MATERNAL WELL-BEING DURING GESTATION: EXAMINING THE ROLE
OF PREGNANT EMBODIMENT

by

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ABSTRACT

JAN THANGAM MOONEY. Maternal well-being during gestation: examining the role of pregnant embodiment. (Under the direction of DR. JENNIFER WEBB)

The transitional state of gestation is marked by rapid physiological shifts, at the intersection of sense of self and dominant societal discourses about pregnancy and motherhood. As a result, the experience of the body during pregnancy (i.e., pregnant embodiment) is reflective of varied experiences, including disconnection and objectification (i.e., body estrangement) as well as connection and attunement (i.e., body agency), with important implications for maternal well-being. Extant research has focused largely on external body evaluations (i.e., body dissatisfaction) and indicators of psychosocial distress, highlighting gaps in knowledge regarding positive affective components of well-being as well as variability in pregnant embodiment. The Attunement Model of Wellness and Embodied Self-Regulation (AMWESR) posits that attunement to bodily needs supports balance between internal and external demands, which may be particularly important during pregnancy. Emerging work on mindfulness indicates that awareness and acceptance in response to pregnancy-related change may contribute to increases in positive outcomes and reductions in negative outcomes. However, research has yet to examine the relationships between practices associated with mindfulness (e.g., mindful self-care; MSC) and pregnant embodiment. We examined cross-sectional relationships between pregnant embodiment, MSC, maternal well-being and maternal distress in a nationally-inclusive sample of US women ($N = 165$; $M_{age} = 31.4$, aged 21-43; 85.6% White, 4.9% Hispanic/Latinx). Two multi-stage hierarchical linear regression models using mean-centered focal predictors examined associations of MSC, body estrangement, and body agency with well-being and distress, respectively. Main effect models revealed positive associations of MSC and body agency with well-being, a negative association between MSC and distress, and a pos-

itive association between body estrangement and distress, controlling for maternal age, parity, and level of education. Additionally, the potential for mindful self-care as a moderator of relationships between embodiment and well-being or distress was assessed. Exploration of interaction terms and their relative contribution to the model indicated that at higher levels of MSC, the association between body estrangement and distress was weaker. Overall, findings suggest that disconnection with the body, intentional self-care, and distress are tightly intertwined. As a partial replication and exploration of the interplay among appraisals, behavior, and affective gestational experiences, the present work promotes inclusion of unique potential protective and risk factors for pregnancy well-being, toward innovation in health promotion.

DEDICATION

To Lena, whose steadfast presence remains a bulwark against even the most furious of storms. And to Cora, who never fails to remind me that there is always time to stop and sniff.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AMWESR The Attunement Model of Embodied Wellness and Self-Regulation

BEPS The Body Experiences during Pregnancy Scale

MSC Mindful self-care

MSCS The Mindful Self-Care Scale

PREDM The Prenatal Distress Measure

WEMWBS The Warwick-Edinburgh Mental Wellbeing Scale

CHAPTER 1: INTRODUCTION

Pregnancy is shaped by social-cultural and biomedical structures that can give rise to conflicting narratives regarding how to "do pregnancy well." Expectant mothers face a multitude of recommendations and criticisms with respect to such areas as nutrition, physical activity, weight gain, and appearance, among others (e.g., Nash, 2012, 2015). Women may also experience difficulty navigating new roles as mothers and caretakers (Bonacquisti, Cohen, & Schiller, 2017; Nash, 2012). For instance, during this time of developmental transition, women are positioned between societal expectations advancing the ideal pregnant body aesthetic and the prioritization of the health of the fetus above all else (Hodgkinson, Smith, & Wittkowski, 2014; Nash, 2012). In non-pregnant populations, adolescent girls appear to be at heightened risk for experiencing negativity in response to perceived bodily signals (e.g., appetite) at the onset of puberty, a developmental transition involving the integration (or division) of identity in response to the emerging woman's body (Piran, 2016). Similarly, pregnancy represents an extended state of transition during which women navigate the integration of a mothering identity into their sense of self, while attempting to balance the opposing pressures of societal narratives about embodied pregnant womanhood (Darvill, Skirton, & Farrand, 2010; Nash, 2012, 2015).

