelings about their weight gain across pregnancy, regardless of parity (Nash, 2012). Mills et al. (2013) sample of overweight women (who were classified as overweight pre-pregnancy) in late pregnancy or early postpartum reported that the excess weight they carried into pregnancy interfered with their attempts to achieve the ideal pregnant body, which they perceived as being a thin body with a distinctly round stomach.

The relationship between the body changes of pregnancy and the role of becoming a mother was frequently discussed in the qualitative studies. Women expressed that their bodies needed to get bigger and change to cater for their unborn child, and this was necessary to fulfil the role of a mother (Chang et al., 2006; Clark et
al., 2009a; Earle, 2003; Harper & Rail, 2011; Patel et al., 2005). Acceptance of the growing body implies an adjustment of body shape and size ideals across pregnancy to better align with the increase in size and changes to shape characteristic of each stage of pregnancy. Furthermore, women expressed that the changes to their bodies were viewed as being a natural part of their pregnancy and communicated that their pregnancy was progressing successfully. Therefore, they adjusted more favourably to the body changes with increased acceptance (Earle, 2003). Nash (2012) echoed this idea that the changing pregnant body was a method of communicating to others that they were pregnant.

However, multiple studies indicate that although there is a relaxation of appearance ideals during pregnancy there is still an ideal in place, valuing normal weight gain over the unaccepted excessive weight gain (Earle, 2003; Johnson et al., 2004). These women sampled demonstrated that women were not necessarily realistic in their notions of what constitutes acceptable, or normal, weight gain during pregnancy (Clark et al., 2009a). In the postpartum, women reflected that their expectations for both weight gain during pregnancy and weight loss during the postpartum were incongruent with their realities, expressing that regaining the pre-pregnancy idealised body was more difficult than anticipated (Clark et al., 2009a).

A similar theme identified to this adjustment of ideals from other studies was redefinition of the women’s self-identity (Chang et al., 2010; Patel et al., 2005). Both Patel et al.’s (2005) and Chang et al.’s (2010) samples of pregnant women highlighted that the pregnancy period was a transition of the self or identity for the women, with their body image attitudes adapting as they formed their new sense of self. While the women were able to adopt more realistic ideals to coincide with their changing
identity and body, there was some ambivalence as they reflected sadness about the loss of their pre-pregnancy self (Chang et al., 2010; Patel et al., 2005). The sample of pregnant women in Chang et al. (2006) also raised the theme of the loss of the pre-pregnancy self, with the women ambivalent in their feelings about their changing bodies. The subsample of women reporting a positive adjustment to their changing bodies during pregnancy reflected that their comparison with other pregnant women allowed them to gain perspective about the changes and appreciate that they were a shared, common experience (Chang et al., 2006). This reprieve from the strict body image ideals women employed was considered temporary, with women living in a temporary body whereby weight gain during pregnancy was permissible, however women should lose weight to regain a pre-pregnancy figure once they had given birth (Chang et al., 2006; Clark et al., 2009a; Earle, 2003).

Also tied into this redefining of self-identity theme was the idea of shifting priorities, from the focus of doing what is best for the individual’s body as a woman to doing what is best for their body in terms of one’s unborn child (Chang et al., 2006; Clark et al., 2009a). Prioritising of the unborn baby was also discussed in Mills et al. (2013), with the women concerned about their overweight status during pregnancy not for appearance-related reasons but because of the potential to affect the health of their unborn child. Similarly, Patel et al. (2005) reported that whereas those women who had been classified as having non-clinical or sub-clinical eating disorders were able to switch their attention from preoccupation with appearance to the unborn child, women with an eating disorder diagnosis struggled to shift their focus to their unborn child away from their normal, pre-pregnancy preoccupation with their appearance (Patel et al., 2005).
The postpartum period was consistently discussed as an area of concern for pregnant women’s body changes and body image across the qualitative studies, with the perceived expectation of having to return to their pre-pregnancy figure (Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Johnson et al., 2004). This perceived pressure to regain a pre-pregnancy figure was also expressed in those studies sampling pregnant women, despite not yet giving birth (Chang et al., 2006; Earle, 2003). These samples of pregnant women were already anticipating, and concerned about, the difficulty of returning to pre-pregnancy weight and shape, and the need to implement strategies to lose weight (Chang et al., 2006; Earle, 2003). Clark et al.’s (2009a) postpartum sample emphasised that there was an internal expectation to return to some form of pre-pregnancy figure, as they were no longer pregnant and therefore no longer exempt from society’s thin ideal. Although these postpartum women acknowledged that expectations of immediately regaining pre-pregnancy figure were unrealistic, they still felt dissatisfied for not achieving this unrealistic post-pregnancy body image ideal (Clark et al., 2009a). However, with Harper and Rail’s (2011) sample of women, many were more concerned about the development of stretch marks, varicose veins, and excess skin in the postpartum (Harper & Rail, 2011).

**Body dissatisfaction across the perinatal period.** Five studies focused on the experience of body dissatisfaction or body satisfaction across the perinatal period, with one characterised by positive adjustments of body satisfaction across the duration of pregnancy (Clark et al., 2009a), three highlighting the negative adjustment of body satisfaction across mid pregnancy, late pregnancy, and the postpartum respectively (Harper & Rail, 2011; Johnson et al., 2004; Patel et al., 2005), and one
reporting mixed results for women in late pregnancy (Mills et al., 2013). Patel et al.’s (2005) sample expressed concerns about weight gain and body changes during pregnancy, and many felt negatively about these changes. Similarly, Johnson et al.’s (2004) sample of primiparous women discussed being less satisfied with their bodies and appearance during pregnancy, however this varied in the sample. Clark et al. (2009a) also found that although the women experienced an increase in positive affect during the postpartum, this did not necessarily correspond to their body image satisfaction and the women did not feel the two were related. While the women were able to feel positively about being pregnant, there were feelings of body dissatisfaction associated with their postpartum bodies (Clark et al., 2009a).

The experience of being physically restricted, uncomfortable, and impaired in the pregnant body was discussed by Johnson et al. (2004), with the sample reflecting that this frustration added to their general body dissatisfaction. This physical restriction of the pregnant body was also discussed in Harper and Rail (2011), with some of the women finding the pregnant body uncomfortable and foreign, while others admired the pregnant body and what it could achieve, enjoying the physical changes.

On the other hand, Clark et al. (2009a) reported that many women adapted positively to their body changes and consequently experienced body satisfaction in pregnancy, with this adjustment aided by several events unique to pregnancy. These unique events included feeling the baby kick, the increased perceived body functionality, positive comments from others about their appearance, and the new sense of meaning to the women’s lives (Clark et al., 2009a). Fourteen percent of the pregnant, overweight women sampled in Mills et al.’s (2013) study reported being
unconcerned with their overweight status during pregnancy; however, there was a
diversity of experiences with others being dissatisfied and actively attempting to
control their weight during pregnancy.

**Relevance of specific features of the body across the perinatal period.** The
body parts most referenced were the stomach (Clark et al., 2009a; Earle, 2003;
Johnson et al., 2004; Nash, 2012) and breasts (Chang et al., 2006; Earle, 2003).
Across the five qualitative studies that explored satisfaction with body parts, the
stomach was consistently referred to as having relevance to the women’s body image
and changing body image ideals across pregnancy (Clark et al., 2009a; Earle, 2003;
Johnson et al., 2004; Nash, 2012). The stomach was spoken about in relation to the
women’s progression across pregnancy, and the important distinction between being
fat versus ‘showing’ during early pregnancy (Clark et al., 2009a; Earle, 2003; Johnson
et al., 2004; Nash, 2012). Women identified a distinctly rounded stomach as the
defining feature of pregnancy that communicated to others their pregnancy status
(Nash, 2012). Hence, this form of weight gain was deemed more acceptable than for
other body regions (Harper and Rail (2011).

Earle’s (2003) sample of pregnant women reflected that the growing stomach
was something to be coveted, particularly in early pregnancy when women were yet
to significantly show they were pregnant. Similarly, Mills et al.’s (2013) sample of
women expressed that when they were in the early phase of pregnancy they were
pleased when others were able to recognise that they were pregnant rather than simply
‘frumpy’ or carrying excess weight. However, Nash’s (2012) sample of women
associated this transition period with fear, as they were concerned about others’
misperceptions of their weight gain. Similarly, Harper and Rail (2011) found that the
period of pregnancy where women do not yet look pregnant was related to an increase in anxiety, with the women concerned whether others were able to distinguish between weight gain as being ‘fat’ and weight gain for pregnancy. Consequently, this fear of being perceived as ‘fat’ shaped the women’s feelings about their bodies, and their weight gain across the duration of their pregnancies (Nash, 2012).

Women’s pre-pregnancy perceptions of their breasts shaped their feelings towards their breasts during the perinatal period (Chang et al., 2006). Earle (2003) suggested that while many women were pleased with their increase in breast size, a small number of women were displeased because of the breasts being perceived as too large and being physically uncomfortable. In addition, Earle (2003) reflected that the women’s concerns about their changing breast size were related to their feelings of attractiveness rather than their transition to motherhood, suggesting a relinquishing of body ideals. Furthermore, women sampled in two studies were concerned with the changes in their nipple colour (Chang et al., 2006; Clark et al., 2009a).

Physical changes to the skin resulting from pregnancy as a unique transition period were also discussed for their impact on body dissatisfaction, including stretch marks, varicose veins, and other skin changes (Chang et al., 2006, 2010; Harper & Rail, 2011). While the sample of pregnant women in Chang et al. (2010) reported that skin changes of pregnancy were unexpected, dissatisfaction was reduced once conversations with other pregnant women normalized the experience.

**Perceived expectations for limited weight gain during pregnancy and increased weight loss in the postpartum.** The ideas communicated about appropriate weight gain during pregnancy were highly relevant to women’s experience of body image across the perinatal period (Harper & Rail, 2011; Haruna et
al., 2010; Mills et al., 2013; Nash, 2012). Weight gain during pregnancy was a common concern among Western women, who registered worry about gaining excessively during pregnancy and losing the pre-pregnancy body (Harper & Rail, 2011; Haruna et al., 2010; Mills et al., 2013). Cultural differences were evident in those studies sampling women of specific ethnicities. Haruna et al. (2010) demonstrated that their sample of Japanese women were very concerned about weight gain, and sought to minimise this throughout their pregnancies, whereas the sample of Fijian women sampled in Mills et al. (2013), were less concerned about their weight gain during pregnancy. Being overweight entering into pregnancy was also of concern to women interviewed in Mills et al. (2013). The women’s concerns about being overweight were related to both the women’s body image and the prioritising of their own and their unborn baby’s health (Mills et al., 2013).

Communication about weight gain in antenatal healthcare was explored by two studies (Haruna et al., 2010; Mills et al., 2013). Haruna et al. (2010) found that both pregnant women and healthcare providers in Japan prioritised minimal weight gain rather than appropriate weight gain during pregnancy for the women’s BMI. Pregnant women perceived the advice given by the healthcare providers as setting a limit on the weight they could gain across their pregnancies, however this may be a cultural difference (Haruna et al., 2010). Women were frustrated by the messages given about weight gain and how these did not account for the development of body image disturbances during the perinatal period (Haruna et al., 2010). Pregnant women complained that healthcare practitioners were too focused on weight recommendations during pregnancy, without due consideration of how their appearance-related messages may have longer-term implications for body satisfaction.
post-pregnancy (Haruna et al., 2010). In contrast, Mills et al. (2013) sample of overweight or obese pregnant women living in Australia were surprised how health providers related to them throughout pregnancy, with some experiencing a reluctance from health providers to talk about weight issues with patients who were obese. In some instances, women presenting for antenatal care received abrupt messages from health providers that they were too fat and needed to lose weight, with no instructions regarding how to achieve this (Mills et al., 2013).

**Discussion**

**What Key Themes Emerge from the Extant Qualitative Literature?**

The key themes emerging from the data included: (a) body image ideals adapt across pregnancy, (b) pregnant women may experience both body dissatisfaction and satisfaction at different times during pregnancy (and even simultaneously), (c) the stomach and breasts are particularly salient features of body image during pregnancy, and (d) perceived pressure to limit weight gain across pregnancy and to quickly return to pre-pregnancy figure following birth.

Adjustment of body image ideals was frequently referred to in the reviewed studies, with women expressing recognition that to fulfil the role of becoming a mother, it was necessary for their bodies to get bigger and change to cater for their unborn child (Chang et al., 2006; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Patel et al., 2005). This acceptance of the growing body implies an adjustment of body shape and size ideals across pregnancy, which is consistent with findings from quantitative studies. Quantitative literature recognised the importance of the appropriate adjustment of body image ideals, with the changes to body shape and size
across each phase of pregnancy requiring an accommodation of ideals to accept the growing figure (Duncombe et al., 2008; Skouteris et al., 2005). Both Skouteris et al. (2005) and Duncombe et al. (2008) demonstrated an accommodation in the ideal figures selected by the pregnant women as they progressed across the gestation period. This indicates that pregnant women were able to adjust their current perceptions of what would be considered an ideal shape and size for that stage of pregnancy (Duncombe et al., 2008; Skouteris et al., 2005). However, the shift in body image ideals was also expressed in other ways. In some studies there was acceptance of a temporary transgression from this ideal, with the implicit assumption that the pregnancy body weight is temporary and will be lost postpartum (Chang et al., 2006; Clark et al., 2009a; Earle, 2003). In contrast, other studies demonstrated an increased emphasis on ‘showing’, and on functional considerations during pregnancy, suggesting that the goals they have regarding appearance are not limited to aesthetics (Clark et al., 2009a; Harper & Rail, 2011). The ideals the women aspire to, and thus the salient features of the body they compare against, appear different to those of women who have not experienced pregnancy. While regaining the pre-pregnancy body is important in the postpartum, some of the salient features may change as a consequence of pregnancy. Such findings suggest that the use of ideal figure ratings in quantitative studies may be insufficient for gauging body image ideals of pregnant women.

Body dissatisfaction experiences across pregnancy were mixed in the reviewed research, with both positive and negative feelings associated with the pregnant body (Clark et al., 2009a; Harper & Rail, 2011; Johnson et al., 2004; Mills et al., 2013). Factors such as weight status (Mills et al., 2013), the perceptual experience
and functionality of the pregnant body (Clark et al., 2009a), internal conflict (satisfaction with current appearance, but concern about this figure in the postpartum), and the physical restriction of the pregnant body (Harper & Rail, 2011; Johnson et al., 2004) were discussed for their influence on body dissatisfaction. Furthermore, while interviewed women registered dissatisfaction with their changing appearance, body image was actually deprioritised with health and function of the body becoming more important. This suggests that body dissatisfaction may have less importance in pregnant populations than non-pregnant populations, therefore more detailed surveys that provide context for the women’s experiences are needed to ascertain whether this body dissatisfaction is meaningful and something the women will act upon.

The experience of body (dis)satisfaction associated with the stomach was emphasised by several studies (Clark et al., 2009a; Earle, 2003; Johnson et al., 2004; Nash, 2012) as being uniquely tied to being pregnant, whereas changes to body parts such as the breasts or skin and resulting body dissatisfaction was related to aesthetics (Chang et al., 2006; Earle, 2003). This suggests that some aspects of body image associated with specific qualities of the pregnant body revolve more around the body function and relationship with the body, than appearance concerns and the attainment of appearance related ideals.

Expectations about weight changes during pregnancy were identified in this review, with anxiety associated with the loss of pre-pregnancy figure and anticipation of the weight gain potential across pregnancy consistently emerging as themes (Harper & Rail, 2011; Haruna et al., 2010; Mills et al., 2013; Nash, 2012). The ‘in-between’ phase of pregnancy was referenced frequently in the qualitative studies, with women struggling to negotiate the early phase of pregnancy where there is a
perceived ambiguity for onlookers to gauge whether the pregnant women had gained excessive weight or were pregnant, as they did not display the distinctly rounded, firm, stomach of a pregnant woman (Clark et al., 2009a; Earle, 2003; Johnson et al., 2004; Nash, 2012). Increased pressure perceived during the postpartum to return to a pre-pregnancy figure was a theme emerging in the studies focusing on samples of postpartum women and those studies focusing on women still pregnant, with these women thinking forward to a time when they would no longer be pregnant (Clark et al., 2009a; Patel et al., 2005). This worry about the post-pregnancy body from women who were still currently pregnant suggests that pregnant women can be happy with their current appearance yet simultaneously hold concerns about their future appearance (Chang et al., 2006; Earle, 2003). Quantitative studies focusing on the postpartum period consistently support the idea that excessive weight retained following the birth of the child results in heightened body dissatisfaction (Erbil, Senkul, Başara, Sağlam, & Gezer, 2012; Huang & Dai, 2007; Jenkin & Tiggemann, 1997; Walker & Freeland-Graves, 1998; Walker et al., 2004).

Importantly, the relationship between weight status pre-pregnancy and during pregnancy with body dissatisfaction needs to be fully explored considering excessive gestational weight gain (GWG) and the implications for pregnancy outcomes. Whereas sufficient weight gain is required to maintain optimal wellbeing for the mother and unborn child (Dipietro, Millet, Costigan, Gurewitsch, & Caulfield, 2003; Hill, Skouteris, McCabe, Milgrom, et al., 2013), excessive GWG is associated with a wide variety of negative health consequences such as pregnancy complications, increased risk of delivery complications, and later increased risk of obesity for mother and child (Amorim, Rössner, Neovius, Lourenço, & Linné, 2007; Schack-Nielsen,
Michaelsen, Gamborg, Mortensen, & Sørensen, 2010; Siega-Riz et al., 2010; Wrotniak, Shults, Butts, & Stettler, 2008). Current research indicates that over half of all women exceed the recommended weight gain across pregnancy for their specific BMI category (Chu, Callaghan, Bish, & D'Angelo, 2009). Hill et al.’s (2013) conceptual model of the interplay between GWG and body image proposed that increased body dissatisfaction has an important role in the prediction of excessive GWG. In a prospective study testing their conceptual model, Hill, Skouteris, McCabe, and Fuller-Tyszkiewicz (2013) found that both body image and pre-pregnancy BMI were predictive of gaining more weight and excessive GWG. Importantly, it is possible that awareness and dissatisfaction with one’s body size, particularly if concerned about being overweight, carry over into pregnancy such that the health implications of weight gain and overweight status are more salient during pregnancy for these women than for others who previously had not been particularly concerned about their body size. Clinically, these relationships need to be considered in the messages communicated to women about weight gain across pregnancy, and the difficulty in losing excessive weight during the post-partum, to ensure women establish realistic ideas about their body changes across the perinatal period.

**What Components of Body Image are Explored in the Qualitative Literature?**

The findings of the qualitative studies reviewed here highlighted the multifaceted nature of body image, with studies focusing on body image ideals, body (dis)satisfaction, body change, and behaviours related to appearance management. Body image ideals were discussed in five of the qualitative studies reviewed (Chang et al., 2006; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Patel et al., 2005), in terms of how body image ideals adapt to coincide with an adjustment of roles and
the physical changes to body size and shape. Experiences of both body dissatisfaction and body satisfaction were explored in five qualitative studies (Clark et al., 2009a; Harper & Rail, 2011; Johnson et al., 2004; Mills et al., 2013), with dissatisfaction attached to the body as a whole, specific body parts such as the stomach, breasts, and skin, and the weight changes experienced. Body changes across pregnancy were emphasised in four of the ten qualitative studies (Harper & Rail, 2011; Haruna et al., 2010; Mills et al., 2013; Nash, 2012), specifically focusing on the weight gained across pregnancy and pressure to return to a pre-pregnancy figure following the birth of the child. Behaviours related to appearance management or concealment were referenced in multiple studies (Chang et al., 2006, 2010; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Johnson et al., 2004; Patel et al., 2005), with samples of women discussing the availability of flattering maternity clothing, trying to fit into pre-pregnancy clothing (both during pregnancy and in the postpartum), and attempts to present oneself as beautiful in early pregnancy.

What do the Qualitative Findings tell us about Body Image during the Perinatal Period?

The findings of our systematic review revealed the complex and varied nature of body image experiences across the perinatal period. It was evident that many women were appearance dissatisfied, but this dissatisfaction may be deprioritised and thus have less impact than in pre-pregnancy. Body image adjustment across the perinatal period is challenging, depending on the pre-pregnancy importance placed on body image, women’s body image ideals or values during the perinatal period, and the expectations women have for their body changes as they transition through early pregnancy, mid- late pregnancy, and the postpartum. Furthermore, aspects of
appearance focused upon during pregnancy are markedly different from those salient in non-pregnant populations. There is a greater emphasis on function than aesthetics, suggesting that the ideal may need to be considered in broader terms than simply focusing on body size and shape. Similarly, the shift women experience in priorities from their appearance to their body’s functioning and their child’s wellbeing should also be acknowledged.

Even when one limits the scope to dissatisfaction with appearance, qualitative findings reviewed here suggest the insufficiency of currently adopted body (dis)satisfaction measures for pregnant women. Absent from existing body image measures are concerns about stretch marks, varicose veins, nipple discoloration, as well as focus on a big stomach as evidence of pregnancy ('showing') instead of a sign of discordance with the non-pregnant physical ideal. Thus, one may wonder whether inconsistent findings regarding body dissatisfaction during pregnancy are, in part, an artefact of inquiring about body features that are of limited salience to pregnant women. These qualitative findings echo the suggestion of Fuller-Tyszkiewicz et al. (2012b) that researchers in this area should prioritise development of suitable body image measures before further exploring substantive questions about the nature of body image during pregnancy.

Limitations of the Current Research and Future Research Directions

The findings of this review revealed significant gaps in the literature. Firstly, the cross-sectional nature of the majority of these studies relies on women making retrospective reflections about their pre-pregnancy body image in order to gauge an understanding of how body image adapts to the body changes characteristic of pregnancy. While some of the studies sampled women in early pregnancy, the
majority of the studies focused on samples in the later stages of pregnancy, and this retrospective exploration of pre-pregnancy body image may mean questions focusing on what happened earlier in pregnancy are problematic (Fuller-Tyszkiewicz et al., 2012a). The sampling of women primarily at late pregnancy may influence the findings generated, with women’s body image experiences in late pregnancy potentially coloured by their memory of early, mid, and pre-pregnancy body image experiences (Duncombe et al., 2008; Fuller-Tyszkiewicz et al., 2012a; Skouteris et al., 2005). Qualitative studies sampling women in late pregnancy are subject to recall biases, therefore these biases need to be accounted for with future research designs given that during pregnancy (specifically late pregnancy), impaired memory and the experience of forgetfulness is common (Casey, Huntsdale, Angus, & Janes, 1999; Henry & Sherwin, 2012). Broader cross-sectional studies are needed to cover pregnant women at different stages of pregnancy to reconfirm themes early on in pregnancy, not just that these are incorrectly remembered.

An additional limitation of the studies included in the review is that they were primarily composed of women who were in their early- to mid- 30’s, married, university educated, and Caucasian. The three exceptions, Taiwanese women in Chang et al. (2006, 2010), and Japanese women in Haruna et al. (2010) exhibited clearly different views regarding body image experiences and expectations than Anglo-Saxon counterparts in the remaining studies. Similarly, the markedly different responses of pregnant women diagnosed with eating disorders compared to non-eating disordered women (Patel et al., 2005), as well as how the obese women in Mills et al. (2013) responded, provide clear evidence of differences of body image experiences on the basis of demographics. While these demographic factors (BMI, culture, and eating
disorder status) are common bases for group difference in body image research, there are others that should be explored. For instance, Chang et al. (2006, 2010) exclusion of women with health or weight complications during pregnancy limits the interpretation of how women’s body image experiences differ depending on their complications, warranting further research. Given the impact of culture on ideas about ideal body size and shape for non-pregnant women (McDowell & Bond, 2006), further investigation of the body image experiences of pregnant women in the context of their demography, culture, and ethnicity may also be of specific interest for future research. Lastly, the issue of having unrealistic expectations about body changes across pregnancy or being unsure about what to expect during pregnancy also came up, and this signals the need to separate women on the basis of parity.

**Conclusion: Clinical Implications for the Support and Healthcare of Pregnant Women**

Despite accumulated research highlighting associations between increased body image disturbances and adverse health outcomes for both the mother (psychological conditions including depression (Fuller-Tyszkiewicz et al., 2012a), eating restraint (Fuller-Tyszkiewicz et al., 2012a), impaired maternal-foetal attachment (Fuller-Tyszkiewicz et al., 2012a), and physical health concerns such as obesity (Neumark-Sztainer et al., 2006) and excessive gestational weight gain (Hill, Skouteris, McCabe, & Fuller-Tyszkiewicz, 2013) and the unborn child (unhealthy eating behaviours that can negatively impact on the unborn child’s health and development (Fuller-Tyszkiewicz et al., 2012a), body image is largely neglected by healthcare professionals working with pregnant women (Leddy, Jones, Morgan, & Schulkin, 2009). A study completed by the American College of Obstetricians and
Gynaecologists reported that less than one third of professionals assessed for body image disturbances in routine antenatal care (Leddy et al., 2009). Our review has highlighted the inaccurate or unrealistic expectations pregnant women have about weight gain, particularly post-pregnancy. Further research is required to understand what messages are being communicated to women entering into pregnancy or the postpartum about weight gain and body image in clinical settings, their potential impact on pregnant women, and consequently how the delivery of these messages can be improved. With more knowledge about what body changes to expect across the perinatal period, pregnant women may be able to better adjust their ideals and adapt to the body changes.
References


Records identified through database searching.  
$n=67$

Additional records sourced through other sources.  
$n=2$

Records after duplicates removed.  
$n=65$

Records screened.  
$n=65$

Records removed.  
$n=45$

Full text articles assessed for eligibility.  
$n=20$

Full Text articles removed with reasons.  
$n=10$
- Qualitative methodology to administer quantitative measures, not qualitative data, $n=2$.
- Retrospective assessment of pregnancy or the postpartum, $n=1$.
- Article not peer-reviewed publication, $n=1$.
- Insufficient inclusion of body image as a focus, $n=5$.

Studies included in the review.  
$n=10$
<table>
<thead>
<tr>
<th>Authors</th>
<th>Aim</th>
<th>Sample</th>
<th>Qualitative Methodology</th>
<th>Results</th>
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</table>
| Chang et al. (2006) Taiwan | To explore the body image and body satisfaction of Taiwanese women in their third trimester of pregnancy. | $n = 18$  
$M$ age: Information not given.  
$M$ weeks gestation: range between 29 and 39 weeks gestation.  
*Ethnicity*: 100% Taiwanese.  
*Parity*: 83% primiparous.  
*Education*: 61% tertiary educated.  
*Income*: Information not given.  
*Relationship Status*: 94% married. | Interviews were conducted face-to-face, lasting between 45 minutes and 2.5 hours. Interviews were kept conversational, focusing first on the women’s general experience of pregnancy before focusing on their body image experiences. | Two key themes emerged: (1) the loss of the pre-pregnancy body being one of concern for the women and the use of standards of beauty being referenced from pre-pregnancy, (2) the change of body being accepted due to the change of roles and doing what is best for the unborn child. |
| Chang et al. (2010) Taiwan | To examine how Taiwanese women consider the self during pregnancy, including their body image. | $n = 18$  
$M$ age: 30.5 years  
$M$ weeks gestation: 33.6 weeks.  
*Ethnicity*: 100% Taiwanese.  
*Parity*: 83% primiparous.  
*Education*: 61% tertiary educated.  
*Income*: Information not given.  
*Relationship Status*: 94% married. | In depth, open-ended interviews were conducted face-to-face, lasting between 45 minutes and 2.5 hours. Interviews focused first on the women’s general experience of pregnancy before focusing on their body image experiences. | Pregnancy required the women to build a new idea of their body image, on the basis of their past self, and cultural beliefs and traditions. |
Clark et al. (2009a) Australia

To explore women’s body experiences and attitudes during pregnancy, in conjunction with an exploration of their mood changes and their influence on changes in body image. $n = 20$

$M$ age: 31.25 years

$M$ weeks gestation: 34.5 weeks pregnant ($n=10$) and 9.2 weeks postpartum ($n=10$)

Ethnicity: 100% Caucasian. Parity: 80% of the pregnant women were primiparous. 100% of the postpartum women had given birth to their first child.

Education: 90% tertiary educated.

Income: Information not given.

Relationship Status: 80% married.

Semi-structured, in-depth interviews were used to gain detailed insights into the meaning the women attached to body-related experiences, and how they reacted to them. Interviews for the two groups were conducted face-to-face, and lasted approximately 45 minutes.

Two key themes emerged from the data of the pregnant women: (1) Body image shifted to a positive perspective, with the women able to reason their body was changing for their unborn child. (2) Pregnant women were concerned about how others in society viewed their pregnant body, and expressed the public nature of pregnancy.

Two key themes emerged from the postpartum data: (1) The women felt like they had no excuse for not shifting their body back to their pre-pregnancy shape and size. (2) It was a difficult adjustment for body image in the postpartum, especially for those women who had higher or unrealistic expectations.

Earle (2003) UK

To explore the level of acceptance women have with the changes characteristic of pregnancy in body size, shape and appearance. $n = 19$

$M$ age: range between 16 and 30 years.

$M$ weeks gestation: Information not given.

Ethnicity: Information not given. Parity: 100% primiparous.

Education: Information not given.

Income: Information not given.

Multiple interviews were completed with each participant, at early pregnancy, late pregnancy and early during the postpartum. Women completed three face-to-face interviews each, with the interviews ranging from half an hour to 2.5 hours. Body image was explored through the

Three key themes were highlighted: (1) Women were very focused on the distinction between looking fat in early pregnancy and when they start to ‘show’ their pregnant stomach. (2) The growing stomach was a body change unique to pregnancy that was coveted by the women. The women were also quite focused on the changes to their breasts during pregnancy. (3) Pregnancy was viewed as a temporary state for their body and the changes happening.
Harper and Rail (2011) Canada To explore how pregnant women discursively construct the pregnant body.

$n = 15$

$M$ age: Women were aged between 18 and 28 years.

$M$ weeks gestation: Information not given.

$Ethnicity$: Information not given.

$Parity$: 86.7% primiparous.

$Education$: Information not given.

$Income$: Information not given.

$Relationship Status$: Information not given.

Women expressed that the gaining of weight was somewhat more acceptable if the weight was distributed to the stomach, hips and buttocks, but not if the was put on their face or arms.

Women expressed anxiety about losing their pre-pregnancy body, and were concerned about the amount of weight they would gain across pregnancy.

The women distinguished that there was a difference between being pregnant and being fat. There was purpose for the weight gain during pregnancy as they were fulfilling the role of being a mother.

For some of the women the period of pregnancy where women do not yet look pregnant was related to an increase in anxiety.

Some of the women admired the pregnant body and what it could achieve, enjoying the physical changes, while others found the pregnant body uncomfortable and foreign.

Some of the women were concerned about the regaining of the pre-pregnancy body after the birth of their child, however many of the participants were more concerned about stretch.
Haruna et al. (2010) Japan

To explore pregnant women and healthcare providers perceptions of appropriate weight gain across pregnancy.

$n = 9$

$M$ age: 33 years (26-40 years).

$M$ weeks gestation: 27 weeks (13-35 weeks).

Ethnicity: 100% Japanese.

Parity: 100% primiparous.

Education: $M$ years education= 16 years.

Income: Information not given.

Relationship Status: Information not given.

Once-off face-to-face focus groups were completed with separate groups of both the pregnant women and the healthcare providers.

For both the pregnant women and the healthcare providers, minimal weight gain was prioritised as opposed to appropriate weight gain. The pregnant women perceived the advice given by the healthcare providers as setting a limit on the weight they could gain across their pregnancies.

The pregnant women were frustrated by the messages given about weight gain and how these conflicted with their body image.

Male health providers expressed a difficulty in discussing body image and weight with the pregnant women. The female health providers expressed that they displayed sympathy to the women concerned about their weight gain during pregnancy.

The women generally spoke of being less satisfied with their bodies during pregnancy, however this was a complex process and their perceptions were constantly changing.

The woman also spoke of the contrast between the pregnant body and the ideal, slender body.

Johnson et al. (2004) UK

To explore the meaning of body changes during pregnancy for first time mothers and the implications of these changes for their body image.

$n = 6$

$M$ age: ranged between 26 and 34 years.

$M$ weeks gestation: ranged between 33 and 39 weeks.

Ethnicity: 83% Caucasian.

Parity: 100% primiparous.

Education: 67% tertiary educated.

Income: Information not given.

Once-off semi-structured interviews were conducted.

The women generally spoke of being less satisfied with their bodies during pregnancy, however this was a complex process and their perceptions were constantly changing.

The woman also spoke of the contrast between the pregnant body and the ideal, slender body.
| Mills et al. (2013) Australia | To explore the perceptions and experiences of women who were overweight during pregnancy. | $n = 14$

$M$ age: Women were aged between 25-42 years.

$M$ weeks gestation: 32-38 weeks gestation ($n = 11$) and 3 days-6 weeks postpartum ($n = 3$).

Ethnicity: Information not given.

Parity: 21.4% primiparous.

Education: Information not given.

Income: Information not given.

Relationship Status: Information not given. | Once-off face-to-face interviews were completed, ranging from 15-60 minutes duration. The women were first asked about the meaning of their pregnancy and how they felt about becoming a mother. These were followed by more specific questions about how felt about their body, weight and eating behaviour. | Most women expressed a certain level of discomfort about being overweight, and were critical of themselves in their judgments of their bodies.

