

Bond University
Research Repository



Striving for the thin ideal post-pregnancy: a cross-sectional study of intuitive eating in postpartum women

Lee, Megan F.; Williams, Susan L.; Burke, Karena J.

Published in:
Journal of Reproductive and Infant Psychology

DOI:
[10.1080/02646838.2019.1607968](https://doi.org/10.1080/02646838.2019.1607968)

Licence:
CC BY-NC-ND

[Link to output in Bond University research repository.](#)

Recommended citation(APA):
Lee, M. F., Williams, S. L., & Burke, K. J. (2020). Striving for the thin ideal post-pregnancy: a cross-sectional study of intuitive eating in postpartum women. *Journal of Reproductive and Infant Psychology, 38*(2), 127-138. <https://doi.org/10.1080/02646838.2019.1607968>

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

For more information, or if you believe that this document breaches copyright, please contact the Bond University research repository coordinator.

Striving for the Thin Ideal Post-Pregnancy: Cross-Sectional Study of Intuitive Eating in Postpartum Women

Abstract

Due to societal pressures to conform to the thin ideal, postpartum women often strive to restore their pre-pregnancy weight and shape by dieting and restricting food. This can lead to high levels of body image dissatisfaction, disordered eating attitudes, depressive symptomology and can impact on the health of mother and child.

Objective: To conduct a cross-sectional study of women in the postpartum period to identify relationships between intuitive eating, body image satisfaction, eating attitudes and depressive symptomology.

Methods: Women with at least one child born in the previous six to 48 months were recruited via Facebook to complete an online survey which included: socio-demographic and health questions, the Intuitive Eating Scale (IES), Body Shape Questionnaire (BSQ), Multi-dimensional Body-Self Relations Questionnaire (MBSRQ), Eating Attitudes Test-26 (EAT-26), and Edinburgh Postnatal Depression Scale (EPDS). Descriptive statistics were calculated for all variables and hierarchical regressions used to examine associations between intuitive eating styles, body image satisfaction, eating attitudes and depressive symptomology.

Results: Of the 419 women (Mean age 32 ± 5.3 years), 32% were classified with intuitive eating styles and were more likely to have higher body image satisfaction ($F = 476.80, p < .001$), less disordered eating attitudes ($F = 30.74, p < .001$) and lower depressive symptomology ($F = 4.14, p = .042$).

The postpartum period is a time of high risk for developing/maintaining eating styles that may negatively impact psychological health and wellbeing. Providing education to new mothers about the benefits of intuitive eating could positively influence their health and well-being.

Keywords

Body image satisfaction

Depression

Dieting

Intuitive eating

Postpartum

Striving for the Thin Ideal Post-Pregnancy: Cross-Sectional Study of Intuitive Eating in Postpartum Women

Many women in Western societies report pressure to conform to a societally constructed thin ideal (Gillen, Markey, & Markey, 2012; Mask & Blanchard, 2011; Schaefer & Magnuson, 2014). Pregnancy is a stage in the life cycle during which dramatic changes occur in a woman's body shape and weight (Gjerdingen et al., 2009; Shloim, Hetherington, Rudolf, & Feltbower, 2015). In contrast to other stages of the lifespan, pregnancy related body shape and weight changes are generally considered positively by the mother and society, as they are an aspect of a child's developing life (Rauff & Downs, 2011; Shloim et al., 2015). However, once the infant is born and the mother is in the postpartum period, weight gain is no longer attributed to supporting a baby and for many women this results in negative body image and body dissatisfaction (Fern, Buckley, & Grogan, 2014; Gjerdingen et al., 2009; Lovering, Rodgers, George, & Franko, 2018; Silveira, Ertel, Dole, & Chasan-Taber, 2015).

It is suggested that body image concerns in the postpartum period are directly linked to the amount of weight a woman perceives themselves as needing to lose. Not meeting these pre-conceived weight goals can add further stress for a new mother and higher body image dissatisfaction levels (Rodgers, Apos, Flynn, Bourdeau, & Zimmerman, 2018). Others who wish to maintain their pre-pregnancy body shape and weight are known to be at a higher risk of body image dissatisfaction and lower self-esteem at a critical period in both her and her

child's life (Gjerdingen et al., 2009; Lovering et al., 2018).

