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**Body image concerns during pregnancy are associated with a shorter breast feeding duration**

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Abstract

Objective: Breastfeeding is affected by numerous psycho-social factors. Prenatal concerns such as embarrassment regarding public feeding and the impact of breastfeeding upon breast shape are known to lead to formula use. However, although work has explored the relationship between maternal weight and infant feeding, wider body image concerns have not been examined. The aim of the current study was to explore the association between maternal body image concerns during pregnancy upon intended and actual breastfeeding duration.

Design: A two stage self report questionnaire completed during pregnancy and at six months postpartum.

Setting: Mothers were recruited from local mother and infant groups, nurseries and online mother and infant forums.

Participants: One hundred and twenty eight pregnant women completed both stages.

Measures: Phase One: Completion of a questionnaire exploring body image during pregnancy (concerns about stretch marks, weight gain and appearance) and planned breastfeeding duration during the second/third trimester of pregnancy (body image, weight, intended duration) followed by a second questionnaire measuring actual breastfeeding duration and breastfeeding experiences.

Findings: Factor analysis revealed three primary body image concerns; pregnancy body image, prospective postnatal body image and dieting during pregnancy. Higher concerns on all three factors were associated with both intended and actual shorter breastfeeding duration. Amongst mothers who stopped breastfeeding before six months, those with higher body image concerns were more likely to report stopping due to embarrassment or the perceived impact upon their breast shape. The relationship was not explained by maternal weight, although a higher residual weight gain at six months was associated with a shorter breastfeeding duration.

Conclusions and implications for practice: Mothers who are affected negatively by
changes to their body during pregnancy may be less likely to plan to or initiate breastfeeding potentially due to underlying issues such as embarrassment or perceived impact of feeding upon their appearance. The findings are important to those working with women during pregnancy and the postpartum period in understanding the impact of body image upon intention and ability to initiate and continue breastfeeding.

Key words: breastfeeding; body image; weight gain; attitudes; public feeding
**Key Messages**

- Body image during pregnancy predicts both intended and actual breastfeeding duration; higher body image concerns are associated with formula use.
- This relationship is not explained by weight alone, although residual higher weight gain at six months postpartum predicts a shorter breastfeeding duration.
- Body image concerns are associated with stopping breastfeeding due to embarrassment and concerns about public feeding.
- Perceptions about breastfeeding and its impact on appearance affect breastfeeding duration.
Introduction

The World Health Organisation recommends exclusive breastfeeding for the first six months postpartum (WHO 2003). However, levels of breastfeeding in the UK are low; although 81% of women may initiate breastfeeding at birth, there is a sharp fall in continuation rates with only 55% feeding by six weeks postpartum (McAndrew, Thompson, Fellows, Large, Speed & Renfrew, 2012).

Low breastfeeding rates can be explained by physical problems (such as pain, difficulty latching the infant on and exhaustion) but are also heavily driven by social and psychological factors. Mothers who lack social and professional support, feel they have little knowledge and confidence and are pressurized by others to stop breastfeeding are all more likely to use formula (Li et al, 2009; Thulier & Mercer, 2008; Brown, Raynor & Lee, 2011).

How a woman feels about her body has also been associated with breastfeeding. Women who feel embarrassed at breastfeeding in front of others or in public or who dislike the changes they believe breastfeeding may bring to their breasts are less likely to initiate or continue breastfeeding (Haughton, Gregorio & Perez-Escamilla, 2010; Alexander, Dowling & Furman, 2010; Wambach & Cohen, 2009; Dyson, Green, Renfrew, McMillan & Woolridge, 2010). Additionally, issues with seeing the breast as sexual rather than something to feed an infant or wanting to reclaim their body for themselves after pregnancy can impede breastfeeding (Drummond & Willis, 2012; Kukla, 2006; Ogbuanu, Probst, Laditka, Liu, Baek & Glover, 2009; Angell, 2006).

Finally, breastfeeding has been associated with maternal weight. Mothers who are overweight or obese are less likely to initiate or continue breastfeeding ((Kitsantas & Pawloski, 2009; Hilson, Rasmussen & Kjolhede, 2004).

Weight gain (within the recommended range) and changes in body shape and appearance are an expected and healthy element of pregnancy. However, growing numbers of women appear to be concerned about their weight gain and appearance during pregnancy and may be at risk of developing a negative body image (Skouteris, 2011). Body image describes the cognitive, affective and behavioural aspects of one’s body (Cash, Fleming, Alindogan Steadman & Whitehead, 2002). Negative body
image is common during pregnancy (Skouteris, Carr, Wertheim, Paxton, & Duncombe, 2005) and extends to the postnatal period (Clark, Skouteris, Wertheim, Paxton & Milgrom, 2009; Duncombe, Wertheim, Skouteris, Paxton & Kelly, 2008). Women can be distressed by bodily changes in pregnancy, although some report feeling liberated (Duncombe, Wertheim, Skouteris, Paxton, & Kelly, 2008; Goodwin, Astbury, & McMekken, 2000). Pregnancy can trigger or intensify negative feelings about the body or disordered eating (Conrad, Schablewski, Schilling, & Liedtke, 2003; Body image dissatisfaction during pregnancy can have a negative impact on both mother and baby. It can be linked to unhealthy eating, dieting and purging behaviours (Conti, Abraham, & Taylor, 1998). In turn these behaviours increase the risk of low infant birth weight and premature delivery (Kaiser, 2002; Olafsdottir, et al., 2006) with higher levels of miscarriage (Franko, 2006) and caesarean delivery (Franko et al., 2001) amongst pregnant women with disordered eating. Conversely, poor body image can sometimes be associated with increased weight gain as the woman binges or comfort eats (Devine, Bove, & Olson, 2000; Mumford, Siega-Riz, Herring, & Evenson, 2008; Swann et al., 2009), a factor that has been associated with infant macrosomia, caesarean section and later childhood overweight (Amorim, Rossner, Neovius, Lourenco, & Linne, 2007; Olson, 2008; Siega-Riz et al., 2009; Olson, Strawderman, & Dennison, 2009).