In this ripe context, the current study seeks to replicate and extend findings of previous work by examining the relationships between positive and negative embodiment (i.e., how one experiences their body engaging in the world; Piran, 2016) with both measures of psychological distress and well-being at this critical maturational juncture. A secondary aim is to evaluate whether individual differences in engaging in mindful self-care practices during pregnancy moderates these associations. The

following manuscript serves to a) situate this analysis within the theoretical foundations of embodiment alongside the accumulating evidence base linking negative embodiment during pregnancy to dimensions of psychological distress, b) provide a rationale for the importance of expanding the scope to include a complementary focus on positive embodiment and well-being during this developmental transition, c) consider how mindful self-care may act as a protective factor, d) describe the study design and methodology, e) report the subsequent results, and e) situate the results within the larger context of the literature base.

1.1 Expanding the Scope of Embodiment during Pregnancy: The Value of Integrating both Positive and Negative Dimensions

Gestation is marked by rapid physical and psychological shifts which likely affect women's experiences of and in their bodies. Some descriptions of pregnant embodiment note a sense of "loss of control" or being "invaded" (by the fetus), reflecting body estrangement or a sense of disconnection from the body (e.g., Schmied & Lupton, 2001; Talmon & Ginzburg, 2018; Upton & Han, 2016). Other possible experiences of pregnant embodiment include positive, welcoming feelings in response to the changing body (Maas, Vreeswijk, Braeken, Vingerhoets, & van Bakel, 2013) and shifts toward prioritization of functionality over appearance (Clark, Skouteris, Wertheim, Paxton, & Milgrom, 2009; Watson, Fuller-Tyszkiewicz, Broadbent, & Skouteris, 2015), reflecting body agency, or a sense of "being at home" in one's body (e.g., Piran, 2016; Talmon & Ginzburg, 2018). More broadly, embodiment theory (e.g., Cook-Cottone, 2015; Menzel & Levine, 2011) suggests that awareness of and attentiveness to bodily experiences and needs are associated with healthy self-regulation, or the ability to balance and address internal (e.g., cognitive, physical, emotional) needs with external demands (e.g., societal, relational; Cook-Cottone, 2015), commonly expressed through intentional (i.e., mindful) self-care practices. Although it was developed based on research with non-pregnant individuals, the Attunement Model of Well-

ness and Embodied Self-Regulation (AMWESR, see Figure 5.1; Cook-Cottone, 2015, 2006) may be relevant for expectant mothers because it suggests a framework for understanding, navigating, and responding to the shifting internal and external realities of pregnancy.

The AMWESR posits that healthy, embodied self-regulation represents attentiveness to and awareness of one's own needs in balance with addressing external demands (e.g., interpersonal relationships, cultural norms, etc.). These adaptive qualities reflect a sense of connection between the mind and the body (Piran, 2016), similar to the concept of body agency during pregnancy (Talmon & Ginzburg, 2018). That is, recognition and responsiveness to physiological, emotional, and cognitive demands occur along with awareness of and responsiveness to the demands of the external, ecological system, including interpersonal relational demands, community-level demands, and larger cultural demands. However, the AMWESR framework has not yet been examined with respect to its applicability to the experience of the body in pregnant women, for whom rapid and central shifts in sense of self and body are common. Negotiations of identity (i.e., sense of self) during pregnancy are significantly complicated by both external and internal shifts in bodily boundaries (Nash, 2012). These changes in turn could be experienced as welcomed or aversive given the widespread exposure to societal narratives prescribing bodily and behavioral control during pregnancy and motherhood in Western culture (e.g., Carter, 2010).