In the postpartum period, a woman's body image dissatisfaction can contribute to depressive symptomology and disordered eating patterns (Gjerdingen et al., 2009; Hartley, Hill, McPhie, & Skouteris, 2018; Silveira et al., 2015) that may also negatively influence infant development and later eating pathology of both mother and child (McMahon, Trapolini, & Barnett, 2008). Postpartum body image dissatisfaction has also been linked to decreased well-being, excessive food restriction, development of eating disorders, impaired milk production, and energy deficiency in the mother and her baby (Hartley et al., 2018; Silveira et al., 2015). Rates of depression in postpartum women range from 13% to 19% in the twelve months following childbirth (Silveira et al., 2015; Underwood, Waldie, D'Souza, Peterson, & Morton, 2016). This depressive symptomology can increase the risk of future depression and adversely affect parenting and caretaking behaviours (Gjerdingen et al., 2009; Silveira et al., 2015).

Usually, mothers turn to weight loss methods such as food restriction and dieting in an attempt to lose the weight retained from pregnancy (Clark, Skouteris, Wertheim, Paxton, & Milgrom, 2009; Gjerdingen et al., 2009; Leahy, Berlin, Banks, & Bachman, 2017; Schaefer & Magnuson, 2014; Silveira et al., 2015). Unfortunately, this weight-focused thinking is often ineffective for weight loss and can lead to patterns of self-deprivation that result in food preoccupation, rapid cycling between weight loss and gain (Bacon & Aphramor, 2011), body dysmorphic beliefs (Laliberte, Newton, McCabe, & Mills, 2007), fasting, binge eating, and cutting out macronutrients (Bacon, 2010). All of these maladaptive eating behaviours can negatively impact a mother's psychological well-being during a time where she is experiencing heightened physical and psychological demands and trying to support both her own and her baby's health (Bacon & Aphramor, 2011; Clifford et al., 2015; Laliberte et al.,

2007).

There is however a different approach that involves striving for positive eating behaviours and intuitive eating styles. Intuitive eating promotes listening to one's body, accepting its natural size and shape, being kind to one's self, removing food guilt and ending food preoccupation by not restricting foods or making food the enemy (Bacon & Aphramor, 2011; Clifford et al., 2015; Dorsey Spoor & Madanat, 2016). Women who adopt intuitive eating styles are more likely to report being content with their body weight, enjoy a greater variety of foods, have better self-esteem (Bruce & Ricciardelli, 2016; Linardon & Mitchell, 2017), are less likely to eat when stressed or emotional, binge eat, exhibit maladaptive eating patterns, internalise the thin ideal, and have a higher overall sense of psychological well-being (Bacon & Aphramor, 2011; Clifford et al., 2015; Dorsey Spoor & Madanat, 2016). However, there is very limited research on intuitive eating and its role in increasing body image satisfaction and reducing symptoms of depression, especially in mothers. Previous studies of intuitive eating, body image satisfaction and psychological wellbeing have focused on adolescents and reported psychological and physiological benefits of intuitive eating regimes in women who do not have children (Bruce & Ricciardelli, 2016).

Recent studies have found that pregnant women are more likely than non-pregnant women to respond intuitively to internal body cues and heed health education messages, as a protective response to the life that is growing within their bodies (Hutchinson, Charters, Prichard, Fletcher, & Wilson, 2017; Shloim et al., 2015). The antenatal and postpartum periods thereby present very 'teachable' times and could provide a valuable opportunity for targeted interventions that promote understanding of intuitive eating and its positive impact on physical and psychological health.

In the absence of any previous published research on intuitive eating styles in women

in the postpartum period, this pilot study of a sample of women in the postpartum period aimed to establish rates of intuitive eating and examine relationships between intuitive eating styles and body image satisfaction, disordered eating attitudes and depressive symptomology. It is intended that this study will inform future research and interventions that educate women about the adoption or maintenance of intuitive eating styles during the postpartum period and associated benefits to psychological wellbeing.

Methods

Ethical approval to conduct the research was provided by the **university name omitted for blind review** Human Research Ethics Committee H17/04-061. To participate in the study, women had to be older than 18 years of age and have a child between six months and four years of age. The online survey consisted of 126 questions and was pre-tested on a sample of five women prior to implementation. Participants were recruited via the social media platform Facebook to complete a survey that aimed to understand the eating styles of women in the postpartum period. Respondents accessed a link to a study information sheet and survey. Completion of all questions in the survey was required for full consent and participation. Respondents with more than one child were instructed to complete the survey in relation to their youngest child.