However, although the association between breastfeeding and maternal weight and self image related to breastfeeding has been examined, there is little work, particularly in the UK, exploring wider body image concerns during pregnancy such as changing shape and weight gain and breastfeeding duration. Earlier work found that pregnant women with increased concern about their body shape or weight were less likely to intend to breastfeed (Barnes, Stein, Smith & Pollock, 1997). Similarly, a small qualitative study (n = 38) found that body shape concerns were associated with intention to formula feed (Foster et al., 1996). More recently, in Taiwan, pregnant women who rated their pre-pregnancy body image more positively were more likely to plan to breastfeed. Finally, research has suggested that women with anorexia are less likely to breastfeed (Larsson & Andersson-Ellstrom, 2003; Torgersen, Ystrom & Haugen, 2010).
The aim of the current study was to explore body image concerns in first time pregnant women and examine their association with later breastfeeding initiation and duration.

**Methodology**

**Participants**

Primiparous pregnant women who were in the second or third trimester of pregnancy (13–42 weeks) took part in the study. Participants provided demographic background (age, education, marital status, occupation).

All participants gave informed consent prior to inclusion in the study. Ethics approval was granted by a Department of Psychology Research Ethics Committee. All aspects of this study have been performed in accordance with the ethical standards set out in the 1964 Declaration of Helsinki.

Participants were recruited through local antenatal classes / mother and baby groups / community centers who encouraged pregnant women to attend and through online pregnancy and mother and baby forums. Women could either complete the questionnaire via a paper copy (used at face to face groups) or online via an online questionnaire designed and hosted using SurveyMonkey.

**Questionnaire**

Participants completed two questionnaires. The first, in phase one during pregnancy, examined their body image, pre pregnancy weight and height and intended mode of infant feeding at birth and if relevant intended breastfeeding duration. A body image questionnaire was constructed specifically for the study (Table one). Although numerous validated body image questionnaires exist (e.g. The Body Esteem Scale [Franzoi & Shields, 1984], the Body Shape Questionnaire [Cooper, Taylor, Cooper & Fairburn, 1987], body self relations questionnaire [Brown, Cash & Mikulka, 1990])
these have not been validated for use in pregnancy. Questions have been raised over their suitability and validity at this time (Fuller-Tyszkiewicz, Skouteris, Watson & Hill, 2012). Furthermore, the study wished to examine specific body image concerns related to pregnancy e.g. weight gain, stretch marks, concerns about appearance of body postnatally rather than more generic concerns. Items were based on current literature examining body image during pregnancy (e.g. Skouteris et al, 2005; Clark et al, 2009; Duncombe et al 2008) and discussion with mothers regarding body issues that were associated with breastfeeding [Author A previous work]

In phase two, the second questionnaire was completed at six months postpartum and examined mode of infant feeding at birth, any breastfeeding duration and if relevant, reasons for breastfeeding cessation. Infants who were born prematurely, who were low birth weight or who had significant health difficulties were excluded from the sample. Participants also provided mode of delivery (caesarean / vaginal birth). The items for breastfeeding cessation questionnaire was based on author A’s previous work (add ref after review). Items were based on factors known to affect breastfeeding cessation in the current literature and previous published work (Thulier & Mercer, 2008; Li et al, 2009).

Mothers provided height and pre-pregnancy BMI at phase one and current weight (postnatal weight) at phase two (around 6 months postpartum). Weight and weight change were not the primary measures of the study but were collected and computed to explore whether body image itself, rather than weight was indicative of breastfeeding duration. Although the two are correlated, it is possible to have poor body image at a healthy weight. Moreover, body image is a wider concept than weight alone, particularly during pregnancy where changes to breast shape, skin elasticity and skin (e.g. stretch marks) are common.

Data collection

In phase one, for the face-to-face groups, permission was initially sought from the group leader. The group leader distributed the questionnaire to mothers who returned it to the group in a sealed envelope. For the online version of the
questionnaire permission was sought from the host of various online parenting
groups (e.g. www.mumsnet.com; www.bounty.com). Details of the questionnaire
were then posted online with a link to the online version of the questionnaire. Both
questionnaires included a participant information sheet and debrief with details of
how to contact the researcher for further details or professional bodies if they had
any concerns regarding pregnancy or infant care. Participants gave consent for phase
two contact at phase one.

In phase two participants were either emailed a link to the follow up questionnaire
or sent a paper version in the post dependent on indicated preference at phase one.

**Data Analysis**

Data was analysed using SPSS version 16.

Three weight measures were computed; pre pregnant BMI, postnatal BMI and
weight change. Pre pregnant BMI was used to explore the main associations with
body image as participants were pregnant at the time of completing the body image
questionnaire. Weight change during pregnancy was also used as it was considered a
potential measure of how much weight participants were gaining during pregnancy.
Postnatal BMI was collected to use as a covariate in the analyses as postnatal BMI is
associated with breastfeeding duration (as well as to compute weight gain).
Maternal height and pre pregnant / postnatal weight were used to compute pre
pregnant /postnatal BMI. Maternal postnatal weight and pre pregnant weight was
used to compute weight difference at six months postpartum (e.g. weight gain or
loss from pre pregnant weight).

For the items related to body image, exploratory factor analysis was conducted to
determine items groupings. Using SPSS, a principal components factor analysis using
varimax rotation was performed, retaining factors with eigenvalues over 1. A
threshold of 0.5 was used to determine which variables should be retained. Further
analyses performed on split samples of the data for confirmation found similar
structures. The factor scores computed were saved as regression scores and used for
the data analysis (Tabachnik & Fidell, 2006). Cronbach’s alpha was computed for each factor to examine internal consistency of the factors produced.

Although the items for breastfeeding cessation questionnaire had been used in previous research, exploratory factor analysis was used to group items. This ensured greater reliability of item grouping. The method used was as above. Factors and item groupings reflected previous research. Cronbach’s alpha was computed for each factor to check internal validity.