Research on body experiences during pregnancy has focused predominantly on external (e.g., appearance-related) and negative evaluations to the exclusion of other more positive or adaptive aspects of embodiment (e.g., Fuller-Tyszkiewicz, Skouteris, Watson, & Hill, 2013; Talmon & Ginzburg, 2018; Watson et al., 2015; Watson, Fuller-Tyszkiewicz, Broadbent, & Skouteris, 2017). For example, body dissatisfaction, a form of negative embodiment reflecting body image-related stress is related to depressive symptoms during pregnancy, and depressive symptoms in late preg-

nancy may predict body dissatisfaction in the postpartum period (Clark et al., 2009; Downs, DiNallo, & Kirner, 2008), suggesting that negative experiences of the body during pregnancy may relate to psychosocial distress during and following pregnancy. In turn, anxiety, stress, and depression symptoms during gestation increase risk for birth complications and postpartum depression, underscoring the relevance of examining possible correlates of these negative affective experiences during early pregnancy (Bonacquisti et al., 2017; Dunkel Schetter & Tanner, 2012; Soderquist, Wijma, Thorbert, & Wijma, 2009). Overall, scholarship to date has largely targeted assessing and reducing the presence of negative outcomes such as depressive symptoms or anxiety. However, accumulated (primarily qualitative) accounts of women's body experiences during pregnancy suggest multiple themes relating to reactions to bodily changes (e.g., joy, dissatisfaction), appraisal of the body experience (e.g., sense of control, loss of control), appraisal of the sense of the developing fetus (e.g., feeling invaded, feeling comforted, feeling a sense of pleasure), and pregnancy in the social sphere (i.e., as a public or private experience; Talmon & Ginzburg, 2018; Watson et al., 2015), suggesting that considering only negative experiences may narrow our understanding of these relationships.

In response, recent work has broadened the consideration of body experiences during pregnancy to include assessment of women's psychological representations of the body, yielding two internal aspects (i.e., body agency and body estrangement) and one external aspect (i.e., body visibility; Talmon & Ginzburg, 2018). More specifically, body agency reflects (pregnancy-specific) feelings of pride, self-confidence, and attractiveness, whereas body estrangement refers to feelings of loss of control, mind-body duality and disconnection, and bodily discomfort. From a more externally oriented perspective, body visibility reflects the sense of the public or exposed nature of the pregnant body (Talmon & Ginzburg, 2018). Preliminary work examining this expanded conceptualization of internally-oriented body experiences during pregnancy

indicated that after controlling for body shame, body estrangement is negatively associated with positive affective experiences and self-rated health, and positively associated with depressive symptoms, suggesting that body experiences are comprised of more than just external body evaluations (Talmon & Ginzburg, 2018). Additionally, qualitative work suggests that women who experience pregnancy embodiment negatively may also be less likely to engage in health-promoting self-care practices (such as eating regularly and nutritiously) that may correspond with decreased well-being (e.g., Cook-Cottone, 2017; Mulder et al., 2002). Relatedly, body agency demonstrated positive associations with indicators of quality of life (i.e., positive aspects of well-being) such as life satisfaction, self-rated health, and positive affective experiences (Talmon & Ginzburg, 2018), and negative relationships with depressive symptoms and negative affect (Talmon & Ginzburg, 2018; Talmon, Horovitz, Shabat, Haramati, & Ginzburg, 2019) suggesting that broadening the range of outcomes studied may result in a fuller understanding of the implications of body experiences during pregnancy.

1.2 The Contemporary Zeitgeist: Inclusion of Well-being Promotion during Pregnancy

Primarily studied in non-pregnant populations, the concept of well-being (i.e., subjective well-being) has been framed as a multidimensional concept reflecting a subjective, global experience of quality of life, incorporating affective (i.e., hedonic level well-being, comprised of both negative affect and positive affect) and cognitive (i.e., eudaimonic well-being, life satisfaction) components, beyond merely the absence of negative affect (Butler & Kern, 2016; Diener, 1984, 1994, 2009; Ryan & Deci, 2001). While life satisfaction is thought to represent a summative evaluation of "life as a whole," affective well-being may shift in response to events (Diener, 2009). As a result, affective well-being may be a particularly relevant area of focus during the transitional period of pregnancy. Though some research has included an assessment

of positive affect during pregnancy, observational research has primarily focused on associations with demographic variables (e.g., age, parity, race, employment) to the exclusion of experiential factors such as the experience of embodiment (e.g., Cheng & Pickler, 2009). While a focus on demographic variables may illustrate possible interactions between affective well-being and external systems (e.g., racism, ageism) this illuminates a gap in knowledge regarding how affective well-being may relate to interactions with internal components of experience (i.e., embodiment).