Measures

Participant Characteristics. Participant characteristics included: age (in years), marital status (married, single, defacto, separated, divorced, widowed), gross weekly household income (< \$600 AUD, \$600 to \$2000 AUD, >\$2000 AUD), highest education level attained (primary school, high school, Technical and Further Education - TAFE, bachelor's degree, master's degree, doctoral degree), current employment (homemaker, student, part-time, full-time, casual, self-employed), number of children (one, two, three or

more), BMI before first child, BMI before last child and current BMI (calculated using self-report height and weight measurements)

Eating styles. Intuitive eating was assessed using the 28 item Intuitive Eating Scale (IES), (Hawks, Madanat, Hawks, & Harris, 2005). Response items were measured on a five point Likert scale (1 = strongly agree to 5 = strongly disagree) with higher scores indicating intuitive eating styles. Scores above 3.5 indicate greater adherence to an intuitive eating style (Tylka, 2006). Previous studies using this scale have reported reliabilities of .56 to .85 (Tylka, 2006). Construct validity can be seen in negative associations with dietary restriction, positive association with pleasure in eating, and the EAT-26 scale (Avalos & Tylka, 2006; Daundasekara et al., 2017; Hawks, Merrill, & Madanat, 2004; Tylka, 2006). Cronbach's alpha in this study was .91.

Body image. Body image satisfaction was measured using the 16 item Body Shape Questionnaire (BSQ), (Evans & Dolan, 1993). Response items measure weight and shape dissatisfaction, desire to lose weight and fear of gaining weight on a six point Likert scale (1 = never to 6 = always). Total scores range from 0 to 96 with higher scores indicating greater body image dissatisfaction. Previous studies using this scale have reported excellent internal consistency (.91 to .94) and that the 16-item scale is strongly correlated with the original 34-item scale ($r = .99$) (Cooper, Taylor, Cooper, & Fairbum, 1987; Gjerdingen et al., 2009; Haedt & Keel, 2007). Convergent and discriminant validity have also been observed with the EAT-26 (.58 to .63) (Evans & Dolan, 1993). Cronbach's alpha in this study was .95.

Eating attitudes. The likelihood of having disordered eating attitudes were assessed using the 26 item Eating Attitudes Test-26 (EAT-26), (Garner, Olmsted, Bohr, & Garfinkel, 1982). Response items were measured on a five point Likert scale (1 = strongly agree to 5 = strongly disagree). Total scores range from 0 to 130 with higher scores indicating symptoms of

disordered eating. (Garner & Garfinkel, 1979). A previous study using this scale has reported strong internal consistency (.90) (Carter, Baker, & Brownwell, 2000) and discriminant validity shows the EAT-26 satisfactorily measures symptoms of disordered eating (Garfinkel & Newman, 2001; Laliberte et al., 2007). Cronbach's alpha in this study was .86.

Body-self relations. Body-self relations were assessed using the 14 item Multidimensional Body-Self Relations Questionnaire (MBSRQ) (Winstead & Cash, 1984). Response items measure body-self relation satisfaction on a five point Likert scale (1 = strongly agree to 5 = strongly disagree) with higher scores indicating body-self relation dissatisfaction. Previous studies using this scale have reported internal consistency of .88 and test retest reliability of .81 (Brown, Cash, & Mikulka, 1990). Cronbach's alpha in this study was .93.

Depressive symptomology. Degree of postpartum depression was assessed using the 20 item Edinburgh Postnatal Depression Scale (EPDS) (Cox, Holden, & Sagovsky, 1987). The EPDS is commonly used as a depression screener that specifically measures depressive symptomology and emotional distress in postpartum women. Response items measure depressive symptomology on a five point Likert scale (1 = strongly agree to 5 = strongly disagree). Total scores range from 0 to 100 with lower scores indicating a higher degree of postnatal depression. Previous studies using this scale have reported strong internal consistency (.90) (Abraham, Taylor, & Conti, 2001; Haedt & Keel, 2007; Silveira et al., 2015) and strong validity has been shown in women beyond the immediate postpartum period (Cox et al., 1987; Thorpe, 1993). Cronbach's alpha in this study was .87.