The weight was discussed by some of the women as interfering with their having the ideal pregnant body of being thin with the distinctly round stomach. This meant that the women were pleased when others were able to recognise that they were pregnant and not ‘frumpy’.

Women were situated along a continuum of change with their perceptions about their pregnant bodies and status as being overweight. Women ranged from being unconcerned about their being overweight through to actively attempting to control their weight during pregnancy.

Concern about being overweight related to the women prioritising their unborn baby’s health and also themselves. |

| Nash (2012) Australia | To examine experiences of weight gain and ‘fatness’ across pregnancy. | $n = 38$

$M$ age: 33 years of age (21-40 years).

$M$ weeks gestation: Women were interviewed four times across the perinatal period at Multiple interviews were completed with each participant, at 10 week intervals across the perinatal period. Women completed four interviews | The ‘in-between’ phase of pregnancy before mothers’ bodies distinctly took on the pregnancy shape was associated with fear for the women, for others misperceptions of their weight gain. This shaped the women’s feelings about their bodies and their weight gain across the duration |
10 week intervals, beginning at 10-20 weeks gestation.  
*Ethnicity*: 100% Caucasian.  
*Parity*: Information not given.  
*Education*: 100% tertiary educated.  
*Income*: Information not given.  
*Relationship Status*: Information not given.

Each. Body image was explored through exercise, dressing and eating.

The physical appearance and body was used to communicate to others that the women were pregnant.

Women’s pre-pregnancy weight control shaped their feelings about their weight gain across pregnancy, with women reflecting on their active attempts to lose weight before becoming pregnant and the fear of losing their normal bodies during pregnancy.

A key theme around the loss of the pre-pregnancy self emerged, especially around the changes the women experienced during pregnancy for their bodies. Related to this was the idea that the women were in the process of transitioning from their pre-pregnancy self and that body and the new self they were becoming (a mother).

The postpartum was emphasised as a period associated with negative feelings due to the concerns and expectations the women had about regaining their figures.
CHAPTER THREE

Study Two: A Qualitative Exploration of the Body Image Experiences of Women Progressing through Pregnancy

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Number of References: 27

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Abstract

Background
Pregnancy provides an interesting challenge to body image theories in that the natural physiological changes push women further from the socioculturally prescribed thin ideal which these theories hinge upon. The impact that these significant physiological changes have on the woman’s body image during pregnancy may depend on the extent to which they retain or revise the ideal. However, little is known about body image experiences during pregnancy.

Aim
To provide a comprehensive exploration of the body image experiences of pregnant women.

Methods
Individual structured interviews were conducted with 19 currently pregnant women. Transcriptions were analysed using a thematic content analysis approach.

Findings
Themes extracted from the qualitative data included: (1) Women’s body image experiences during pregnancy were complex and changing, and shaped by the salience of specific body parts, the women’s expectations for future changes to their body within the perinatal period, the functionality of the body, and their experience of maternity clothing, (2) Women were able to negotiate the changes to their bodies as they recognised the functionality of the pregnant body, (3) Women were surprised by the public nature of the pregnant body, (4) Partner support and positive feedback about the pregnant body was highly valued, and (5) The importance of open communication around weight and body image in antenatal healthcare.
Discussion

Our findings highlight the need for the adaptation and expansion of existing body image theories to be used as a framework for women’s experiences of pregnancy.

Keywords: Body Image, Pregnancy, Pregnant Women
Summary of relevance

Problem or Issue

Little is known about whether common sociocultural theories of body image apply to the unique period of pregnancy.

What is Already Known

Common models of body image disturbance emphasise the role of sociocultural influences in promoting the importance of women’s appearance and an unrealistic, thin ideal to aspire to. The natural physiological changes of pregnancy push women further from the thin ideal. Qualitative literature has enhanced our understanding of women’s body image experiences during pregnancy, however is incomplete.

What this Paper Adds

Existing sociocultural theories of body image need to expand to capture unique body image experiences of pregnancy such as the prioritization of functioning over aesthetics of the pregnant body.
Background

Common models of body image disturbance, such as the Tripartite Influence Model\textsuperscript{1} and Objectification Theory\textsuperscript{2}, emphasize the role of sociocultural influences in promoting to women: (1) the importance of appearance rather than functionality of their bodies, (2) an unrealistic, thin ideal for women to aspire to, that is reinforced through media, peers, friends and family, to create a pressure for females to conform to these body ideals, and (3) how women will be perceived in a social context on the basis of their body’s alignment with this ideal.\textsuperscript{1,3} Despite the idealised body weight and shape being unrealistic for most women to attain, many women strive towards this almost impossible shape and weight\textsuperscript{3}. For those individuals who do not meet the ideal, they may be encouraged to monitor how they look, change their appearance (e.g. through exercise, restricted eating or cosmetic surgery), and avoid situations in which their body may be scrutinised or judged.\textsuperscript{4}

Pregnancy is an interesting exception to body image theories in that there are rapid, significant physiological changes across a relatively short 40 week period\textsuperscript{5-7}, and these natural physiological changes push women further from the thin ideal.\textsuperscript{4,8,9} The impact that these significant physiological changes have on the woman’s body image during pregnancy may depend on the extent to which they engage in the ideal.\textsuperscript{3} Little is known about how sociocultural theories of body image apply to the unique period of pregnancy. For example, it is unclear how women are viewed by others while they transition through pregnancy, whether the ideal is still emphasized for them by those close to them and others in society, and whether this comparison to the ideal effects pregnant women’s engagement in social situations where their pregnant bodies will be viewed and judged.

While qualitative findings enhance our understanding of body image during pregnancy\textsuperscript{10}, the current literature is incomplete. First, the extent to which women retain the thin ideal of pre-pregnancy, the importance they place on this ideal, and whether they still
Body image in pregnancy

attempt to attain this idealised body is yet to be explored. Second, the broader context of women’s body image experiences during pregnancy is yet to be tested systematically, with content regarding context emerging organically. For example, for pregnant women, there appears to be focus on both aesthetics and the function and health of the pregnant body, and in many instances, the aesthetic concerns arise from concerns about function rather than from the thin ideal.11,12 Third, few studies have explored the impact of women’s interactions with healthcare professionals during the antenatal period with women, even though the body is a key focus in these consultations. If handled effectively, the interaction may reassure the pregnant woman about normative body changes. If handled poorly, it may exacerbate body image concerns with women having inaccurate expectations for their body changes. In a Westernised culture, little is known about the relevance of women’s interactions with healthcare professionals for experiences of body image in pregnancy, with Mills, Schmied, and Dahlen13 the only known study. Mills, Schmied 13 sampled pregnant Australian women who were classified as overweight or obese, finding that women were surprised how health providers related to them throughout pregnancy, with some experiencing a reluctance from health providers to talk about weight issues with patients who were obese.

Given the lack of research systematically investigating women’s body image experiences and the absence of established questionnaires developed for women’s body image during pregnancy14, several researchers (e.g.,10,12,15) have advocated greater emphasis on qualitative methods to better understand the range and nuances of women’s body image experiences during pregnancy. The primary aim of the present study was to conduct a more comprehensive qualitative evaluation of body image experiences during pregnancy, with questions designed to explore the following body image constructs: body image importance and the value placed on body image during pregnancy, how women adapt their body image ideals during pregnancy, body image dissatisfaction, appearance management, and body change. A secondary aim of the current study was to explore women’s experiences of
antenatal healthcare, in particular whether women had engaged in open communication about weight status, expectations for weight changes, and body image in their antenatal appointments, and how important women felt this was as a focus of their care.

**Method**

The reporting of this qualitative research was informed by the consolidated criteria for reporting qualitative research (COREQ) guidelines.\(^16\)

A qualitative descriptive approach underpinned the methodology for the study\(^17,18\). A qualitative descriptive approach enables the exploration of complex situations to reach a deeper understanding of the lived experiences of participants.

**Design**

A qualitative approach using structured, in-depth interviews was used to gain insight into women’s body image experiences during pregnancy. Deakin University Human Research Ethics Committee approved the research. Pregnant women, of all gestational periods, were invited to participate in individual qualitative interviews to provide details about their body image experiences during their pregnancies. Recruitment flyers were distributed on social media websites and advertised on pregnancy forums and pregnancy websites. Interested pregnant women made contact with the first author via phone or email to express interest before Plain Language Statements (PLS) and once-off demographic questionnaires were mailed to their personal addresses. A total of 25 women expressed interest in participation in the study, with six women dropping out prior to their participation. The women who dropped out of the research did so for a number of reasons including having experienced a miscarriage, having just given birth, and inconvenience of participation. Audio-recorded phone interviews were conducted at Deakin University by the first author, a post-graduate student conducting her Doctoral of Psychology (Clinical) thesis in body image during pregnancy. Participants were informed by the PLS, recruitment flyers,
and verbally during the phone interviews that the research would form part of the first author’s Doctorate of Psychology (Clinical) research.

To explore the body image experiences of the pregnant women, interview questions targeted key constructs of body image such as body dissatisfaction, body changes, the importance or value attached to body image, and body image ideals. Participants were also asked about their antenatal healthcare experiences, and the focus on body image and weight in such appointments. Interview length ranged from 24 to 60 minutes ($M = 36$ minutes, $SD = 9.81$).

**Participants**

Nineteen Australian women ($M$ age= 31.44 years, $SD = 2.89$ years, range= 27-39 years, $n = 18^*$ as one participant did not provide demographic details) who were currently pregnant completed the phone interviews. At the time of interviewing, mean gestation was 23.47 weeks ($SD = 7.01$ weeks). Half of the sample were primiparous (55.6%), 33.3% were pregnant with their second child, and 11.1% with their third. Eighty-nine percent ($n = 16$) of the sample had not required assistance to become pregnant, and the remaining 11.1% ($n = 2$) required assistance (i.e., IVF). All women were in heterosexual relationships (married 83.3%, de facto 16.7%), all were tertiary educated (50.0% post-graduate, 33.3% bachelor, 16.7% graduate diploma), and 88.9% were currently employed (44.4% full-time, 44.4% part-time). The majority of the sample had an annual income exceeding $85,000 (88.9%, $n = 16$), and 11.1% ($n = 2$) had an income ranging from $45,000 to $65,000. The mean pre-pregnancy BMI was 23.34 ($SD = 4.01$), with 72.2% categorised as being in the healthy BMI range. Three of the remaining women were classified as overweight (16.7%), and equal numbers of women were categorised as being in the underweight (5.6%) and obese (5.6%) weight ranges. In this sample, over half of the sample (61.1%, $n = 11$) had no history of mental illness, 22.2% ($n = 4$) had minor or major depression (excluding antenatal and
postnatal depression), 11.1% ($n = 2$) anxiety disorder, 5.6% ($n = 1$) eating disorder, and 11.1% ($n = 2$) ‘other’ (i.e. complex bereavement and Specific Phobia).

**Measures**

**Demographic information.** Participants completed a brief demographic questionnaire.

**Weight and height information.** Participants’ self-reported height and weight at pre-pregnancy were recorded to calculate Body Mass Index (BMI; calculated as weight/height$^2$). World Health Organisation guidelines$^{19}$ were then applied to interpret the BMI scores as either underweight ($<17.9$), healthy weight ($18 > 24.9$) overweight ($25 > 29.9$) obese ($30+$).

**Structured interview questions.** A structured interview schedule was developed based on the objectives of the study and current literature (See Table 1 for the full interview schedule).

<table>
<thead>
<tr>
<th>Table 1. Structured interviewed questions.</th>
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<tbody>
<tr>
<td>1. How many weeks pregnant are you currently?</td>
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<tr>
<td>2. Tell me about your pregnancy experience?</td>
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<tr>
<td>3. How did you feel when you first found out you were pregnant? And now?</td>
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<tr>
<td>4. How do you feel about your current appearance and body shape?</td>
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<tr>
<td>5. How do your current feelings about your weight and shape differ from those you had pre-pregnancy?</td>
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<tr>
<td>6. How do you feel about specific parts of your body such as your breasts, abdomen, shape, weight, facial features?</td>
</tr>
<tr>
<td>7. How do you feel your perceptions about your ideal body size have changed across pregnancy (if they have)?</td>
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</tbody>
</table>
8 How would you rate your level of satisfaction with your growing bump? Rate on a scale of one to ten with one being highly dissatisfied and ten being highly satisfied. Please explain your rating of X for the question on your satisfaction with your growing abdomen.

9 What does your growing abdomen (‘bump’) mean for you? Do you view it as a negative or a positive?

10 How have your feelings for your growing ‘bump’ changed from early pregnancy when it was not yet defined?

11 What conflict do you feel there is between what is good for your body as a woman and what changes are good for your baby?

12 How have you felt emotionally throughout your pregnancy?

13 How have you found your body changes during pregnancy to affect your mood?

14 What factors do you believe have contributed to your increased emotional sensitivity during pregnancy?

15 How do you feel about yourself when you’re undressed?

16 What does your partner think about your pregnant body? And how does this make you feel?

17 How would you rate the severity of your physical symptoms experienced during pregnancy, taking into consideration such symptoms as morning sickness, fatigue, varicose veins, stretch marks, skin changes? Rate on a scale of one to ten, with one being barely noticeable/haven’t affected you and ten being debilitating/have strongly affected your pregnancy.

18 How do you feel the physical symptoms of pregnancy such as morning sickness have affected how you feel about your pregnancy? (morning sickness, fatigue, varicose veins, stretch marks, skin changes)
<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
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<tbody>
<tr>
<td>19</td>
<td>How do you feel your strength and fitness have changed across the duration of your pregnancy? And in comparison to your fitness levels pre-pregnancy?</td>
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<tr>
<td>20</td>
<td>How did feedback you received from others about your body affect how you viewed these changes unique to pregnancy?</td>
</tr>
<tr>
<td>21</td>
<td>How do you feel your peers and others in society view your pregnant body?</td>
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<tr>
<td>22</td>
<td>What do you think others base their perceptions of your pregnant body on? (E.g., the media, other pregnant women they’ve recently seen, their own pregnant body)</td>
</tr>
<tr>
<td>23</td>
<td>Do you think your obstetrician, midwife and/or GP should discuss your weight status through pregnancy with you? (To be rated on a Likert scale ranging from 1-10, with 1= absolutely not, 5= neutral, 10= absolutely yes) Please explain your rating of X on whether your weight status should be discussed with your obstetrician, midwife or GP?</td>
</tr>
<tr>
<td>24</td>
<td>Do you think that women should be weighed at each antenatal appointment? (To be rated on a Likert scale ranging from 1-10, with 1= absolutely not, 5= neutral, 10= absolutely yes) Please explain your rating of X on whether you think that women should be weighed at each antenatal appointment?</td>
</tr>
<tr>
<td>25</td>
<td>Do you feel comfortable discussing your body image (and potential body dissatisfaction experiences) with your obstetrician/midwife/GP? (To be rated on a Likert scale ranging from 1-10, with 1= extremely uncomfortable, 5= neutral, 10= completely comfortable) Please explain your rating of X on whether you feel comfortable discussing your body dissatisfaction experiences with your obstetrician/midwife/GP?</td>
</tr>
</tbody>
</table>
| 26       | Do you think that your obstetrician/midwife/GP should raise body image during
pregnancy as a topic of discussion or concern in your appointments? (To be rated on a Likert scale ranging from 1-10, with 1= absolutely not, 5= neutral, 10= absolutely yes)

Please explain your rating of X on whether you think that your obstetrician/midwife/GP should raise the topic of body image during pregnancy within your appointments?

27 If you believe this topic should be raised in your antenatal appointments, when do you believe this topic should be raised? (i.e. early pregnancy/first appointment or later in pregnancy)

28 Do you believe this topic should be discussed with all pregnant women, or should your obstetrician/midwife/GP only raise this as a topic of concern if they believe their patient to be at risk of body dissatisfaction?

Data Analysis

A thematic content analysis was undertaken on the transcripts of the 19 interviews completed for the current study. The subjective interpretation of data is allowed through thematic content analysis with the systematic classification process of coding for themes or patterns. Given the aim of the current study to explore women’s body image experiences during pregnancy a thematic content analysis was deemed appropriate. Individual transcripts were read by the first author to develop an understanding of the global experiences of pregnancy and body image. Re-reading of the transcripts enabled the first author to identify specific themes from the data. Subsequent thematic content analysis of the 19 interviews included in the current study involved the organisation of themes into categories to encapsulate similar experiences. Key content of the emerging themes were explored, as were the relationships between themes and the patterns within individual transcripts. Three of the authors discussed and reviewed the key themes to reach consensus on themes that most
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accurately reflected the women’s experiences as detailed in the interviews. Consensus was reached, with four themes identified.

Results

Findings

1. Body image experiences consistent across all phases of pregnancy. Five themes were extracted for the sample of women as a whole: (1) Reflecting on the changing body image across pregnancy, (2) Expectations for the changing abdomen and other body parts, (3) What body change is still to come?, (4) My body is changing- but there’s a reason, and (5) Maternity clothing and the changing relationship with the pregnant body.

1.1 Reflecting on the changing body image across pregnancy. Body image across pregnancy encompassed both body dissatisfaction and body satisfaction, with the women reflecting on how their appearance had changed during this unique transition. Thirteen women highlighted their contentment with the pregnant body, however experiences ranged from this satisfaction to conflicted feelings about the pregnant body, and body dissatisfaction or a lack of appreciation for the pregnant body for other women in the sample. Specific changes in pregnancy to the body were highlighted for their impact on the women’s body (dis)satisfaction, including; an increase in breast size, changes to the abdomen shape and size, waist and hips widening, skin changes (acne, stretch marks, cellulite, fluid retention resulting in a “puffy” appearance, and varicose veins, changes in hair (hair becoming thicker or oily), and increase in the size of legs and thighs. While less frequently reported the women interviewed did describe desirable body changes including developing the pregnancy ‘glow’ and skin improving in terms of acne \((n= 1)\), thighs appearing smaller in size \((n= 2)\), and an increase in breast size for those women who characterised themselves as small breasted pre-pregnancy \((n= 6)\).
The naked body served as a reminder of the purpose of the body changes across the duration of the women’s pregnancies. There was a curiosity and excitement about the naked pregnant body, with three of the women commenting on the unique opportunity to observe the changes to their bodies when they were undressed, particularly to their growing abdomens. This theme was reflected by one woman:

*It is quite nice… like getting dressed for bed or whatever usually after a shower or like that kind of the time that I notice oh, it is sort of a curiosity more than anything else.* (Preg18, 30weeks, primiparous)

A preference for or appreciation of the pregnant body without clothes was reported by seven of the 19 women interviewed. One woman reflected how she was able to appreciate the growing pregnant abdomen in particular, and this resulted in an increase in body satisfaction:

*I think I probably like it more [naked] actually than with clothes. I can see obviously that I am pregnant and I can see my belly and see the changes that have happened* (Preg7, 36weeks, primiparous)

In contrast, three of the women interviewed had overwhelmingly negative feelings about their naked bodies, expressing that they were “disgusted” and “horrified” by the sight of their bodies without clothing.

*Pretty horrified. I don’t recognise a whole chunk of my body. Like you are just huge! … But yeah, you completely forget what you used to look like, and really you just become all boobs and bump.* (Preg10, 33weeks, primiparous)

1.2 Expectations for the changing abdomen and other body parts. Women’s expectations for the growing abdomen, how the fat would distribute, and where the abdomen would sit in relation to the ribs and hips, shaped their feelings about the abdomen. The women were mixed about their feelings about the pregnant abdomen, with both body satisfaction and dissatisfaction reported depending on how the women’s individual
abdomens had developed. One woman who was somewhat dissatisfied with her pregnant abdomen commented:

*Reconciling that reality with this image of a pregnant belly being really taut and smooth and hard. If you’ve not experienced it before, that’s a... slightly misleading experience.* (Preg2, 17weeks, primiparous)

For 11 women whom had developed the rounded abdomen of pregnancy, there were feelings of appreciation that resulted in increased body satisfaction, as the abdomen communicated to the women that the pregnancy was progressing as it should:

*[The rounded abdomen is]* *A positive definitely, because it means that the baby is growing. It’s nice that it is going normally and getting bigger.* (Preg1, 24weeks, primiparous)

In contrast, for five women who had not yet established the distinct pregnant abdomen, there was heightened body dissatisfaction as they felt they had not yet progressed from the earlier phase of pregnancy where they may be perceived as having gained weight. Once there was some evidence of a distinctly rounded abdomen more characteristic of pregnancy, women began to feel more satisfied:

*In the first trimester I was a bit upset because I felt like just a belly of fat. And now I’m getting a bit of a belly and actually looking pregnant and am a bit happier.* (Preg14, 21weeks, primiparous)

For two women, comments about their smaller sized pregnant abdomen were perceived as communicating there being something wrong with their pregnancies; this resulted in both anxiety about the current body and anticipation for future weight gain and changes to the abdomen.

Finally, when asked about other body parts where change was particularly salient, the breasts (an increase in size) and skin (negative changes e.g. acne or discolouration, and positive changes e.g. the “glow”) were noted by 11 of the women. For example, one woman
described the changes to her breasts, recognising that while the skin of her breasts was required to change to accommodate their increase in size, she was still discontent with the appearance and physical pain of some aspects of the breasts:

*I knew they [the breasts] were going to be sore... [there is] a lot more dry skin on the actual nipple which probably more of a vanity thing... as a woman you don't want to see boobs growing to the point of soreness.* (Preg11, 20 weeks, primiparous)

1.3 What body change is still to come? Seven women interviewed contemplated the changes to their appearance to be experienced with the remainder of pregnancy, with the women spontaneously referencing their anticipation of further changes to their body shape and size. One primiparous woman highlighted her lack of knowledge about appropriate and expected weight gain for pregnancy. However, women who had transitioned through pregnancy before were able to reference their weight changes for previous pregnancies for their current pregnancy. One woman reflected:

*What I am concerned about in this second pregnancy is everything checking along somewhat similar [to the last pregnancy]. Because for me I just gained so much weight in the last trimester, but I was feeling like this is happening [in the current pregnancy] very early but really it was just that I had forgotten what I was like. So I am probably content that it is tracking along the same.* (Preg9, 25 weeks, multiparous)

Furthermore, 12 women in pregnancy were already thinking forward to the postpartum and the expected changes to their bodies. Women had some expectations about the body’s transition to the postpartum, ranging from not achieving their pre-pregnancy bodies because of anatomical changes, being able to get back to a similar weight, and still having some excess weight or skin left over from pregnancy. Six women recognised the long recovery period for the pregnant body following childbirth, and communicated some level of acceptance of the need to put aside expectations for the body during this period.
However, one woman expressed that she would continue to have concern about her appearance:

*I think there’s like that possibility [of being more accepting of the postpartum body], but at the same time I also feel a lot of pressure to drop the weight really quickly. I don’t know which way I will go - I don’t know whether I will be more accepting. I definitely feel that pressure feeling about twelve weeks [postpartum] to get back to looking like I haven’t had a baby.* (Preg10, 33weeks, primiparous)

**1.4 My body is changing - but there’s a reason.** Women recognised the functional aspects of their body change experienced during pregnancy, with ten women resigning themselves to the body changes that were not considered attractive. Women considered the changes for their bodies as confronting for their body image, but explained the changes in the context of the body growing for the baby’s health and development:

*I guess any growth or size increase as a woman is undesirable, [but] it is probably exactly the reason for the baby’s health.* (Preg11, 20weeks, primiparous)

One multiparous woman highlighted her increase in body confidence during pregnancy, compared to pre-pregnancy:

*But I feel more confident pregnant...I feel like my body is doing something really important.* (Preg17, 24weeks, multiparous)

Women were conflicted about the size of the pregnant abdomen and their weight gain experienced, with four women highlighting that they had to negotiate the salient image of their pregnant “bump” and their weight increase over the duration of pregnancy with their body image. However, 11 women justified that the purpose of the abdomen and weight gain was for their baby, and this increased their acceptance. This again highlighted the functionality of the pregnant body and the association between the physical changes of pregnancy and fulfilling the role of being a mother:
I have never put on weight there [on the lower abdomen], even when I’ve been bigger that area has always stayed flat. So that was actually quite painful, and really noticeable. But I think that actually helped me to be more accepting of the pregnancy. Because it’s clearly not a weight issue, it was clearly the bubby.

(Preg10, 33weeks, primiparous)

1.5 Maternity clothing and the changing relationship with the pregnant body.

Although not specifically asked about their experience of wearing maternity clothing, eight of the women spontaneously spoke of their experiences transitioning to maternity clothing or trying to fit into their pre-pregnancy clothes. Not being able to fit into pre-pregnancy clothing earlier in pregnancy was seen as an ongoing reminder of their increasing weight, and four women highlighted their experience of body dissatisfaction when being unable to fit into their clothing. Women who were able to wear their pre-pregnancy clothes as long as possible used this as a measurement of body satisfaction. One woman noted her perception of maternity clothes being unattractive, and her experience of trying to fit into pre-pregnancy clothing:

I decided very early on that I wasn’t going to buy maternity clothes...I don’t know if that was a decision based on the fact that I didn’t want to be buying fat clothes... I was just going to stretch my pre maternity clothes and then buy new clothes again when I’m hot and skinny again. (Preg19, 33weeks, primiparous)

Four women noted that they felt unsure when to start highlighting their pregnant shape through their clothing or continue to hide their figure under loose clothing for fear of being judged about their changing bodies (mainly their weight increase). This indicated a level of concern about others’ perceptions of the pregnant body. For example, one woman commented:

My stomach is not big enough that I would feel comfortable wearing something tight in public and having people know that I was pregnant and not just fat. I feel like I’m
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in a bit of in-between stage but I don’t quite know when it will be big enough that I can stop trying to hide it. (Preg2, 17 weeks, primiparous)

2. Others opinions of the pregnant body - will I buy into it? The women were surprised by how comfortable others felt commenting on their pregnant bodies, despite this social commentary being perceived as unacceptable when a woman was not pregnant. This was illustrated by one woman’s remark:

It interesting how people feel that they can comment... “oh, your hips look a bit bigger this week”, it is funny how people feel they can say something. (Preg18, 30 weeks, primiparous)

Women spoke of the public perception of the pregnant body being the distinctly rounded abdomen, and how others looked for physical signs to confirm their pregnant status. Three women discussed the discrepancy between the public image and the reality of the pregnant body, and how they struggled to reconcile the two. Feedback received that did not align with their own judgments about their pregnant body was spoken about by two women, which resulted in the women feeling frustrated and upset, for example:

I think if another woman comments on how small my tummy is, I’m going to punch them in the face... But women always comment on how big or small you are, and I don’t think they realize how upsetting it can be. (Preg7, 36 weeks, primiparous)

One woman commented on her perception of other women who had carried their own children having more balanced and appropriate judgments about the pregnant body:

I know that a number of people who already have kids view it [the pregnant body] quite positively. (Preg19, 33 weeks, primiparous)

Interestingly, she also alluded to her own negative judgments about the pregnant body before she herself had become pregnant:
I know that before I was pregnant I never particularly viewed a pregnant body as particularly attractive, and I assume that it would be the same of a lot of people who don’t have kids. (Preg19, 33weeks, primiparous)

The pregnant women reported different levels of buy-in to the feedback they received from others, depending on the nature and source of the feedback. Experiences of receiving positive feedback about their pregnant body was described by 12 women, and this contributed positively to their body image:

It’s nice to have people say that it's suits me and, that even though I feel absolutely massive, that they say “oh look it’s all out the front you are going so well. And you are still quite tiny in terms of the rest of you” and so it does make you feel good.

(Preg10, 33weeks, primiparous)

Negative feedback was reported by four of the women interviewed, and predominantly related to being bigger or smaller than expected, or appearing tired. While the women reported being frustrated, they were often able to refute the feedback. One woman provided an example of how she had interpreted feedback given about her pregnant body:

“Wow! You look like you’re …really tired.” I’m like, “Oh, okay. Take that as a sign that I look like crap.” [Laughs] I don’t know. I sort of just like fob it off. (Preg16, 15weeks, multiparous)

3. Relationship dynamics, partner support, and body image during pregnancy.

Six women discussed using their partners as a soundboard to voice concerns about their pregnant body or receive reinforcement about their appearance. Partners were perceived as being able to normalise the pregnant women’s thinking about their bodies, and provide reassurance about body change being part of the pregnancy experience. This theme was demonstrated by comments such as:

My partner is always very supportive of my pregnant body... He always can normalize my thinking too if I am saying ‘does it just look like I’m fat?’.... he will
just say don’t stupid, to me you are starting to look pregnant or, he would always say it in a positive way for my changes. (Preg9, 25weeks, multiparous)

Receiving positive feedback from their partners was an overwhelmingly positive experience for the women interviewed, and reinforced their body satisfaction. When asked specifically about feedback, 11 of the 19 women interviewed provided examples of how their partners consistently spoke encouragingly about the changes they were observing for the pregnant body:

He loves it! Yeah he constantly tells me that he thinks that it is really beautiful and he still finds me attractive, and he’s constantly like rubbing my belly or rubbing my back. He is very affectionate and attentive. He finds it still very attractive and very beautiful to him. But it does make me feel very loved. (Preg10, 33weeks, primiparous)

The sexual attractiveness of the pregnant body was discussed by six of the women, with their reflections of the pregnant body being perceived as “womanly” and “sexy” by their partners:

He thinks pregnant women are really sexy and gorgeous. And he loves the boobs and you know he doesn’t seem to have minded the weight gain. So he was pretty happy with it all. (Preg11, 20weeks, primiparous)

For seven of the women, it was reported that their partners remained neutral in their communication and did not actively discuss body change and body image. For example, one woman spoke of her partner’s hesitance in commenting on the pregnant body:

[My partner] is not going to comment on my shape at all…. He stays completely neutral about the whole thing because I think he doesn’t want to put his foot in it. (Preg4, 21weeks, primiparous)

The opportunity for women’s partners to be engaged in their pregnancies through the pregnant abdomen was a positive experience, with five of the 19 participants
spontaneously speaking about this. Physically touching or embracing the pregnant abdomen allowed partners to be connected to the pregnant body and unborn child, and this was an encouraging experience for the women’s body image:

The bump is the baby and something like my husband will come up and like feel my stomach and his connection. I feel like the bump is both our connection to the baby.

(Preg5, 27weeks, primiparous)

4. Body image and antenatal healthcare. All women highlighted the lack of attention paid to body change and body image by healthcare professionals during antenatal care. However, two women felt healthcare professionals were the ‘experts’, with the knowledge about appropriate body and weight changes during pregnancy. One woman stated:

They know off the top of their heads the average healthy weight gain. So their opinion is really the only one to listen to. (Preg11, 20weeks, primiparous)

Of the 19 women interviewed, 12 felt an open conversation about body change and body image during pregnancy was appropriate for antenatal healthcare, as healthcare professionals consistently neglected body image. One woman expressed the following:

I think they should definitely discuss it with you, especially in the first pregnancy, mainly because I don’t really know what’s normal. (Preg1, 24weeks, primiparous)

However, nine of the women cautioned that if too much influence were placed on their weight during pregnancy this had the potential to significantly increase the anxiety women experienced. As such, an individualised approach was prioritised by nine of the women as they felt it was necessary to not emphasise any one group of women. This was illustrated by the following comment:

I don’t think that they should try to put their own opinion onto you in regards to what normal weight gain is or anything like that. But at the same time that weight
In contrast, the recognition of both underweight and overweight pregnant women as being groups of women requiring attention during antenatal healthcare was highlighted by ten of the participants. Specifically, the women felt these groups required more attention as they were potentially at risk of developing health complications related to not gaining enough weight (if underweight pre-pregnancy) and excessive gestational weight gain (if overweight pre-pregnancy). Health complications associated with excessive weight gain during pregnancy was referenced by one woman, with her comment:

*I think there was a big change in how weight gain in pregnancy was treated. Now that it is not really discussed, there are people who probably put on more weight than what is healthy for them and then they end up with complications.* (Preg15, 31weeks, multiparous)

Furthermore, the relationship between body image and other mental health issues relevant to pregnancy was recognised by 11 of the women. Opening dialogue about body image was seen as a way of screening for mental health issues potentially related to body image disturbances, such as depressive symptoms, anxiety, and eating disorders. This was highlighted by one woman’s comment regarding underlying mental health concerns:

*Purely because it [being pregnant] can be a trigger for a relapse in their declined mental health...so you need be observant to the emotional state and the psychological state of the patient as well.* (Preg7, 36weeks, primiparous)

**Discussion**

The current study aimed to provide a more comprehensive evaluation of body image experiences during pregnancy than has previously been completed, to capture the different facets of body image and explore the context of women’s body image experiences during
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pregnancy. First, while individual facets of body image have been explored qualitatively with pregnant women previously, this study is the first to integrate all facets of body image into one study. Set questions were used to elicit information from all participants about the different facets of body image, such as women’s body image ideals, the value assigned to body image during pregnancy, and body changes observed. Second, this study expanded on the limited existing knowledge regarding messages communicated by health professionals to pregnant women about normative experiences in relation to body change during pregnancy (both what to expect physically and the variety of reactions to the changing body). Our findings provide useful insights into the unique body image experiences for women as they progress through pregnancy that are not covered by existing sociocultural theories of body image. The key themes and their relation to past research and theory are detailed below.