In addition, although the regression scores were used in the main analyses, for clearer understanding of the descriptive data, factor scores were computed for each of the three body image variables. The mean score for items loading onto each variable was computed for each participant. Likert scales were converted to numbers from one for strongly disagree through to five for strongly agree and mean score calculated for each factor.

MANCOVA were then used to examine differences in body image scales for women who intended to breast or formula feed at birth and postnatally for feeding method at birth (breast / formula) and any breastfeeding at two, six, twelve and twenty six weeks. Pearson r correlations were used to explore associations between body image and reasons for breastfeeding cessation. Maternal age, education, marital status and occupation were controlled for alongside maternal BMI and birth mode [vaginal/ caesarean].

**Results**

One hundred and twenty eight mothers completed both phases of the questionnaire. The mean age of participants was 29.34 [SD: 5.52] (range 18 – 40). Mean number of years in education was 13.03 [SD: 2.28]. Seventy two (58.2%) were in their second trimester and fifty one (39.8%) in their third trimester. Gestation ranged from 13 to 40 weeks with a mean stage of 24.20 weeks (SD: 8.97). Further details of the sample can be found in table 3.
Both planned (Pearson’s $r = .167$, $p = .030$) and actual breastfeeding duration (Pearson’s $r = .210$, $p = .009$) were significantly associated with maternal age.

Moreover, the more years experience in education a mother had, the longer she planned (Pearson’s $r = .155$, $p = .040$) and did breastfeed (Pearson’s $r = .207$, $p = .009$).

No significant difference occurred in any of the body image scales for mothers in trimester two or three in phase one.

No significant difference occurred in planned or actual breastfeeding duration, maternal pre or postnatal weight, body image or maternal age and education between mothers recruited online or face to face.

**Breastfeeding duration**

Participants indicated whether they planned to breast or formula feed at birth. One hundred and ten participants (85.9%) planned to breastfeed whilst 18 (14.1%) planned to formula feed.

At six months postpartum, mothers reported feeding mode at birth and any breastfeeding at two, six, twelve and twenty six weeks postpartum. One hundred and two participants breastfed at birth (83.6%) whilst 21 formula fed (16.4%). Breastfeeding duration can be found in table four.

**BMI and weight gain**

Participants reported pre-pregnant height and weight from which pregnancy BMI was computed. 12 were classed as underweight (9.4%), 58 a normal weight (64.4%) and 31 overweight or obese (24.2%). For postnatal BMI, only five mothers were considered to have an underweight BMI (3.9%), 77 a normal BMI (60.2%) and 46 were overweight or obese (35.9%).
Participant weight change between pre-pregnant and postnatal weight was also computed. Although the mean weight change was a gain of 1.3 kg (SD: 8.37), a wide range of weight change was seen from a gain of 26 kg to a loss of 20 kg. 53.5% of participants were heavier at six months postpartum compared to their pre-pregnant weight, 11.7% the same weight and 34.8% had lost weight. A significant association between pre-pregnant weight and weight gain was found (Pearson’s r = -0.227, p = .005). Mothers who had a lower weight before pregnancy were significantly heavier after pregnancy.

**Body Image**

Principal components factor analysis was performed on all items examining body image producing 3 factors and explaining 58.07% of the variance (Table 1). Factors were labeled ‘pregnancy body image’ (thoughts about pregnancy body), ‘prospective postnatal body image’ (concerns about how body would appear postnatally) and ‘dieting during pregnancy’ (active dieting during pregnancy). All items loaded highly onto a factor. One item ‘I worry about stretch marks’ loaded highly onto both pregnancy and postnatal factors and was included in each. Regression scores for each factor were computed and used for comparison. Cronbach’s alpha was also computed for each factor, ranging from .729 to .782 and is also shown in Table 1.

Using the descriptive mean scores for each factor, body image was explored. Overall, a wide variety of body image was seen amongst women with mean scores of 3.30 [SD: 1.45] for pregnancy body image, 3.34 [SD: 1.44] for prospective postnatal body image and 2.55 [SD: 1.41] for dieting during pregnancy. Although dieting during pregnancy was lower than body image concerns, 32.5% of women (N = 43) reported actively limiting their food intake during pregnancy to avoid gaining weight although only sixteen (12.5%) reported they were following a diet during pregnancy.

**Body image and BMI**

Body image during pregnancy was significantly associated with pre-pregnant BMI. Concerns about pregnancy body image [Pearson’s r = .352, p =.000] and dieting during pregnancy [Pearson’s r = .231, p = .005] were both significantly associated
with raised BMI. No significant association was found between prospective postnatal concerns and BMI. Body image concerns were not unique to those with an overweight BMI however. Exploring those with a normal or underweight BMI, 56.1% had a mean score of four or over (signifying agree or strongly agree) for pregnancy body image concerns, 53.0% for prospective postnatal concerns and 23.3% for dieting behavior.

Weight change was also significantly associated with body image. Mothers who were significantly heavier at six months postpartum than before pregnancy had reported significantly higher pregnancy body image concerns (Pearson’s r = .156, p = .040) and dieting behavior (Pearson’s r = .155, p = .041) during pregnancy. No significant association was found with postnatal concerns.

**Body image, BMI and breastfeeding**

Mothers reported both planned breastfeeding duration (during pregnancy) and actual breastfeeding duration (at six months postpartum).

**Planned duration**

Planned breastfeeding duration was not significantly associated with prenatal BMI or weight change. A MANCOVA was performed to examine differences in body image between those who planned to breast or formula feed at birth. Covariates included maternal age, education, occupation, marital status, prenatal BMI, postnatal BMI and weight change. A significant difference in pregnancy body image \[F (1, 123) = 5.46, p = .021\], prospective postnatal body image \[F (1, 123) = 12.21, p = .000\] and dieting during pregnancy \[F (1, 123) = 5.67, p = .017\] was seen. Mothers who planned to formula feed had higher body image concerns.