Consequently, there is little knowledge regarding the potential relationships between body experiences and well-being during pregnancy. Larger shifts toward a health promotion lens (e.g., Hilton & Johnston, 2017) highlight the necessity of balancing consideration of positive and negative outcomes in understanding their potential to influence health and illness trajectories. Much research on positive embodiment during pregnancy has been qualitative (e.g., Nash, 2015; Watson, Broadbent, Skouteris, & Fuller-Tyszkiewicz, 2016; Watson et al., 2015), with little quantitative assessment of positive embodiment (Talmon & Ginzburg, 2018; Talmon et al., 2019), suggesting that this area of knowledge regarding the experience of the body during pregnancy may benefit from additional observational quantitative assessment. Overall, existing qualitative and quantitative work highlights the likely co-occurrence of positive and negative experiences of the pregnant body, underscoring the need to systematically explore a broader conceptualization of maternal mental health that incorporates positive affective experiences as well as negative ones (Bergbom, Modh, Lundgren, & Lindwall, 2017).

However, as the AMWESR suggests, awareness and subsequent appraisals of bodily sensations (collectively referred to as body experiences or embodiment) may relate to well-being and distress in different ways, reflecting a complex system of possible relationships. Moreover, a range of factors (e.g., individual behaviors, interpersonal interactions, community/societal forces) may affect the strength of these relationships.

For example, one potential moderating factor may be the way in which individuals relate to their internal experiences more generally. Mindfulness has been conceptualized as non-evaluative, non-judgmental awareness and acceptance of the present moment (e.g., Brown, Ryan, & Creswell, 2007), suggesting that mindfulness may facilitate the balance that characterizes well-being and self-regulation via awareness and acceptance of both positive and negative appraisals.

1.3   Mindfulness, Self-Care, and Pregnancy

Notably, methodological inconsistencies contribute to uncertainty in our understanding regarding the potential role of mindfulness during pregnancy. A recent meta-analysis examining the impact of mindfulness-based interventions during pregnancy indicates that mindfulness interventions increase levels of mindfulness, though may not produce statistically significant change in anxiety, depression, or perceived stress (Dhillon, Sparkes, & Duarte, 2017). However, few if any studies assessed positive outcomes (e.g., self-compassion, positive affect, satisfaction with life) or overall well-being, despite being framed as exploring the impact of mindfulness-based interventions on mental health. The lack of inclusion of positive outcomes could limit our understanding of how mindfulness functions in relation to well-being.

In non-pregnant samples, cross-sectional research examining pre-existing levels of mindfulness as a moderator suggests that mindfulness may relate to positive and negative affective experiences differently. For example, dispositional (i.e., trait) mindfulness has been observed to attenuate the relationship between appraisal of life events (e.g., as hassles) and negative affective outcomes such as depression, anxiety, and stress (Marks, Sobanski, & Hine, 2010). Additionally, mindfulness aspects (observing, describing) buffer the effects of stress on negative affective symptoms as well as the effects of stress on life satisfaction (Bergin & Pakenham, 2016). Moreover, limited research in the areas of mindfulness and self-compassion during pregnancy suggests that awareness and acceptance with respect to pregnancy-related changes may con-

tribute both to positive outcomes and reductions in negative outcomes (Dimidjian et al., 2016; Dunn, Hanieh, Roberts, & Powrie, 2012), highlighting the importance of further exploration of how mindfulness and mindfulness-based practices may affect the experience of pregnancy. However, research with pregnant samples has not yet explored the ways in which behaviors and practices associated with mindfulness may specifically relate to positive and negative embodiment during pregnancy.