Data Analysis

Descriptive statistics were calculated for all variables; age, marital status, gross weekly household income, highest education level, current employment), number of children, BMI, eating styles, body image satisfaction, eating attitudes, body-self relations, and

depressive symptomology. Prior to conducting a regression assumptions of linearity, independent errors, homoscedasticity, normally distributed errors, and outliers were tested and all were satisfied. Correlations were used to determine significant relationships with the IES and multicollinearity of all scales. BMI, was entered into the final hierarchical regression model first as it was considered to be a significant covariate of IES. Independent variables, body image satisfaction, eating attitudes, body-self relations, and depressive symptomology were then entered into the hierarchical regression model in order of hypothesised importance to IES.

Results

A total of 632 respondents commenced the survey. Of these, 94 (14.87%) did not complete all questions in the survey and a further 119 (18.83%) were excluded based on having children of an age outside the inclusion criteria (either younger than six months or older than four years of age). The final study sample comprised 419 women aged between 19 and 52 years ($M = 32.06$, $SD = 5.30$) who had at least one child between six months and four years of age ($M = 1.93$, $SD = 1.06$). Of these, 11 women stated their children's age instead of their own and a further 15 women did not disclose their current weight. For these cases, missing values were assigned for the missing ages and/or body weight and all other data was included for analysis.

The initial descriptive analysis (see Table 1) found a majority of participants were partnered (85%), received a household income greater than \$2000 per week (80%), had more than a high school education (81%), and just over half (57%) were employed either part time or full time. Almost two thirds (62 %) were categorised as having a healthy body weight (BMI $<25\text{kg/m}^2$) before their first child ($n = 257$, $p < .001$), as classified by the World Health Organization's BMI cut-offs (World Health Organization, 2000), half (51%) had a healthy

weight after their last child ($n = 194$), while 40% ($n = 165$) had a current healthy weight. Overall, 32.1% of participants identified as having intuitive eating styles ($M = 3.11$, $SD = 0.61$, $n = 127$).

Insert Table 1 here

In the correlation matrix (see Table 2) there is a significant relationship between intuitive eating styles and BMI, body image satisfaction, eating attitudes, body-self relations, and depressive symptomology (all $p < .001$). All inter-correlations between variables were also observed.

Insert Table 2 here

Table 3. outlines results of a hierarchical regression. At step one current BMI contributed significantly to the regression model $F(1,402) = 115.81$, $p < .001$ and accounted for 22.24% of the variation in intuitive eating styles. Introducing body image satisfaction explained an additional 42.2% of variation in eating styles and this change in R^2 was also significant $F(1, 401) = 476.80$, $p < .001$. Adding eating attitudes to the regression model explained an additional 2.5% of the variation in intuitive eating, $F(1, 400) = 30.74$, $p < .001$. The addition of body-self relations explained a further 2.4% of the variation $F(1, 399) = 30.68$, $p < .001$ and depressive symptomology added a final 0.3% to the model, $F(1, 398) = 4.14$, $p = .042$. Together the five independent variables accounted for 69.53% of the variance in intuitive eating styles.

Insert Table 3 here

Discussion

The aim of the current study was to examine intuitive eating styles in postpartum women and relationships between eating attitudes, body image satisfaction, and depressive

symptomology. This study of postpartum women revealed findings similar to previous studies of women across different age groups with overall intuitive eating scores of 3.2 ($SD = 0.61$) (Augustus-Horvath & Tylka, 2011), 3.4 ($SD = 0.39$) (Dorsey Spoor & Madanat, 2016) and 3.4 ($SD = 0.48$) (Tylka, 2006). Each comparable to our study score for intuitive eating ($M = 3.11$, $SD = 0.61$).

The majority of women in this study were classified with non-intuitive eating styles. This suggests that many women in the postpartum period are at risk of unhealthy weight control behaviours such as food preoccupation, self-deprivation, weight cycling, and binge eating (Bacon, Stern, Van Loan, & Keim, 2005; Clifford et al., 2015) and an apparent perception that being thin may be valued more highly than mothering and maternal body shape (Augustus-Horvath & Tylka, 2011; Denny, Loth, Eisenberg, & Neumark-Sztainer, 2013). This is vitally important for women in the postpartum period as those who eat intuitively are more likely to be content with their body weight and less likely to internalise the ‘thin’ ideal (Bacon et al., 2005; Dorsey Spoor & Madanat, 2016).