To examine planned breastfeeding duration, formula use from birth was recorded as zero days. Using partial correlations controlling for maternal age, education, occupation, marital status and prenatal BMI, postnatal BMI and weight change, significant associations were found between planned breastfeeding duration and
pregnancy body image (Pearson’s $r = -0.227$, $p = 0.007$), prospective postnatal body image (Pearson’s $r = -0.380$, $p = 0.000$) and dieting during pregnancy (Pearson’s $r = -0.361$, $p = 0.000$). Mothers with higher body image concerns planned to breastfeed for a shorter duration of time or not at all.

As all three body image factors were associated with planned breastfeeding duration, a linear regression analysis using the enter method was performed to examine which factors remained predictive of planned breastfeeding duration. The model was significant, explaining 17.9% of the variance [$F (3, 124) = 8.789$, $p = 0.000$]. Pregnancy body image ($p = 0.004$) and dieting during pregnancy ($p = 0.020$) remained significant. Prospective postnatal body image was however no longer significant ($p = 0.90$).

**Actual breastfeeding duration**

Actual breastfeeding duration was unrelated to pre-pregnant or postnatal BMI. However, mothers who breastfed at birth reported a significantly smaller weight gain compared to mothers who formula fed ($t (125) = 2.854$, $p = 0.005$), which remained significant for any breastfeeding at two ($t (125) = 3.496$, $p = 0.001$), six ($t (125) = 3.945$, $p = 0.000$), twelve ($t (125) = 3.351$, $p = 0.001$) and twenty six weeks ($t (125) = 3.216$, $p = 0.001$).

One hundred and two participants breastfed at birth (83.6%) whilst 21 formula fed (16.4%). A MANCOVA was performed controlling for maternal age, education, occupation, marital status and prenatal BMI, postnatal BMI and weight change. Significant differences in feeding method at birth were found for body image including pregnancy body image [$F (1, 123) = 7.201$, $p = 0.008$], prospective postnatal body image [$F (1, 123) = 17.367$, $p = 0.000$] and dieting during pregnancy [$F (1, 123) = 7.192$, $p = 0.008$]. Mothers who formula fed at birth had higher body image concerns during pregnancy.

Mothers reported breastfeeding duration up to six months. Mothers were computed as breastfeeding at all at two, six, twelve and twenty six weeks. A MANCOVA was
used to examine differences in body image by breastfeeding at each of these time points (Table four). Breastfeeding at any stage was associated with significantly lower body image concerns on all three factors during pregnancy.

Again, as all three body image factors were associated with actual breastfeeding duration, a further linear regression analysis was performed, including the weight change variable. The model was significant, explaining 30.0% of the variance [F (4, 124 = 8.447, p = 0.000]. Pregnancy body image (p = .002), dieting during pregnancy (p = .001), prospective body image (p = .010) and weight change (p = 0.015) remained significant.

**Stopping breastfeeding**

Participants who initiated breastfeeding at birth but stopped before six months postpartum completed a further series of questions examining why they stopped breastfeeding. Principle components analysis was performed on these items producing eight factors that explained 83.97% of the variance.

Factors were labeled ‘difficult’ (lack of milk, exhausting), painful (pain, infection), inconvenient (interfering with maternal lifestyle, placing greater responsibility on the mother than formula feeding), body image (dislike of appearance of breasts), embarrassment (did not like feeding in front of others or in public), pressure from others (pressure to stop from family, partner), lack of support (poor professional support) and medical reasons. Three items did not load onto any factor and were excluded from the analysis (Other people made negative comments, I wasn’t well and I couldn’t socialize).

Regression scores for each factor were computed and used for comparison. Cronbach’s alpha was also computed for each factor, ranging from 0.71 to 0.95 and is also shown in Table 1.

Pearson’s partial correlations were used to explore association between breastfeeding duration and reasons for stopping (Table 5). Significant associations
were found between body image during pregnancy and stopping because breastfeeding was difficult or painful. Women with higher pregnancy body image concerns were significantly more likely to find breastfeeding difficult or painful. Additionally, significant correlations were found between prospective postnatal concerns and stopping because of public feeding and body image. Women with higher postnatal body image concerns were significantly more likely to stop because of a dislike of public feeding and higher concerns about the impact of breastfeeding on their body.

No significant correlations were found between reasons for stopping breastfeeding and dieting.

**Discussion**

This study explores the association between maternal body image during pregnancy and breastfeeding intention and duration. Although previous research has highlighted the influence of maternal weight during pregnancy and specific concerns related to breast appearance/identity and the postnatal period upon infant feeding, little research has considered the impact of wider maternal body image. Data showed that higher body image concerns were associated with both intention to use and actual use of formula from birth and intended or actual shorter breastfeeding duration. Notably these concerns were not limited to women who were overweight, and actual BMI was unrelated to breastfeeding initiation and duration. The findings have important application for those working with women during pregnancy and the postnatal period both in terms of considering the overall issue of maternal body image and the impact upon breastfeeding duration.

The research considered three separate aspects of body image during pregnancy: pregnancy body image concerns, prospective concerns for postnatal appearance and dieting behavior. All three behaviors were predictive of breastfeeding intention, initiation and breastfeeding duration. Higher concerns on each factor were associated with intended and actual formula use from birth and decreased likelihood
of planned or actual breastfeeding at two, six, twelve and twenty six weeks. Body image was predictive of breastfeeding independently of wider maternal background including demographic factors, birth mode and weight. The regression analysis showed that all three elements remained predictive.

Previous research has shown that issues related to body image can discourage women from breastfeeding. Mothers who feel embarrassed breastfeeding in public (Khoury, Moazzem, Jarjoura, Carothers & Hinton, 2005), worry about the appearance of breastfeeding on their breasts (Wambach & Cohen, 2009) or want to reclaim their body for themselves (Earle, 2002) are less likely to breastfeed. Issues such as leaking breasts (Lewallen et al. 2006), difficulty adapting to thinking of the breast other than a sexual object (Brown, Raynor & Lee, 2011) and conflict with a partner who doesn’t like her breastfeeding (Thulier & Mercer, 2008), can all reduce breastfeeding intention and duration. This study extends the research to show that wider body image issues related to pregnancy and changing shape and appearance, rather than those only centered around changes in breast appearance and use can affect whether a mother intends to, or does, initiate or continue breastfeeding.