Our findings highlighted that women’s body image experiences during pregnancy were complex and changing, and shaped by the women’s expectations for their body shape and size for the pregnancy and the postpartum, the salience of specific body parts (i.e. the abdomen and breasts), the functionality of the pregnant body, and their experience of maternity clothing. The women sampled reflected a number of feelings about their pregnant body shape and size, including satisfaction, conflict, or mixed feelings about their body changes encompassing both joy and a lack of appreciation, and discontentment. Concern about weight gain is common during pregnancy, particularly for Western women, with many women sampled in these studies registering concern about their appearance during pregnancy and losing the pre-pregnancy body.\(^\text{13,21,22}\) Second, women’s experiences of their pregnancy body image often centred on their pregnant abdomen, and whether their actual pregnant abdomen size and shape aligned with their expectations for how a pregnant abdomen should appear (e.g. distinctly rounded, compact, with little other weight gain). The relevance of the pregnant abdomen to body image ideals and body satisfaction is emphasised in past qualitative literature.\(^\text{12,15,23,24}\) Lastly, maternity clothing acted as a trigger for image
Body image in pregnancy experiences. Those women who were able to wear pre-pregnancy clothing as long as possible used this as a means to body satisfaction. However, for women unable to fit into pre-pregnancy clothing earlier in pregnancy, this served as a reminder of their increasing weight, and resulted in body dissatisfaction. These qualitative findings suggest that interpretations women make about their body image during pregnancy may be influenced by their expectations of what their appearance should look like and whether they are meeting these ideals. These ideals of pregnancy are fundamentally different from those ideals relevant to non-pregnancy.

The functionality of the body became increasingly important during pregnancy, increasing in emphasis compared to the aesthetics. While women remained concerned to a certain extent about their appearance, they were able to negotiate the changes to their bodies as they recognised the functionality of the pregnant body. Objectification theory places female bodies in a sociocultural context where women are evaluated in terms of their body and appearance, and valued for its use to others; with women focusing purely on appearance and the functioning of the body prioritized by men. Women’s de-prioritisation of aesthetics in favour of the functioning of the pregnant body therefore provides an exception to objectification theory. A model focusing purely on aesthetic concerns, neglecting the relevance of the functioning of the pregnant body, will result in the full picture of women’s body image experiences during pregnancy not being captured.

The women reflected the public nature of the pregnant body, with their body changes during pregnancy being perceived by others around them as being acceptable to comment on. This theme was consistent with those discussed in past literature. This experience of ongoing feedback about the pregnant body and its influence on body image was perceived as being incongruent with women’s body image experiences before they were pregnant, as this social commentary would be considered unacceptable. Furthermore, sociocultural influences appear to change when women transition to pregnancy, with a shift from peers, friends,
family, and media, to women’s partners. Pregnancy is a shared experience compared to non-pregnancy, when women have complete ownership for their body and their body image. While this is true to a certain extent in pregnancy, the woman’s body is carrying a baby that is shared with their partner, whom has a vested interest in the women and their body. Consequently, messages about the women’s body shape and size delivered by others were de-prioritised, with the importance attached to their partner’s feedback increasing. Therefore, existing sociocultural models of body image (that emphasise the contribution of others such as friends, families, peers, and the media in the shaping of women’s body image), would need to account for the unique role of women’s partners in building their pregnancy body image to act as a model for women’s body image experiences for pregnancy as a unique developmental period. Receiving positive feedback from partners was a positive experience for the women across all phases of pregnancy, and bolstered the women’s body satisfaction. Furthermore, the sexual attractiveness of the pregnant body emerged as a novel facet of body image during pregnancy. The present study demonstrated the importance of exploring the relationship dynamics between the pregnant woman and her partner during this period for its influence on the unique body image of pregnancy. Past literature has not explicitly focused on the experience of partner feedback about the pregnant body, and how this is incorporated into the women’s body image to impact her body (dis)satisfaction.

Lastly, our study is one of the first to explore women’s perceptions of antenatal healthcare and the communication around body changes and body image during pregnancy, and emphasises the perceived need for such focuses. A strong message from the pregnant women was the lack of emphasis on body image in antenatal healthcare, with healthcare professionals overlooking conversations about how women are adjusting their body image to coincide with the rapid physical changes experienced. While Haruna, Yeo, Watanabe, et al.’s sample of pregnant women reported that healthcare providers frequently communicated about weight changes to be expected across pregnancy, the women were
Body image in pregnancy

frustrated by the messages given. The women felt the healthcare practitioners were too focused on weight recommendations during pregnancy, without due consideration of how their appearance-related messages may have longer-term implications for body satisfaction. Furthermore, our sample of women perceived there to be a lack of focus on women’s body image during pregnancy, despite the potential increased risk for ante- and post-natal depression and other mental health issues. While the monitoring of depressive symptoms is highlighted in current clinical guidelines for antenatal care, the screening or discussion of other psychological concerns such as body image is neglected.

Present findings should be placed within the context of study limitations. The sample of women included in the present study demonstrated a lack of variability in their demographics, with all women either married or in a de facto relationship, all tertiary educated and most of middle to high income, and working in professional occupations. Thus, caution should be given when generalizing to all socioeconomic groups. Further, all women were heterosexual. Women in homosexual relationships may have different experiences of their pregnancy body image, and their same-sex partners may have different perceptions of the pregnant body. Lastly, while the current study sampled both primiparous and multiparous women, questions did not explicitly enquire about how parity affected their body image experiences. Differences between multiparous and primiparous women emerged organically, with multiparous women expressing a higher level of acceptance with their body image because they had transitioned through pregnancy before, and therefore had more realistic expectations.

Conclusion

Our findings highlight the need for the adaptation of existing body image theories developed for non-pregnant women to be used as a framework for women’s body image experiences during pregnancy. Existing measures are insufficient for pregnant women, and do not capture the complexity and nuances of women’s body image experiences during
Body image in pregnancy

pregnancy, as identified in the current study and previous qualitative investigations. Our study has highlighted the relevance of women’s expectations about the appearance and functioning of the changing body across pregnancy and the context of pregnancy for their body image experiences. Interactions with healthcare professionals through antenatal care focus on the pregnant body, however communication in clinical settings about body change, in particular weight gain, and body image was perceived as lacking and inadequate. Messages communicated by healthcare professionals supporting these women have the potential to impact the pregnant women’s expectations for their body change, and consequently their body image. A study completed by the American College of Obstetricians and Gynaecologists showed that body image is largely neglected by healthcare professionals working with pregnant women, with less than one third of clinicians assessing for body image disturbances in routine antenatal care. Raising awareness of the importance of body change and body image for pregnant women for relevant healthcare professionals, and improving the messages communicated, can contribute to women having better understanding of what body change to expect across pregnancy. Consequently, women entering pregnancy may be able to better adjust their ideals and adapt to the body changes, improving their body image and emotional wellbeing during this transition period.

Acknowledgements

This study was undertaken as a dissertation for a Doctorate of Psychology (Clinical) through Deakin University. A sincere thank-you to the women who participated in this study for sharing their experiences of body image during pregnancy.
Body image in pregnancy

References


CHAPTER FOUR

Methods

Study Two Method

Aim

The aims of study two were fourfold. First, the qualitative study aimed to complete a more comprehensive evaluation of body image experiences during pregnancy than has previously been completed. Secondly, the study will aimed to explore the pattern of body image experiences across the different phases of pregnancy, with questions designed to tap key constructs of body image, including; body image importance and the value placed on body image during pregnancy, how women adapted their body image ideals, body image dissatisfaction, appearance management, appearance related behaviours, and body change. In conjunction with the first two aims, the study aimed to provide a context for these experiences, investigating those contributing factors that influence the body image experiences of women during pregnancy. A fourth aim of the study was to explore the women’s experiences of antenatal healthcare, in particular whether women had engaged in open communication about weight status, expectations for weight changes, and body image in their antenatal appointments, and how important and relevant women felt this was as a focus of their care.

Procedure

The Deakin University Human Research Ethics Committee (refer to Appendix A) approved this research. Pregnant women, of all gestation periods, were
invited to participate in once off qualitative interviews to provide detail about their body image experiences across their pregnancies. Recruitment flyers were distributed on social media websites and advertised on pregnancy forums and pregnancy websites, with the details of the study and contact details for the investigators made available so the pregnant women could contact Deakin University to communicate their interest in participation (See Appendix B for the recruitment flyer). Following phone or email contact with Deakin University the women were provided with further details about the project. If the women voluntarily expressed further interest in the study contact details were taken so a Plain Language Statement (PLS; See Appendix C) and letter of invitation could be sent. Following the completion of the PLS women were provided with a demographic questionnaire to respond to prior to engagement with the phone interview (See Appendix D for the complete demographic questionnaire and Appendix E for the structured interview schedule).

**Study Three Method**

**Aims**

The aims of the third study were twofold, to develop a new measure of body image for pregnant women and to evaluate the psychometric properties of the measure. The study aimed to incorporate the different constructs of body image into the newly developed measure, including body image dissatisfaction, body image importance, body image ideals, body change, appearance related behaviours, functioning of the pregnant body, and sexual attractiveness of the pregnant body.
Participants

A total of 419 participants were recruited for this study. The sample of 419 participants at time point one consisted of 251 pregnant women, and 168 women who had never been pregnant. Of these women, 61 pregnant women and 50 women whom had never been pregnant completed the second time point of the study.

Pregnant participants recruited were 251 women (\(M\) age= 30 years, \(SD= 4.34\) years, range= 18- 43 years) who were currently pregnant (\(M\) gestation= 24.22 weeks, \(SD= 8.58\) weeks, range= 4- 40 weeks). Sixty-three percent (\(n= 156\)) were primiparous, 23.2% (\(n= 57\)) already had one child, 8.9% (\(n= 22\)) had two children, 3.7% (\(n= 9\)) had three and .8% (\(n= 2\)) had four or more children. Twenty-three percent (\(n= 58\)) of participants had a university post-graduate degree, 36.0% (\(n= 89\)) had a university Bachelor degree, 24.2% (\(n= 60\)) had a diploma qualification, 12.6% (\(n= 31\)) highest qualification was Year 12, and 3.6% (\(n= 9\)) had never finished secondary school. In this sample, 8.2% (\(n= 20\)) had an annual household Australian income of less than $45,000, 11.4% (\(n= 28\)) $45,000 to $65,000, 13.9% (\(n= 34\)) $65,000 to $85,000, 14.3% (\(n= 35\)) $85,000 to $105,000, 18.4% (\(n= 45\)) $105,000 to $125,000, 11.4% (\(n= 28\)) $125,000 to $145,000, and 22.4% (\(n= 55\)) more than $145,000. The majority of the sample were currently working, with 78.1% employed in work, and the remaining 21.9% (\(n= 54\)) did not work. Seventy nine percent (\(n= 194\)) of the sample were married, 18.8% (\(n= 46\)) were in a de facto relationship, and 2.0% (\(n= 5\)) were never married. The mean pre-pregnancy body mass index (BMI) was 25.13 (\(SD = 6.23\)), with 61.9% (\(n= 151\)) categorised as being in the healthy BMI range. Seventeen percent (\(n= 43\)) of the sample were classified as overweight, 16.8% (\(n= 41\)) categorised as obese and 3.7% (\(n= 9\)) underweight weight ranges. In this sample, approximately half of the women (51.2%, \(n= 131\)) had no history of mental
illness, 21.9% (n= 55) had minor depression, 10% (n= 25) major depression, 1.2% (n= 3) antenatal depression, 3.6% (n= 9) postnatal depression, 0% (n= 0) bipolar disorder, 15.1% (n= 38) anxiety disorder, 5.6% (n= 14) eating disorder, 1.2% (n= 3) substance use disorder, and 2.8% (n= 7) ‘other’ (i.e. Borderline Personality Disorder, Post Traumatic Stress Disorder, or insomnia). Of the sample, 97.6% (n= 239) spoke English as their main language at home.

A comparison group of 168 never-pregnant women (M age= 30.42 years, SD= 7.95 years, range= 20- 69 years) were recruited. Thirty percent (n= 50) of participants had a university post-graduate degree, 38.6% (n= 64) had a university undergraduate degree, 21.0% (n= 35) had a diploma qualification, and 10.2% (n= 17) of the sample’s highest qualification was secondary school. In this sample, 32.5% (n= 53) had an annual household Australian income of less than $45,000, 18.4% (n= 30) $45,000 to $65,000, 16.6% (n= 27) $65,000 to $85,000, 9.8% (n= 16) $85,000 to $105,000, 8.6% (n= 14) $105,000 to $125,000, 2.5% (n= 4) $125,000 to $145,000 and 11.7% (n= 19) more than $145,000. Eighty-six percent (n= 143) of the sample were currently working, and 13.9% (n= 23) did not work. Thirty-three percent (n= 54) of the sample were married, 47.9% (n= 79) were never married, 1.8% (n= 3) were divorced, 16.4% (n= 27) were in a de facto relationship, and one person each was separated or widowed. The mean body mass index (BMI) was 26.03 (SD = 6.51), with 58.9% (n= 96) categorised as being in the healthy BMI range. Nineteen percent (n= 31) of the sample were classified as overweight, 20.9% (n= 34) categorised as obese and 1.2% (n= 2) underweight weight ranges. In this sample, 59.5% (n= 100) had no history of mental illness, 21.4% (n= 36) had minor depression, 6% (n= 10) major depression, 18.5% (n= 31) anxiety disorder, 6% (n= 10) eating disorder, and 1.2% (n= 2) ‘other’ (i.e. Borderline Personality Disorder and
Post Traumatic Stress Disorder). None of the participants reported a history of bipolar disorder or substance use disorder. Of the sample, 96.4% (n= 161) spoke English as their main language at home.

Materials

Two online questionnaires were developed for this study, the first for currently pregnant women participating and the second for participating women whom had never been pregnant. The questionnaires were both divided into nine sections: (a) demographic information; (b) body image importance; (c) body image ideals; (d) body image dissatisfaction; (e) body change; (f) appearance related behaviours; (g) sexual attractiveness; (h) functioning of the body; and (i) psychosocial factors. The questionnaires asked pregnant women to frame their body image in the context of their current experience of pregnancy and never-pregnant women to consider their current body image experiences. Refer to Appendix F for the complete questionnaire for pregnant women and Appendix G for the complete questionnaire for never-pregnant women.

Measures.

**Demographic information.** Questions targeted the women’s age, highest level of education completed, annual family income, current marital status, and current work status. Participants were asked about their highest level of education and given the following options to select: *Still at secondary school, did not finish secondary school, secondary school, certificate level, diploma qualification, bachelor degree or postgraduate degree.* Family income brackets, ranged from *Less than $25,000* to *More than $145,001* and increased in increments of $20,000. Participants indicated their current marital status by selecting one of the following
options; never married, de facto, married, separated, divorced, or widowed. Participants indicated their employment status (whether they were or were not currently employed) including their workload (full time, part time or causal), their current work role. For the sample of pregnant women, questions were also asked about their weeks’ gestation (at the time of completion of the questionnaire), parity, and whether this was their first pregnancy. Questions regarding mental health history and treatment were also completed by both the pregnant and never-pregnant samples. All participants were asked if they had any experience of mental illness, and given the following options to select from; no mental illness history, minor depression, major depression, antenatal depression, postnatal depression, bipolar disorder, anxiety disorder, eating disorder, substance or alcohol related disorder, or ‘other’ (and asked to specify). For participants with a history of mental illness treatment accessed was indicated by selecting one of the following; none, medication, counselling or psychological therapy, or other (and asked to specify). Options were given for participants to indicate when they had accessed treatment; within the last 12 months, 1-2 years ago, 3-4 years ago, 4-5 years ago, 6-10 years ago, or over 10 years ago. Participants were asked about their current access to treatment for mental illness; counselling or psychological therapy, antidepressants, other medication, herbal or natural remedies, other, or none. For those participants accessing counselling or psychological therapy, the frequency of access was indicated by selecting one of three options; once (i.e. single visit), occasionally (i.e. once a month or every few months), and regularly (i.e. weekly or fortnightly).

**Anthropometric information.** Participants’ self-reported their height and weight for Body Mass Index (BMI) to be calculated. Participants were asked to record both pre-pregnancy weight and height and their current gestational weight and
height. Options of both kilograms (kg) and pounds (lb) for weight and metres (m) and feet (ft) for height were given. Adult BMI for the never-pregnant women was calculated as weight in kilograms divided by height in metres squared. Pre-pregnancy BMI was calculated for the currently pregnant women. These BMI scores were then classified according to how over- or under-weight the women were. World Health Organisation guidelines were applied to interpret BMI scores (World Health Organisation, 2000).

**Confidence in height and weight estimates.** Participants were asked to rank their confidence in their estimates of pre-pregnancy and current weight and height on a ten-point scale (1= ‘completely unconfident’ through to 10= ‘completely confident’).

**Body Image in Pregnancy Scale.** The Body Image in Pregnancy Scale (BIPS) was developed by the researchers to measure body image specifically during pregnancy. The final version of the BIPS had a total of 49 items, with seven subscales designed to tap different constructs of body image. The seven subscales were: Body Image Importance (five items); Body Image Ideals (six items); Body Dissatisfaction (eight items); Body Change (nine items); Appearance Related Behaviours (nine items); Sexual Attractiveness (six items); and Functioning of the Body (six items).

The Body Image Importance subscale included items pertaining to the importance of or preoccupation with one’s body image, with items such as ‘there are more important things in my pregnancy than the size of my body’. The original Body Image Importance subscale included 13 items, however this was trimmed down to the final five items. Table 1 displays original items and wording, followed by the reason for exclusion from final measure for those items considered redundant and
eliminated. The response set was anchored to a five-point Likert scale, where participants rated the extent of their agreement for specific statements ($1 = \text{strongly agree}$ to $5 = \text{strongly disagree}$). Five of the items are negatively worded and hence require reverse scoring (items 3, 4, 5, 7, and 10). The scores for each item are summed together to produce a total score, with a range of total scores from five to 25, where higher scores are indicative of higher levels of importance placed on body image.

Table 1

Revision of items for the Body Image Importance Subscale

<table>
<thead>
<tr>
<th>#</th>
<th>Original item</th>
<th>Reason for deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>There are more important things in my pregnancy than the size of my body.</td>
<td>Low factor loading.</td>
</tr>
<tr>
<td>2</td>
<td>There are more important things in my pregnancy than my weight.</td>
<td>Low factor loading.</td>
</tr>
<tr>
<td>3</td>
<td>I spend a lot of time thinking about my pregnancy weight.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>4</td>
<td>I spend a lot of time thinking about my pregnancy body size.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>5</td>
<td>I spend a lot of time thinking about my pregnant body shape.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>6</td>
<td>I am preoccupied with the desire to weigh less during pregnancy.</td>
<td>Multicollinearity with other</td>
</tr>
</tbody>
</table>

110
7 I am preoccupied with the desire to have a slimmer physique during pregnancy. 

8 Thinking about the shape of my pregnant body stops me from concentrating.

9 Thinking about the size of my pregnant body stops me from concentrating.

10 Thinking about my weight during pregnancy stops me from concentrating.

11 Compared to other things in your pregnancy, how important to you is your body shape? Low factor loading.

12 Compared to other things in your pregnancy, how important to you is your body size? Low factor loading.

13 Compared to other things in your pregnancy, how important to you is your weight? Low factor loading.

The Body Image Ideals subscale focused on the level of acceptance of the thin ideal, with items such as ‘a thin body with a distinctly rounded stomach is an ideal body shape for pregnancy’. The original Body Image Ideals subscale included nine items, however this was trimmed down to the final six items. Table 2 displays original items and wording, followed by the reason for exclusion from final measure for those items considered redundant and eliminated. The response set was anchored to a five-point Likert scale, where participants rated the extent of their agreement for
specific statements (1 = strongly agree to 5 = strongly disagree). Four of the items are negatively worded and hence require reverse scoring (items 1, 4, 5 and 7). The scores for each item are summed together to produce a total score, with a range of total scores from six to 30, where higher scores are indicative of higher levels of valuing of the thin ideal.

Table 2

*Revision of items for the Body Image Ideals Subscale*

<table>
<thead>
<tr>
<th>#</th>
<th>Original item</th>
<th>Reason for deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I wish my pregnant body was smaller in size.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>2</td>
<td>I wish my pregnant body was larger in size.</td>
<td>Low factor loading.</td>
</tr>
<tr>
<td>3</td>
<td>I would like my pregnant body to look more like other pregnant women’s bodies.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>4</td>
<td>I would like my pregnant body to look more like the bodies of women who aren’t pregnant.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>5</td>
<td>Women who are smaller in pregnancy are more attractive.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>6</td>
<td>Women who are larger in pregnancy are more attractive.</td>
<td>Low factor loading.</td>
</tr>
<tr>
<td>7</td>
<td>A thin body with a distinctly rounded stomach is an ideal body shape for pregnancy.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>8</td>
<td>There is no ideal body shape for pregnancy, every body is different.</td>
<td>Multicollinearity with other subscale items.</td>
</tr>
</tbody>
</table>

112
There is no ideal body size for pregnancy, every body is different. Included in final subscale.

The Body Dissatisfaction subscale included items such as ‘how happy are you with your body shape during pregnancy?’. The original Body Dissatisfaction subscale included 23 items, however this was trimmed down to the final eight items. Table 3 displays original items and wording, followed by the reason for exclusion from final measure for those items considered redundant and eliminated. The response set was anchored to a five-point scale, where participants ranked their level of satisfaction with specific aspects of their body (1 = strongly satisfied to 5 = strongly dissatisfied). The scores for each item are summed together to produce a total body satisfaction score, with a range of total scores from eight to 40, where higher scores are indicative of higher levels of body dissatisfaction.

Table 3

Revision of items for the Body Dissatisfaction Subscale

<table>
<thead>
<tr>
<th>#</th>
<th>Original item</th>
<th>Reason for deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How happy are you with your weight during pregnancy?</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>2</td>
<td>How happy are you with your body shape during pregnancy?</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>3</td>
<td>How happy are you with your muscle size during pregnancy?</td>
<td>Conceptual overlap with other subscale items.</td>
</tr>
<tr>
<td>4</td>
<td>How happy are you with your hips during</td>
<td>Low factor loading.</td>
</tr>
</tbody>
</table>
pregnancy?

5 How happy are you with your thighs during pregnancy? Included in final subscale.

6 How happy are you with your chest during pregnancy? Included in final subscale.

7 How happy are you with your abdominal region/stomach during pregnancy? Included in final subscale.

8 How happy are you with the size/width of your shoulders during pregnancy? Low factor loading.

9 How happy are you with your legs during pregnancy? Multicollinearity with other subscale items.

10 How happy are you with your thighs during pregnancy? Low factor loading.

11 How happy are you with your calves during pregnancy? Low factor loading.

12 How happy are you with your ankles during pregnancy? Low factor loading.

13 How happy are you with your arms during pregnancy? Included in final subscale.

14 How happy are you with your hands during pregnancy? Low factor loading.

15 How happy are you with your skin tone and appearance (including acne, varicose veins, stretch marks, dryness) during pregnancy? Included in final subscale.
16 How happy are you with your facial complexion during pregnancy? Low factor loading.
17 How happy are you with your hair during pregnancy? Low factor loading.
18 How happy are you with your body’s fluid retention during pregnancy? Conceptual overlap with other subscale items.
19 How happy are you with your muscle tone during pregnancy? Included in final subscale.
20 How happy are you with your body’s flexibility during pregnancy? Low factor loading.
21 How happy are you with your strength during pregnancy? Low factor loading.
22 How happy are you with your energy levels during pregnancy? Low factor loading.
23 How happy are you with your overall appearance during pregnancy? Too broad conceptually.

The Body Change subscale focused on one’s experiences of changes to physical appearance (i.e. changes in shape and size of particular body parts) and the satisfaction attached to this body change, with items such as ‘thinking about your body during pregnancy, how happy are you with the changes to your stomach?’. The original Body Change subscale included 13 items, however this was trimmed down to the final nine items. Table 4 displays original items and wording, followed by the reason for exclusion from final measure for those items considered redundant and eliminated. The response set was anchored to a five-point scale, where participants
ranked their level of satisfaction with specific body parts or body changes (*I* = *strongly satisfied* to *5* = *strongly dissatisfied*). A ‘non-applicable’ response was also available. The scores for each item are summed together to produce a total score of satisfaction with body change, with a range of total scores from 0 to 45, where higher scores are indicative of higher levels of dissatisfaction with the body changes.

Table 4

*Revision of items for the Body Change Subscale*

<table>
<thead>
<tr>
<th>#</th>
<th>Original item</th>
<th>Reason for deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thinking about your body during pregnancy, how happy are you with your changes in weight?</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>2</td>
<td>Thinking about your body during pregnancy, how happy are you with the changes to your size?</td>
<td>Multicollinearity with other subscale items.</td>
</tr>
<tr>
<td>3</td>
<td>Thinking about your body during pregnancy, how happy are you with the changes to your shape?</td>
<td>Conceptual overlap with other subscale items.</td>
</tr>
<tr>
<td>4</td>
<td>Thinking about your body during pregnancy, how happy are you with the changes to your breasts?</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>5</td>
<td>Thinking about your body during pregnancy, how happy are you with the changes to your stomach?</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>6</td>
<td>Thinking about your body during pregnancy, how happy are you with the changes to your breasts?</td>
<td>Included in final subscale.</td>
</tr>
</tbody>
</table>
are you with the changes to your legs? subscale.

7 Thinking about your body during pregnancy, how are you with the changes to your arms? Included in final subscale.

8 Thinking about your body during pregnancy, how are you with the changes to your skin tone and appearance (including acne, varicose veins, stretch marks, dryness)? Low factor loading.

9 Thinking about your body during pregnancy, how are you with the changes to your hair? Low factor loading.

10 Thinking about your body during pregnancy, how are you with the changes to your body’s fluid retention? Included in final subscale.

11 Thinking about your body during pregnancy, how are you with the changes to your muscle tone? Included in final subscale.

12 Thinking about your body during pregnancy, how are you with the changes to your body’s flexibility? Included in final subscale.

13 Thinking about your body during pregnancy, how are you with the changes to your strength? Included in final subscale.

The Appearance Related Behaviours subscale included items pertaining to one’s tendency to engage in behaviours that manage one’s physical appearance or avoid situations in which appearance may be evaluated, with items such as ‘has worry about your weight during pregnancy made you feel you ought to exercise?’.
The original Appearance Related Behaviours subscale included 13 items, however this was trimmed down to the final nine items. Table 5 displays original items and wording, followed by the reason for exclusion from final measure for those items considered redundant and eliminated. The response set was anchored to a five-point scale, where participants ranked their level of engagement with the behaviour (1 = never engaged with the behaviour to 5 = always engaged in the behaviour) for items. The scores for each item are summed together to produce a total score, with a range of total scores from nine to 45, where higher scores are indicative of higher levels of engagement with appearance related behaviours.

Table 5

Revision of items for the Appearance Related Behaviours Subscale

<table>
<thead>
<tr>
<th>#</th>
<th>Original item</th>
<th>Reason for deletion</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Have you avoided exercising during pregnancy because your flesh might wobble?</td>
<td>Low factor loading.</td>
</tr>
<tr>
<td>2</td>
<td>Have you avoided wearing clothes which make you particularly aware of the shape of your body during pregnancy?</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>3</td>
<td>Have you not gone out to social occasions (e.g. parties) during pregnancy because you have felt bad about your shape?</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>4</td>
<td>Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths) during pregnancy?</td>
<td>Included in final subscale.</td>
</tr>
</tbody>
</table>
5 Have you vomited in order to feel thinner during pregnancy? Low frequency endorsement.
6 Have you taken laxatives in order to feel thinner during pregnancy? Low frequency endorsement.
7 Have you restricted your eating in order to feel thinner during pregnancy? Low frequency endorsement.
8 Have you exercised more in order to feel thinner during pregnancy? Included in final subscale.
9 Has worry about your shape during pregnancy made you feel you ought to exercise? Included in final subscale.
10 Has worry about your size during pregnancy made you feel you ought to exercise? Included in final subscale.
11 Has worry about your weight during pregnancy made you feel you ought to exercise? Included in final subscale.
12 Have you avoided observing yourself in mirrors where you could see your pregnant body? Included in final subscale.
13 Have you avoided being naked while pregnant? Included in final subscale.

The Sexual Attractiveness subscale included items such as ‘I feel my partner finds my pregnant body sexy’. The original Sexual Attractiveness subscale included 11 items, however this was trimmed down to the final six items. Table 6 displays original items and wording, followed by the reason for exclusion from final measure for those items considered redundant and eliminated. The response set was anchored to a five-point Likert scale, where participants rated the extent to which they agreed...
with specific statements (1 = strongly agree to 5 = strongly disagree). Three of the items are negatively worded and hence require reverse scoring (items 1, 2, and 10). The scores for each item are summed together to produce a total sexual attractiveness score, with a range of total scores from six to 30, where higher scores are indicative of lower levels of sexual attractiveness.

Table 6

Revision of items for the Sexual Attractiveness Subscale

<table>
<thead>
<tr>
<th>#</th>
<th>Original item</th>
<th>Reason for deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I prefer not to let my partner see my naked pregnant body.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>2</td>
<td>I prefer not to let other people see my naked pregnant body.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>3</td>
<td>I like and appreciate my pregnant body sexually.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>4</td>
<td>I find my pregnant body attractive sexually.</td>
<td>Multicollinearity with other subscale items.</td>
</tr>
<tr>
<td>5</td>
<td>I feel my partner finds my pregnant body attractive sexually.</td>
<td>Multicollinearity with other subscale items.</td>
</tr>
<tr>
<td>6</td>
<td>I feel my partner likes and appreciates my pregnant body sexually.</td>
<td>Multicollinearity with other subscale items.</td>
</tr>
<tr>
<td>7</td>
<td>I find my pregnant body sexy.</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>8</td>
<td>I feel my partner finds my pregnant body sexy.</td>
<td>Included in final subscale.</td>
</tr>
</tbody>
</table>
9. I worry that some parts of my pregnant body would be unattractive to my partner. **Multicollinearity with other subscale items.**

10. I worry that my pregnant body would be unattractive to my partner. **Included in final subscale.**

11. People find the pregnant body sexually attractive. **Low factor loading.**

The Functioning of the Body subscale included items pertaining to the emphasis placed on the practical functioning of specific body parts, with items such as ‘I am more concerned with what my pregnant body can do than how it looks’. The original Functioning of the Body subscale included eight items, however this was trimmed down to the final six items. Table 7 displays original items and wording, followed by the reason for exclusion from final measure for those items considered redundant and eliminated. The response set was anchored to a five-point Likert scale, where participants rated the extent to which they agreed with the specific statement (1 = strongly agree to 5 = strongly disagree). The scores for each item are summed together to produce a total score, with a range of total scores from six to 30, where higher scores are indicative of decreased emphasis on functioning (and increased emphasis on aesthetics).