Results of this study highlight that postpartum women who eat intuitively are more likely to report higher levels of body image satisfaction than those who diet and/or restrict food. This is consistent with previous research of college aged women exhibiting intuitive eating styles who also had less body image dissatisfaction levels (Bacon et al., 2005; Dorsey Spoor & Madanat, 2016) and may represent a continuum of eating styles across life-stages. Postpartum women are often unprepared for weight and shape changes that continue after childbirth, which can further affect their self-esteem and exacerbate dissatisfaction with their bodies (Hartley et al., 2018; Leahy et al., 2017). In contrast, body image satisfaction in this period provides protective factors for mothers whilst caring for their health and the health of their children (Schaefer & Magnuson, 2014).

The results of this study also show that postpartum women who eat intuitively are more likely to report healthier eating attitudes and less likely to have an eating disorder. This is consistent with previous research (Denny et al., 2013) that found women with intuitive eating styles had lower odds of reporting maladaptive eating attitudes than those who did not eat intuitively.

Postpartum women often find that the additional pressures and responsibilities of caring for a new-born child impacts their personal eating attitudes and can result in the adoption of unhealthy and disordered eating patterns (Hodgkinson, Smith, & Wittkowski, 2014).

This study has also found that postpartum women with intuitive eating styles are more likely to report lower levels of depression. This is consistent with previous research by Augustus-Horvath and Tylka (2011), who observed significant decreases in depression and increases in self-esteem in their intuitive eating group. Reducing the risk of depression and increasing psychological wellbeing in postpartum women can decrease the risk of future depression and increase positive health and caretaking behaviour (Gjerdingen et al., 2009; Silveira et al., 2015).

This study is the first that has used validated measures of intuitive eating in postpartum women and offers support of previous research in younger childless females and findings for the positive outcomes of intuitive eating (Schaefer & Magnuson, 2014). Results of the study will add information that can be utilised in policy and practice to enrich the understanding of women's health, in particular in the postpartum period (Lovering et al., 2018). There are some limitations of this study that require consideration. It is important to note that due to the cross-sectional nature of this study findings do not reflect causality, and future randomised control trials could further unpack these causal relationships. The study did attempt to gather data from women of varying ages and socio demographic backgrounds, in spite of this the sample was mainly well educated, middle class, younger women. Therefore the results on

eating styles in postpartum women of a different sociodemographic, less educated, cohort may not be reflected in the findings of the current study (Hultsch, MacDonald, Hunter, Maitland, & Dixon, 2002). Ethnicity of participants was not covered in the survey questions. This is a limitation as the study was carried out in Australia which has a large multicultural population and differences in intuitive eating styles may be different across differing ethnicities. Additionally, it was chosen within the study design not to include women with children less than 6 months old as it was believed that the breast feeding period would confound results due to distractions during breast-feeding months often impacting on maternal eating behaviours (Ventura & Teitelbaum, 2017). In addition, the self-report measures utilised relied on accurate and honest responding, perceptions of the self and social desirability may have influenced participant's answers (Paulhus & Vazire, 2007). The self-report method also introduced a level of human error that resulted in the initial sample size being much larger than the final sample size. Future research that uses multiple recruitment methods from a broader population base would be beneficial in confirming the rates of intuitive eating in postpartum women.

Disordered eating patterns are known to track from adolescence into adulthood, especially in those individuals who are already overweight and pregnancy is a risk factor for postpartum overweight and obesity (Goldschmidt et al., 2018). This understanding coupled with the consistency in findings for intuitive eating styles in early adulthood and postpartum adulthood, suggest a continuum of behaviours across the lifespan and highlight a need for early intervention (i.e. before pregnancy) in healthy and overweight women. Future longitudinal studies are needed to examine temporal changes in eating styles across adolescence, young adulthood and adulthood, and the relationships between intuitive eating in cohorts before, during and after pregnancy (Goldschmidt et al., 2018).

Dieting, food restriction, and weight cycling in women has been associated with decreased physical and mental health (Bruce & Ricciardelli, 2016; Gillen et al., 2012; Laliberte et al., 2007). Adopting an intuitive eating style could positively influence health and wellbeing outcomes for women postpartum. Strategies that highlight the value of intuitive eating and help women remove food guilt, attend to their bodies hunger and satiety signals rather than external cues of eating are necessary (Leahy et al., 2017). Addressing the benefits of intuitive eating and the limitations of dieting and food restriction for weight loss with postpartum women may help to clarify the distinction between weight and health, which could promote a healthier lifestyle and encourage women to adopt more sustainable health behaviours. Future research on intuitive eating in women before and after childbirth and in different sociodemographic areas would expand upon the findings of this pilot study.