Body image during pregnancy (pregnancy, prospective postnatal and dieting during pregnancy) was notably linked to both intended and actual breastfeeding duration. Mothers with higher body image concern more likely to intend to use formula from birth or to breastfeed for a shorter duration as well as actually do so. This suggests that perceptions about breastfeeding are driving feeding choices rather than actual negative experiences such as finding it embarrassing to feed in front of others. Indeed, these perceptions may be preventing women from attempting to breastfeed in the first place, rather than experiencing it for themselves. This fits well with previous research showing that first time pregnant women hold many negative perceptions about breastfeeding such as that it is embarrassing, inconvenient or difficult based on information passed from friends or family (Rojjanasrirat & Sousa, 2010).
The question arises as to why body image concerns during pregnancy impact upon the intention and decision to breastfeed. It is likely that issues such as not wanting to feed in public, concerns about the appearance of the breast or wanting to regain their body for themselves (Khoury et al., 2005; Wambach & Cohen, 2009; Lewallen et al. 2006) apply to those with body dissatisfaction. However, this study looked at body image factors not specifically related to breastfeeding.

Maternal weight did not explain the relationship and was indeed included as a measure primarily to distinguish between weight and body image. It appeared that maternal thoughts and evaluations of their body shape and appearance during pregnancy were associated with breastfeeding duration rather than their weight per se. Previous research has shown that mothers who are overweight are less likely to breastfeed or to do so for only a short duration (Kitsantas & Pawloski, 2009; Hilson, Rasmussen & Kjolhede, 2004). However although BMI was associated with body image the findings showed body dissatisfaction was not limited to overweight women, and in fact BMI was not associated with breastfeeding duration. Instead, how a mother felt about her changing appearance and concerns about weight gain predicted breastfeeding duration independently of her weight. However, notably, the variable of ‘weight change’ during pregnancy was significant. Mothers who gained the greatest amount of weight were less likely to plan or actually breastfeed. This suggests that it might be changes in body shape, appearance and image that are important rather than weight itself. Greater weight gain or retention may negatively affect body image satisfaction, in turn affecting breastfeeding duration.

Data regarding reasons for breastfeeding cessation might explain the findings. Body image was also linked to reasons for stopping breastfeeding. Specifically two patterns emerged in the data. Firstly, concerns about how her body would appear postnatally were linked to stopping breastfeeding because of concerns about the impact of breastfeeding on her breasts and embarrassment at feeding in front of others. This fits well with previous findings that show these factors to be common reasons for stopping breastfeeding (Thulier & Mercer, 2008; Brown, Raynor & Lee, 2011; Wambach & Cohen, 2009). If a mother has higher body image concerns it is
likely she is more aware of herself in front of others (Grogan, 2007). She may worry that others are paying her high levels of attention, which may exacerbate anxiety over public feeding. Likewise, women with negative body image are more likely to be self critical and have lower self esteem (Fanzoi, Vasquez, Sparapani, Frost, Martin & Aebly, 2012) which may exacerbate how she feels about any postnatal changes to her body. Mothers with eating disorders report higher levels of social anxiety and self awareness (Godart, Flament, Perderau & Jeammet, 2002).

However, women who held high body image concerns about their pregnancy appearance during pregnancy were more likely to stop breastfeeding because they found it difficult or painful. This finding is less expected and understandable than the link between postnatal image and stopping for reasons of embarrassment / public feeding but the pattern in factors of both difficulty and pain being significant suggests an underlying contributor. It could be that body image concerns during pregnancy and prospective postnatal concerns are very different issues. Pregnancy is a time of expected changes in weight and appearance and women can feel liberated at this time (Loth, Bauer, Wall, Berge & Neumark-Sztainer, 2011). Indeed, many women report worrying less about their appearance and choosing to relax their diet at this time (Nash, 2013). Conversely, levels of postnatal body dissatisfaction are very common. Women feel under increasing pressure to lose weight and regain their pre pregnancy appearance (Riley, 2011). The current findings showed that although pregnancy body image concerns were related to BMI, prospective postnatal concerns were not, suggesting postnatal concerns may be more common regardless of weight. Additionally, in the regression analysis, prospective postnatal concerns did not remain a significant predictor of breastfeeding duration implying it has a weaker link with breastfeeding. Thus, although levels of body dissatisfaction during pregnancy are growing (Skouteris et al, 2005), perhaps concerns at this time are indicative of other issues such as anxiety or low self-esteem that may make breastfeeding more difficult.

For example, maternal mental health may play a role. Body image dissatisfaction during pregnancy has also been associated with increased risk of depression during...
pregnancy and the postpartum period (Downs, DiNallo & Kirner, 2008). Postnatal depression is linked to finding breastfeeding more painful and difficult (Field, 2010). Moreover body image dissatisfaction has been linked to increased general anxiety (Etu & Gray, 2010). Women who are anxious about breastfeeding are more likely to find it difficult, worry that their infant is not getting enough milk or to feel unable to solve problems if they arise (Brown, 2013; Li et al, 2008; Sachs, Dykes & Carter, 2006). Similarly, poor confidence and self-efficacy, which are significantly lower in those with body dissatisfaction (Grabe & Hyde, 2009), are linked to finding breastfeeding more difficult and subsequently a shorter breastfeeding duration (Forster et al, 2006; Brown, Raynor & Lee, 2011).

Alternatively, a woman’s wider personality may play a role. Introversion is associated with body dissatisfaction (Swami, Hadji-Michael & Furnham, 2008). Indeed, women who are more introverted are more likely to find breastfeeding difficult (Brown, 2013). Perfectionist traits are also common amongst those with body image concerns (Boone, Soenens & Braet, 2011) and may lead women to find breastfeeding more difficult (O’Brien, 2007). Body image concerns may also be indicative of social anxiety, a disorder which is higher amongst those with body image concerns (Cash, Theriault & Annis, 2004) with anxiety known to make breastfeeding more difficult (O’Brien, Buikstra & Hegney, 2008).