Table 7

<table>
<thead>
<tr>
<th>#</th>
<th>Original item</th>
<th>Reason for deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I think more about how my pregnant body feels than how it looks</td>
<td>Included in final</td>
</tr>
<tr>
<td></td>
<td>Statement</td>
<td>Included in final subscale.</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>2</td>
<td>I am more concerned with what my pregnant body can do than how it looks.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I am more concerned with how my body functions during pregnancy than how it looks.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I am more concerned with how the function of my breasts during pregnancy than how they look.</td>
<td>Multicollinearity with other subscale items.</td>
</tr>
<tr>
<td>5</td>
<td>I am more concerned with the function my stomach has during pregnancy than how it looks.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I am more concerned with the function of my thighs during pregnancy than how they look.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I am more concerned with the function of my arms during pregnancy than how they look.</td>
<td>Multicollinearity with other subscale items.</td>
</tr>
<tr>
<td>8</td>
<td>I am more concerned with the function of my legs during pregnancy than how they look.</td>
<td></td>
</tr>
</tbody>
</table>

The BIPS was completed by participants at both time point one (T1) and time point two (T2). Table 8 and Table 9 display the reliability statistics for the ‘BIPS’ subscales at each time point, for the pregnant and never-pregnant samples respectively. The subscales of the BIPS met criteria for reliability for use in the analyses.
Table 8

*Reliability of the Body Image in Pregnancy Scale at Each Time Point: Pregnant Sample*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Reliability (Maximal Reliability)</th>
<th>Number of items in the final scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body Image in Pregnancy Scale - T1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image importance</td>
<td>.92</td>
<td>5</td>
</tr>
<tr>
<td>Body image ideals</td>
<td>.80</td>
<td>6</td>
</tr>
<tr>
<td>Body dissatisfaction</td>
<td>.88</td>
<td>8</td>
</tr>
<tr>
<td>Body change</td>
<td>.72</td>
<td>9</td>
</tr>
<tr>
<td>Appearance related behaviours</td>
<td>.98</td>
<td>9</td>
</tr>
<tr>
<td>Sexual attractiveness</td>
<td>.89</td>
<td>6</td>
</tr>
<tr>
<td>Functioning of the body</td>
<td>.89</td>
<td>6</td>
</tr>
<tr>
<td><strong>Body Image in Pregnancy Scale - T2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image importance</td>
<td>.90</td>
<td>5</td>
</tr>
<tr>
<td>Body image ideals</td>
<td>.84</td>
<td>6</td>
</tr>
<tr>
<td>Body dissatisfaction</td>
<td>.88</td>
<td>8</td>
</tr>
<tr>
<td>Body change</td>
<td>.96</td>
<td>9</td>
</tr>
<tr>
<td>Appearance related behaviours</td>
<td>.78</td>
<td>9</td>
</tr>
<tr>
<td>Sexual attractiveness</td>
<td>.87</td>
<td>6</td>
</tr>
<tr>
<td>Functioning of the body</td>
<td>.94</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 9

*Reliability of the Body Image in Pregnancy Scale at Each Time Point: Never-Pregnant Sample*
<table>
<thead>
<tr>
<th>Subscale</th>
<th>Reliability (Maximal Reliability)</th>
<th>Number of items in the final scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Image in Pregnancy Scale- T1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image importance</td>
<td>.95</td>
<td>5</td>
</tr>
<tr>
<td>Body image ideals</td>
<td>.75</td>
<td>5</td>
</tr>
<tr>
<td>Body dissatisfaction</td>
<td>.90</td>
<td>8</td>
</tr>
<tr>
<td>Body change</td>
<td>.73</td>
<td>9</td>
</tr>
<tr>
<td>Appearance related behaviours</td>
<td>.83</td>
<td>9</td>
</tr>
<tr>
<td>Sexual attractiveness</td>
<td>.89</td>
<td>6</td>
</tr>
<tr>
<td>Functioning of the body</td>
<td>.94</td>
<td>6</td>
</tr>
<tr>
<td>Body Image in Pregnancy Scale- T2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image importance</td>
<td>.96</td>
<td>5</td>
</tr>
<tr>
<td>Body image ideals</td>
<td>.78</td>
<td>5</td>
</tr>
<tr>
<td>Body dissatisfaction</td>
<td>.93</td>
<td>8</td>
</tr>
<tr>
<td>Body change</td>
<td>.98</td>
<td>9</td>
</tr>
<tr>
<td>Appearance related behaviours</td>
<td>.90</td>
<td>9</td>
</tr>
<tr>
<td>Sexual attractiveness</td>
<td>.93</td>
<td>6</td>
</tr>
<tr>
<td>Functioning of the body</td>
<td>.98</td>
<td>6</td>
</tr>
</tbody>
</table>

**Body Attitudes Questionnaire- Short Form.** The Body Attitudes Questionnaire- Short Form (BAQ; Ben-Tovim & Walker, 1991) is a 28-item self-report measure designed to assess one’s attitude to their body. Four subscales relevant to a pregnant population were utilised from the BAQ: Attractiveness (five items); Feeling Fat (12 items); Salience of Weight and Shape (five items); and Strength and Fitness (six items). Items represented in the short form of the scale
include ‘I usually felt physically attractive’ (Attractiveness), ‘when I wore loose
clothing it made me feel thin’ (Feeling Fat), ‘I hardly ever thought about the shape of
my body’ (Salience of Weight and Shape) and ‘I was proud of my physically strong
body’ (Strength and Fitness). Participants rank their agreement with the statements
on a five-point Likert scale (1= definitely disagree to 5= definitely agree). Rather
than produce a total score of body attitude, the BAQ produces total scores for each
of the subscales, with higher scores indicative of a stronger attitude to the specific
aspect of body image. For example, higher scores on ‘attractiveness’ represent
higher perceived attractiveness, whereas higher scores for ‘strength and fitness’
indicates feeling stronger and fitter, higher scores on ‘salience of weight and shape’
represents that the individual is consumed more by thinking about their weight and
shape, and higher scores on ‘feeling fat’ represents increased frequency or intensity
of feelings of fatness. As such, scores on each of the subscales are representative of
more positive or negative attitudes. Specific items of the BAQ are negatively worded
and require reverse coding (items 2, 8, 9, 11, 13, 27). The BAQ has demonstrated
high internal consistency for a pregnant cohort, with Cronbach alpha’s of: feeling fat
$\alpha= 0.91$, attractiveness $\alpha= 0.64$, strength and fitness $\alpha= 0.71$, and salience of weight
and shape $\alpha= 0.81$ (Hill, Skouteris, McCabe, & Fuller-Tyszkiewicz, 2013). The
BAQ was completed by participants at both time point one (T1) and time point two
(T2). Table 10 and Table 11 display the reliability statistics for each of the subscales
of the BAQ at each time point, for the pregnant and never-pregnant samples
respectively. In both the pregnant and never-pregnant samples the subscales of the
BAQ had good reliability for use in the analyses.
Reliability of the Body Attitudes Questionnaire at Each Time Point: Pregnant Sample

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Reliability (Cronbach’s alpha)</th>
<th>Number of items in the scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body Attitudes Questionnaire- T1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attractiveness</td>
<td>.66</td>
<td>5</td>
</tr>
<tr>
<td>Feeling fat</td>
<td>.92</td>
<td>12</td>
</tr>
<tr>
<td>Strength and fitness</td>
<td>.71</td>
<td>6</td>
</tr>
<tr>
<td>Salience of weight and shape</td>
<td>.86</td>
<td>5</td>
</tr>
<tr>
<td><strong>Body Attitudes Questionnaire- T2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attractiveness</td>
<td>.68</td>
<td>5</td>
</tr>
<tr>
<td>Feeling fat</td>
<td>.93</td>
<td>12</td>
</tr>
<tr>
<td>Strength and fitness</td>
<td>.77</td>
<td>6</td>
</tr>
<tr>
<td>Salience of weight and shape</td>
<td>.80</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 11

Reliability of the Body Attitudes Questionnaire at Each Time Point: Never-Pregnant Sample

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Reliability (Cronbach’s alpha)</th>
<th>Number of items in the scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body Attitudes Questionnaire- T1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attractiveness</td>
<td>.77</td>
<td>5</td>
</tr>
<tr>
<td>Feeling fat</td>
<td>.93</td>
<td>12</td>
</tr>
<tr>
<td>Strength and fitness</td>
<td>.78</td>
<td>6</td>
</tr>
</tbody>
</table>

126
Salience of weight and shape .84 5

*Body Attitudes Questionnaire*—*T2*

Attractiveness .79 5
Feeling fat .94 12
Strength and fitness .83 6
Salience of weight and shape .86 5

**Self-esteem.** The 10-item Rosenberg Self-Esteem Scale was used to assess the self-esteem of the women (RSES; Rosenberg, 1989). The RSES is a self-report measure with items answered on a four point scale (0 = *strongly disagree* to 3 = *strongly agree*). Five of the items are negatively worded and hence require reverse scoring (items 3, 5, 8, 9, and 10). The summed scores of the ten items produce a global score of self-esteem, with totals ranging from zero to 30. Higher scores are considered indicative of higher levels of self-esteem, with a score between 15 and 25 within normal range and scores lower than 15 suggestive of low self-esteem. The RSES is represented by such items as ‘*on the whole, I am satisfied with myself*’ and ‘*I feel that I’m a person of worth, at least on an equal plane with others*’. The RSES has demonstrated high internal consistency (α = .88) for a pregnant cohort (Kamysheva, Skouteris, Wertheim, Paxton, & Milgrom, 2008). The RSES was completed by participants at both time point one (T1) and time point two (T2). Table 12 and Table 13 display the reliability statistics for the RSES at each time point, for the pregnant and never-pregnant samples respectively. In both the pregnant and never-pregnant samples the RSES had good reliability for use in the analyses.
Reliability of the Rosenberg Self-Esteem Scale at Each Time Point: Pregnant Sample

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Reliability</th>
<th>Number of items in the scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosenberg Self-Esteem Scale - T1</td>
<td>.89</td>
<td>10</td>
</tr>
<tr>
<td>Rosenberg Self-Esteem Scale - T2</td>
<td>.89</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 13

Reliability of the Rosenberg Self-Esteem Scale at Each Time Point: Non-Pregnant Sample

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Reliability</th>
<th>Number of items in the scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosenberg Self-Esteem Scale - T1</td>
<td>.91</td>
<td>10</td>
</tr>
<tr>
<td>Rosenberg Self-Esteem Scale - T2</td>
<td>.95</td>
<td>10</td>
</tr>
</tbody>
</table>

**Depressive symptoms.** The screening of depressive symptoms during pregnancy was completed with the Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987). The EPDS is a ten item self-report measure assessing the frequency or applicability of the different depression symptoms over the past seven days for the woman, with items such as ‘things have been getting on top of me’ and ‘I have been so unhappy that I have had difficulty sleeping’. The scale also includes one item assessing the presence of self-harm and suicidal thoughts, ‘the thought of harming myself has occurred to me’. Responses are anchored with a four-point scale. A global score of depressive symptoms is produced by the summing together of the scores for each item, with global scores ranging from 128.
zero to 30. As such, higher scores are indicative of higher levels of distress and depressive symptoms whereas lower scores reflect lower levels of symptomatology. The EPDS has demonstrated high internal consistency ($\alpha = .87$) and has shown high sensitivity and specificity with 86% and 78% respectively (Cox et al., 1987). The EPDS was completed by participants at both time point one (T1) and time point two (T2). Table 14 and Table 15 display the reliability statistics for the EPDS at each time point, for the pregnant and never-pregnant samples respectively. In both the pregnant and never-pregnant samples the EPDS had good reliability for use in the analyses.

Table 14

*Reliability of the Edinburgh Postnatal Depression Scale at Each Time Point: Pregnant Sample*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Reliability</th>
<th>Number of items in the scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edinburgh Postnatal Depression Scale- T1</td>
<td>.88</td>
<td>10</td>
</tr>
<tr>
<td>Edinburgh Postnatal Depression Scale - T2</td>
<td>.88</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 15

*Reliability of the Edinburgh Postnatal Depression Scale at Each Time Point: Never-Pregnant Sample*
<table>
<thead>
<tr>
<th>Subscale</th>
<th>Reliability</th>
<th>Number of items in the scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Edinburgh Postnatal Depression Scale - T1</em></td>
<td>.88</td>
<td>10</td>
</tr>
<tr>
<td><em>Edinburgh Postnatal Depression Scale - T2</em></td>
<td>.91</td>
<td>10</td>
</tr>
</tbody>
</table>

**Procedure**

The Deakin University Human Research Ethics Committee (refer to Appendix H) approved this research. Two versions of a questionnaire, targeting pregnant women and never-pregnant women, were developed and placed online in April 2015. Pregnant women, of all gestation periods, were invited to participate in the study aiming to validate a new measure of body image designed specifically for pregnant women. Never-pregnant women were invited to participate in the study aiming to validate a new measure of body image. The two samples were recruited via online social networking sites, researchers and participants also publicized information about the study via word of mouth to their own social networks. Recruitment flyers were advertised in hospitals, GP offices, gyms, and community noticeboards (See Appendix I for the recruitment flyer for both pregnant women and never-pregnant women). Additionally, the pregnant sample were also targeted through specific recruitment avenues including motherhood and parenting social networking sites and forums. A second wave of recruitment was completed due to insufficient sample sizes. The research was advertised through Amazon’s website Mechanical Turk to attract participants. All participants were invited to complete the online questionnaire via a web link. Before completing the questionnaire,
participants were presented with a landing page (refer to Appendix J for the landing pages for pregnant women and never-pregnant women) and Plain Language Statement (refer to Appendix K for the PLS for pregnant women and never-pregnant women) that informed participants they would be asked questions about their body image experiences. Although risks to participants were unexpected, participants were fully informed about questions that may bring up any distress and provided with contact details for appropriate services should they require them. Participants were also informed the study was voluntary and were advised that they may withdraw participation at any time without any negative consequences. Participants were provided with contact details of the researchers to ask any questions they had. A participant’s informed consent was inferred when the finished questionnaire was submitted. The online questionnaire was completed at the woman’s own convenience and took approximately 30 minutes to complete. At the completion of the questionnaire participants were asked to provide their email address should they wish to participate in a second time point (two weeks later). Those participants who provided an email address were emailed approximately two-weeks after the date for the completion of T1 with instructions and an online link for accessing the T2 questionnaire.

Initially, participants were not provided with any incentive or reward to participate in this study. As part of participation through the online platform Amazon’s Mechanical Turk participants are paid a small amount for completing online research questionnaires. Therefore, those participants completing the online questionnaire specifically through the Mechanical Turk website received a small monetary incentive.
**Data screening.** Prior to conducting analyses the data were screened for missing data using Little’s MCAR test. Missingness (less than 5% overall) was handled using the replacement method of Expectation Maximisation (EM). Tests were conducted to assess the normality, linearity, homoscedasticity and outliers of the data using SPSS version 22. Normality of the data was assessed using the absolute values of skew and kurtosis; absolute skew and kurtosis values were within the acceptable range of <2.00 and <7.00 respectively, and therefore the data was deemed normally distributed (Curran, West, & Finch, 1996). The sample size (n = 251) was deemed appropriate on the basis of guidelines posed by Gorsuch (2015) and by Kline (1998), dictating that a sample size greater than 100 is required for factor analysis.

**Data analytic strategy.** Confirmatory factor analyses (CFA) were used to test the factor structure of the BIPS. This methodology allows for testing predetermined data structure to competing models and for the presence of higher order factors. Confirmatory factor analyses were conducted using SPSS AMOS version 22. Individual subscales of the BIPS were modelled as a unidimensional construct (consistent with theory). The original items for each subscale were trimmed to a final set of items that loaded onto the factor on the basis of multicollinearity between items (Pearson correlations >.8), poor item loadings onto the factor (standardised loadings <.4), issues with item wording (conceptual redundancy with other items, ambiguity in phrasing, etc.), and high skew or reliance on the neutral option of the response set. Once adequate model fit had been achieved for each of the subscales, the BIPS scale was modelled including all subscales. Adequacy of model fit was assessed using the following criteria: Comparative Fit Index (CFI; scale 0–1.0, >0.95 is good fit), Tucker-Lewis Index (TLI; scale 0–1.0, >0.95 is good fit), Standardized Root Mean Square Residual (SMR; <.08 is good fit), and Root Mean Square Error
of Approximation (RMSEA; <0.05 is adequate fit, <0.08 for good fit) (Byrne, 2010; Hu & Bentler, 1999). Modification indices (MIs) were used to refine the proposed model on the basis of the possibility of cross-loading items and significant item covariance in the model.

**Reliability and validity testing.** Following the construction of test items for the new measure of body image, psychometric testing was completed to evaluate the reliability and validity of the measure.

**Face validity.** To establish face validity for all items prior to initial testing, the research team reviewed all the items. On the basis of group discussion item wording was changed or items were deleted. Items were deleted on the basis of a lack of relevance to a pregnant population and their body image experiences, or an overlap of content between items.

**Construct validity.** Confirmatory factor analyses were used to test the factor structure of the BIPS. This methodology allows for testing predetermined data structure to competing models and for the presence of higher order factors. Individual subscales of the BIPS were modelled as a uni-dimensional construct (consistent with theory). Once adequate model fit had been achieved for each of the subscales, the BIPS scale was modelled including all subscales.

**Convergent validity.** Scores on the newly developed BIPS were compared to scores on the BAQ (Ben-Tovim & Walker, 1991), which is presumed to measure the same construct of body image. Pearson’s correlations were examined between total scores for each of the seven subscales of the BIPS and the four subscales of the BAQ. The four subscales of feeling fat, attractiveness, salience of weight and shape, and strength and fitness were selected originally for their relevance to a pregnant population. Convergent validity was also examined by the calculation of Pearson
correlations between the seven subscales of the BIPS and theoretically related constructs. The first construct was depressive symptoms, as assessed by the EPDS (Cox et al., 1987). It was hypothesised that greater disturbance of body image during pregnancy would be related to higher levels of depressive symptoms. Given that women may find it difficult to negotiate the changes during pregnancy, including to their bodies, resulting in negative evaluation of themselves and the experience of depressive symptomatology (Clark, Skouteris, Wertheim, Paxton, & Milgrom, 2009). Specific subscales of the BIPS hypothesized to be positively correlated to depressive symptomatology were body image importance, body image ideals, body dissatisfaction, body change, and the functioning of the pregnant body. The second construct of self-esteem was assessed by the RSES (Rosenberg, 1989). With one’s sense of his/her own body image a component of their overall sense of self it was hypothesized that body image disturbance and self-esteem would be moderately negatively correlated. Specific subscales of the BIPS hypothesized to be positively correlated to depressive symptomatology were body image importance, body image ideals and body dissatisfaction.

**Internal consistency.** The internal consistency of each of the subscales of the BIPS was estimated using Maximal Reliability (H; Conger, 1980). Maximal reliability allows the calculation of the internal reliability of the optimally weighted scale (Conger, 1980). Maximal reliability for each of the subscales ranged from .72 to .98 for T1, and .78 to .98 for T2.

**Test-retest reliability.** Test-retest reliability was evaluated by the calculation of Pearson correlations between T1 and T2 subscale composite scores.
References


CHAPTER FIVE

Study Three: Developing and Validating a Measure of Body Image for Pregnant Women

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Abstract

This study developed and validated a quantitative measure of body image specifically designed for pregnancy - the Body Image in Pregnancy Scale (BIPS). Scale development was guided by qualitative data from a series of studies exploring the meaning of women’s body image experiences during pregnancy, and previously established body image measures. Confirmatory factor analysis for a sample of pregnant women (n= 251) indicated good fit for a 49-item scale with nine factors: Body Image Ideals, Body Image Importance, Body Dissatisfaction, Body Change (Global and Specific Parts), Appearance-Related Behaviours (Appearance and Physical Activity), Sexual Attractiveness, and Functioning of the Body. The study also examined whether scores differed between the sample of pregnant women and a comparison sample of women who had never been pregnant (n= 168). BIPS subscale scores demonstrated good internal reliability and convergent validity with measures of body image, self-esteem, and depressive symptomatology. Test-retest reliability was weaker for the BIPS subscales compared to the BAQ subscales, thus the BIPS was more sensitive to detecting change in body image disturbance. Greatest differences were found for the BIPS subscales of Body Dissatisfaction, Body Change, Functioning of the Body, and Appearance-Related Behaviours, whereas the Sexual Attractiveness did not differ across groups.

Keywords: body image disturbances, pregnancy, assessment, validation, psychometrics.
Introduction

Pregnancy represents an ideal time to study malleability of body image in light of the rapid physical changes women experience across the relatively short forty-week period of gestation (Skouteris, 2011; Skouteris, Carr, Wertheim, Paxton, & Duncombe, 2005). Given the natural physiological changes experienced during pregnancy, women are moved further away from the sociocultural prescribed ‘thin ideal’ (Clark, Skouteris, Wertheim, Paxton, & Milgrom, 2009b; Duncombe, Wertheim, Skouteris, Paxton, & Kelly, 2008; Grogan, 2008). As a result of this deviation from the ideal, women may reflect on their body image, re-evaluating their appearance-related values to adapt to their changing body (Fuller-Tyszkiewicz, Skouteris, Watson, & Hill, 2012a; Skouteris, 2011). Coinciding with the adaptation of their body image ideals, lower or comparable levels of body dissatisfaction to pre-pregnancy may be experienced (Duncombe et al., 2008). Conversely, women who retain the thin ideal in pregnancy may experience increased body dissatisfaction.

Body image disturbances during pregnancy are of concern as they have been consistently linked with adverse psychological consequences, such as depressive symptoms (Fuller-Tyszkiewicz et al., 2012a), eating disorder symptomatology (Fuller-Tyszkiewicz et al., 2012a), impaired self-esteem (Kamysheva, Skouteris, Wertheim, Paxton, & Milgrom, 2008), and obesity (Hill, Skouteris, McCabe, & Fuller-Tyszkiewicz, 2013; Hill, Skouteris, McCabe, Milgrom, et al., 2013). Research has yielded mixed findings about the trajectory of body dissatisfaction during pregnancy and periods of risk, with some studies suggesting a worsening of body dissatisfaction during early pregnancy (Goodwin, Astbury, & McMeeken, 2000; Skouteris et al., 2005), others showing an increase in body image dissatisfaction later in pregnancy (Clark et al., 2009b; Duncombe et al., 2008), and others still finding
that body image dissatisfaction peaks in the postpartum (Rallis, Skouteris, Wertheim, & Paxton, 2007). Further findings have instead provided evidence of increased body satisfaction experienced during pregnancy relative to pre-pregnancy body satisfaction levels (Clark & Ogden, 1999; Loth, Bauer, Wall, Berge, & Neumark-Sztainer, 2011).

This inter-study variability in reported level of body image during pregnancy is likely a function of several factors. First, differences may be attributable to samples used in the studies. Body image is conceptualised as a broad construct, encompassing cognitive (e.g., importance attached to body image), behavioural (e.g., body checking to monitor body shape and size), and perceptual (e.g., discrepancy between perceived and actual size of specific body parts) dimensions (Banfield & McCabe, 2002; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). However, the majority of research into body image experiences of pregnant women has focused exclusively on body dissatisfaction (Clark et al., 2009b; Clark & Ogden, 1999; Duncombe et al., 2008; Fuller-Tyszkiewicz et al., 2012a; Goodwin et al., 2000; Rallis et al., 2007; Skouteris et al., 2005). Without consideration of the context of body dissatisfaction during pregnancy (i.e., without inclusion of other types of body image disturbances), it is difficult to accurately appraise patterns of body image disturbance in pregnancy. Internalisation of the thin ideal is one such example of an aspect of body image that may influence women’s body dissatisfaction during pregnancy. Evidence suggests that while some women may continue to internalise the thin ideal through pregnancy, others may not (Davies & Wardle, 1994; Duncombe et al., 2008). This heterogeneity in the thin-idealisation during pregnancy may affect estimation of body dissatisfaction at a sample level. However, studies that have measured both appearance ideals and body dissatisfaction in pregnant samples
have not investigated whether those women who experience higher body
dissatisfaction also tend to endorse the thin ideal more strongly. Thus, there is a need
for greater consideration of how body dissatisfaction relates to other body image
constructs for pregnant women.

Second, there has been a reliance on body image measures validated in non-
pregnant samples (Fuller-Tyszkiewicz, Skouteris, Watson, & Hill, 2012b; Skouteris, 2011). The Body Attitudes Questionnaire (BAQ; Ben-Tovim & Walker, 1991) is one
such measure validated in non-pregnant samples yet applied to pregnancy. Although
at face value, the four subscales of this construct (feeling fat, attractiveness, salience
of weight and shape, and strength and fitness) appear relevant for pregnant women,
Fuller-Tyszkiewicz et al. (2012b) found the BAQ had poorer model fit for pregnant
women. Moreover, factor loadings differed markedly in comparison to non-pregnant
women, suggesting the underlying factors may be qualitatively different for the two
groups. Qualitative research has emphasised that different body parts or aspects of
body image are salient during pregnancy, with emphasis on the pregnant stomach
(Clark, Skouteris, Wertheim, Paxton, & Milgrom, 2009a; Earle, 2003; Johnson,
Burrows, & Williamson, 2004; Mills, Schmied, & Dahlen, 2013; Nash, 2012a), the
breasts (Chang, Chao, & Kenney, 2006; Earle, 2003), and skin changes (Chang et
al., 2006; Chang, Kenney, & Chao, 2010; Harper & Rail, 2011). These salient
features are poorly captured or neglected in existing body image measures used with
pregnant women (Watson, Broadbent, Fuller-Tyszkiewicz, & Skouteris, 2015a).
Finally, studies utilising the BAQ for the investigation of body image across
pregnancy have demonstrated the measure’s high test-retest reliability (Duncombe et
al., 2008; Skouteris et al., 2005). While ordinarily this may be taken to reflect
stability of the construct and suitability of the measure, in the present context it is a possible indicator of insensitivity of the scale to detect change. After all, given the body changes during pregnancy it is expected that body image will fluctuate.

There are more aspects of body image that are rarely examined in a pregnant context and that lack validated scales for measurement. Findings from a qualitative study comprehensively exploring women’s body image experiences during pregnancy highlighted that women’s experiences were complex and changing (Watson, Broadbent, Fuller-Tyszkiewicz, & Skouteris, 2015b). Their body satisfaction was shaped by the expectations for the pregnant body, and the changes observed with the body shape and size (Watson et al., 2015b). Furthermore, the functionality of the pregnant body was emphasised over the aesthetics of one’s body (Watson et al., 2015b). Unique to pregnancy was the public nature of the pregnant body, with increased commentary about the pregnant body, and the perceived sexual attractiveness of the pregnant body (Watson et al., 2015b). Consideration of these neglected aspects of body image is necessary to provide a comprehensive representation of body image as a construct during pregnancy. Secondly, it allows body image in the perinatal period to be contextualised (Watson et al., 2015b).

The aim of the current study was to report on the development and validation of a new measure of body image for the perinatal period, the Body Image in Pregnancy Scale [BIPS]. The measure was designed to tap key facets of body image, including body dissatisfaction, body image importance, body image ideals, body change, functioning of the pregnant body, sexual attractiveness, and appearance-related behaviours. To evaluate the validity of the BIPS in a pregnant sample, the psychometric properties reported on will include the test-retest reliability, internal
consistency, and convergent validity (including depressive symptomatology and self-esteem).

It was hypothesised that the newly constructed measure would: (1) be valid (based on factorial validity and construct validity methods, where the final measure will have good model fit); (2) have at best moderate associations with existing measures of body image (given evidence suggesting that the BAQ as an existing measure may not be accurately assessing body image for pregnancy); (3) have moderate to strong associations with measures of depressive symptoms and self-esteem, as mentioned earlier, two constructs known to be related to body image during pregnancy (Chou, Lin, Cooney, Walker, & Riggs, 2003; Clark et al., 2009b; Haedt & Keel, 2007; Kamysheva et al., 2008; Rauff & Downs, 2011; Skouteris et al., 2005); (4) show lability over time (based on test-retest reliability); and (5) show greater sensitivity to the body changes of pregnancy compared to the BAQ (based on test-retest reliability). Finally, it was hypothesized that (6) there will be significant differences in the level of body image disturbances between the pregnant and non-pregnant samples.

Method

Participants

A total of 419 participants (n = 251 pregnant women and n = 168 women who had never been pregnant) were recruited for this study. Of these, 24% of the pregnant women (n = 61) and 30% of women who had never been pregnant (n = 50) completed the second time point of the study for test-retest reliability purposes. No significant differences in the demographics were identified between those who completed the second time point and those who did not, with the exception of weeks’
gestation and level of education (see Appendix A for analysis details). Demographic characteristics for both samples are presented in Table 1.

Measures

**Body Image in Pregnancy Scale.** The BIPS was developed by the researchers to measure body image during pregnancy. Body image theory posits that body image is composed of affective, cognitive, perceptual, and behavioural facets, therefore the subscales of the BIPS were developed to target body image as a multifaceted construct (Banfield & McCabe, 2002; Thompson et al., 1999). The initial pool of items were designed to comprehensively assess the target constructs, and thus introduced likelihood of conceptual and statistical redundancy (Clark & Watson, 1995). An item pool of 90 items was generated by the authors on the basis of themes extracted from a number of qualitative studies exploring body image in pregnancy (e.g. Chang et al., 2006, 2010; Clark et al., 2009a; Earle, 2003; Johnson et al., 2004; Mills et al., 2013; Nash, 2012; Watson, 2015a; Watson et al., 2015b) and existing measures of body image (for example the BAQ, Ben-Tovim & Walker, 1991). Items from existing measures of body image were adapted to target those salient aspects or parts of body image during pregnancy, for example items specified the women’s relationships with their pregnant stomach, breasts, weight gain, and skin changes. As detailed in the Data Analytic Strategy section, redundant items were removed in the scale refinement phase.

The final version of the BIPS had a total of 49 items, with subscales to tap different constructs of body image. The nine subscales were: Body Image Importance (five items); Body Image Ideals (six items); Body Dissatisfaction (eight items); Body Change, with two factors of Global and Specific Body Parts (nine
items); Appearance-Related Behaviours, with two factors of Overall Appearance and Physical Activity (nine items); Sexual Attractiveness (six items); and Functioning of the Body (six items). For each of the Body Image Importance, Body Image Ideals, Sexual Attractiveness, and Functioning of the Body subscales participants ranked how the item applied to their experience on a five-point Likert scale \((1= \textit{strongly agree} \text{ through to } 5= \textit{strongly disagree})\). For both the Body Dissatisfaction and Body Change subscales participants ranked their level of satisfaction with body parts or body changes on a five-point Likert scale, ranging from one \((\textit{strongly satisfied})\) through to five \((\textit{strongly dissatisfied})\). For the Appearance-Related Behaviours subscale, items were ranked according to the participant’s level of engagement with the behaviour, with response options ranging from ‘\textit{never engaged with the behaviour}’ to ‘\textit{always engaged in the behaviour}’. Item scores were summed together to produce a total score for each of the subscales; higher scores were indicative of greater disturbance of the aspect of body image (e.g., a higher score on the Body Change subscale was indicative of higher body dissatisfaction with the body changes experienced).

**Body Attitudes Questionnaire- Short Form.** The Body Attitudes Questionnaire- Short Form (BAQ; Ben-Tovim & Walker, 1991) is a 28-item self-report measure designed to assess one’s attitude to their body. The BAQ is composed of four subscales: Attractiveness (five items); Feeling Fat (12 items); Salience of Weight and Shape (five items); and Strength and Fitness (six items). Participants ranked their agreement with the statements on a five-point Likert scale \((1= \textit{definitely disagree} \text{ through to } 5= \textit{definitely agree})\). The BAQ has demonstrated high internal consistency for a pregnant cohort, with Cronbach alpha’s of: Feeling Fat \(\alpha= 0.91\), Attractiveness \(\alpha= 0.64\), Strength and Fitness \(\alpha= 0.71\), and Salience of
Weight and Shape $\alpha = 0.81$ (Hill, Skouteris, McCabe, & Fuller-Tyszkiewicz, 2013). In the present study the BAQ subscales demonstrated acceptable internal reliability for both the pregnant sample (scale $\alpha = .66 - .92$ for T1 and $\alpha = .68 - .93$ for T2) and the non-pregnant sample (scale $\alpha = .77 - .92$ for T1 and $\alpha = .79 - .94$ for T2).

**Self-esteem.** The 10-item Rosenberg Self-Esteem Scale was used to assess the self-esteem of the women (RSES; Rosenberg, 1965). The RSES is a self-report measure with items answered on a four-point Likert scale ranging from ‘strongly agree’ to ‘strongly disagree’. The items were summed to produce a global score of self-esteem, with higher scores indicative of higher levels of self-esteem. The RSES has demonstrated high internal consistency ($\alpha = .88$) for a pregnant cohort (Kamysheva, Skouteris, Wertheim, Paxton, & Milgrom, 2008). In the current study, the RSES produced high internal consistency for both the pregnant sample ($\alpha = .89$ for both T1 and T2) and the non-pregnant sample ($\alpha = .91$ and $\alpha = .95$ for T1 and T2, respectively). The RSES scores were used to investigate convergent source validity.

**Depressive symptoms.** The screening of depressive symptoms during pregnancy was completed with the Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987), a 10-item self-report measure assessing frequency of depression symptoms over the past seven days. A global score is produced by summing together the scores for each item, with higher scores indicative of higher levels of distress and depressive symptoms. The EPDS has demonstrated high internal consistency ($\alpha = .87$) and has shown high sensitivity and specificity with 86% and 78% respectively (Cox et al., 1987). In the current study, the EPDS produced high internal reliability for both the pregnant and non-pregnant samples across both time points ($\alpha = .88$ for the pregnant sample across T1 and T2, and $\alpha = .88$
and $\alpha = .91$ for the non-pregnant sample, T1 and T2 respectively). The EPDS scale scores were used to investigate convergent source validity.

**Procedure**

The University’s Human Research Ethics Committee approved this research. Pregnancy and non-pregnancy versions of the body image questionnaire were developed and placed online in March 2015. Participants clicked on a web-link that presented a Plain Language Statement, followed by the online questionnaire, which took approximately 25 minutes to complete. Participants interested in repeating the questionnaire for test-retest reliability provided their email address. Participants were not provided with any incentive or reward to participate in this study.

**Data cleaning and screening.** Preliminary data analysis revealed that missing data were distributed randomly across items and participants. Given total missing data were less than 5% for each variable, data were replaced using Expectation Maximisation (EM). The data were deemed normally distributed on the basis of the absolute skew and kurtosis values being within the acceptable range of $\pm 2.00$ and $\pm 7.00$ respectively (Curran, West, & Finch, 1996). The sample size ($n=251$) was deemed appropriate on the basis of guidelines posed by Gorsuch (2015) and Kline (1998), dictating that a sample size greater than 100 is required for factor analysis.

**Data analytic strategy.** Confirmatory factor analyses (CFA) were used to examine the factor structure of the preliminary BIPS and to guide item deletion before the model was identified and tested. This methodology allows for testing predetermined data structure to competing models and for the presence of higher order factors. Each subscale was refined before the final versions of the subscales
were combined into a model of the whole scale that was tested. Individual subscales
of the BIPS were modelled separately given the lack of clarity around whether the
construct was uni-dimensional or multidimensional. Furthermore, given the high
degree of correlation between body dissatisfaction and other aspects of body image,
it was likely that cross-loadings would complicate attempts to identify which items
loaded onto the intended subscale factor. The original items for each subscale were
trimmed to a final set of items that loaded onto the factor. Items were trimmed on the
basis of multi-collinearity between items (defined as Pearson’s correlations >.8),
poor item loadings onto their designated factor (defined as standardised loadings
<.4), issues with item wording (conceptual redundancy with other items, ambiguity
in phrasing, etc.), and high skew or reliance on the neutral option of the response set.