References

- Abraham, S., Taylor, A., & Conti, J. (2001). Postnatal depression, eating, exercise, and vomiting before and during pregnancy. *International Journal of Eating Disorders*, 29(4), 482-487. doi:10.1002/eat.1046
- Augustus-Horvath, C. L., & Tylka, T. L. (2011). The acceptance model of intuitive eating: A comparison of women in emerging adulthood, early adulthood, and middle adulthood. *Journal of Counseling Psychology*, 58(1), 110-125. doi:10.1037/a0022129
- Avalos, L. C., & Tylka, T. L. (2006). Exploring a model of intuitive eating with college women. *Journal of Counseling Psychology*, 53(4), 486-497. doi:10.1037/0022-0167.53.4.486
- Bacon, L. (2010). *Health at Every Size: The Surprising Truth About Your Weight*. Dallas, TX: Benbella Books.
- Bacon, L., & Aphramor, L. (2011). Weight science: Evaluating the evidence for a paradigm shift. *Nutrition Journal* 10(9), 68-81. doi:10.1186/1475-2891-10-69

- Bacon, L., Stern, J. S., Van Loan, M. D., & Keim, N. L. (2005). Size acceptance and intuitive eating improve health for obese, female chronic dieters. *Journal of the American Dietetic Association, 105*(6), 929-936. doi:10.1016/j.jada.2005.03.011
- Brown, T. A., Cash, T. F., & Mikulka, P. J. (1990). Attitudinal body-image assessment: Factor analysis of the Body-Self Relations Questionnaire. *Journal of Personality Assessment, 55*(1-2), 135-144. doi:10.1080/00223891.1990.9674053
- Bruce, L. J., & Ricciardelli, L. A. (2016). A systematic review of the psychosocial correlates of intuitive eating among adult women. *Appetite, 96*, 454-472. doi:10.1016/j.appet.2015.10.012
- Carter, A. S., Baker, C. W., & Brownwell, K. D. (2000). Body mass index, eating attitudes, and symptoms of depression and anxiety in pregnancy and the postpartum period. *Psychosomatic Medicine, 62*(1), 264-270.
- Clark, A., Skouteris, H., Wertheim, E. H., Paxton, S. J., & Milgrom, J. (2009). The relationship between depression and body dissatisfaction across pregnancy and the postpartum: A prospective study. *Journal of Health Psychology, 14*(1), 27-35. doi:10.1177/1359105308097940
- Clifford, D., Ozier, A., Bundros, J., Moore, J., Kreiser, A., & Morris, M. N. (2015). Impact of non-diet approaches on attitudes, behaviors, and health outcomes: A systematic review. *Journal of Nutrition Education and Behavior, 47*(2), 143-155. doi:10.1016/j.jneb.2014.12.002
- Cooper, P. J., Taylor, M. J., Cooper, Z., & Fairbum, C. G. (1987). The development and validation of the Body Shape Questionnaire. *International Journal of Eating Disorders, 6*(4), 485-494. doi:10.1002/1098-108X(198707)6:4<485::AID-EAT2260060405>3.0.CO;2-O
- Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *The British Journal of Psychiatry, 150*(6), 782-786. doi:10.1192/bjp.150.6.782