Women may also project their own body image and weight insecurities onto their infant. Research has shown that mothers with body image concerns and restrained eating are more likely to try and restrict their child’s intake of food (Duke, Bryson, Hammer & Agras, 2004) as early as the weaning period (Brown & Lee, 2011). One study showed that eating disordered women are more likely to try and breastfeed their infant to a strict routine, becoming distressed if their infant wanted to feed more frequently (Evans & Grange, 1995). Controlling feeds during breastfeeding has been associated with finding breastfeeding more difficult and breastfeeding cessation (Brown, Raynor & Lee, 2011b).
Finally, experience of motherhood and perceptions of infant temperament may play a role. Motherhood is a huge change to a woman’s life and one where her time is largely controlled by the infant. If a woman is used to being quite controlling with herself and her body, she may struggle with an infant who appears not to follow set routines. Mothers who want a strict routine for their infant are more likely to formula feed as it allows greater maternal control (Brown & Lee, 2012). Linked to this, mothers may view their infant temperament differently. Mothers who are anxious (Austin, Hadzi-Pavlovic, Leader, Saint & Parker, 2005), depressed (McGratj, Records & Rice, 2008) or lacking in self efficacy (Anzman-Frasca, Stifter, Paul & Birch, 2013) are more likely to perceive their infants to be difficult, as are women with eating disorders (Zerwas, Von Holle Torgesen, Reichborn-Kjennerud, Stoltenberg & Bulik, 2012). Mothers who perceive their infants to have a difficult temperament are more likely to report feeding difficulties (Farrow & Blisett, 2006), introduceformula (Nie&g, Ystrom, Hagtvet & Vollrath, 2008) and start complementary feeding before six months to soothe their infant (Wasser et al, 2011).

These possible explanations are however speculative. Further research is needed to examine the wider factors that might moderate the relationship between pregnancy body dissatisfaction and breastfeeding and how the role of weight gain influences this. However the findings have important implications for those working to support pregnant women and new mothers. Two main issues arise from the data; body image concerns during pregnancy amongst normal weight women and the impact upon breastfeeding duration. Appropriate levels of weight gain and body changes during pregnancy are considered to be healthy and important aspects of pregnancy. The risk arises that women who become concerned about their changing appearance may try and limit weight gain which can increase the risk of low birth weight and preterm birth (Viswathan et al, 2008; Kothari, Wendt, Liggins, Overton, & Carmen Sweezy, 2011). Although interventions to prevent excessive weight gain during pregnancy are growing, there may be women at risk of not gaining enough weight.
Midwives are already encouraged to talk about healthy eating and weight gain from an obesity perspective due to known links with infant macrosomia, caesarean section and later childhood overweight (Amorim, Rossner, Neovius, Lourenco, & Linne, 2007; Olson, 2008; Siega-Riz et al., 2009; Olson, Strawderman, & Dennison, 2009). However, body image is not routinely considered in antenatal care (Leddy, Jones, Morgan & Schulkin, 2009). Current UK clinical recommendations advise against routine repeated weighing of women during pregnancy (NICE, 2008; NICE, 2010). These findings support this stance, suggesting that drawing attention to a woman’s changing shape in a negative way might increase body image dissatisfaction and impact upon, amongst other things, breastfeeding duration. The findings that weight change, rather than BMI itself, are also linked to breastfeeding duration further support this, suggesting that women with a healthy BMI but poor body image satisfaction may be overly concerned about their weight and appearance. Although weight gain restriction may be safe amongst overweight and obese pregnant women (Claesson, Brynhildsen, Cedergren, Jeppsson, Sydsjo & Josefsson, 2009), too little weight gain during pregnancy has been associated with risk of low birth weight and preterm birth (Viswathan et al, 2008; Kothari, Wendt, Liggins, Overton, & Carmen Sweezy, 2011). Talking positively and realistically to women about their changing shape, the importance of healthy weight gain and concepts of sensible weight loss after the birth may be more productive.

Secondly, the link between body image and breastfeeding is important. Women who feel uncomfortable about their changing shape, who try to limit weight gain or who have concerns about the appearance of their body after pregnancy may be less likely to breastfeed, or struggle to do so if they initiate. Discussion during pregnancy about how they feel about their changing shape and function of their breasts (outside of simple weight gain) and issues such as feeding in public feeding and considering strategies to overcome such issues may encourage or enable further breastfeeding.

The research does have its limitations. The sample size was relatively small and self selecting. Although a wide range of participants did take part, mothers were older
and more educated than average. Also, although levels of breastfeeding initiation were similar to population norms, a higher proportion of mothers breastfed for at least six months (ref). Care should be taken in generalizing the findings to a wider population. Further research should explore the issue in a wider population based sample.

In addition, online adverts were utilized as part of the recruitment process. This may be criticized for increasing sample bias; internet users may be a well educated and proactive group (Drentea & Moren-Cross 2005). However internet recruitment is growing in popularity in health research (e.g. Alcade & Cristina, 2011; Hamilton, White & Cuddihy, 2012; Ferguson & Hansen, 2012) as it allows access to a targeted sample in a cheap and effective way (Koo & Skinner, 2005). It is particularly useful in recruiting pregnant and new mothers due to high use of internet forums amongst this sample (Hall & Irvine 2008, Plantin & Daneback 2009). Such forums are now typically used by a wide spread of demographic groups (Sarkadi & Bremberg 2005; Quan-Haase et al. 2002).