Once adequate model fit was achieved for each of the subscales, the BIPS
scale was modelled including all subscales. Multiple fit indices were examined to
assess overall model fit. Comparative Fit Index (CFI) values >0.95 were considered
good fit, and >.90 as minimally acceptable fit (Byrne, 2010; Hu & Bentler, 1999).
Standardized Root Mean Square Residual (SMSR) values <.05 indicated good fit,
and Root Mean Square Error of Approximation (RMSEA) values <0.05 indicated
good fit, while values <0.08 were considered adequate fit (Byrne, 2010; Hu &
Bentler, 1999). The $\chi^2$ value was also examined, however caution was used in
interpreting this and comparative fit indices were used in conjunction with $\chi^2$ given
the sensitivity of the statistic to sample size (DiStefano & Hess, 2005). Modification
indices (MIs) were used to refine the proposed model on the basis of the possibility
of cross-loading items and significant item covariance in the model.

Finally, other aspects of psychometric performance of the BIPS were tested
on this refined set of items. In particular, the internal consistency of the subscales of
the BIPS and each of the previously established scales (for example, the BAQ, EPDS, and RSES) was estimated using maximal reliability (H; Conger, 1980). Construct validity was evaluated using CFA to test the factor structure of the BIPS in the pregnant sample. Convergent validity was assessed via Pearson’s correlations between BIPS subscales and constructs that should theoretically be related for pregnant women, such as global self-esteem, BAQ subscales, and depressive symptomatology. The testing of convergent validity of the measure was limited to a focus exclusively on depressive symptomatology and self-esteem, due to the time and effort needed for participants to complete the questionnaire. The complete version of the BIPS included 90 items that participants were required to respond to, and the testing of these items was prioritized to be able to assess the structure of the scale. As such, other theoretically related constructs, e.g., anxiety and eating disorder symptomatology, were excluded from the testing of convergent validity. Test-retest reliability was evaluated by the calculation of Pearson’s correlations between T1 and T2 subscale composite scores. Test-retest reliability allows for the testing of how sensitive the BIPS is in detecting change in body image disturbances for the pregnant sample. Descriptives, independent sample t-tests, and internal reliability were tested with both the pregnant and non-pregnant samples to allow for the comparison of the functioning of the BIPS.

Results

Confirmatory Factor Analysis

Individual subscales. As detailed below, the seven constructs were best fit with nine factors. The final model of the Body Image Importance subscale was unidimensional, and contained five items that loaded strongly onto their primary factor.
Eight original items were excluded from the final model due to low factor loading (five items) and multi-collinearity (three items). The final model of the Body Image Ideals subscale was uni-dimensional, and contained six items that loaded strongly onto their primary factor. Three original items were excluded from the final model, due to low factor loading (two items) and multi-collinearity (one item). The final model of the Body Dissatisfaction subscale was uni-dimensional, and contained eight items that loaded strongly onto their primary factor. A total of 15 original items were excluded from the final model, due to low factor loading (10 items), multi-collinearity (two items), a conceptual overlap with other items (two items), and being too broad conceptually (one item).

The final model of the Body Change subscale was bi-factor with the nine items loading onto Body Change- Global Appearance (four items) and Body Change- Specific Body Parts (five items). Four original items were excluded from the final model, due to low factor loading (two items), multi-collinearity (one item), and a conceptual overlap with other items (one item). The final model of the Appearance-Related Behaviours subscale was bi-factor with the nine items loading onto Appearance-Related Behaviours- Overall Appearance (five items) and Appearance-Related Behaviours- Physical Activity (four items). Within the Appearance-Related Behaviours final model two items were correlated. Four original items were excluded from the final model, due to low factor loading (one item) and low frequency endorsement (three items).

The final model of the Sexual Attractiveness subscale was uni-dimensional, and contained six items that loaded strongly onto their primary factor. Five original items were excluded from the final model, due to low factor loading (one item) and multi-collinearity (four items). The final model of the Body Functioning subscale
was uni-dimensional, and contained six items that loaded strongly onto their primary factor. Within the Body Functioning final model two items were correlated. Two original items were excluded from the final model due to multi-collinearity. See Appendix B for the BIPS measure, including the set of 49 items contained within the nine-factor scale.

**Model as a whole.** The initial CFA of the whole model (all BIPS subscales combined) indicated poor model fit ($\chi^2 = 2325.31, p < .001$, CFI = .82, RMSEA = .07, SRMR = .07). This model contained all 49 items loading onto their primary factors, with correlations between all latent variables. Modification indices were used to resolve the issues with the fit. Residual variances with strong collinearity between the Body Dissatisfaction subscale and other variables, and the need for cross-loadings between specific items and individual subscales were indicated by the MIs.

Removal of the Body Satisfaction subscale from the combined model improved model fit. Correlations between all subscales remained. Within the Appearance-Related Behaviours subscale two items were correlated, and two items were correlated within the Functioning subscale. Cross-loadings were introduced between the first item of the Body Change subscale (“Thinking about your body during pregnancy, how happy are you with your changes in weight?”) onto the subscales of Sexual Attractiveness, Appearance Related Behaviour (both Overall Appearance and Physical Activity), Body Image Importance, and Functioning. Cross-loadings were also introduced between both one item of the Sexual Attractiveness (“I prefer not to let my partner see my naked pregnant body”) and one item of the Body Image Importance subscale (“Thinking about my weight during pregnancy stops me from concentrating”) onto the Appearance-Related Behaviours-Overall Appearance subscale. The final model resulted in a 49-item scale that
demonstrated acceptable fit ($\chi^2=1189.00$, $p<.001$, CFI= .92, RMSEA= .05, SRMR= .06).

**Internal Consistencies, Descriptive Statistics, and Subscale Correlations**

Maximal reliability values for the subscales of the BIPS are presented in Table 2. For the pregnant sample, all subscales met conventional standards of reliability across both the first and second time points. All BIPS subscales were significantly related, and strength of association ranged from moderate to strong. Table 3 displays the correlations amongst the BIPS subscales for the pregnant sample.

Mean subscale scores and independent samples t-tests examining difference of mean scores for the BIPS and BAQ subscales between pregnant and non-pregnant women are presented in Table 4. Items that were unsuitable for a non-pregnant context were excluded from the comparisons. In the case of Body Image Ideals and Body Image Importance, the limited number of overlapping items meant comparisons of mean scores was not meaningful and these subscales were not used in the t-tests. Pregnant women reported significantly higher levels of body change, significantly lower levels of body dissatisfaction, functioning of the body, and engagement in appearance-related behaviours, and did not differ from non-pregnant women on sexual attractiveness.

**Test-retest Reliability**

Pearson’s correlations between each of the BIPS subscale composite scores across time point one and time point two are presented in Table 3. Test-retest reliability was poor for the pregnant sample, with all of the Pearson’s correlations between BIPS subscales being non-significant.
Convergent Validity

Pearson correlations between the BIPS subscales and all convergence measures are presented in Table 5 for the pregnant sample. Generally, the seven BIPS subscales correlated with measures of global self-esteem and depressive symptoms, as well as another measure of body image, in the hypothesised directions and association strength in the sample of pregnant women. For the majority of the BIPS subscales, there were weak to strong negative correlations with global self-esteem, and weak to strong positive correlations with depressive symptomatology. The correlation between Body Dissatisfaction and global self-esteem was an exception, with a positive rather than negative moderate correlation found. Moderate to strong positive correlations were found between all BIPS subscales and the BAQ subscales of Feeling Fat and Salience of Weight and Shape, and moderate to strong negative correlations were found between all of the BIPS subscales and the BAQ subscale of Attractiveness. Weak negative correlations were found between all of the BIPS subscales, except Body Image Importance, and the BAQ subscale of Strength and Fitness.

Discussion

Whilst considerable research has been dedicated to examining body image in non-pregnant populations, the appropriateness of existing body image measures for pregnant women has been recently questioned (Fuller-Tyszkiewicz et al., 2012a; Fuller-Tyszkiewicz et al., 2012b; Watson et al., 2015a; Watson et al., 2015b), and suitable alternatives have yet to be established. Hence, the overarching goal of the current study was to develop a reliable and valid measure of body image disturbances for pregnant women, and to assess its underlying factor structure. The
Body Image in Pregnancy Scale [BIPS] built upon established measures of body image designed for non-pregnant populations to develop items, and was informed by the themes extracted from a series of qualitative studies exploring women’s body image experiences of pregnancy (Chang et al., 2006; Chang et al., 2010; Clark et al., 2009a; Earle, 2003; Johnson et al., 2004; Mills et al., 2013; Nash, 2012b; Watson et al., 2015a; Watson et al., 2015b). As such, the scope of previous measures was expanded to more comprehensively and accurately capture body image experiences specific to pregnancy.

The final solution for the BIPS identified distinct, yet related, factors for body image importance, body image ideals, body dissatisfaction, body change, appearance-related behaviours, functioning of the pregnant body, and sexual attractiveness. However, we note several caveats to this factor structure. First, in order to ensure adequate fit, several items were allowed to cross-load onto multiple factors. For example, cross-loadings were introduced between the Body Change subscale item pertaining to (dis)satisfaction with changes to one’s weight during pregnancy onto the subscales of Sexual Attractiveness, Appearance Related Behaviour (both Overall Appearance and Physical Activity), Body Image Importance, and Functioning. This set of cross-loadings indicates the importance of women’s changing weight to their experiences of body image during pregnancy, as suggested by past research (Harper & Rail, 2011; Mills et al., 2013; Patel, Lee, Wheatcroft, Barnes, & Stein, 2005). Separate cross-loadings were also introduced between one item of the Sexual Attractiveness (“I prefer not to let my partner see my naked pregnant body”) subscale and one item from the Body Image Importance (“Thinking about my weight during pregnancy stops me from concentrating”) subscale, onto the Appearance-Related Behaviours Overall Appearance factor,
highlighting the behavioural components of these subscales. For example, the pregnant woman’s concern about the observation of the naked pregnant body by her partner may result in the pregnant woman engaging in efforts to change or control her appearance (i.e., covering her body with clothing to avoid exposure). The decision was made to retain these cross-loading items rather than delete since: (1) they had higher loadings on their intended factor, and (2) these cross-loadings make sense in light of theory and past empirical research.

Second, two factors (body change and appearance-related behaviours) had poor fit when modeled as uni-dimensional constructs. This issue of fit was ultimately resolved by bi-factor structures representing a global factor and two lower-level factors in each case. Naturally, this forces researchers who wish to use BIPS to consider the more appropriate way to utilize these bi-factor measures. The relative advantage of using the more narrowly focused lower-level factors is that they provide clearer indication of the aspects of these body image constructs that relate to one’s variables of interest. The addition of these subscales may also provide a more complete picture of the areas in which an individual may be experiencing greatest body image disturbances. In contrast, if a researcher is simply interested in how the body image construct is relevant, in general, to other constructs, the higher order factor may be sufficient.

Third, as per previous research in which body dissatisfaction has been shown to be strongly linked to other aspects of body image (e.g., (Lampard, MacLehose, Eisenberg, Neumark-Sztainer, & Davison, 2014; Lynch, Heil, Wagner, & Havens, 2008; Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006; Rieder & Ruderman, 2001; Stice & Shaw, 2002)), the body dissatisfaction component of BIPS had broad-ranging cross-loadings with these other factors. Nevertheless, present
findings showed that focus solely on body dissatisfaction is likely to give an incomplete picture of one’s body image disturbance. First, descriptive statistics showed that some forms of body image disturbance were more common than others. Whereas body change, functioning, and appearance-related behaviours had mean endorsement levels in the lower half of the possible scoring range, body image importance, body image ideals, body dissatisfaction, and sexual attractiveness were above the mean. Second, the magnitude of correlations between body dissatisfaction and other BIPS subscales indicated moderate to strong overlap between the constructs without being redundant. Therefore, we argue that it is meaningful to utilize the body dissatisfaction subscale of the BIPS in conjunction with the other six subscales representing body image as a multifaceted construct during pregnancy, to assess women’s body image experiences during pregnancy.

Other findings from the present study indicate the strong psychometric properties of the BIPS as a measure for the assessment of women’s body image experiences during pregnancy. The internal consistency of items for individual BIPS subscales was strong, indicating that the items hang together well. Additionally, the BIPS subscales demonstrated sensitivity to the changes in body image disturbances during pregnancy, indicated by the weak test-retest reliability. This result is in line with expectation, with body image likely to fluctuate in response to the rapid physical changes to the body during pregnancy. Prior research, typically with the Body Attitudes Questionnaire, has yielded inconsistent findings with respect to (in)stability of body image during pregnancy (Duncombe et al., 2008; Skouteris et al., 2005). Lastly, the convergent validity of the BIPS subscales was established, with body image disturbances correlated with other constructs proposed to be related to body image (e.g., depressive symptomatology and self-esteem). The results from
the current study indicated that increased body image disturbances was associated with increased depressive symptomatology and decreased self-esteem, and these correlations remained with more appropriate assessment of body image disturbances specific to pregnancy through the use of the BIPS.

Present findings also provide insights into experiences of body image during pregnancy relative to non-pregnancy. For the present sample, pregnant women reported higher levels of body change (i.e., less dissatisfaction in relation to the body changes experienced during pregnancy), and significantly lower levels of body dissatisfaction, functioning of the body (i.e., de-prioritised the aesthetics of their appearance, and emphasised the functioning of the pregnant body), and engagement in appearance-related behaviours (i.e., behaviours to control or change appearance), compared to their non-pregnant counterparts. These findings indicate that for the present sample there were key differences in those salient aspects of body image during pregnancy, compared with non-pregnancy. Qualitative research exploring the salient aspects of body image during pregnancy (compared to non-pregnancy) has found that while some concern may remain about appearance, women are able to negotiate the changes to their bodies as they recognise the functionality of the pregnant body (Watson et al., 2015b).

Limitations of the current research indicate opportunities for future research. While our study was prospective in design, with two time points, future research would benefit from the inclusion of more time points to enable greater insight into the changes in body image across the perinatal period. This would allow the testing of the functioning of the BIPS measure at key transitions across the perinatal period and its capacity to highlight periods of risk where body image disturbances are heightened. Additionally, as with the majority of prior studies investigating body
image experiences in pregnancy, the present sample was predominantly white, educated, and of middle to high income. Further testing in more diverse cultural and socioeconomic groups is warranted.

Despite these limitations, the newly developed BIPS measure offers several advantages over existing measures of body image disturbance that are validated on populations of non-pregnant women and expected to translate to the unique period of pregnancy. Specifically: (1) the BIPS is one of the first measures to be developed and validated with a sample of women who are pregnant; (2) the BIPS offers a more targeted assessment of the body image disturbances specific to pregnancy, with items to target the salient aspects of body image in pregnancy; and (3) the BIPS focuses on body image as a multifaceted construct, rather than exclusively focusing on body dissatisfaction. The current study provides evidence for the reliability and validity of the BIPS. The development and validation of the BIPS provides a platform for future research to accurately investigate the development and maintenance of body image disturbances during pregnancy. Future research directions include additional testing of the psychometric properties of the BIPS, further item development, and application of the measure in diverse populations.
References


Lampard, A., MacLehose, R., Eisenberg, M., Neumark-Sztainer, D., & Davison, K. (2014). Weight-related teasing in the school environment: Associations with psychosocial health and weight control practices among adolescent boys and


Table 1

*Demographic Characteristics of the Sample*

<table>
<thead>
<tr>
<th></th>
<th>Pregnant Sample</th>
<th>Non-pregnant Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n</strong></td>
<td>251</td>
<td>168</td>
</tr>
<tr>
<td><strong>Age (M, SD)</strong></td>
<td>30 years</td>
<td>30.42 years</td>
</tr>
<tr>
<td><em>(SD= 4.34 years)</em></td>
<td><em>(SD= 7.95 years)</em></td>
<td></td>
</tr>
<tr>
<td><strong>Age Range</strong></td>
<td>18-43 years</td>
<td>20-69 years</td>
</tr>
<tr>
<td><strong>Week’s gestation (M, SD)</strong></td>
<td>24.22 weeks</td>
<td>N/A</td>
</tr>
<tr>
<td><em>(SD= 8.58 weeks)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Week’s gestation range</strong></td>
<td>4-40 weeks</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Parity (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primiparous</td>
<td>63% <em>(n= 156)</em></td>
<td>N/A</td>
</tr>
<tr>
<td>Multiparous</td>
<td>37% <em>(n= 90)</em></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Education (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not completed Year 12</td>
<td>3.6% <em>(n= 9)</em></td>
<td>0.0% <em>(n= 0)</em></td>
</tr>
<tr>
<td>Finished High School</td>
<td>12.6% <em>(n= 31)</em></td>
<td>10.2% <em>(n= 17)</em></td>
</tr>
<tr>
<td>Diploma Education</td>
<td>24.3% <em>(n= 60)</em></td>
<td>21.0% <em>(n= 35)</em></td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>36% <em>(n= 89)</em></td>
<td>38.6% <em>(n= 64)</em></td>
</tr>
<tr>
<td>Post-graduate Degree</td>
<td>23.5% <em>(n= 58)</em></td>
<td>30.0% <em>(n= 50)</em></td>
</tr>
<tr>
<td><strong>Work Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>78.1% *(n= )</td>
<td>86.1% <em>(n= 143)</em></td>
</tr>
<tr>
<td>Not currently working</td>
<td>21.9% <em>(n= 54)</em></td>
<td>13.9% <em>(n= 23)</em></td>
</tr>
<tr>
<td><strong>Income (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$45,000</td>
<td>8.2% <em>(n= 20)</em></td>
<td>32.5% <em>(n= 53)</em></td>
</tr>
<tr>
<td>$45,000 - $65,000</td>
<td>11.4% <em>(n= 28)</em></td>
<td>18.4% <em>(n= 30)</em></td>
</tr>
<tr>
<td>$65,000 - $85,000</td>
<td>13.9% <em>(n= 34)</em></td>
<td>16.6% <em>(n= 27)</em></td>
</tr>
<tr>
<td>$85,000 - $105,000</td>
<td>14.3% <em>(n= 35)</em></td>
<td>9.8% <em>(n= 16)</em></td>
</tr>
<tr>
<td>$105,000 - $125,000</td>
<td>18.4% <em>(n= 45)</em></td>
<td>8.6% <em>(n= 14)</em></td>
</tr>
<tr>
<td>$125,000 - $145,000</td>
<td>11.4% <em>(n= 28)</em></td>
<td>2.5% <em>(n= 4)</em></td>
</tr>
<tr>
<td>&gt;$145,000</td>
<td>22.4% <em>(n= 55)</em></td>
<td>11.7% <em>(n= 19)</em></td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>2.0% <em>(n= 5)</em></td>
<td>47.9% <em>(n= 79)</em></td>
</tr>
<tr>
<td>De facto</td>
<td>18.8% <em>(n= 46)</em></td>
<td>16.4% <em>(n= 27)</em></td>
</tr>
</tbody>
</table>
Married & 79.2\% (n= 194) & 33.0\% (n= 54) \\
Divorced & 0.0\% (n= 0) & 1.8\% (n= 3) \\
Separated or widowed & 0.0\% (n= 0) & (n= 2) \\

| Body Mass Index \((M, SD)\) & 25.13 (SD= 6.23) & 26.03 (SD= 6.51) |

self-reported height (m) and weight (kg)

Mental Illness

| No history of mental illness & 51.2\% (n= 131) & 59.5\% (n= 100) |
| Minor or major depression & 31.9\% (n= 80) & 26.4\% (n= 46) |
| Antenatal or postnatal depression & 4.8\% (n= 12) & N/A |
| Anxiety & 15.1\% (n= 38) & 18.5\% (n= 31) |
| Substance related disorder & 1.2\% (n= 3) & 0.0\% (n= 0) |
| Eating disorder & 5.6\% (n= 14) & 6.0\% (n= 10) |
| Other & 2.8\% (n= 7) & 1.2\% (n= 2) |
Table 2

*Internal Consistency among BIPS Subscales for the Pregnant and Non-Pregnant Samples*

<table>
<thead>
<tr>
<th></th>
<th>Maximal Reliability (H) T1</th>
<th>Maximal Reliability (H) T2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pregnant Sample</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Image Importance</td>
<td>.92</td>
<td>.90</td>
</tr>
<tr>
<td>Body Image Ideals</td>
<td>.80</td>
<td>.84</td>
</tr>
<tr>
<td>Body Dissatisfaction</td>
<td>.88</td>
<td>.88</td>
</tr>
<tr>
<td>Body Change</td>
<td>.72</td>
<td>.96</td>
</tr>
<tr>
<td>Sexual Attractiveness</td>
<td>.89</td>
<td>.87</td>
</tr>
<tr>
<td>Appearance-Related behaviours</td>
<td>.98</td>
<td>.78</td>
</tr>
<tr>
<td>Functioning of the Pregnant Body</td>
<td>.89</td>
<td>.94</td>
</tr>
<tr>
<td><strong>Non-Pregnant Sample</strong></td>
<td></td>
<td></td>
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<tr>
<td>Body Image Importance</td>
<td>.95</td>
<td>.96</td>
</tr>
<tr>
<td>Body Image Ideals</td>
<td>.75</td>
<td>.78</td>
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<td>.90</td>
<td>.93</td>
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<tr>
<td>Body Change</td>
<td>.73</td>
<td>.98</td>
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<tr>
<td>Category</td>
<td>Correlation</td>
<td>Reference Correlation</td>
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<td>-----------------------------------</td>
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</tr>
<tr>
<td>Sexual Attractiveness</td>
<td>.89</td>
<td>.93</td>
</tr>
<tr>
<td>Appearance-Related behaviours</td>
<td>.83</td>
<td>.90</td>
</tr>
<tr>
<td>Functioning of the Pregnant Body</td>
<td>.94</td>
<td>.98</td>
</tr>
</tbody>
</table>
### Table 3

**Correlations between the BIPS Subscales at T1 and T2 for the Pregnant Sample**

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
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<tbody>
<tr>
<td>1. Body Image Importance- T1</td>
<td>.59**</td>
<td>.53**</td>
<td>.45**</td>
<td>.51**</td>
<td>.72**</td>
<td>.57**</td>
<td>.23</td>
<td>.15</td>
<td>.06</td>
<td>.10</td>
<td>.20</td>
<td>.15</td>
<td>.10</td>
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<tr>
<td>2. Body Image Ideals- T1</td>
<td>1</td>
<td>.46**</td>
<td>.42**</td>
<td>.51**</td>
<td>.61**</td>
<td>.54**</td>
<td>.10</td>
<td>.14</td>
<td>-.01</td>
<td>.02</td>
<td>.16</td>
<td>.14</td>
<td>.03</td>
</tr>
<tr>
<td>3. Body Dissatisfaction- T1</td>
<td>1</td>
<td>.68**</td>
<td>.60**</td>
<td>.59**</td>
<td>.56**</td>
<td>.13</td>
<td>.09</td>
<td>.09</td>
<td>.04</td>
<td>-.01</td>
<td>.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Body Change- T1</td>
<td>1</td>
<td>.49**</td>
<td>.47**</td>
<td>.43**</td>
<td>.18</td>
<td>.23</td>
<td>.28*</td>
<td>.27*</td>
<td>.21</td>
<td>.16</td>
<td>.29*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Sexual Attractiveness- T1</td>
<td>1</td>
<td>.64**</td>
<td>.50**</td>
<td>.03</td>
<td>.04</td>
<td>-.08</td>
<td>-.11</td>
<td>.01</td>
<td>-.01</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Appearance-Related behaviours- T1</td>
<td>1</td>
<td>.62**</td>
<td>.04</td>
<td>.04</td>
<td>-.08</td>
<td>.05</td>
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<td>.05</td>
<td>-.04</td>
<td></td>
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<tr>
<td>7. Functioning of the Pregnant Body- T1</td>
<td>1</td>
<td>.05</td>
<td>.01</td>
<td>.13</td>
<td>.06</td>
<td>.12</td>
<td>.13</td>
<td>-.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8. Body Image Importance- T2</td>
<td>1</td>
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<td>.55**</td>
<td>.51**</td>
<td>.49**</td>
<td>.66**</td>
<td>.47**</td>
<td></td>
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<td>9. Body Image Ideals- T2</td>
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<td>.49**</td>
<td>.51**</td>
<td>.62**</td>
<td>.36**</td>
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<td></td>
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<tr>
<td>10. Body Dissatisfaction- T2</td>
<td>1</td>
<td>.71**</td>
<td>.51**</td>
<td>.59**</td>
<td>.45**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Body Change- T2</td>
<td>1</td>
<td>.42**</td>
<td>.51**</td>
<td>.36**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>12. Sexual Attractiveness- T2</td>
<td>1</td>
<td>.65**</td>
<td>.27*</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|---|---
| 13. Appearance-Related behaviours- T2 | 1 | .48**
| 14. Functioning of the Pregnant Body- T2 |   |   

**p<.01, *p<.05**
Table 4

Means (Standard Deviations), t-tests, and effect sizes for the BIPS and BAQ Subscales, RSES and EPDS scales among Pregnant and Non-Pregnant Women

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pregnant women</th>
<th>Non-pregnant women</th>
<th>t-test</th>
<th>p</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>min- max</td>
<td>M (SD)</td>
<td>min- max</td>
<td></td>
</tr>
<tr>
<td>Body Image Importance</td>
<td>14.51 (4.84)</td>
<td>5 - 25</td>
<td>15.43 (5.24)</td>
<td>5 - 25</td>
<td>-</td>
</tr>
<tr>
<td>Body Image Ideals</td>
<td>16.13 (3.26)</td>
<td>7 - 26</td>
<td>14.98 (2.74)</td>
<td>8 - 24</td>
<td>-</td>
</tr>
<tr>
<td>Body Dissatisfaction</td>
<td>23.24 (6.14)</td>
<td>9 - 40</td>
<td>25.32 (6.95)</td>
<td>8 - 40</td>
<td>-3.23**</td>
</tr>
<tr>
<td>Body Change</td>
<td>26.03 (7.27)</td>
<td>5 - 45</td>
<td>20.64 (11.45)</td>
<td>0 - 45</td>
<td>5.42**</td>
</tr>
<tr>
<td>Appearance-Related Behaviours</td>
<td>19.38 (7.87)</td>
<td>9 - 45</td>
<td>25.74 (7.50)</td>
<td>9 - 44</td>
<td>-8.27**</td>
</tr>
<tr>
<td>Sexual Attractiveness</td>
<td>17.78 (5.43)</td>
<td>6 - 30</td>
<td>17.21 (5.23)</td>
<td>6 - 30</td>
<td>1.07</td>
</tr>
<tr>
<td>Functioning of the Body</td>
<td>14.30 (4.67)</td>
<td>6 - 30</td>
<td>18.89 (5.08)</td>
<td>6 - 30</td>
<td>-9.51**</td>
</tr>
<tr>
<td>Scale</td>
<td>Mean (SD)</td>
<td>Range</td>
<td>Mean (SD)</td>
<td>Range</td>
<td>t-value</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-----------</td>
<td>-------</td>
<td>-----------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>BAQ: Feeling Fat</td>
<td>34.38 (11.24)</td>
<td>12 - 58</td>
<td>38.10 (12.02)</td>
<td>12 - 60</td>
<td>-3.22**</td>
</tr>
<tr>
<td>BAQ: Attractiveness</td>
<td>15.60 (3.32)</td>
<td>6 - 25</td>
<td>15.68 (4.06)</td>
<td>5 - 25</td>
<td>-.20</td>
</tr>
<tr>
<td>BAQ: Salience of Weight and Shape</td>
<td>12.62 (4.59)</td>
<td>5 - 25</td>
<td>13.52 (4.65)</td>
<td>5 - 25</td>
<td>-1.95</td>
</tr>
<tr>
<td>BAQ: Strength and Fitness</td>
<td>16.79 (4.20)</td>
<td>7 - 28</td>
<td>19.09 (4.44)</td>
<td>8 - 30</td>
<td>-5.36**</td>
</tr>
<tr>
<td>RSES</td>
<td>28.23 (7.14)</td>
<td>8 - 40</td>
<td>26.68 (8.39)</td>
<td>0 - 40</td>
<td>1.96</td>
</tr>
<tr>
<td>EPDS</td>
<td>7.56 (5.33)</td>
<td>0 - 27</td>
<td>8.61 (5.67)</td>
<td>0 - 25</td>
<td>-1.94</td>
</tr>
</tbody>
</table>

**p<.01, *p<.05.
Table 5

Correlations between the BIPS Subscales and Subscales of the Body Attitudes Questionnaire, Rosenberg Self-Esteem Scale, and Edinburgh Postnatal Depression Scale for the Pregnant Sample

<table>
<thead>
<tr>
<th></th>
<th>BAQ Feeling Fat-T1</th>
<th>BAQ Attractiveness T1</th>
<th>BAQ Salience of Weight Shape-T1</th>
<th>BAQ Strength and Fitness T1</th>
<th>RSES-T1</th>
<th>EPDS-T1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BIPS Body Image Importance- T1</td>
<td>.67**</td>
<td>-.36**</td>
<td>.79**</td>
<td>-.10</td>
<td>-.46**</td>
<td>.39**</td>
</tr>
<tr>
<td>2. Body Image Ideals- T1</td>
<td>.54**</td>
<td>-.36**</td>
<td>.60**</td>
<td>-.19**</td>
<td>-.38**</td>
<td>.28**</td>
</tr>
<tr>
<td>3. BIPS Body Dissatisfaction- T1</td>
<td>.66**</td>
<td>-.55**</td>
<td>.57**</td>
<td>-.34**</td>
<td>-.50**</td>
<td>.34**</td>
</tr>
<tr>
<td>4. BIPS Body Change- T1</td>
<td>.47**</td>
<td>-.42**</td>
<td>.43**</td>
<td>-.28**</td>
<td>-.35**</td>
<td>.24**</td>
</tr>
<tr>
<td>5. BIPS Sexual Attractiveness- T1</td>
<td>.61**</td>
<td>-.63**</td>
<td>.55**</td>
<td>-.31**</td>
<td>-.55**</td>
<td>.40**</td>
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<tr>
<td>6. BIPS Appearance-Related behaviours- T1</td>
<td>.79**</td>
<td>-.41**</td>
<td>.76**</td>
<td>-.15*</td>
<td>-.54**</td>
<td>.51**</td>
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<tr>
<td>7. BIPS Functioning of the Pregnant Body- T1</td>
<td>.53**</td>
<td>-.45**</td>
<td>.63**</td>
<td>-.14**</td>
<td>-.38**</td>
<td>.32**</td>
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<tr>
<td>(M)</td>
<td>34.38</td>
<td>15.60</td>
<td>12.62</td>
<td>16.79</td>
<td>28.23</td>
<td>7.56</td>
</tr>
<tr>
<td>(SD)</td>
<td>11.24</td>
<td>3.32</td>
<td>4.59</td>
<td>4.20</td>
<td>7.14</td>
<td>5.33</td>
</tr>
</tbody>
</table>

**\(p<.01\), *\(p<.001\)
Appendix A

An independent sample t test was conducted to compare the age of those pregnant participants who completed follow up and those who only completed baseline. There was no significant difference in the age of participants \( t (244)= 1.34, p>.05 \).

An independent sample t test was conducted to compare the pre-pregnancy BMI of those pregnant participants who completed follow up and those who only completed baseline. There was no significant difference in the pre-pregnancy BMI of participants \( t (242)= -.98, p>.05 \).

An independent sample t test was conducted to compare the weeks gestation of those pregnant participants who completed follow up and those who only completed baseline. There was significant differences in the weeks gestation of those who completed follow up \( (M= 22.01, SD= 8.65) \) and those who only completed baseline \( (M= 24.85, SD= 8.48; t (245)= -2.18, p<.05) \).

A Chi-square test for independence (with Yate’s Continuity Correction) indicated no significant difference between completion of follow up or not and parity, \( \chi^2 (1)= 0.00, p>.05 \).

A Chi-square test for independence (with Yate’s Continuity Correction) indicated no significant difference between completion of follow up or not and work status, \( \chi^2 (1)= 0.04, p>.05 \).

A Chi-square test for independence (with Yate’s Continuity Correction) indicated no significant difference between completion of follow up or not and experience of psychiatric disorder, \( \chi^2 (1)= 1.28, p>.05 \).

A Chi-square test for independence indicated no significant difference between completion of follow up or not and marital status, \( \chi^2 (2)= 3.04, p>.05 \).
A Chi-square test for independence indicated no significant difference between completion of follow up or not and annual family income, $\chi^2 (7) = 7.41$, $p > .05$.