- Daundasekara, S. S., Beasley, A. D., Connor, D. P., Sampson, M., Hernandez, D., & Ledoux, T. (2017). Validation of the Intuitive Eating Scale for pregnant women. *Appetite*, *112*(2017), 201-209. doi:10.1016/j.appet.2017.02.001
- Denny, K. N., Loth, K., Eisenberg, M. E., & Neumark-Sztainer, D. (2013). Intuitive eating in young adults. Who is doing it, and how is it related to disordered eating behaviors? *Appetite*, *60*(1), 13-19. doi:10.1016/j.appet.2012.09.029
- Dorsey Spoor, K., & Madanat, H. (2016). Relationship between body image discrepancy and intuitive eating. *International Quarterly of Community Health Education*, *36*(3), 189-197. doi:10.1177/0272684X16641847
- Evans, C., & Dolan, B. (1993). Body Shape Questionnaire: Derivation of shortened “alternate forms”. *International Journal of Eating Disorders*, *13*(3), 315-321. doi:10.1002/1098-108X(199304)13:3<315::AID-EAT2260130310>3.0.CO;2-3
- Fern, V. A., Buckley, E., & Grogan, S. (2014). Women's experiences of body image and baby feeding choices: Dealing with the pressure to be slender. *British Journal of Midwifery*, *22*(11), 788-794. doi:10.12968/bjom.2014.22.11.788
- Garfinkel, P., & Newman, A. (2001). The Eating Attitudes Test: Twenty-five years later. *Eating and Weight Disorders*, *6*(1), 1-24. doi:10.1007/BF03339747
- Garner, D. M., & Garfinkel, P. E. (1979). The Eating Attitudes Test: An index of the symptoms of anorexia nervosa. *Psychological Medicine*, *9*(2), 273-279. doi:10.1017/S0033291700030762
- Garner, D. M., Olmsted, M. P., Bohr, Y., & Garfinkel, P. E. (1982). The Eating Attitudes Test: Psychometric features and clinical correlates. *Psychological Medicine*, *12*(4), 871-878. doi:10.1017/S0033291700049163

- Gillen, M. M., Markey, C. N., & Markey, P. M. (2012). An examination of dieting behaviors among adults: Links with depression. *Eating Behaviors, 13*(2), 88-93. doi:10.1016/j.eatbeh.2011.11.014
- Gjerdingen, D., Fontaine, P., Crow, S., McGovern, P., Center, B., & Miner, M. (2009). Predictors of mothers' postpartum body dissatisfaction. *Womens Health 49*(6), 491-504. doi:10.1080/03630240903423998
- Goldschmidt, A. B., Wall, M. M., Choo, T.-H. J., Evans, E. W., Jelalian, E., Larson, N., & Neumark-Sztainer, D. (2018). Fifteen-year weight and disordered eating patterns among community-based adolescents. *American Journal of Preventive Medicine, 54*(1), 21-29. doi:10.1016/j.amepre.2017.09.005
- Haedt, A., & Keel, P. (2007). Maternal attachment, depression, and body dissatisfaction in pregnant women. *Journal of Reproductive and Infant Psychology, 25*(4), 285-295. doi:10.1080/02646830701691327
- Hartley, E., Hill, B., McPhie, S., & Skouteris, H. (2018). The associations between depressive and anxiety symptoms, body image, and weight in the first year postpartum: a rapid systematic review. *Journal of Reproductive and Infant Psychology, 36*(1), 81-101. doi:10.1080/02646838.2017.1396301
- Hawks, S., Madanat, H., Hawks, J., & Harris, A. (2005). The relationship between intuitive eating and health indicators among college women. *American Journal of Health Education, 36*(6), 331-336. doi:10.1080/19325037.2005.10608206
- Hawks, S., Merrill, R. M., & Madanat, H. N. (2004). The Intuitive Eating Scale: Development and preliminary validation. *American Journal of Health Education, 35*(2), 90-99. doi:10.1080/19325037.2004.10603615
- Hodgkinson, E., Smith, D., & Wittkowski, A. (2014). Women's experiences of their pregnancy and postpartum body image: A systematic review and meta-synthesis. *BMC Pregnancy and Childbirth, 14*(330), 330. doi:10.1186/1471-2393-14-330