Thirdly, the study used a body image questionnaire developed for the purpose of the study. This could be criticized for lacking validity. However, although a number of validated questionnaires exist for examining body image, these have had limited use amongst pregnant samples. Data suggests that using measures intended for non pregnant women may be inaccurate and prone to bias (Fuller-Tyszkiewicz, Skouteris, Watson & Hill, 2012). In addition, these questionnaires did not explore the specific issues of body image that arise during pregnancy such as changing shape, appearance of breasts and stretch marks. Items were based on existing literature examining body image during pregnancy and that of factors affecting breastfeeding duration (Thulier & Mercer, 2008; Lie et al, 2009; Brown et al, 2011). Finally, factor analysis was used to group items, producing logical factor groupings and Cronbach’s alpha showed good validity.

In conclusion, higher body image concerns during pregnancy were associated with formula use from birth or shorter breastfeeding duration. Weight gain during pregnancy may play an important role in this. Issues with embarrassment, changing
appearance of breasts and finding breastfeeding more difficult were more common amongst those with higher body image concerns. The findings are important to those working with women both during pregnancy and in the postpartum period to understanding the impact of body image upon intention and ability to initiate and continue breastfeeding.
References


interaction to reflect first-time mothers’ experiences with the social norms of infant feeding. *Qualitative Health Research, 22*(10), 1345-1354.


Conti J, Abraham S, Taylor A. Eating behaviour and pregnancy outcome. Journal of


767


769


771


773


775


777


779


781


adequacy of gestational weight gain. *Obesity, 17*, 300-309.

<table>
<thead>
<tr>
<th>Item</th>
<th>Pregnancy body image</th>
<th>Prospective postnatal body image</th>
<th>Dieting during pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy makes me feel less attractive</td>
<td>.408</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I worry that my partner finds me unattractive during pregnancy</td>
<td>.790</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am worried about the effect of pregnancy on the appearance of my breasts</td>
<td>.588</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I compare my body negatively to other pregnant women</td>
<td>.603</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that I am gaining/or have gained too much weight</td>
<td>.588</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I worry about losing the weight after pregnancy</td>
<td>.470</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I worry about stretch marks</td>
<td>.727</td>
<td>.780</td>
<td></td>
</tr>
<tr>
<td>I worry what my body will look like after pregnancy</td>
<td></td>
<td>.796</td>
<td></td>
</tr>
<tr>
<td>I worry that my partner will find me unattractive after pregnancy</td>
<td></td>
<td>.782</td>
<td></td>
</tr>
<tr>
<td>I worry what my breasts will look like after pregnancy</td>
<td></td>
<td>.725</td>
<td></td>
</tr>
<tr>
<td>I have dieted during pregnancy to avoid gaining too much weight</td>
<td></td>
<td></td>
<td>.800</td>
</tr>
<tr>
<td>I have tried to limit my weight gain during pregnancy</td>
<td></td>
<td></td>
<td>.758</td>
</tr>
<tr>
<td>Other peoples comments about my pregnant body have upset me</td>
<td></td>
<td></td>
<td>.696</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% of variance explained</th>
<th>35.840</th>
<th>11.640</th>
<th>10.594</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach's alpha</td>
<td>.729</td>
<td>.781</td>
<td>.782</td>
</tr>
</tbody>
</table>

Table one shows regression scores for each item and how they load onto each factor produced.
### Table Two: Items and factor structure of questionnaire examining reasons for stopping breastfeeding:

<table>
<thead>
<tr>
<th>Item</th>
<th>Difficulty</th>
<th>Body image</th>
<th>Public Feeding</th>
<th>Pain</th>
<th>Inconvenient</th>
<th>Pressure from others</th>
<th>Lack of support</th>
<th>Medical</th>
</tr>
</thead>
<tbody>
<tr>
<td>The baby wouldn't latch on properly</td>
<td>.703</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The baby was feeding all the time</td>
<td>.826</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My baby wasn't gaining enough weight</td>
<td>.757</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I didn't have enough milk</td>
<td>.618</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baby didn't want to breastfeed anymore</td>
<td>.617</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was exhausted</td>
<td>.722</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breastfeeding was ruining my breasts</td>
<td></td>
<td></td>
<td>.419</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt unattractive</td>
<td></td>
<td></td>
<td></td>
<td>.804</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My breasts kept leaking</td>
<td></td>
<td></td>
<td></td>
<td>.784</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I wanted my body back for me</td>
<td></td>
<td></td>
<td></td>
<td>.830</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I didn't like feeding in public</td>
<td></td>
<td></td>
<td></td>
<td>.866</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I didn't like feeding in front of others</td>
<td></td>
<td></td>
<td></td>
<td>.910</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was stuck in the house breast feeding</td>
<td></td>
<td></td>
<td></td>
<td>.674</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It was too painful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My nipples were cracked</td>
<td></td>
<td></td>
<td></td>
<td>.853</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I got mastitis, thrush or another problem</td>
<td></td>
<td></td>
<td></td>
<td>.712</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It was too difficult</td>
<td></td>
<td></td>
<td></td>
<td>.747</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I never knew when the baby was going to feed</td>
<td></td>
<td></td>
<td></td>
<td>.730</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I didn't like being responsible for all the feeds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.809</td>
</tr>
<tr>
<td>I couldn't keep track of milk intake</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.604</td>
</tr>
<tr>
<td>I couldn't leave the baby</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.760</td>
</tr>
<tr>
<td>I wanted a more predictable routine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.458</td>
</tr>
<tr>
<td>My partner wanted me to stop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.633</td>
</tr>
<tr>
<td>My mother wanted me to stop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.671</td>
</tr>
<tr>
<td>Friends wanted me to stop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.695</td>
</tr>
<tr>
<td>I didn't know anyone else who breastfed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.639</td>
</tr>
<tr>
<td>Other people felt excluded</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.652</td>
</tr>
<tr>
<td>I couldn't get any help with problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.633</td>
</tr>
<tr>
<td>I didn't have enough support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.788</td>
</tr>
<tr>
<td>I couldn't get any professional advice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.631</td>
</tr>
<tr>
<td>The baby wasn't well</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.824</td>
</tr>
<tr>
<td>I was taking medication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.944</td>
</tr>
<tr>
<td>A health professional advised me to stop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.821</td>
</tr>
<tr>
<td>I couldn't breastfeed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.947</td>
</tr>
<tr>
<td><strong>Percentage of variance explained</strong></td>
<td><strong>36.975</strong></td>
<td><strong>11.035</strong></td>
<td><strong>7.783</strong></td>
<td><strong>7.341</strong></td>
<td><strong>5.579</strong></td>
<td><strong>5.075</strong></td>
<td><strong>5.320</strong></td>
<td><strong>4.818</strong></td>
</tr>
<tr>
<td><strong>Cronbach's alpha</strong></td>
<td><strong>.705</strong></td>
<td><strong>.784</strong></td>
<td><strong>.906</strong></td>
<td><strong>.770</strong></td>
<td><strong>.869</strong></td>
<td><strong>.923</strong></td>
<td><strong>.892</strong></td>
<td><strong>.849</strong></td>
</tr>
</tbody>
</table>