A Chi-square test for independence indicated a significant difference between completion of follow up or not and education status, $\chi^2 (3) = 13.20$, $p < .05$. Those pregnant participants who completed follow up were more inclined to have lower levels of education.
Appendix B

Body Image in Pregnancy Scale (BIPS)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Body Image Importance</strong></td>
</tr>
<tr>
<td>1</td>
<td>I spend a lot of time thinking about my pregnancy weight.</td>
</tr>
<tr>
<td>2</td>
<td>I spend a lot of time thinking about my pregnancy body size.</td>
</tr>
<tr>
<td>3</td>
<td>I spend a lot of time thinking about my pregnant body shape.</td>
</tr>
<tr>
<td>4</td>
<td>I am preoccupied with the desire to have a slimmer physique during pregnancy.</td>
</tr>
<tr>
<td>5</td>
<td>Thinking about my weight during pregnancy stops me from concentrating.</td>
</tr>
<tr>
<td></td>
<td><strong>Body Image Ideals</strong></td>
</tr>
<tr>
<td>6</td>
<td>I wish my pregnant body was smaller in size.</td>
</tr>
<tr>
<td>7</td>
<td>I would like my pregnant body to look more like other pregnant women’s bodies.</td>
</tr>
<tr>
<td>8</td>
<td>I would like my pregnant body to look more like the bodies of women who aren’t pregnant.</td>
</tr>
<tr>
<td>9</td>
<td>Women who are smaller in pregnancy are more attractive.</td>
</tr>
<tr>
<td>10</td>
<td>A thin body with a distinctly rounded stomach is an ideal body shape for pregnancy.</td>
</tr>
<tr>
<td>11</td>
<td>There is no ideal body size for pregnancy, every body is different.</td>
</tr>
<tr>
<td></td>
<td><strong>Body Satisfaction</strong></td>
</tr>
<tr>
<td>12</td>
<td>How happy are you with your weight during pregnancy?</td>
</tr>
<tr>
<td>13</td>
<td>How happy are you with your body shape during pregnancy?</td>
</tr>
<tr>
<td>14</td>
<td>How happy are you with your chest during pregnancy?</td>
</tr>
<tr>
<td>15</td>
<td>How happy are you with your abdominal region/stomach during pregnancy?</td>
</tr>
</tbody>
</table>
16 How happy are you with your thighs during pregnancy?
17 How happy are you with your arms during pregnancy?
18 How happy are you with your skin tone and appearance (including acne, varicose veins, stretch marks, dryness) during pregnancy?
19 How happy are you with your muscle tone during pregnancy?

**Body Change**

20 Thinking about your body during pregnancy, how happy are you with your changes in weight?
21 Thinking about your body during pregnancy, how happy are you with the changes to your breasts?
22 Thinking about your body during pregnancy, how happy are you with the changes to your stomach?
23 Thinking about your body during pregnancy, how happy are you with the changes to your legs?
24 Thinking about your body during pregnancy, how are happy are you with the changes to your arms?
25 Thinking about your body during pregnancy, how are happy are you with the changes to your body’s fluid retention?
26 Thinking about your body during pregnancy, how are happy are you with the changes to your muscle tone?
27 Thinking about your body during pregnancy, how are happy are you with the changes to your body’s flexibility?
28 Thinking about your body during pregnancy, how are happy are you with the changes to your strength?
Appearance-related behaviours

29 Have you avoided wearing clothes which make you particularly aware of the shape of your body during pregnancy?
30 Have you not gone out to social occasions (e.g. parties) during pregnancy because you have felt bad about your shape?
31 Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths) during pregnancy?
32 Have you exercised more in order to feel thinner during pregnancy?
33 Has worry about your shape during pregnancy made you feel you ought to exercise?
34 Has worry about your size during pregnancy made you feel you ought to exercise?
35 Has worry about your weight during pregnancy made you feel you ought to exercise?
36 Have you avoided observing yourself in mirrors where you could see your pregnant body?
37 Have you avoided being naked while pregnant?

Sexual Attractiveness

38 I prefer not to let my partner see my naked pregnant body.
39 I prefer not to let other people see my naked pregnant body.
40 I like and appreciate my pregnant body sexually.
41 I find my pregnant body sexy.
42 I feel my partner finds my pregnant body sexy.
43 I worry that my pregnant body would be unattractive to my partner.
I think more about how my pregnant body feels than how it looks.

I am more concerned with what my pregnant body can do than how it looks.

I am more concerned with how my body functions during pregnancy than how it looks.

I am more concerned with how the function of my breasts during pregnancy than how they look.

I am more concerned with the function my stomach has during pregnancy than how it looks.

I am more concerned with the function of my thighs during pregnancy than how they look.
CHAPTER SIX

Summary and General Discussion

Overview

Whilst considerable research attention has been dedicated to examining body image in non-pregnant populations, further research is needed to explore whether and how salient aspects of body image differ between pregnancy and non-pregnancy. As discussed throughout this thesis, accumulated empirical evidence of body image experiences during pregnancy have been inconsistent, and reliant upon body image measures validated in non-pregnant contexts. A key challenge for research into pregnancy-related body image is to ensure that measures of body image applied to pregnant populations appropriately capture women’s experiences of body image specific to pregnancy. Thus, the over-arching aim of this thesis was to develop a valid measure of body image to enable the accurate assessment of women’s body image disturbances during pregnancy.

The steps to achieving this overall aim proceeded as follows: (1) Conduct a review of the literature and further qualitative research to comprehensively understand women’s experiences of body image as a multifaceted construct during pregnancy; (2) Based on these findings, develop a measure of body image disturbance that captures the rich and nuanced experiences of body image during pregnancy; and (3) Test and validate this resulting measure of body image. In order to address the aim of developing a reliable and valid measure of body image experiences during pregnancy, three studies were conducted. Two studies have been
accepted for publication in peer reviewed journals (Study One and Study Two) and Study Three has been submitted for publication.

Study One was a systematic review of the recent qualitative literature published exploring women’s body image experiences as they transitioned through pregnancy and the postpartum (Watson, Broadbent, Fuller-Tyszkiewicz, & Skouteris, 2015a). The systematic review was undertaken to explore potential avenues to advance understanding of pregnancy-related body image experiences within the existing qualitative data (Watson et al., 2015a). Prior studies have cast doubt on the suitability of body image measures validated in non-pregnant samples for pregnancy (Fuller-Tyszkiewicz, Skouteris, Watson, & Hill, 2012a; Fuller-Tyszkiewicz, Skouteris, Watson, & Hill, 2012b; Watson et al., 2015a; Watson, Broadbent, Fuller-Tyszkiewicz, & Skouteris, 2015b). Therefore, prior quantitative studies that have relied on such measures may not have accurately captured the full scope of women’s body image experiences during pregnancy. Hence, the systematic review focused exclusively on qualitative studies, as they allowed the women to discuss their body image experiences of pregnancy in their own terms rather than being imposed by structured questionnaires (Watson et al., 2015a). The systematic review identified ten studies that focused on the qualitative exploration of women’s body image experiences during the perinatal period (Chang, Chao, & Kenney, 2006; Chang, Kenney, & Chao, 2010; Clark, Skouteris, Wertheim, Paxton, & Milgrom, 2009a; Earle, 2003; Harper & Rail, 2011; Haruna et al., 2010; Johnson, Burrows, & Williamson, 2004; Mills, Schmied, & Dahlen, 2013; Nash, 2012; Patel, Lee, Wheatcroft, Barnes, & Stein, 2005). The findings of the systematic review highlighted the need to consider pregnancy body image experiences as a multifaceted construct, comprising body image ideals (Chang et al., 2006; Chang et
al., 2010; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Johnson et al., 2004; Mills et al., 2013; Nash, 2012; Patel et al., 2005), body (dis)satisfaction (Clark et al., 2009a; Harper & Rail, 2011; Johnson et al., 2004; Mills et al., 2013), body change (i.e., experience of natural changes to the body)(Harper & Rail, 2011; Haruna et al., 2010; Mills et al., 2013; Nash, 2012), and appearance-related behaviours (i.e., behaviours to monitor, control, or change aspects of appearance)(Chang et al., 2006; Chang et al., 2010; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Johnson et al., 2004; Patel et al., 2005).

Building on the findings from the systematic review completed for Study One, Study Two was a qualitative study that aimed to provide a comprehensive exploration of women’s body image experiences during pregnancy (Watson et al., 2015b). Although individual components of body image have been explored qualitatively, this qualitative study was the first to integrate all facets of body image to represent the multifaceted nature of the construct (Watson et al., 2015b). The qualitative study developed set questions to elicit information about the different facets of body image from all participants. Furthermore, the qualitative study aimed to explore the broader context of women’s body image experiences during pregnancy, to elaborate on how women’s body dissatisfaction was shaped by other aspects of their body image experiences (Watson et al., 2015b). A secondary aim of the qualitative study was to explore women’s experiences of antenatal healthcare and, in particular, whether women had engaged in open communication about the expectations for body changes of pregnancy and body image (Watson et al., 2015b). Despite the emphasis on the body and body changes experienced during pregnancy, there is limited knowledge about what messages are communicated to pregnant women by health professionals about the normative body changes experienced for
pregnancy (both what to expect for the weight changes and body image) (Watson et al., 2015b). Pregnant Australian women were interviewed individually, with a structured interview schedule targeting the women’s range of body image experiences, and the context of these experiences.

Study Three was a quantitative study aimed at developing and validating a measure of body image specifically designed for a pregnant population. Consideration of those salient aspects of women’s body image during pregnancy is necessary for measurement to provide a comprehensive representation of pregnancy body image. Hence, the Body Image in Pregnancy Scale [BIPS] was developed to tap key components of women’s pregnancy body image as ascertained from the systematic review and qualitative study. The BIPS was designed to assess body image during pregnancy as a multifaceted construct, including body dissatisfaction, body image importance, body image ideals, body change, functioning of the pregnant body, sexual attractiveness, and appearance related behaviours. The functioning of the BIPS was tested in a sample of pregnant women, and a comparison sample of non-pregnant women, to examine whether differences emerged in their body image experiences.

**Main Findings of this Thesis**

**Body Image Experiences throughout Pregnancy**

As per findings in non-pregnant populations (Bearman, Presnell, Martinez, & Stice, 2006; Buchianeri, Arikian, Hannan, Eisenberg, & Neumark-Sztainer, 2013; Eisenberg, Neumark-Sztainer, & Paxton, 2006; Quick, Eisenberg, Buchianeri, & Neumark-Sztainer, 2013; Smolak & Levine, 2001; Wertheim & Paxton, 2011), body image dissatisfaction appears common among pregnant women. Concerns about
appearance during pregnancy were registered both in the systematic review and the qualitative study, with women discussing their dissatisfaction with their changing body shape and size during pregnancy (Watson et al., 2015a; Watson et al., 2015b). Four of the qualitative studies included in the systematic review (Clark et al., 2009a; Harper & Rail, 2011; Johnson et al., 2004; Mills et al., 2013) discussed women’s experience of body (dis)satisfaction during pregnancy, with body image experiences encompassing both body satisfaction and body dissatisfaction reported at different stages of pregnancy (and sometimes simultaneously). This variability in women’s experiences of body (dis)satisfaction was echoed in the qualitative studies with the women sampled relating differently to their appearance (Watson et al., 2015b).

The specific features of appearance that are salient during pregnancy appear to be markedly different from those emphasised in non-pregnant populations. Specific body parts emphasised by studies included in the systematic review and in the qualitative study were the pregnant stomach (Clark et al., 2009a; Earle, 2003; Johnson et al., 2004; Nash, 2012; Watson et al., 2015b), the breasts (an increase in size) (Chang et al., 2006; Earle, 2003; Watson et al., 2015b), and skin changes (negative changes e.g., stretch marks, varicose veins, acne or discolouration, and positive changes e.g., the “glow”) (Chang et al., 2006; Chang et al., 2010; Harper & Rail, 2011; Watson et al., 2015b).

The stomach communicated to women their progression across pregnancy, and the important distinction between being ‘frumpy’ or carrying excess weight versus ‘showing’ during early pregnancy (Clark et al., 2009a; Earle, 2003; Johnson et al., 2004; Nash, 2012). Therefore, the growth of the stomach in the early phases of pregnancy was something to be coveted (Earle, 2003; Mills et al., 2013). Furthermore, the women were concerned that during the period when the pregnant
stomach had not developed others would perceive them as being ‘fat’, and this fear of being perceived as ‘fat’ shaped the women’s feelings about their bodies, and their weight gain across the duration of their pregnancies (Harper & Rail, 2011; Nash, 2012). Lastly, women’s feelings about their breasts during the perinatal period were shaped by their feelings pre-pregnancy (Chang et al., 2006). Although the majority of women appreciated the increase in the size of their breasts associated with pregnancy, a small number of women were displeased because of the breasts being perceived as too large and being physically uncomfortable (Earle, 2003).

Women’s experiences of body (dis)satisfaction were influenced by a range of factors, including weight status (Mills et al., 2013), perceptual experience and functionality of the pregnant body (Clark et al., 2009a; Watson et al., 2015b), physical restriction of the pregnant body (Harper & Rail, 2011; Johnson et al., 2004), internal conflict (i.e., satisfaction with the current body but concern about the figure during the postpartum), and experience of wearing maternity clothing (Chang et al., 2006; Chang et al., 2010; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Johnson et al., 2004; Patel et al., 2005). The transition to maternity clothing from pre-pregnant clothing was consistently discussed as a factor triggering body dissatisfaction for women during pregnancy, as it provided a reminder of their increasing body shape and size (Watson et al., 2015a; Watson et al., 2015b). Women in the qualitative study spontaneously spoke of their efforts to remain in pre-pregnancy clothing throughout their pregnancy (Watson et al., 2015b). Wearing pre-pregnancy clothing for as long as possible reinforced body satisfaction, whereas for those women who were unable to fit into pre-pregnancy clothing earlier in pregnancy, this served as a reminder of their increasing weight, and resulted in body dissatisfaction (Watson et al., 2015b).
Re-orienting of Body Image during Pregnancy

Although women registered experiences of body dissatisfaction, it was also clear that focus on the aesthetics of the pregnant body was de-prioritised with the health and functioning of the pregnant body becoming more important (Watson et al., 2015a; Watson et al., 2015b). Women’s body image (and experience of body dissatisfaction) during pregnancy is shaped by the changes in both the aesthetics (and the attainment of appearance related ideals) and functionality of specific body parts (Watson et al., 2015a; Watson et al., 2015b). The changes to their bodies were considered confronting to the women’s body image (and the women identified body changes that were unattractive), but the women were also able to explain the body changes in the context of the body growing for the baby’s health and development and the body serving a specific function during pregnancy (Watson et al., 2015b). The increased emphasis on function rather than aesthetics suggests that the body image ideals and satisfaction of pregnancy may need to be considered within a broader context than body size and shape (Watson et al., 2015a).

Another key finding from this thesis was that women’s body image ideals during pregnancy are adaptable, with the ideal shifting to account for physiological changes throughout pregnancy (Chang et al., 2006; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Patel et al., 2005). Across a number of qualitative studies reviewed, there was recognition from pregnant women that their bodies were required to grow and change to accommodate their unborn child(ren) (Chang et al., 2006; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Patel et al., 2005). These qualitative findings correspond with prior quantitative findings (e.g., Duncombe, Wertheim, Skouteris, Paxton, and Kelly (2008) and Skouteris, Carr, Wertheim, Paxton, and Duncombe (2005)), which demonstrated an increase in the
ideal body size and shape figures selected by the pregnant women as they progressed across the perinatal period. Collectively, these results provide clear evidence that the ideals pregnant women aspire to, and the salient aspects of the body they compare themselves to, are malleable and different to those of women who have not yet experienced pregnancy (Watson et al., 2015a).

The weight gain and changes in shape and size associated with the pregnant stomach were consistently discussed for their relevance to body image ideals and body dissatisfaction (Watson et al., 2015a; Watson et al., 2015b). The ‘in-between’ period of pregnancy where the distinctly rounded pregnant stomach characteristic of pregnancy had not yet developed was associated with anxiety, with women finding it difficult to negotiate this transition when their stomach was not yet defined (Clark et al., 2009a; Earle, 2003; Johnson et al., 2004; Nash, 2012). The later development of the distinctly pregnant stomach was seen as an indicator of the progression of the pregnancy, and a defining feature of pregnancy that communicated the pregnant status to others (Clark et al., 2009a; Earle, 2003; Johnson et al., 2004; Nash, 2012). Therefore, the weight gain around the pregnant stomach was perceived as more acceptable compared to other body regions (Harper & Rail, 2011; Watson et al., 2015b).

Social Influences on Body Image

The findings of the thesis provided evidence of sources of influence for women’s body image experiences during pregnancy, not just from partners and other social influences (friends, peers, and others in society), but also from healthcare professionals in the context of antenatal healthcare. Healthcare practitioners were perceived as neglecting conversations about how women might adjust their body
image to coincide with the rapid physical changes experienced during pregnancy (Watson et al., 2015b). Women sampled in the qualitative study expressed that there was a lack of attention paid to body image in antenatal healthcare, despite the potential increased risk for ante- and post-natal depression and other mental health issues (Watson et al., 2015b). Clinically, messages delivered during antenatal healthcare to women about the weight gain of pregnancy and the difficulty shifting excessive weight gained in the post-partum need to be considered to ensure women establish realistic expectations about the body changes during pregnancy.

Partners also became increasingly influential in the body image experiences of pregnant women (Watson et al., 2015b). Past research has not explicitly focused on the unique role of the partner in influencing the woman’s body image during pregnancy. The qualitative study explored the unique role of the partner, finding that receiving positive feedback from partners bolstered body satisfaction (Watson et al., 2015b). Furthermore, communication from partners about their appreciation for the changing body of pregnancy allowed women to feel attractive and desirable, and this reinforced their body satisfaction during pregnancy. These results highlighted the importance of exploring relationship dynamics for its influence on the women’s unique body image experiences (Watson et al., 2015b).

Lastly, consistent with past research (Clark et al., 2009a), the women sampled in the qualitative study discussed the public nature of the pregnant body, in that they felt others in society (e.g., peers) were more comfortable providing commentary about the pregnant women’s body changes (Watson et al., 2015b). This was perceived as being incongruent with women’s body image experiences before they were pregnant, as this social commentary would be considered unacceptable (Watson et al., 2015b).
Measurement of Body Image during Pregnancy

The multidimensional nature of body image as found in both the systematic review and qualitative study was reinforced by Study Three (the quantitative study). Although body dissatisfaction is the most commonly assessed aspect of body image (both in pregnant and non-pregnant populations), present findings show a broader range of body image experiences that may be relevant during pregnancy. The confirmatory factor analysis revealed a multifactorial structure, with eight identified factors in addition to body dissatisfaction. Further analyses revealed distinct relations of these body image constructs with other variables. For example, correlations between body dissatisfaction and other BIPS subscales indicated moderate to strong overlap between the constructs without being redundant. Secondly, body image disturbances were correlated with other constructs theoretically related to body image (e.g., depressive symptomatology and self-esteem).

Importantly, Study Three developed and provided strong psychometric properties of the BIPS as a measure for the assessment of women’s body image experiences during pregnancy. The final solution for the BIPS identified distinct, yet related, factors for body image importance, body image ideals, body dissatisfaction, body change (global body change and specific body parts), appearance-related behaviours (overall appearance and physical activity), functioning of the pregnant body, and sexual attractiveness. The BIPS subscales were internally consistent, related to each other, and showed increased sensitivity to the changes in women’s body image experiences during pregnancy. The BIPS provided evidence of convergent validity, with body image disturbances correlated with other constructs that have been both empirically and theoretically linked to body image (e.g., depressive symptomatology and self-esteem).
The BIPS offers several advantages for pregnancy researchers over existing measures of body image disturbance. Specifically, the BIPS improves on existing measures in that: (1) the BIPS is one of the first measures to be developed and validated with a sample of women who are pregnant; (2) the BIPS has specific items to measure those salient aspects of women’s body image experiences of pregnancy, and therefore offers a more targeted assessment of the body image disturbances specific to pregnancy; and (3) as opposed to existing measures that have a predominant focus on body dissatisfaction exclusively, the BIPS as a measure focuses on body image as a multifaceted construct.

**Theoretical and Clinical Implications**

**Implications for Theory**

Existing sociocultural theories of body image, such as the Tripartite Influence Model (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999) and Objectification Theory (Fredrickson & Roberts, 1997), seek to explain individual differences in the development and maintenance of body image disturbances on account of a number of sociocultural influences. Whereas these models propose a strong sociocultural influence on body image ideals in non-pregnant samples, present findings suggest that the sociocultural pressure to conform to the ideal may be lessened during pregnancy. Instead, appearance pressures may be exerted in different ways, such as through greater scrutiny of pregnant physique or misattribution of pregnant belly as overweight status. Findings from the present thesis suggest several areas in which these models need revision to ensure relevance for pregnant women.

A sociocultural model of body image that focuses purely on the aesthetic concerns of pregnant women will result in the full picture of women’s body image
experiences of pregnancy not being explained, given the neglect of salient aspects of pregnancy body image such as the relevance of the health and functioning of the pregnant body (Watson et al., 2015b). Pregnancy may provide a context in which the body image ideal is relaxed. However, the findings of the systematic review and the qualitative study suggested that some women do not relinquish the ideal during pregnancy. For example, this was discussed in terms of the women’s experience of anxiety about the ‘loss’ of the pre-pregnancy body (Johnson et al., 2004; Nash, 2012; Watson et al., 2015b), the idea of an ‘ideal’ pregnant stomach (Clark et al., 2009a; Earle, 2003; Johnson et al., 2004; Nash, 2012; Watson et al., 2015b), and the need to return to a pre-pregnancy figure following the birth of the child (expressed by samples of women who were still pregnant and those in the postpartum)(Chang et al., 2006; Clark et al., 2009a; Earle, 2003; Harper & Rail, 2011; Johnson et al., 2004; Watson et al., 2015b). Moreover, the ideal may change (i.e., to a body size and size that is more realistic), and a sociocultural model of body image for pregnancy needs to be able to accommodate changes in the body image ideals women aspire to during the perinatal period. Lastly, the importance of body image may change in its meaning (shifting from a focus on aesthetics to the health and functioning of the body). Within a sociocultural model of body image for pregnancy, the changing priorities from aesthetics to function could act as a moderator of the effects of internalisation on body image behaviours (body checking, weight loss behaviours, etc.) and attitudes (body dissatisfaction).

Testing of the sociocultural model and measurement of body image during pregnancy needs to: (1) place greater emphasis on health and functioning of the body; (2) include responses for the appearance aesthetic ideals of pregnancy that are realistic; and (3) ensure the focus on importance of features includes those salient
features that are specific to pregnancy. Further research revising the sociocultural models of body image disturbances (as discussed in the Theories of Body Image section included in Chapter One) needs to be conducted, given these models have been validated in non-pregnant populations and women’s experiences of body image during pregnancy are significantly different compared to non-pregnancy.

Finally, the resulting measure of the BIPS expanded on the scope of existing measures of body image, to more comprehensively and accurately capture body image experiences specific to pregnancy. However, opportunities exist for future research. Additional studies investigating: (1) the application of the BIPS measure in diverse populations (i.e., different cultures, socioeconomic groups, women with different experiences of pregnancy); (2) further development of the measure (i.e., larger scale studies confirming the psychometric properties of the BIPS, adaptation of the measure for clinical practice, adaptation of the measure to include more specific focus on the health and functioning of the pregnant body); and (3) use of the measure to comprehensively track the progression of body image disturbances across the perinatal period will be of benefit. Future research utilising the BIPS as a valid measure of women’s specific body image experiences of pregnancy will be able to accurately investigate the development and maintenance of body image disturbances during pregnancy.

**Implications for Practice**

The findings of this thesis highlighted the importance of women’s body image experiences during pregnancy in clinical practice. Women’s body image experiences are complex, and are shaped by their expectations for the changing body size and shape across pregnancy (Watson et al., 2015a; Watson et al., 2015b). As
seen in the qualitative study, communication in clinical settings about what to expect for the body changes, in particular weight gain, and body image was perceived as lacking and inadequate (Watson et al., 2015b), despite interactions with healthcare practitioners through antenatal care focusing on the pregnant body.

A study completed by the American College of Obstetricians and Gynaecologists showed that body image is largely neglected by healthcare professionals working with pregnant women, with less than one-third of clinicians assessing for body image disturbances in routine antenatal care (Leddy, Jones, Morgan, & Schulkin, 2009). This is surprising given obstetricians, gynaecologists, and midwives act as the primary care providers for childbearing women (Hauck et al., 2015), and body image disturbances are associated with negative psychological consequences, such as depressive symptomatology, and maladaptive behaviours, such as unhealthy eating habits and extreme weight loss behaviours (Fuller-Tyszkiewicz et al., 2012b). Therefore, it is important that healthcare practitioners working with pregnant women understand the inter-relationship between the perinatal period and body image disturbances, as well as the negative impacts of body image disturbance on women’s psychological functioning and physical health.

Importantly, the relationship between weight status pre-pregnancy and during pregnancy with body image disturbances needs to be fully explored, particularly when considering the implications of excessive gestational weight gain (GWG) for pregnancy outcomes. Current research indicates that over half of all women exceed the recommended weight gain across pregnancy for their specific BMI category (Chu, Callaghan, Bish, & D'Angelo, 2009). Although sufficient weight gain is necessary to maintain optimal wellbeing for the mother and unborn child (Dipietro, Millet, Costigan, Gurewitsch, & Caulfield, 2003; Hill, Skouteris, McCabe, Milgrom,
et al., 2013), excessive GWG is associated with an array of negative health consequences such as pregnancy complications, increased risk of delivery complications, and later increased risk of obesity for mother and child (Amorim, Rössner, Neovius, Lourenço, & Linné, 2007; Schack-Nielsen, Michaelsen, Gamborg, Mortensen, & Sørensen, 2010; Siega-Riz et al., 2010; Wrotniak, Shults, Butts, & Stettler, 2008).

The interplay between body image and GWG is explored in Hill et al.’s (2013) conceptual model, with the model proposing that increased body dissatisfaction has an important role in the prediction of excessive GWG. In their prospective study testing their conceptual model, Hill, Skouteris, McCabe, and Fuller-Tyszkiewicz (2013) found that both body image and pre-pregnancy BMI were predictive of gaining more weight and excessive GWG. Raising the awareness of the importance of body change and body image for the relevant healthcare practitioners, and improving the messages communicated about body changes to be expected, can contribute to women having better understanding of realistic and healthy body change during pregnancy. Consequently, this may have positive outcomes for women’s physical health, preventing excessive GWG and weight retained in the postpartum.

Healthcare practitioners involved with the care of women during the antenatal period should consider the routine screening of body image disturbances, extreme weight loss behaviours, and/or a history of eating disorders (Fuller-Tyszkiewicz et al., 2012b). Although the routine assessment of current or past mental health difficulties is endorsed in current clinical guidelines for standard practice in antenatal care in Australia (Australian Government Department of Health and Ageing, 2012), there is a predominant focus on depressive symptomatology. A
focus exclusively on depressive symptoms may impede a more comprehensive assessment of perinatal distress, and the range of challenges and negative emotional experiences women may experience during the perinatal period (Rallis, Skouteris, McCabe, & Milgrom, 2014). However, the feasibility of adopting the BIPS into clinical practice within the antenatal healthcare context needs to be considered. The BIPS is a lengthy measure and as such may not be suitable for healthcare context, and assessment of pressing issues such as antenatal depression may take precedent over the assessment of body image. Adaptation of the BIPS for clinical practice (i.e., by the shortening of the measure or use of the measure in pre-screening online) may allow for the accommodation of body image assessment in the antenatal context.

Limitations

Limitations of the research presented in this thesis indicate opportunities for future research. Study Two was cross-sectional in design, relying on snapshots of women’s body image experiences at specific stages of pregnancy to capture their global experiences of body image during pregnancy. Although the cross-sectional design presents challenges in interpreting the changing relationships the women had to their bodies as they experienced the body changes characteristic of each stage of pregnancy, collectively, other qualitative studies also show a pattern whereby body image experiences change over time.

Secondly, the majority of studies included in Study Two focused on samples in the later stages of pregnancy, and this retrospective exploration of pre-pregnancy body image may mean questions focusing on what happened in earlier phases of pregnancy are problematic (Fuller-Tyszkiewicz et al., 2012a). Qualitative studies sampling women in late pregnancy are subject to recall biases whereby women’s
reflections about the later phases of pregnancy are coloured by their early, mid, and pre-pregnancy body image experiences (Fuller-Tyszkiewicz et al., 2012a).

Therefore, future research designs need to account for these recall biases given that during pregnancy (specifically late pregnancy), impaired memory and the experience of forgetfulness is common (Casey, Huntsdale, Angus, & Janes, 1999; Henry & Sherwin, 2012).

Although Study Three was prospective in design, with two time points, the purpose of the prospective design was to test the stability of the BIPS scale. Study Three was not designed to track changes in body image experiences across the full duration of pregnancy, and hence the test-retest reliability component of the quantitative study provides few insights into the experience of body image from the beginning to end of pregnancy. Future research would benefit from the inclusion of more time points and/or greater time lapse between intervals to map this more comprehensively. The inclusion of more time points to track women as they transition from pre-pregnancy, through pregnancy, and into the postpartum, would enable greater insight into how the changes in body image coincide with the developmental changes across the perinatal period (Tiggemann, 2004). Furthermore, the investigation of the progression of body image disturbances across the perinatal period would allow for the identification of periods where risk of body image disturbances is particularly heightened.

Furthermore, the samples included in Study Two and Study Three demonstrated a lack of demographic variability in relation to socioeconomic status, marital status, level of education and employment, with all women either married or in a de facto relationship, all tertiary educated, most of middle to high income, and working in professional occupations. This is consistent with the majority of prior
studies investigating body image experiences in pregnancy (Clark et al., 2009a; Clark, Skouteris, Wertheim, Paxton, & Milgrom, 2009b; Duncombe et al., 2008; Skouteris et al., 2005) and also in non-pregnant populations (Grogan, 2008), suggesting further testing in more diverse cultural and socioeconomic groups is warranted. Given the impact of culture on ideas about ideal body size and shape for non-pregnant women (McDowell & Bond, 2006), differences may exist in the relationships among body image variables and with other related constructs. For example, women of different cultures may attach less importance to body image, and as such despite deviation from their ideal and significant body changes during pregnancy may be protected from the experience of body dissatisfaction.

Related to the lack of variability in the demographics of the women, the investigation of the influence of a range of pregnancy specific factors was beyond the scope of this body of research. For example, women’s experiences of body image during pregnancy may vary depending on their parity, their pre-pregnancy weight status, and experience of gestational weight gain, experience of medical complications during pregnancy, history of pregnancies (i.e., whether any miscarriages or still births have occurred), and different methods of pregnancy (e.g., naturally, in vitro fertilisation). Questions across both Study Two and Study Three were not designed to explicitly tease out the effects of these pregnancy specific factors. For example, differences between multiparous and primiparous women’s body image experiences emerged organically in Study Two, with multiparous women expressing a higher level of acceptence with their body image because they had transitioned through pregnancy before, and therefore had more realistic expectations (Watson et al., 2015b). Future research will benefit from the inclusion
of pregnancy specific factors to investigate whether these variables explain any heterogeneity in body image experiences during pregnancy.

Conclusions

The overall aim of this thesis was to develop and validate a measure of body image disturbances specifically designed for a pregnant population. The BIPS was developed through a mixed-methods approach, with the items included in the final scale generated from previously established measures of body image and qualitative studies exploring the body image experiences of pregnancy. The development and validation of the BIPS provides a platform for future research to accurately investigate the development and maintenance of body image disturbances during pregnancy. Future research directions include additional testing of the psychometric properties of the BIPS, further item development, and application of the measure in diverse populations. With further research supporting the validity of the BIPS as a measure of body image disturbances during pregnancy, research can systematically investigate the periods or risk and consequences of body image disturbances during the perinatal period. Clinically, the BIPS can then be utilised as a validated screening tool to identify those women who may be at risk of developing increased body image disturbances, and mental health difficulties, during pregnancy.
References


APPENDICES

Appendix A

Memorandum

To: Dr Helen Skouteris
School of Psychology

B

cc: Miss Brittany Watson

From: Deakin University Human Research Ethics Committee (DUHREC)

Date: 21 May, 2013

Subject: 2013-052

Body Image during Pregnancy: Developing a valid measure of body dissatisfaction for pregnant women

Please quote this project number in all future communications

The application for this project was considered at the DUHREC meeting held on 08/04/2013.

Approval has been given for Miss Brittany Watson, under the supervision of Dr Helen Skouteris, School of Psychology, to undertake this project from 21/05/2013 to 21/05/2017.

The approval given by the Deakin University Human Research Ethics Committee is given only for the project and for the period as stated in the approval. It is your responsibility to contact the Human Research Ethics Unit 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 are requested by other HRECs.

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.

DUHREC 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).

Human Research Ethics Unit
research-ethics@deakin.edu.au
Telephone: 03 9251 7123
Appendix B

Body image during pregnancy: Developing a valid measure of body dissatisfaction for pregnant women

Pregnant women are invited to take part in a study looking at wellbeing and body image during pregnancy. Whilst considerable research has been dedicated to examining body image, further research needs to explore the personal meaning behind these experiences unique to pregnancy and how they impact on a woman’s own body image and wellbeing.

If you agree to participate, you will be sent a basic once-off questionnaire covering your demographics and will also take part in a one on one phone interview for approximately 25-35 minutes. In the interview you will be asked a series of questions about your body image experiences across your pregnancy and what factors you believe to impact on these experiences. The study will form part of a Doctorate of Psychology (Clinical) research project for Miss Watson and is supervised by Dr Matthew Fuller-Tyszkiewicz and Associate Professor Helen Skouteris from Deakin University.

If you are interested in participating in this vital research, or would like more information about our study, please contact:

Brittany Watson
School of Psychology, Deakin University, Victoria 3125
Phone: (03) 9251-7406 Email: bewatson@deakin.edu.au
Appendix C

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Prospective participants

Plain Language Statement

Date: April 2013

Full Project Title: Body image during pregnancy: Developing a valid measure of body dissatisfaction for pregnant women.