- Hultsch, D. F., MacDonald, S. W., Hunter, M. A., Maitland, S. B., & Dixon, R. A. (2002). Sampling and generalisability in developmental research: Comparison of random and convenience samples of older adults. *International Journal of Behavioral Development, 26*(4), 345-359. doi:10.1080/01650250143000247
- Hutchinson, A. D., Charters, M., Prichard, I., Fletcher, C., & Wilson, C. (2017). Understanding maternal dietary choices during pregnancy: The role of social norms and mindful eating. *Appetite, 112*, 227-234. doi:10.1016/j.appet.2017.02.004
- Laliberte, M., Newton, M., McCabe, R., & Mills, J. S. (2007). Controlling your weight versus controlling your lifestyle: How beliefs about weight control affect risk for disordered eating, body dissatisfaction and self-esteem. *Cognitive Therapy and Research, 31*(6), 853-869. doi:10.1007/s10608-006-9104-z
- Leahy, K., Berlin, K. S., Banks, G. G., & Bachman, J. (2017). The relationship between intuitive eating and postpartum weight loss. *Maternal and Child Health Journal, 21*(8), 1-7. doi:10.1007/s10995-017-2281-4
- Linardon, J., & Mitchell, S. (2017). Rigid dietary control, flexible dietary control, and intuitive eating: Evidence for their differential relationship to disordered eating and body image concerns. *Eating Behaviors, 26*, 16-22. doi:10.1016/j.eatbeh.2017.01.008
- Lovering, M. E., Rodgers, R. F., George, J. E., & Franko, D. L. (2018). Exploring the Tripartite Influence Model of body dissatisfaction in postpartum women. *Body Image, 24*, 44-54. doi:10.1016/j.bodyim.2017.12.001
- Mask, L., & Blanchard, C. M. (2011). The effects of “thin ideal” media on women's body image concerns and eating-related intentions: The beneficial role of an autonomous regulation of eating behaviors. *Body Image, 8*(4), 357-365. doi:10.1016/j.bodyim.2011.06.003
- McMahon, C., Trapolini, T., & Barnett, B. (2008). Maternal state of mind regarding attachment predicts persistence of postnatal depression in the preschool years. *Journal of Affective Disorders, 107*(1-3), 199-203. doi:10.1016/j.jad.2007.07.017

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins & R. C. Fraley (Eds.), *Handbook of Research Methods in Personality Psychology* (Vol. 1, pp. 224-239). New York: Guilford Press.

Rauff, E., & Downs, D. (2011). Mediating effects of body image satisfaction on exercise behavior, depressive symptoms, and gestational weight gain in pregnancy. *Annals of Behavioral Medicine, 42*(3), 381-390. doi:10.1007/s12160-011-9300-2

Rodgers, R. F., Apos, Flynn, J. L., Bourdeau, A., & Zimmerman, E. (2018). A biopsychosocial model of body image, disordered eating, and breastfeeding among postpartum women. *Appetite, 126*, 163-168. doi:10.1016/j.appet.2018.04.007

Schaefer, J. T., & Magnuson, A. B. (2014). A review of interventions that promote eating by internal cues. *Journal of the Academy of Nutrition and Dietetics, 114*(5), 734-760. doi:10.1016/j.jand.2013.12.024

Shloim, N., Hetherington, M. M., Rudolf, M., & Feltbower, R. G. (2015). Relationship between body mass index and women's body image, self-esteem and eating behaviours in pregnancy: A cross-cultural study. *Journal of Health Psychology, 20*(4), 413-426. doi:10.1177/1359105313502568

Silveira, M., Ertel, K., Dole, N., & Chasan-Taber, L. (2015). The role of body image in prenatal and postpartum depression: a critical review of the literature. *Archive of Womens Mental Health, 18*(3), 409-421. doi:10.1007/s00737-015-0525-0

Thorpe, K. (1993). A study of the use of the Edinburgh Postnatal Depression Scale with parent groups outside the postpartum period. *Journal of Reproductive and Infant Psychology, 11*(2), 119-125. doi:10.1080/02646839308403204

Tylka, T. L. (2006). Development and psychometric evaluation of a measure of intuitive eating. *Journal of Counseling Psychology, 53*(2), 226-240. doi:10.1037/0022-0167.53.2.226

Underwood, L., Waldie, K., D'Souza, S., Peterson, E. R., & Morton, S. (2016). A review of longitudinal studies on antenatal and postnatal depression. *Archive of Womens Mental Health, 19*(5), 711-720. doi:10.1007/s00737-016-0629-1

Ventura, A. K., & Teitelbaum, S. (2017). Maternal distraction during breast and bottle feeding among WIC and non-WIC mothers. *Journal of Nutrition Education and Behavior, 49*(7), 169-176. doi:10.1016/j.jneb.2017.04.004

Winstead, B. A., & Cash, T. F. (1984). *Reliability and validity of the Body-Self Relations Questionnaire: A new measure of body image*. New Orleans: Sotheastern Psychological Association.

World Health Organization. (2000). *Obesity: preventing and managing the global epidemic*. WHO. Retrieved from http://www.who.int/nutrition/publications/obesity/WHO_TRS_894/en/