Items in bold signify items which group strongly on each factor.

Table one shows regression scores for each item and how they load onto each factor produced.
### Table three. Sample distribution by Demographic Factors

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Group</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 19</td>
<td>4</td>
<td></td>
<td>3.1</td>
</tr>
<tr>
<td>20 – 24</td>
<td>21</td>
<td></td>
<td>16.4</td>
</tr>
<tr>
<td>25 – 29</td>
<td>25</td>
<td></td>
<td>19.5</td>
</tr>
<tr>
<td>30 – 34</td>
<td>52</td>
<td></td>
<td>40.6</td>
</tr>
<tr>
<td>35 ≥</td>
<td>26</td>
<td></td>
<td>20.3</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School</td>
<td>30</td>
<td></td>
<td>23.4</td>
</tr>
<tr>
<td>College</td>
<td>27</td>
<td></td>
<td>21.1</td>
</tr>
<tr>
<td>Higher</td>
<td>48</td>
<td></td>
<td>32.8</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>29</td>
<td></td>
<td>22.7</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>89</td>
<td></td>
<td>69.5</td>
</tr>
<tr>
<td>Cohabit ing</td>
<td>27</td>
<td></td>
<td>21.1</td>
</tr>
<tr>
<td>Partner</td>
<td>9</td>
<td></td>
<td>7.0</td>
</tr>
<tr>
<td>Single</td>
<td>3</td>
<td></td>
<td>2.3</td>
</tr>
<tr>
<td><strong>Maternal occupation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional &amp; managerial</td>
<td>69</td>
<td></td>
<td>53.9</td>
</tr>
<tr>
<td>Skilled</td>
<td>23</td>
<td></td>
<td>18.0</td>
</tr>
<tr>
<td>Unskilled</td>
<td>20</td>
<td></td>
<td>15.6</td>
</tr>
<tr>
<td>No job</td>
<td>16</td>
<td></td>
<td>12.5</td>
</tr>
</tbody>
</table>
Table Four: Differences in pregnancy body image by infant feeding group at two, six, twelve and twenty six weeks postpartum

<table>
<thead>
<tr>
<th>Time point</th>
<th>Breast (N)</th>
<th>Formula (N)</th>
<th>Pregnancy body image</th>
<th>Prospective postnatal body image</th>
<th>Dieting during pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two weeks</td>
<td>102</td>
<td>26</td>
<td>F(1, 124) = 7.92, p = .006</td>
<td>F(1, 124) = 10.68, p = .001</td>
<td>F(1, 124) = 7.90, p = .006</td>
</tr>
<tr>
<td>Six weeks</td>
<td>87</td>
<td>41</td>
<td>F(1, 124) = 4.03, p = .046</td>
<td>F(1, 124) = 18.17, p = .000</td>
<td>F(1, 124) = 21.67, p = .000</td>
</tr>
<tr>
<td>Twelve weeks</td>
<td>62</td>
<td>66</td>
<td>F(1, 124) = 4.10, p = .045</td>
<td>F(1, 124) = 11.30, p = .001</td>
<td>F(1, 124) = 15.98, p = .000</td>
</tr>
<tr>
<td>Twenty six weeks</td>
<td>48</td>
<td>80</td>
<td>F(1, 124) = 7.51, p = .007</td>
<td>F(1, 124) = 26.31, p = .000</td>
<td>F(1, 124) = 24.99, p = .000</td>
</tr>
</tbody>
</table>
Table Five: Association between maternal body image and reasons for stopping breastfeeding

<table>
<thead>
<tr>
<th></th>
<th>Pregnancy body image</th>
<th>Prospective postnatal concerns</th>
<th>Dieting during pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty</td>
<td>.323 (.017)*</td>
<td>-.157 (.158)</td>
<td>.088 (.287)</td>
</tr>
<tr>
<td>Pain</td>
<td>.292 (.029)*</td>
<td>-.008 (.480)</td>
<td>-.089 (.286)</td>
</tr>
<tr>
<td>Body Image</td>
<td>.001 (.499)</td>
<td>.602 (.000)**</td>
<td>.122 (.218)</td>
</tr>
<tr>
<td>Public Feeding</td>
<td>-.088 (.287)</td>
<td>.345 (.012)*</td>
<td>.046 (.385)</td>
</tr>
<tr>
<td>Inconvenient</td>
<td>.083 (.299)</td>
<td>.159 (.154)</td>
<td>.025 (.437)</td>
</tr>
<tr>
<td>Pressure from others</td>
<td>.105 (.252)</td>
<td>-.073 (.320)</td>
<td>-.016 (.460)</td>
</tr>
<tr>
<td>Lack of support</td>
<td>.137 (.191)</td>
<td>.024 (.439)</td>
<td>-.028 (.428)</td>
</tr>
<tr>
<td>Medical</td>
<td>-.198 (.101)</td>
<td>-.193 (.107)</td>
<td>-.165 (.145)</td>
</tr>
</tbody>
</table>

Shaded areas denote significant correlations: * = p < 0.05, ** = p < 0.001