Principal Researcher: Dr Matthew Fuller-Tyszkiwicz (School of Psychology, Deakin University, Burwood), and Associate Professor Helen Skouteris (School of Psychology, Deakin University, Burwood)

Student Researcher: Miss Brittany Watson (Doctorate of Psychology (Clinical))

• Purpose and Background;

The purpose of this project is to investigate women’s body image experiences during pregnancy through a series of qualitative interviews with pregnant women and those health practitioners providing care for these women in this unique time. The project aims to provide some insight into the level and type of distress experienced by women in relation to their body dissatisfaction across pregnancy, and identify any ‘critical periods’ where early intervention may be most effective. The identification of risk factors and consequences to maternal body dissatisfaction during pregnancy and the postpartum will also be explored. Through the use of these qualitative interviews it is hoped that a specific measure of body dissatisfaction can be developed for pregnant women.

In order to obtain accurate and meaningful results, we aim to recruit 60 women into the project who will complete the qualitative interviews as well as a basic questionnaire regarding their demographics. Coinciding with these interviews, we aim to recruit approximately 40 obstetricians, gynecologists, GP’s and/or midwives to complete qualitative interviews regarding their knowledge, beliefs and experiences with women’s body
dissatisfaction as they provide specialised healthcare to women during pregnancy.

We are inviting you to participate as a pregnant woman as we wish to find out about your body image experiences across pregnancy, any periods of pregnancy in which you may have experienced heightened body dissatisfaction and any factors specific to pregnancy you believe to have challenged your body image.

• **Methods;**

If you agree to participate, you will be required to complete a 25-35 minute interview in which you will be asked a series of questions about your body image experiences during pregnancy. Should you consent to participate your contact details will be recorded on this form and used for Miss Watson to contact you to organize a time for your phone interview and an appropriate number will be noted to call for the interview. In the interview we are particularly interested to find out how your body image experiences differ from pre-pregnancy, with questions such as:

1. What are your experiences of body image during this period (i.e., pregnancy)?
2. Has your level of concern for your appearance and body shape changed since becoming pregnant?
3. When thinking about your body image, what are the key areas of focus for you now?
4. Have your appearance related values and beliefs changed since becoming pregnant?
5. How do feelings of satisfaction/dissatisfaction with your appearance influence/relate to your overall sense of identity and self-worth?

These interviews will be audio recorded for later transcribing purposes to ensure accuracy of data. Should you wish to view your individual transcript from the phone interview you may contact Miss Watson to have it forwarded to a preferred email address or mailing address.

You will also complete a brief demographic questionnaire asking details about your family background, occupation, family income and past pregnancy history. This questionnaire will be mailed to your address (please provide your preferred contact address for the questionnaire to be sent to below) and you will be supplied with a reply paid envelope to return the questionnaire to the research team at Deakin University, Burwood.

• **Risks and potential benefits to participants;**

By participating in this project, you will be making an invaluable contribution to a very important area of research concerning maternal and
infant health and wellbeing. The results obtained at the conclusion of the study will potentially have implications for numerous health professions, expectant mothers as well as the general community.

There are no anticipated risks outside the normal day-to-day activities. However, if you do participate and find that you are uncomfortable or overly worried about your responses to any of the questions asked in the interview or if you find participation in the project distressing, you should contact the Principal Researcher (Helen Skouteris on: 03 9251-7699) as soon as convenient. You will have the opportunity to discuss your concerns in a confidential manner. Should your concerns about your body image become particularly elevated or distressing, please contact the Principal Research for contact details of services or psychologists providing specialised support. You may also like to contact a government or community organisation specialising in dealing with distress. You can contact BeyondBlue on 1300 22 4636 or the Post and Ante Natal Depression Association (PANDA) on 1300 726 306.

• **Privacy and confidentiality;**

  You can be assured that you will not be identified by name in any way in the reporting of our results in reports, publications and conference presentations. Any information we collect from you that can identify you will remain confidential and will be stored in a locked cabinet within the School of Psychology at Deakin University for a minimum of 6 years from the date of publication. Hard copy questionnaires and interview transcriptions will be stored in locked filing cabinets, and will only be labeled by a unique identification number, whilst audio recordings of the interviews will be stored on a password-locked computer only accessible by the Primary Researchers and Student Researcher.

• **Form of dissemination of the research results;**

  A summary of the findings will be available for any interested participants to read at the completion of the study. This project will also form part of a Doctorate of Psychology (Clinical) research project and thus the findings may be published in peer-reviewed journals. Please contact bewatson@deakin.edu.au if you would like to receive a copy of this report or be forwarded details of where to find the publications.

• **Research monitoring;**

  This research project will form part of a Doctorate of Psychology (Clinical) research project for Miss Brittany Watson. The project will not only be monitored by the two supervisors on the project, Dr Matthew Fuller-
Tyszkiewicz and Associate Professor Helen Skouteris, but also by the Deakin University School of Psychology, to ensure the research practices comply with Deakin University ethics guidelines.

- **Reimbursement;**
  You will not be paid for your participation in this component of the project.

- **Funding;**
  This project is being funded by a Deakin University School of Psychology student budget.

- **Financial or other relevant declarations of interests of researchers, sponsors and institutions;**
  The research team have no declarations of interest to report.

- **Participation is voluntary;**
  Participation in any research project is voluntary. If you do not wish to take part you are not obliged to. If you decide 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. Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with Deakin University in any way.

  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 and your details and data will be removed from the project. You may contact Miss Brittany Watson on (03) 9251 7406 or alternatively via email, on bewatson@deakin.edu.au.

- **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 2013-052.

- **Further Information;**
  
  This research project will form part of a Doctorate of Psychology (Clinical) research project for Miss Brittany Watson. Miss Watson will be supervised for this project by Dr Matew Fuller-Tysztkiewicz and Associate Professor Helen Skouteris.

  Should you wish to contact Dr Fuller-Tysztkiewicz or Associate Professor Helen Skouteris, you may reach them on the following details;

  Dr Matthew Fuller-Tysztkiewicz  
  Deakin University, School of psychology  
  Phone: (03) 9251 7344  
  Email: matthew.fuller-tysztkiewicz@deakin.edu.au

  Associate Professor Helen Skouteris  
  Deakin University, School of Psychology  
  Phone: (03) 9251 7699  
  Email: helen.skouteris@deakin.edu.au
PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participants

Consent Form

Date: April 2013

Full Project Title: Body image during pregnancy: Developing a valid measure of body dissatisfaction for pregnant women.

Reference Number: 2013-052

I have read and I understand the attached Plain Language Statement.

I freely agree to participate in this project according to the conditions in the Plain Language Statement.

I have been given a copy of the Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal my identity and personal details, including where information about this project is published, or presented in any public form.

The researcher have agreed to that the audio recordings and transcripts will not be used for anything other than the purpose of this project and will only be viewed by researchers and Chief Investigators of the project. The researchers have agreed that all audio recordings will be locked with a password on a secure PC, and hard copy questionnaires and transcripts will be stored in locked filing cabinets.

Participant’s Name (printed) ………………………………………………………………………………………………

Signature …………………………………………………………… Date ……………………………

Participants Contact Details (for mailing and interview purposes):

Address ………………………………………………………………………………………………………………………………………

Email address ……………………………………………………………………………………………………………………………

Phone Number …………………………………………………………………………………………………………………………
The researchers will be applying for further funding to continue their research longer term. If you agree to be contacted for research studies of this type in the future please sign below.

I consent to the researchers named here contacting me for future research studies that I am not obliged to take part in.

Participant’s name: ................................................. Signature: .............................................

Please return the signed form to: Miss Brittany Watson, School of Psychology, Deakin University, 221 Burwood Highway, Burwood, Victoria 3125.
PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participants

<table>
<thead>
<tr>
<th>Withdrawal of Consent Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>(To be used for participants who wish to withdraw from the project)</td>
</tr>
</tbody>
</table>

Date: April 2013

Full Project Title: Body image during pregnancy: Developing a valid measure of body dissatisfaction for pregnant women.

Reference Number: 2013-052

I hereby wish to WITHDRAW my consent to participate in the above research project and understand that such withdrawal WILL NOT jeopardise my relationship with Deakin University.

Participant’s Name (printed) ..........................................................

Signature ........................................................................... Date .................

Please mail or fax this form to:

Please return the signed withdrawal of consent form to: Miss Brittany Watson, School of Psychology, Deakin University, 221 Burwood Highway. Burwood, Victoria 3125. Alternatively you may email it to bewatson@deakin.edu.au.
Body Image during Pregnancy: Developing a valid measure of body dissatisfaction for pregnant women

Pregnant Women Questionnaire
ID No: __________

Today’s date: ……/……/……

1. Your date of birth (dd/mm/yyyy)
   …………………………………………………………………………………………………

2. What is your current weight and height? If you do not have scales at home, your local pharmacy or GP will have scales that you can use to weigh yourself
   Weight: ................................................ kg
   Height: .................................................. cm

3. How confident are you with your estimates of your current weight and height?
   1  2  3  4  5  6  7  8  9  10
   Completely unconfident
   Completely confident

4. What was your pre-pregnancy weight (for this child)? If you do not know exactly, please make a “best” estimate.
   Weight: ................................................ kg

5. How confident are you with your estimate of your pre-pregnancy weight?
   1  2  3  4  5  6  7  8  9  10
   Completely unconfident
   Completely confident

6. How many weeks gestation are you currently?
   …………………………………………………………………………………………………
7. When is your due date for this child?
..........................................................................................................

8. Your occupation is:
..........................................................................................................

9. Your partner’s occupation is:
..........................................................................................................

10. Number of children you have: (0) (1) (2) (3) (4) (5) (6)
(7+)

11. This child is child number: ............... 
   (1= first born; 2 = second born etc).

12. Is this your first pregnancy: (1) Yes    (2) No

13. Did you require any assistance conceiving this pregnancy?
   (1) Yes please state .............................    (2) No

14. If this is not your first pregnancy, did you experience any complications in your other pregnancies?
   (1) Yes   (2) No   (3) N/A
   If yes, please describe briefly
   ..........................................................................................................
   ..........................................................................................................
   ..........................................................................................................

15. Current marital status: (1) Married       (2) Divorced
    (3) De Facto                  (4) Separated
    (5) Widowed                   (6) Never
    Married

16. Are you an Aboriginal or Torres Strait Islander? (1) Yes    (2) No
17. Location of your birth:
(1) Australia  (2) New Zealand
(3) North-West Europe  (4) North America
(5) Southern & Eastern Europe  (6) South America
(7) North Africa & Middle East  (8) Southern & Central Asia
(9) Central, Western & Southern Africa

18. Where were your parents born? (Name of country please):
a. Father: ........................................
b. Mother: ........................................

19. Main language spoken at home:
(1) English
(2) Other (please specify):
..........................................................  

20. Please indicate the highest level of education you have completed.
(1) Still at secondary school  (2) Did not finish secondary school
(3) Year 12 or equivalent  (4) Certificate Level
(5) Advanced Diploma/Diploma  (6) Graduate Diploma/Graduate
Certificate  (7) Bachelor Degree Certificate  (8) Postgraduate Degree

21. Have you completed a trade certificate?
(1) No  (2) Yes, trade certificate or apprenticeship

22. Are you currently in paid employment?
(1) Yes  (2) No
a. If Yes, do you work full time/part time?
..........................................................................................
b. What is your role at work?
..........................................................................................
23. Do you intend to return to work after the birth of your baby?
   (1) Yes  (2) No
   If yes, how many weeks maternity leave do you intend to take?
   ........................................................................................................

24. Please indicate your approximate annual family income (after tax):
   (1) Under 25,000  (2) 25,001- 45,000
   (3) 45,001- 65,000  (4) 65,001- 85,000
   (5) 85,001- 105,000 (6) 105,001- 125,000
   (7) 125,001- 145,000 (8) Over 145,001

25. Have you ever been diagnosed with any of the following psychiatric or psychological conditions? (please circle all that apply)
   (1) No previous psychiatric history
   (2) Minor Depression
   (3) Major Depression (excluding Postnatal Depression)
   (4) Antenatal Depression
   (5) Postnatal Depression
   (6) Bipolar Disorder
   (7) Anxiety Disorder
   (8) Eating Disorder
   (9) Substance or Alcohol related Disorder
   (10) Other ...........................................Please Specify

26. If yes, what treatment did you receive? (please circle all that apply)
   (1) None
   (2) Medication (i.e., Antidepressants or Anti-Anxiety tablets)
   (3) Counselling or psychological therapy
   (4) Other ...........................................(Please Specify)
27. **If yes, how long ago was this? (please circle)**

1. Within the last 12 months
2. 1-2 years ago
3. 3-4 years ago
4. 4-5 years ago
5. 6-10 years ago
6. more than 10 years ago

26. **Are you currently receiving any of the following? (please circle all that apply)**

1. Counselling or psychological therapy
   - If yes, how frequently?
     - (a) Once (i.e., single visit)
     - (b) Occasionally (i.e., once a month, or every few months)
     - (c) Regularly (weekly or fortnightly). If so, for how long?

2. Antidepressants

3. Other medication (please specify):

4. Herbal or natural remedies (please specify):

5. Other (please specify):

6. None of the above
Appendix E

Women’s Body Image Experiences during Pregnancy: Interview Questions

1. How many weeks pregnant are you currently?
2. Tell me about your pregnancy experience?
3. How did you feel when you first found out you were pregnant? And now?
4. How valuable/important was your body image to you pre-pregnancy?
5. How has this adjusted since you became pregnant?
6. Has this adapted between early and late pregnancy (for those participants in late pregnancy)?
7. How do you expect your body image importance to adjust/adapt in the postpartum?
8. How do you feel your perceptions about your ideal body size have changed across pregnancy (if they have)?
9. How do you perceive a body shape or size that is ideal for a pregnant woman?
10. How do you perceive a body shape or size that is ideal for a mother who has just given birth?
11. How do you feel about your current appearance and body shape?
12. How do your current feelings about your weight and shape differ from those you had pre-pregnancy?
13. How do you feel about specific parts of your body such as your breasts, stomach, shape, weight, facial features?
14. Exactly what changes have been noticeable during pregnancy to their body size/shape/parts?
15. How do you expect your body to change in the postpartum?
16. How would you rate your level of satisfaction with your growing bump? Rate on a scale of one to ten with one being highly dissatisfied and ten being highly satisfied.
17. Please explain your rating of X for the question on your satisfaction with your growing stomach.

18. What does your growing stomach (‘bump’) mean for you? Do you view it as a negative or a positive?

19. How have your feelings for your growing ‘bump’ changed from early pregnancy when it was not yet defined?

20. What conflict do you feel there is between what is good for your body as a woman and what changes are good for your baby?

21. How have you felt emotionally throughout your pregnancy?

22. How have you found your body changes during pregnancy to affect your mood?

23. What factors do you believe have contributed to your increased emotional sensitivity during pregnancy?

24. How do you feel about yourself when you’re undressed?

25. What does your partner think about your pregnant body? And how does this make you feel?

26. How would you rate the severity of your physical symptoms experienced during pregnancy, taking into consideration such symptoms as morning sickness, fatigue, varicose veins, stretch marks, skin changes? Rate on a scale of one to ten, with one being barely noticeable/haven’t affected you and ten being debilitating/have strongly affected your pregnancy.

27. How do you feel the physical symptoms of pregnancy such as morning sickness have affected how you feel about your pregnancy? (morning sickness, fatigue, varicose veins, stretch marks, skin changes)

28. How do you feel your strength and fitness have changed across the duration of your pregnancy? And in comparison to your fitness levels pre-pregnancy?
29. How have you found your eating patterns and exercise to change across pregnancy?
30. How did feedback you received from others about your body affect how you viewed these changes unique to pregnancy?
31. How do you feel your peers and others in society view your pregnant body?
32. What do you think others base their perceptions of your pregnant body on? (E.g.- the media, other pregnant women they’ve recently seen, their own pregnant body)
33. Do you think your obstetrician, midwife and/or GP should discuss your weight status through pregnancy with you? (To be rated on a Likert scale ranging from 1-10, with 1= absolutely not, 5= neutral, 10= absolutely yes)
34. Please explain your rating of X on whether your weight status should be discussed with your obstetrician, midwife or GP?
35. Do you think that women should be weighed at each antenatal appointment? (To be rated on a Likert scale ranging from 1-10, with 1= absolutely not, 5= neutral, 10= absolutely yes)
36. Please explain your rating of X on whether you think that women should be weighed at each antenatal appointment?
37. Do you feel comfortable discussing your body image (and potential body dissatisfaction experiences) with your obstetrician/midwife/GP? (To be rated on a Likert scale ranging from 1-10, with 1= extremely uncomfortable, 5= neutral, 10= completely comfortable)
38. Please explain your rating of X on whether you feel comfortable discussing your body dissatisfaction experiences with your obstetrician/midwife/GP?
39. Do you think that your obstetrician/midwife/GP should raise body image during pregnancy as a topic of discussion or concern in your appointments? (To be rated on
a Likert scale ranging from 1-10, with 1= absolutely not, 5= neutral, 10= absolutely yes)

40. Please explain your rating of X on whether you think that your obstetrician/midwife/GP should raise the topic of body image during pregnancy within your appointments?

41. If you believe this topic should be raised in your antenatal appointments, when do you believe this topic should be raised? (i.e. early pregnancy/first appointment or later in pregnancy)

42. Do you believe this topic should be discussed with all pregnant women, or should your obstetrician/midwife/GP only raise this as a topic of concern if they believe their patient to be at risk of body dissatisfaction?
Body Image Checklist
The following is a checklist of common body image experiences and related behaviours. I will read out each item and ask you to select whether this is more of a concern, or more relevant than before you were pregnant, equal with no change, or less concerning or relevant during pregnancy compared to before you were pregnant.

<table>
<thead>
<tr>
<th>#</th>
<th>Item</th>
<th>Level of Concern and Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Value placed on appearance</td>
<td>Greater than non-pregnancy</td>
</tr>
<tr>
<td>2</td>
<td>Value placed on body size</td>
<td>Equal to non-pregnancy</td>
</tr>
<tr>
<td>3</td>
<td>Value placed on body shape</td>
<td>Less than non-pregnancy</td>
</tr>
<tr>
<td>4</td>
<td>Importance of body image</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Body dissatisfaction in relation to size</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Body dissatisfaction in relation to shape</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Concern about weight changes</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Concern about your weight being different from your ‘ideal’ body weight</td>
<td>Greater than non-pregnancy</td>
</tr>
<tr>
<td>9</td>
<td>Concern about your shape being different from your ‘ideal’ shape weight</td>
<td>Equal to non-pregnancy</td>
</tr>
<tr>
<td>10</td>
<td>Experience of eating restraint</td>
<td>Less than non-pregnancy</td>
</tr>
<tr>
<td>11</td>
<td>Focus on exercise</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Experience of purging/laxatives</td>
<td></td>
</tr>
</tbody>
</table>
Appendix F

Questionnaire Pregnant Women

1. Your age ...........................................................................................................

2. What is your current weight and height? If you do not have scales at home, please estimate to the best of your abilities.
   Weight: .................................................. kg
   Weight: .................................................. lb
   Height: ............................................. cm
   Height: .................................................. ft/in.

3. How confident are you with your estimates of your current weight and height?
   1  2  3  4  5  6  7  8  9  10
   Completely unconfident
   Completely confident

4. What was your pre-pregnancy weight (for this child)? If you do not know exactly, please make a “best” estimate.
   Weight: .................................................. kg

5. How confident are you with your estimate of your pre-pregnancy weight?
   1  2  3  4  5  6  7  8  9  10
   Completely unconfident
   Completely confident

6. How many weeks gestation are you currently?
   ..............................................................................................................
7. Your occupation is:

........................................................................................................................................

8. Your partner’s occupation is:

........................................................................................................................................

9. Number of children you have already given birth to:  
   (0)   (1)    (2)   
   (3)    (4)    (5)    (6)    (7+)

10. Current marital status:  
   (1) Married  
   (2) Divorced  
   (3) De Facto  
   (4) Separated  
   (5) Widowed  
   (6) Never Married

11. Main language spoken at home:  
   1. English  
   2. Other (please specify):

........................................................................................................................................

12. Please indicate the highest level of education you have completed.  
   (1) Still at secondary school  
   (2) Did not finish secondary school  
   (3) Year 12 or equivalent  
   (4) Certificate Level  
   (5) Advanced Diploma/Diploma  
   (6) Graduate Diploma/Graduate Certificate  
   (7) Bachelor Degree Certificate  
   (8) Postgraduate Degree (e.g. Honours, Masters, Doctorate, PhD)

13. Are you currently in paid employment?  
   (1) Yes  
   (2) No  
   a. If Yes, how many hours do you work per week?  

........................................................................................................................................

14. Please indicate your approximate annual family income (after tax):  
   (1) Under 25,000  
   (2) 25,001- 45,000
(3) 45,001- 65,000  (4) 65,001- 85,000
(5) 85,001- 105,000  (6) 105,001- 125,000
(7) 125,001- 145,000  (8) Over 145,001

15. **Have you ever been diagnosed with any of the following psychiatric or psychological conditions? (please select all that apply)**

(11) No previous psychiatric history (please go to Q27)

(12) Minor Depression
(13) Major Depression (excluding Postnatal Depression)

(14) Antenatal Depression
(15) Postnatal Depression
(16) Bipolar Disorder
(17) Anxiety Disorder
(18) Eating Disorder
(19) Substance or Alcohol related Disorder
(20) Other .................................. Please Specify
**BODY IMAGE IMPORTANCE**

Below is a list of statements dealing with your feelings about the importance of aspects of your body during pregnancy. Please respond thinking about your current pregnancy and weeks’ gestation. If you strongly agree, select 1. If you agree with the statement, select 2. If you neither agree nor disagree with the statement, select 3. If you disagree, select 4. If you strongly disagree, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>There are more important things in my pregnancy than the size of my body.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>2</td>
<td>There are more important things in my pregnancy than my weight.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>3</td>
<td>I spend a lot of time thinking about my pregnancy weight.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>4</td>
<td>I spend a lot of time thinking about my pregnancy body size.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>5</td>
<td>I spend a lot of time thinking about my pregnant body shape.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>6</td>
<td>I am preoccupied with the desire to weigh less during pregnancy.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>7</td>
<td>I am preoccupied with the desire to have a slimmer physique during pregnancy.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>8</td>
<td>Thinking about the shape of my pregnant body stops me from concentrating.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>9</td>
<td>Thinking about the size of my pregnant body stops me from concentrating.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>10</td>
<td>Thinking about my weight during pregnancy stops me from concentrating</td>
<td>1  2  3  4  5</td>
</tr>
</tbody>
</table>

Below is a list of questions asking about the importance of aspects of your body. If it is not at all important to you, select 1. If it is not very important to you, select 2. If it is neither important nor unimportant to you, select 3. If it is a bit important to you, select 4. If it is very important to you, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Compared to other things in your pregnancy, how important to you is your body shape?</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>2</td>
<td>Compared to other things in your pregnancy, how important to you is your body size?</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>3</td>
<td>Compared to other things in your pregnancy, how important to you is your weight?</td>
<td>1  2  3  4  5</td>
</tr>
</tbody>
</table>
**BODY IMAGE IDEALS**

Below is a list of statements dealing with your feelings about how you would like your pregnant body to look. Please respond thinking about your current pregnancy and weeks’ gestation. If you strongly agree, select 1. If you agree with the statement, select 2. If you neither agree nor disagree with the statement, select 3. If you disagree, select 4. If you strongly disagree, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I wish my pregnant body was smaller in size.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>I wish my pregnant body was larger in size.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>I would like my pregnant body to look more like other pregnant women’s bodies.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>I would like my pregnant body to look more like the bodies of women who aren’t pregnant.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>Women who are smaller in pregnancy are more attractive.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>Women who are larger in pregnancy are more attractive.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>A thin body with a distinctly rounded stomach is an ideal body shape for pregnancy.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>There is no ideal body shape for pregnancy, every body is different.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9</td>
<td>There is no ideal body size for pregnancy, every body is different.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
BODY IMAGE SATISFACTION

Below is a list of questions asking about your feelings around your body during pregnancy. Please respond thinking about your current pregnancy and weeks’ gestation. If you are strongly satisfied, select 1. If you are somewhat satisfied, select 2. If you are neither satisfied nor dissatisfied, select 3. If you are somewhat dissatisfied, select 4. If you are strongly dissatisfied, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How happy are you with your weight during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>How happy are you with your body shape during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>How happy are you with your muscle size during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>How happy are you with your hips during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>How happy are you with your thighs during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>How happy are you with your chest during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>How happy are you with your abdominal region/stomach during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>How happy are you with the size/width of your shoulders during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9</td>
<td>How happy are you with your legs during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10</td>
<td>How happy are you with your thighs during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11</td>
<td>How happy are you with your calves during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12</td>
<td>How happy are you with your ankles during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>13</td>
<td>How happy are you with your arms during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>14</td>
<td>How happy are you with your hands during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>15</td>
<td>How happy are you with your skin tone and appearance (including acne, varicose veins, stretch marks, dryness) during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>16</td>
<td>How happy are you with your facial complexion during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>17</td>
<td>How happy are you with your hair during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>18</td>
<td>How happy are you with your body’s fluid retention during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Question</td>
<td>1</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>19</td>
<td>How happy are you with your muscle tone during pregnancy?</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>How happy are you with your body’s flexibility during pregnancy?</td>
<td>1</td>
</tr>
<tr>
<td>21</td>
<td>How happy are you with your strength during pregnancy?</td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td>How happy are you with your energy levels during pregnancy?</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>How happy are you with your overall appearance during pregnancy?</td>
<td></td>
</tr>
</tbody>
</table>
**BODY CHANGE**

Below is a list of questions asking about your feelings around your body changes during pregnancy. Please respond thinking about your current pregnancy and weeks’ gestation. If you are strongly satisfied, select 1. If you are somewhat satisfied, select 2. If you are neither satisfied nor dissatisfied, select 3. If you are somewhat dissatisfied, select 4. If you are strongly dissatisfied, select 5. If the question is not relevant for your experience of pregnancy please select the N/A option.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thinking about your body during pregnancy, how happy are you with your changes in weight?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>2</td>
<td>Thinking about your body during pregnancy, how happy are you with the changes to your size?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>3</td>
<td>Thinking about your body during pregnancy, how happy are you with the changes to your shape?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>4</td>
<td>Thinking about your body during pregnancy, how happy are you with the changes to your breasts?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>5</td>
<td>Thinking about your body during pregnancy, how happy are you with the changes to your stomach?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>6</td>
<td>Thinking about your body during pregnancy, how happy are you with the changes to your legs?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>7</td>
<td>Thinking about your body during pregnancy, how are happy are you with the changes to your arms?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>8</td>
<td>Thinking about your body during pregnancy, how are happy are you with the changes to your skin tone and appearance (including acne, varicose veins, stretch marks, dryness)?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>9</td>
<td>Thinking about your body during pregnancy, how are happy are you with the changes to your hair?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>10</td>
<td>Thinking about your body during pregnancy, how are happy are you with the changes to your body’s fluid retention?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>11</td>
<td>Thinking about your body during pregnancy, how are happy are you with the changes to your muscle tone?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>12</td>
<td>Thinking about your body during</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td></td>
<td>Thinking about your body during pregnancy, how are you with the changes to your strength?</td>
<td>1</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
**APPEARANCE RELATED BEHAVIOURS**

Below is a list of questions asking about your behaviours during pregnancy. Please respond thinking about your current pregnancy and weeks' gestation. If you have never engaged in the behaviour, select 1. If you have rarely engaged in the behaviour, select 2. If you have sometimes engaged in the behaviour, select 3. If you have often engaged in the behaviour, select 4. If you have always engaged in the behaviour, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Have you avoided exercising during pregnancy because your flesh might wobble?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>Have you avoided wearing clothes which make you particularly aware of the shape of your body during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>Have you not gone out to social occasions (e.g. parties) during pregnancy because you have felt bad about your shape?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths) during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>Have you vomited in order to feel thinner during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>Have you taken laxatives in order to feel thinner during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>Have you restricted your eating in order to feel thinner during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>Have you exercised more in order to feel thinner during pregnancy?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9</td>
<td>Has worry about your shape during pregnancy made you feel you ought to exercise?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10</td>
<td>Has worry about your size during pregnancy made you feel you ought to exercise?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11</td>
<td>Has worry about your weight during pregnancy made you feel you ought to exercise?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12</td>
<td>Have you avoided observing yourself in mirrors where you could see your pregnant body?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>13</td>
<td>Have you avoided being naked while pregnant?</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
**SEXUAL ATTRACTIVENESS**

Below is a list of statements dealing with your feelings about the sexual attractiveness of your pregnant body. Please respond thinking about your current pregnancy and weeks' gestation. If you strongly agree, select 1. If you agree with the statement, select 2. If you neither agree nor disagree with the statement, select 3. If you disagree, select 4. If you strongly disagree, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I prefer not to let my partner see my naked pregnant body.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>I prefer not to let other people see my naked pregnant body.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>I like and appreciate my pregnant body sexually.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>I find my pregnant body attractive sexually.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>I feel my partner finds my pregnant body attractive sexually.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>I feel my partner likes and appreciates my pregnant body sexually.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>I find my pregnant body sexy.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>I feel my partner finds my pregnant body sexy.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9</td>
<td>I worry that some parts of my pregnant body would be unattractive to my partner.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10</td>
<td>I worry that my pregnant body would be unattractive to my partner.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11</td>
<td>People find the pregnant body sexually attractive.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
FUNCTIONING OF THE PREGNANT BODY

Below is a list of statements dealing with your feelings about the functioning of your pregnant body. Please respond thinking about your current pregnancy and weeks’ gestation. If you strongly agree, select 1. If you agree with the statement, select 2. If you neither agree nor disagree with the statement, select 3. If you disagree, select 4. If you strongly disagree, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I think more about how my pregnant body feels than how it looks.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>I am more concerned with what my pregnant body can do than how it looks.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>I am more concerned with how my body functions during pregnancy than how it looks.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>I am more concerned with how the function of my breasts during pregnancy than how they look.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>I am more concerned with the function my stomach has during pregnancy than how it looks.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>I am more concerned with the function of my thighs during pregnancy than how they look.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>I am more concerned with the function of my arms during pregnancy than how they look.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>I am more concerned with the function of my legs during pregnancy than how they look.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
BODY ATTITUDES QUESTIONNAIRE

Please tick **ONE** set of brackets to indicate how much you agree/disagree with each statement in relation to how you have felt **over the past month**.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Definitely Disagree (1)</th>
<th>Mostly Disagree (2)</th>
<th>Neutral (3)</th>
<th>Mostly Agree (4)</th>
<th>Definitely Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I usually felt physically attractive</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>2. People hardly ever found me sexually attractive.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>3. I got so worried about my shape that I felt I ought to diet</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>4. I felt fat when I couldn’t get clothes over my hips.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>5. I felt satisfied with my face.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>6. I worried that other people could see rolls of fat around my waist and stomach.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>7. I thought I deserved the attention of the opposite sex.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>8. I hardly ever felt fat.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>9. There were more important things in life than the shape of my body.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>10. I felt fat when I wore clothes that were tight around the waist.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>11. I quickly became exhausted if I overdid it.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>12. When I wore loose clothing it made me feel thin.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>13. I hardly ever thought about the shape of my body.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>14. I was proud of my physical strength</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>15. When I ate sweets, cakes or other high calorie food, it made me feel fat.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>16. I had a strong body.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>17. I felt fat when I had my photo taken.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>18. I tried to keep fit.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>19. When I thought about the shape of my body, it stopped me from concentrating.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>20. I was preoccupied with the desire to be</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>
lighter.

21. I often felt fat.
22. I spent a lot of time thinking about my weight.
23. I was a bit of an ‘Iron-Woman’.
24. I felt fat when I was lonely.
25. People often complimented me on my looks.
26. I felt fat when I could no longer get into clothes that used to fit me.
27. I was never strong.
28. I tried to avoid clothes that make me feel especially aware of my shape.
ROSENBERG SELF-ESTEEM SCALE
INSTRUCTIONS:
Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, select SA. If you agree with the statement, select A. If you disagree, select D. If you strongly disagree, select SD.

1. On the whole, I am satisfied with myself. SA A D SD
2. At times, I think I am no good at all. SA A D SD
3. I feel that I have a number of good qualities. SA A D SD
4. I am able to do things as well as most other people. SA A D SD
5. I feel I do not have much to be proud of. SA A D SD
6. I certainly feel useless at times. SA A D SD
7. I feel that I'm a person of worth, at least on an equal plane with others. SA A D SD
8. I wish I could have more respect for myself. SA A D SD
9. All in all, I am inclined to feel that I am a failure. SA A D SD
10. I take a positive attitude toward myself. SA A D SD

EDINBURGH POSTNATAL DEPRESSION SCALE
INSTRUCTIONS:
Please select one option for each question that is the closest to how you have felt in the PAST SEVEN DAYS.

<table>
<thead>
<tr>
<th>1. I have been able to laugh and see the funny side of things.</th>
<th>6. Things have been getting on top of me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>As much as I always could ( )</td>
<td>Yes, most of the time I haven’t been able to cope at all ( )</td>
</tr>
<tr>
<td>Not quite so much now ( )</td>
<td>Yes, sometimes I haven’t been coping as well as usual ( )</td>
</tr>
<tr>
<td>Definitely not so much now ( )</td>
<td>Not, most of the time I have coped quite well ( )</td>
</tr>
<tr>
<td>Not at all ( )</td>
<td>No, I have been coping as well as ever ( )</td>
</tr>
</tbody>
</table>
2. I have looked forward with enjoyment to things.
   - As much as I ever did ( )
   - Rather less than I used to ( )
   - Definitely less than I used to ( )
   - Hardly at all ( )

3. I have blamed myself unnecessarily when things went wrong.
   - Yes, most of the time ( )
   - Yes, some of the time ( )
   - Not very often ( )
   - No, never ( )

4. I have been anxious or worried for no good reason.
   - No, not at all ( )
   - Hardly ever ( )
   - Yes, sometimes ( )
   - Yes, very often ( )

5. I have felt scared or panicky for no very good reason.
   - Yes, quite a lot ( )
   - Yes, sometimes ( )
   - No, not much ( )
   - No, not at all ( )

6. I have been so unhappy that I have had difficulty sleeping.
   - Yes, most of the time ( )
   - Yes, sometimes ( )
   - Not very often ( )
   - No, not at all ( )

7. I have been so unhappy that I have been crying.
   - Yes, most of the time ( )
   - Yes, quite often ( )
   - Only occasionally ( )
   - No, never ( )

8. I have felt bad or miserable.
   - Yes, most of the time ( )
   - Yes, quite often ( )
   - Not very often ( )
   - No, not at all ( )

9. I have been so unhappy that I have been thinking.
   - Yes, most of the time ( )
   - Yes, quite often ( )
   - Only occasionally ( )
   - No, never ( )

10. The thought of harming myself has occurred to me.
    - Yes, quite often ( )
    - Sometimes ( )
    - Hardly ever ( )
    - Never ( )
Appendix G

Questionnaire Non-Pregnant Women

1. Your age ................................................................................................................

2. What is your current weight and height? If you do not have scales at home, please estimate to the best of your abilities.
   Weight: .................................................. kg
   Weight: .................................................. lb
   Height: .................................................. cm
   Height: .................................................. ft/in.

3. How confident are you with your estimates of your current weight and height?
   1  2  3  4  5  6  7  8  9  10
   Completely unconfident  Completely confident

4. Your occupation is:
   ......................................................................................................................

5. Your partner’s occupation is:
   ......................................................................................................................

6. Current marital status:  (1) Married  (2) Divorced
   (3) De Facto  (4) Separated
   (5) Widowed  (6) Never
   Married
7. Main language spoken at home:
   1. English
   2. Other (please specify):

8. Please indicate the highest level of education you have completed.
   (1) Still at secondary school  (2) Did not finish secondary school
   (3) Year 12 or equivalent    (4) Certificate Level
   (5) Advanced Diploma/Diploma (6) Graduate Diploma/ Graduate
      Certificate  (7) Bachelor Degree Certificate
   (8) Postgraduate Degree (e.g. Honours, Masters, Doctorate, PhD)

9. Are you currently in paid employment?
   (1) Yes  (2) No
   a. If Yes, how many hours do you work per week?

10. Please indicate your approximate annual family income (after tax):
    (1) Under 25,000  (2) 25,001- 45,000
     (3) 45,001- 65,000  (4) 65,001- 85,000
     (5) 85,001- 105,000 (6) 105,001- 125,000
     (7) 125,001- 145,000 (8) Over 145,001

11. Have you ever been diagnosed with any of the following psychiatric or psychological conditions? (please select all that apply)
    (21) No previous psychiatric history (please go to Q27)
    (22) Minor Depression
    (23) Major Depression (excluding Postnatal Depression)
    (24) Antenatal Depression
    (25) Postnatal Depression
(26) Bipolar Disorder
(27) Anxiety Disorder
(28) Eating Disorder
(29) Substance or Alcohol related Disorder
(30) Other ........................................Please Specify
BODY IMAGE IMPORTANCE

Below is a list of statements dealing with your feelings about the importance of aspects of your body. If you strongly agree, select 1. If you agree with the statement, select 2. If you neither agree nor disagree with the statement, select 3. If you disagree, select 4. If you strongly disagree, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I spend a lot of time thinking about my weight.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>2</td>
<td>I spend a lot of time thinking about my body size.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>3</td>
<td>I spend a lot of time thinking about my body shape.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>4</td>
<td>I am preoccupied with the desire to weigh less.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>5</td>
<td>I am preoccupied with the desire to have a slimmer physique.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>6</td>
<td>Thinking about the shape of my body stops me from concentrating.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>7</td>
<td>Thinking about the size of my body stops me from concentrating.</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>8</td>
<td>Thinking about my weight stops me from concentrating</td>
<td>1  2  3  4  5</td>
</tr>
</tbody>
</table>

Below is a list of questions asking about the importance of aspects of your body. If it is not at all important to you, select 1. If it is not very important to you, select 2. If it is neither important nor unimportant to you, select 3. If it is a bit important to you, select 4. If it is very important to you, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Compared to other things in your life, how important to you is your body shape?</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>2</td>
<td>Compared to other things in your life, how important to you is your body size?</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>3</td>
<td>Compared to other things in your life, how important to you is your weight?</td>
<td>1  2  3  4  5</td>
</tr>
</tbody>
</table>
**BODY IMAGE IDEALS**

Below is a list of statements dealing with your feelings about how you would like your body to look. If you strongly agree, select 1. If you agree with the statement, select 2. If you neither agree nor disagree with the statement, select 3. If you disagree, select 4. If you strongly disagree, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I wish my body was smaller in size.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>I wish my body was larger in size.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>I would like my body to look more like other women’s bodies.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>Women who are smaller are more attractive.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>Women who are larger are more attractive.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>A thin body is an ideal body shape.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>There is no ideal body shape, every body is different.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>There is no ideal body size, every body is different.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9</td>
<td>A thin body with a distinctly rounded stomach is an ideal body shape for pregnancy.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10</td>
<td>During pregnancy, there is no ideal body shape, every body is different.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11</td>
<td>During pregnancy, there is no ideal body size, every body is different.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12</td>
<td>During pregnancy women should continue to compare their bodies to the ideal body of women who aren’t pregnant.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
**BODY IMAGE SATISFACTION**

Below is a list of questions asking about your feelings around your body. If you are strongly satisfied, select 1. If you are somewhat satisfied, select 2. If you are neither satisfied nor dissatisfied, select 3. If you are somewhat dissatisfied, select 4. If you are strongly dissatisfied, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How happy are you with your weight?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>How happy are you with your body shape?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>How happy are you with your muscle size?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>How happy are you with your hips?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>How happy are you with your thighs?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>How happy are you with your chest?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>How happy are you with your abdominal region/stomach?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>How happy are you with the size/width of your shoulders?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9</td>
<td>How happy are you with your legs?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10</td>
<td>How happy are you with your thighs?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11</td>
<td>How happy are you with your calves?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12</td>
<td>How happy are you with your ankles?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>13</td>
<td>How happy are you with your arms?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>14</td>
<td>How happy are you with your hands?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>15</td>
<td>How happy are you with your skin tone and appearance (including acne, varicose veins, stretch marks, dryness)?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>16</td>
<td>How happy are you with your facial complexion?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>17</td>
<td>How happy are you with your hair?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>18</td>
<td>How happy are you with your body’s fluid retention?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>19</td>
<td>How happy are you with your muscle tone?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>20</td>
<td>How happy are you with your body’s flexibility?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>21</td>
<td>How happy are you with your strength?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>22</td>
<td>How happy are you with your energy levels?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>23</td>
<td>How happy are you with your overall appearance?</td>
<td></td>
</tr>
</tbody>
</table>
BODY CHANGE

Below is a list of questions asking about your feelings around your body changes during the past three months. If you are strongly satisfied, select 1. If you are somewhat satisfied, select 2. If you are neither satisfied nor dissatisfied, select 3. If you are somewhat dissatisfied, select 4. If you are strongly dissatisfied, select 5. If the question is not relevant for your experience over the past three months please select the N/A option.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thinking about your body, how happy are you with your changes in weight?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>2</td>
<td>Thinking about your body, how happy are you with the changes to your size?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>3</td>
<td>Thinking about your body, how happy are you with the changes to your shape?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>4</td>
<td>Thinking about your body, how happy are you with the changes to your breasts?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>5</td>
<td>Thinking about your body, how happy are you with the changes to your stomach?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>6</td>
<td>Thinking about your body, how happy are you with the changes to your legs?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>7</td>
<td>Thinking about your body, how happy are you with the changes to your arms?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>8</td>
<td>Thinking about your body, how happy are you with the changes to your skin tone and appearance (including acne, varicose veins, stretch marks, dryness)?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>9</td>
<td>Thinking about your body, how happy are you with the changes to your hair?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>10</td>
<td>Thinking about your body, how happy are you with the changes to your body’s fluid retention?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>11</td>
<td>Thinking about your body, how happy are you with the changes to your muscle tone?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>12</td>
<td>Thinking about your body, how happy are you with the changes to your body’s flexibility?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>13</td>
<td>Thinking about your body, how happy are you with the changes to your strength?</td>
<td>1 2 3 4 5 N/A</td>
</tr>
</tbody>
</table>
APPEARANCE RELATED BEHAVIOURS

Below is a list of questions asking about your behaviours related to your body image. If you have never engaged in the behaviour, select 1. If you have rarely engaged in the behaviour, select 2. If you have sometimes engaged in the behaviour, select 3. If you have often engaged in the behaviour, select 4. If you have always engaged in the behaviour, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Have you avoided exercising because your flesh might wobble?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>Have you avoided wearing clothes which make you particularly aware of the shape of your body?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>Have you not gone out to social occasions (e.g. parties) because you have felt bad about your shape?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths)?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>Have you vomited in order to feel thinner?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>Have you taken laxatives in order to feel thinner?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>Have you restricted your eating in order to feel thinner?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>Have you exercised more in order to feel thinner?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9</td>
<td>Has worry about your shape made you feel you ought to exercise?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10</td>
<td>Has worry about your size made you feel you ought to exercise?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11</td>
<td>Has worry about your weight made you feel you ought to exercise?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12</td>
<td>Have you avoided observing yourself in mirrors where you could see your body?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>13</td>
<td>Have you avoided being naked?</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
SEXUAL ATTRACTIVENESS

Below is a list of statements dealing with your feelings about the sexual attractiveness of your body. If you strongly agree, select 1. If you agree with the statement, select 2. If you neither agree nor disagree with the statement, select 3. If you disagree, select 4. If you strongly disagree, select 5. If the statement is not relevant for you please select the N/A option.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I prefer not to let a sexual partner see my naked body.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>I prefer not to let other people see my naked body.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>I like and appreciate my body sexually.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>I find my body attractive sexually.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>I feel my sexual partner finds my body attractive sexually.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>I feel my sexual partner likes and appreciates my body sexually.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>I find my body sexy.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>I feel my sexual partner finds my body sexy.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9</td>
<td>I worry that some parts of my body would be unattractive to a sexual partner.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10</td>
<td>I worry that my body would be unattractive to a sexual partner.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11</td>
<td>People find the body sexually attractive.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
FUNCTIONING OF THE BODY

Below is a list of statements dealing with your feelings about the functioning of your body. If you strongly agree, select 1. If you agree with the statement, select 2. If you neither agree nor disagree with the statement, select 3. If you disagree, select 4. If you strongly disagree, select 5.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Response set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I think more about how my body feels than how it looks.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>I am more concerned with what my body can do than how it looks.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>I am more concerned with how my body functions than how it looks.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>I am more concerned with how the function of my breasts than how they look.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>I am more concerned with the function my stomach has than how it looks.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>I am more concerned with the function of my thighs than how they look.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>I am more concerned with the function of my arms than how they look.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>I am more concerned with the function of my legs than how they look.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
BODY ATTITUDES QUESTIONNAIRE

Please tick ONE set of brackets to indicate how much you agree/disagree with each statement in relation to how you have felt over the past month.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Definitely Disagree (1)</th>
<th>Mostly Disagree (2)</th>
<th>Neutral (3)</th>
<th>Mostly Agree (4)</th>
<th>Definitely Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I usually felt physically attractive</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>2. People hardly ever found me sexually attractive.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>3. I got so worried about my shape that I felt I ought to diet</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>4. I felt fat when I couldn’t get clothes over my hips.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>5. I felt satisfied with my face.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>6. I worried that other people could see rolls of fat around my waist and stomach.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>7. I thought I deserved the attention of the opposite sex.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>8. I hardly ever felt fat.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>9. There were more important things in life than the shape of my body.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>10. I felt fat when I wore clothes that were tight around the waist.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>11. I quickly became exhausted if I overdid it.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>12. When I wore loose clothing it made me feel thin.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>13. I hardly ever thought about the shape of my body.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>14. I was proud of my physical strength</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>15. When I ate sweets, cakes or other high calorie food, it made me feel fat.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>16. I had a strong body.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>17. I felt fat when I had my photo taken.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>18. I tried to keep fit.</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>19. When I thought about the shape of my</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>
body, it stopped me from concentrating.

20. I was preoccupied with the desire to be lighter.

21. I often felt fat.

22. I spent a lot of time thinking about my weight.

23. I was a bit of an ‘Iron-Woman’.

24. I felt fat when I was lonely.

25. People often complimented me on my looks.

26. I felt fat when I could no longer get into clothes that used to fit me.

27. I was never strong.

28. I tried to avoid clothes that make me feel especially aware of my shape.
ROSENBERG SELF-ESTEEM SCALE
INSTRUCTIONS:
Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, select SA. If you agree with the statement, select A. If you disagree, select D. If you strongly disagree, select SD.

1. On the whole, I am satisfied with myself. SA A D SD
2. At times, I think I am no good at all. SA A D SD
3. I feel that I have a number of good qualities. SA A D SD
4. I am able to do things as well as most other people. SA A D SD
5. I feel I do not have much to be proud of. SA A D SD
6. I certainly feel useless at times. SA A D SD
7. I feel that I’m a person of worth, at least on an equal plane with others. SA A D SD
8. I wish I could have more respect for myself. SA A D SD
9. All in all, I am inclined to feel that I am a failure. SA A D SD
10. I take a positive attitude toward myself. SA A D SD

EDINBURGH POSTNATAL DEPRESSION SCALE
INSTRUCTIONS:
Please select one option for each question that is the closest to how you have felt in the PAST SEVEN DAYS.

<table>
<thead>
<tr>
<th>1. I have been able to laugh and see the funny side of things.</th>
<th>6. Things have been getting on top of me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>As much as I always could ( )</td>
<td>Yes, most of the time I haven’t been able to cope at all ( )</td>
</tr>
<tr>
<td>Not quite so much now ( )</td>
<td>Yes, sometimes I haven’t been coping as well as usual ( )</td>
</tr>
<tr>
<td>Definitely not so much now ( )</td>
<td>Not, most of the time I have coped quite well ( )</td>
</tr>
<tr>
<td>Not at all ( )</td>
<td>No, I have been coping as well as ever ( )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. I have looked forward with enjoyment to things.</th>
<th>7. I have been so unhappy that I have had difficulty sleeping.</th>
</tr>
</thead>
<tbody>
<tr>
<td>As much as I ever did ( )</td>
<td>Yes, most of the time ( )</td>
</tr>
<tr>
<td>Rather less than I used to ( )</td>
<td>Yes, sometimes ( )</td>
</tr>
<tr>
<td>Definitely less than I used to ( )</td>
<td>Not very often ( )</td>
</tr>
<tr>
<td>Hardly at all ( )</td>
<td>No, not at all ( )</td>
</tr>
</tbody>
</table>
3. I have blamed myself unnecessarily when things went wrong.
   Yes, most of the time ( )
   Yes, some of the time ( )
   Not very often ( )
   No, never ( )

8. I have felt sad or miserable.
   Yes, most of the time ( )
   Yes, quite often ( )
   Not very often ( )
   No, not at all ( )

4. I have been anxious or worried for no good reason.
   No, not at all ( )
   Hardly ever ( )
   Yes, sometimes ( )
   Yes, very often ( )

9. I have been so unhappy that I have been crying.
   Yes, most of the time ( )
   Yes, quite often ( )
   Only occasionally ( )
   No, never ( )

5. I have felt scared or panicky for no very good reason.
   Yes, quite a lot ( )
   Yes, sometimes ( )
   No, not much ( )
   No, not at all ( )

10. The thought of harming myself has occurred to me.
    Yes, quite often ( )
    Sometimes ( )
    Hardly ever ( )
    Never ( )
Appendix H

Memorandum

To: Prof Helen Skautoris  
    School of Psychology  
    ex. Miss Brittany Watson

From: Deakin University Human Research Ethics Committee (DU-HREC)

Date: 26 February, 2016

Subject: 2015-005  
Developing & validating a body image measure for pregnant women

Please quote this project number in all future communications.

The application for this project was considered at the DU-HREC meeting held on 09/02/2015.

Approval has been given for Miss Brittany Watson, under the supervision of Prof Helen Skautoris, School of Psychology, to undertake this project from 26/02/2015 to 26/02/2016.

The approval given by the Deakin University Human Research Ethics Committee is given only for the project and for the period as stated in the approval. It is your responsibility to contact the Human Research Ethics Unit immediately should any of the following occur:

- Severe 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 are requested by other HREC.

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.

DU-HREC 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).

Human Research Ethics Unit  
research-ethics@deakin.edu.au  
telephone: 03 9251 7123
Appendix I

Body image during pregnancy: Developing a valid measure of body image for pregnant women

Pregnant women are invited to take part in a study looking at body image and wellbeing during pregnancy. Whilst considerable research has been dedicated to examining body image, further research is needed to ensure body image is assessed appropriately during pregnancy.

If you agree to participate, you will be involved in the testing of a newly developed assessment of body image, specifically designed for pregnant women. You will complete an online questionnaire, which will ask you questions regarding demographics, body image, and other psychological factors related to pregnancy. If you are interested in participating in this research, please go to:

http://www.deakin.edu.au/psychology/research/brittany_watson

The study will form part of a Doctorate of Psychology (Clinical) research project for Miss Watson and is supervised by Dr Matthew Fuller-Tyszkiewicz, Dr Jaclyn Broadbent, and Professor Helen Skouteris from Deakin University.

If you would like more information, please contact:

Brittany Watson
School of Psychology, Deakin University, Victoria 3125
Phone: (03) 9251- 7406 Email: bewatson@deakin.edu.au
Developing a valid measure of body image for pregnant women: How do pregnant women and non-pregnant women compare?

You are invited to take part in a study looking at how body image and wellbeing compare between pregnant women and non-pregnant women. Whilst considerable research has been dedicated to examining body image, further research is needed to ensure body image is assessed appropriately during pregnancy.

If you agree to participate, you will be involved in the testing of a newly developed assessment of body image for pregnant women. You will complete an online questionnaire, which will ask you questions regarding demographics, body image, and other psychological factors related to body image. If you are interested in participating in this research, please go to:

http://www.deakin.edu.au/psychology/research/brittany_watson

The study will form part of a Doctorate of Psychology (Clinical) research project for Miss Watson and is supervised by Dr Matthew Fuller-Tyszkiewicz, Dr Jaclyn Broadbent, and Professor Helen Skouteris from Deakin University.

If you would like more information, please contact:

Brittany Watson
School of Psychology, Deakin University, Victoria 3125
Phone: (03) 9251-7406 Email: bewatson@deakin.edu.au
Thank you for your interest in this study! Your participation in this research is greatly appreciated.

Whilst body image is frequently studied in female populations such as adolescent females or young women, the body image experiences of pregnant women remain relatively unknown. However, considering the rapid physical changes a woman undergoes as she progresses through her pregnancy it is important to consider how her body image adapts to these changes, particularly with body image being a vital component of one’s mental wellbeing. Studies such as this contribute to the knowledge base about women’s body image and wellbeing during pregnancy and the postpartum period. As this knowledge base expands, clinicians in the field will be better informed about how to best support women across this unique developmental period.

The purpose of the present study is to examine the body image experiences of women as they progress through pregnancy. As well as the body image questions there are a series of demographic questions we would like you to respond to. These questions will ask for information regarding: height, weight, relationship status, job status, ethnicity, and pregnancy history. You will also be asked questions about other psychological factors related to pregnancy such as self-esteem and depressive symptoms.

The next page will bring up the Plain Language Statement informing you in detail about the study. Please have a quick read of it, and if you agree to participate then go on to complete the online questionnaire.

If you’re interested in attaining these results at the end of this study, please contact us (bewatson@deakin.edu.au) and we will happily send them to you upon completion.

Thank you again for your valuable contribution!
Thank you for your interest in this study! Your participation in this research is greatly appreciated.

Whilst body image is frequently studied in female populations such as adolescent females or young women, the body image experiences of pregnant women remain relatively unknown. Furthermore, little is known about how experiences of body image compare between those women who have never been pregnant and those women who are transitioning through pregnancy. However, considering the rapid physical changes a woman undergoes as she progresses through her pregnancy it is important to consider how her body image adapts to these changes, particularly with body image being a vital component of one’s mental wellbeing. Studies such as this contribute to the knowledge base about women's body image and wellbeing during pregnancy and the postpartum period. As this knowledge base expands, clinicians in the field will be better informed about how to best support women across this unique developmental period.

The purpose of this project is to test a newly developed measure of body image that is specifically designed for pregnant women. The project aims to provide an accurate assessment of the body image experiences and disturbances of pregnant women as a specific population, with body image during pregnancy believed to be different to body image experiences outside of pregnancy. As well as the body image questions there are a series of demographic questions we would like you to respond to. These questions will ask for information regarding; height, weight, relationship status, job status, and ethnicity. You will also be asked questions about other psychological factors related to body image such as self-esteem and depressive symptoms. We are inviting you to participate as a woman who has never been pregnant as we wish to find out about your body image experiences, to compare to those body image experiences of women who are currently pregnant.

The next page will bring up the Plain Language Statement informing you in detail about the study. Please have a quick read of it, and if you agree to participate then go on to complete the online questionnaire.

If you or your organisation is interested in attaining these results at the end of this study, please contact us (bewatson@deakin.edu.au) and we will happily send them to you upon completion.

Thank you again for your valuable contribution!

DEAKIN UNIVERSITY AUSTRALIA
Worldly
Appendix K

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Prospective participants

Plain Language Statement

Date: March 2015

Full Project Title: Body image during pregnancy: Developing a valid measure of body image for pregnant women.

Principal Researcher: Dr Matthew Fuller-Tyszkiwicz (School of Psychology, Deakin University, Burwood), Dr Jaclyn Broadbent (School of Psychology, Deakin University, Burwood), and Professor Helen Skouteris (School of Psychology, Deakin University, Burwood)

Student Researcher: Miss Brittany Watson (Doctorate of Psychology (Clinical))

Purpose and Background:

The purpose of this project is to test a newly developed measure of body image that is specifically designed for pregnant women. The project aims to provide an accurate assessment of the body image experiences and disturbances of pregnant women as a specific population. It is hoped that this new measure will be able to provide some insight into the level and type of distress experienced by women in relation to their body image across pregnancy, and identify any ‘critical periods’ where early intervention may be most effective.

In order to obtain accurate and meaningful results, we aim to recruit 300 pregnant women into the project who will complete the newly devised measure of body image. As well as body image questions, you will complete a short questionnaire involving basic questions regarding your demographics, such as family background, occupation, family income, and your past pregnancy history, and information about your current pregnancy. The questionnaire will also ask you to respond to other measures looking at a range of psychological factors such as stress and depressive symptoms.
We are inviting you to participate as a pregnant woman as we wish to find out about your body image experiences across pregnancy, and how your body image relates to your other experiences and wellbeing across pregnancy.

**Methods;**

If you agree to participate, you will be required to complete a short online questionnaire. You will also be invited to complete the questionnaire two weeks after first completing it, as a way of establishing the stability of the new measure.

**Risks and potential benefits to participants;**

By participating in this project, you will be making a valuable contribution to an area of research concerning maternal and infant health and wellbeing. The results obtained at the conclusion of the study will potentially have implications for numerous health professions, expectant mothers as well as the general community.

There are no anticipated risks outside the normal day-to-day activities. However, if you do participate and find that you are uncomfortable or overly worried about your responses to any of the questions asked in the questionnaires or if you find participation in the project distressing, you should contact the Principal Researcher (Helen Skouteris on: 03 9251-7699) as soon as convenient. You will have the opportunity to discuss your concerns in a confidential manner. Should your concerns about your body image or wellbeing become particularly elevated or distressing, please contact the Principal Researcher for contact details of services or psychologists providing specialised support. You may also like to contact a government or community organisation specialising in dealing with distress. You can contact BeyondBlue on 1300 22 4636, the Pregnancy Birth and Baby Helpline on 1800 882 436, or the Post and Ante Natal Depression Association (PANDA) on 1300 726 306.

**Privacy and confidentiality;**

You will not be asked to provide any identifying information (i.e. your name) as part of your participation.

**Form of dissemination of the research results;**

A summary of the findings will be available for any interested participants to read at the completion of the study. This project will also form part of a Doctorate of Psychology (Clinical) research project and thus the findings may be published in peer-reviewed journals and presented at conferences. Please contact bewatson@deakin.edu.au if you would like to receive a copy of this report or be forwarded details of where to find the publications.
Research monitoring;
This research project will form part of a Doctorate of Psychology (Clinical) research project for Miss Brittany Watson. The project will not only be monitored by the three supervisors on the project, Dr Matthew Fuller-Tyszkiewicz, Dr Jaclyn Broadbent, and Professor Helen Skouteris, but also by the Deakin University School of Psychology, to ensure the research practices comply with Deakin University ethics guidelines.

Reimbursement;
You will not be paid for your participation in this project.

Funding;
This project is being funded by a Deakin University School of Psychology student budget.

Financial or other relevant declarations of interests of researchers, sponsors and institutions;
The research team have no declarations of interest to report.

Participation is voluntary;
Participation in any research project is voluntary. If you do not wish to take part you are not obliged to. Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with Deakin University in any way.

Your consent for participating in this research will be assumed from your continuation to the questionnaire by selecting the ‘next’ option on this page. Should you choose to withdraw from this study at any stage during participation, your non-completion of the questionnaire will be presumed as a withdrawal of consent. Should you complete the whole questionnaire you will be unable to withdraw your consent as we will be unable to remove your data.

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 2015-005.

Further Information;
This research project will form part of a Doctorate of Psychology (Clinical) research project for Miss Brittany Watson. Miss Watson will be supervised for this project by Dr Matthew Fuller-Tyszkiewicz, Dr Jaclyn Broadbent, and Professor Helen Skouteris. Should you wish to contact them, you may reach them on the following details;

Dr Matthew Fuller-Tyszkiewicz  
Deakin University, School of psychology  
Phone: (03) 9251 7344  
Email: matthew.fuller-tyszkiewicz@deakin.edu.au

Dr Jaclyn Broadbent,  
Deakin University, School of Psychology  
Phone: (03) 9244 3043  
Email: jaclyn.broadbent@deakin.edu.au

Professor Helen Skouteris  
Deakin University, School of Psychology  
Phone: (03) 9251 7699  
Email: helen.skouteris@deakin.edu.au
PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Prospective participants

Plain Language Statement

Date: March 2015

Full Project Title: Body image during pregnancy: Developing a valid measure of body image for pregnant women.

Principal Researcher: Dr Matthew Fuller-Tyszkiewicz (School of Psychology, Deakin University, Burwood), Dr Jaclyn Broadbent (School of Psychology, Deakin University, Burwood), and Professor Helen Skouteris (School of Psychology, Deakin University, Burwood)

Student Researcher: Miss Brittany Watson (Doctorate of Psychology (Clinical))

Purpose and Background;

The purpose of this project is to test a newly developed measure of body image that is specifically designed for pregnant women. The project aims to provide an accurate assessment of the body image experiences and disturbances of pregnant women as a specific population, with body image during pregnancy believed to be different to body image experiences outside of pregnancy. It is hoped that this new measure will be able to provide some insight into the level and type of distress experienced by women in relation to their body image across pregnancy, and identify any ‘critical periods’ where early intervention may be most effective. Whilst considerable research has been dedicated to examining body image in non-pregnant women, further research is needed to ensure body image is assessed appropriately during this specific transition.

If you agree to participate, you will be involved in the testing of a version of the newly developed assessment of body image for pregnant women, with questions adapted to relate to women’s experience of body image whom have not been pregnant before.

In order to obtain accurate and meaningful results, we aim to recruit 300 pregnant women and 300 women who have never been pregnant into the project who will complete the newly devised measure of body image. As well as body image questions, you will complete a short questionnaire involving basic questions regarding your demographics, such as family background, occupation, and family
income. The questionnaire will also ask you to respond to other measures looking at a range of psychological factors such as stress and depressive symptoms.

We are inviting you to participate as a woman who has never been pregnant as we wish to find out about your body image experiences, to compare to those body image experiences of women who are currently pregnant.

Methods;

If you agree to participate, you will be required to complete a short online questionnaire. You will also be invited to complete the questionnaire two weeks after first completing it, as a way of establishing the stability of the new measure.

Risks and potential benefits to participants;

By participating in this project, you will be making an invaluable contribution to a very important area of research concerning women’s body image and wellbeing. The results obtained at the conclusion of the study will potentially have implications for numerous health professions, women as well as the general community.

There are no anticipated risks outside the normal day-to-day activities. However, given that the questionnaires will include questions regarding issues such as anxiety and stress, there is a slight possibility that you may experience some concern about your responses. Thus, you are invited to examine the questionnaire material before agreeing to participate. If you do participate and find that you are uncomfortable or overly worried about your responses to any of the questionnaire items, or if you find participation in the project distressing, you should contact either of the Chief Investigators, Dr Helen Skouteris or Dr Matthew Fuller-Tyszkiewicz, as soon as convenient. You will have the opportunity to discuss your concerns in a confidential manner and appropriate follow-up will be suggested if necessary.

Privacy and confidentiality;

You will not be asked to provide any identifying information (i.e. your name) as part of your participation.

Form of dissemination of the research results;

A summary of the findings will be available for any interested participants to read at the completion of the study. This project will also form part of a Doctorate of Psychology (Clinical) research project and thus the findings may be published in peer-reviewed journals and presented at conferences. Please contact bewatson@deakin.edu.au if you would like to receive a copy of this report or be forwarded details of where to find the publications.

Research monitoring;
This research project will form part of a Doctorate of Psychology (Clinical) research project for Miss Brittany Watson. The project will not only be monitored by the three supervisors on the project, Dr Matthew Fuller-Tyszkiewicz, Dr Jaclyn Broadbent, and Professor Helen Skouteris, but also by the Deakin University School of Psychology, to ensure the research practices comply with Deakin University ethics guidelines.

Reimbursement;
You will not be paid for your participation in this project.

Funding;
This project is being funded by a Deakin University School of Psychology student budget.

Financial or other relevant declarations of interests of researchers, sponsors and institutions;
The research team have no declarations of interest to report.

Participation is voluntary;
Participation in any research project is voluntary. If you do not wish to take part you are not obliged to. Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with Deakin University in any way.

Your consent for participating in this research will be assumed from your continuation to the questionnaire by selecting the ‘next’ option on this page. Should you choose to withdraw from this study at any stage during participation, your non-completion of the questionnaire will be presumed as a withdrawal of consent. Should you complete the whole questionnaire you will be unable to withdraw your consent as we will be unable to remove your data.

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Please quote project number 2015-005.

Further Information;
This research project will form part of a Doctorate of Psychology (Clinical) research project for Miss Brittany Watson. Miss Watson will be supervised for this project by Dr Matthew Fuller-Tyszkiewicz, Dr Jaclyn Broadbent, and Professor Helen Skouteris.
Should you wish to contact them, you may reach them on the following details;

Dr Matthew Fuller-Tyszkievicz  
Deakin University, School of psychology  
Phone: (03) 9251 7344  
Email: matthew.fuller-tyszkievicz@deakin.edu.au

Dr Jaclyn Broadbent,  
Deakin University, School of Psychology  
Phone: (03) 9244 3043  
Email: jaclyn.broadbent@deakin.edu.au

Professor Helen Skouteris  
Deakin University, School of Psychology  
Phone: (03) 9251 7699  
Email: helen.skouteris@deakin.edu.au
# AUTHORSHIP STATEMENT

## 1. Details of publication and executive author

<table>
<thead>
<tr>
<th>Title of Publication</th>
<th>Publication details</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name of executive author</th>
<th>School/Institute/Division if based at Deakin; Organisation and address if non-Deakin</th>
<th>Email or phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miss Brittany Watson</td>
<td>School of Psychology, Faculty of Health, Deakin University.</td>
<td><a href="mailto:bewatson@deakin.edu.au">bewatson@deakin.edu.au</a></td>
</tr>
</tbody>
</table>

## 2. Inclusion of publication in a thesis

<table>
<thead>
<tr>
<th>Is it intended to include this publication in a higher degree by research (HDR) thesis?</th>
<th>Yes / No</th>
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## 3. HDR thesis author’s declaration

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*I declare that the above is an accurate description of my contribution to this paper, and the contributions of other authors are as described below.*

| Signature and date | 05/03/2016 |

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_I agree to be named as one of the authors of this work, and confirm: that I have met the authorship criteria set out in the Deakin University Research Conduct Policy, that there are no other authors according to these criteria, that the description in Section 4 of my contribution(s) to this publication is accurate, that the data on which these findings are based are stored as set out in Section 7 below._

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