In previous research on motherhood, self-care has been conceptualized more broadly as activities that contribute to or address maternal physical and emotional health, as part of a larger definition of maternal functioning, studied particularly in the first year after birth (Barkin, Wisner, Bromberger, Beach, & Wisniewski, 2010). Overall, research on maternal self-care and well-being during pregnancy has focused mainly on actions directed toward the fetus, with little understanding regarding women's efforts to care for themselves during pregnancy, or how this affects their overall well-being (e.g., Sjostrom, Langius-Eklof, & Hjertberg, 2004). Given the focus of societal discourse on maternal self-care during pregnancy in terms of benefit to the fetus (i.e., defined solely as health behaviors), previous research has often used prenatal care appointments as a proxy for maternal self-care during pregnancy (e.g., Barkin & Wisner, 2013; Larranaga et al., 2013; Reading, Campbell, Cox, & Sledmere, 1982). However, the reliance on prenatal care appointments for understanding maternal self-care is limited in many respects. For example, prenatal care appointments may focus exclusively on maternal actions with direct relevance for fetal health, which may not fully capture maternal actions which primarily directly affect maternal health (though likely with indirect benefits for fetal health).

Alternatively, mindful self-care (MSC) reflects a more holistic conceptualization of the experience. MSC is a constellation of well-being promotion practices characterized by intentional spiritual/existential (e.g., sense of purpose and meaning), relational (e.g., positive social support), cognitive-affective (e.g., mindfulness, self-

compassion), and physical (e.g., hydration, sleep, exercise) dimensions. Aligned with the AMWESR framework, MSC helps facilitate attunement with the internal self (i.e., positive embodiment; Cook-Cottone, 2015; Cook-Cottone & Guyker, 2018) and balance with external demands. For example, MSC may act as a mediator in the relationship between perceived stress and health-related quality of life for adult students (Feng, Mosimah, Sizemore, Goyat, & Dwibedi, 2019), suggesting that MSC behaviors may help individuals respond to perceived stress to mitigate its impact on their health-related quality of life (and thus, their overall well-being). Importantly, MSC reflects purposeful assessment to determine which self-care practices may be most relevant to the individual and when (e.g., assessing "goodness of fit"), informed by self-awareness and attunement (as opposed to context-blind application of self-care strategies; Cook-Cottone & Guyker, 2018). Research examining MSC behaviors in chaplains and hospice care professionals suggests differential distributions of self-care behaviors in each group and differing strengths of their relationships to psychosocial distress indicators such as burnout and secondary traumatic stress (Hotchkiss, 2018; Hotchkiss & Lesher, 2018). Thus, the current research and societal focus on prenatal care as a universal recommendation does not adequately assess MSC as an intentional set of practices that is informed by and responsive to individual needs.

Recent research examining MSC in women during different stages of the transition to motherhood (i.e., some participants were assessed during pregnancy, some within the first year postpartum, some had young children) found that women with higher levels of MSC reported lower levels of negative body image and depressive symptoms (Webb et al., 2019). More specifically, while some mothers conceptualize self-care as critical to new motherhood (i.e., during the postpartum period), this may conflict with the idea of selflessness (e.g., minimization of own needs, exclusive focus on the infant's needs) as important to "good" motherhood (Barkin & Wisner, 2013). The negative cognitions and emotions associated with low levels of MSC (e.g., negative body im-

age) suggest that investigating early-phase (i.e., pregnancy) correlates of well-being is important to effective ongoing prioritization of maternal health. In accordance with the AMWESR framework, response to bodily signals is a key building block for MSC practices, which are in turn supportive of positive embodiment (Cook-Cottone & Guyker, 2018). Theories of stress and coping (e.g., Folkman, 1984, 2008) posit that events may be appraised (i.e., evaluated, interpreted) differently, particularly in comparison to the individual's coping resources, resulting in varied experiences of stress. That is, stress is conceptualized as an interactional process between person and environment. Similarly, women's appraisal of their body experiences (e.g., as positive, negative, integrated, disconnected) may have important implications for their well-being, particularly in the context of protective or coping mechanisms. During the context of pregnancy, this may reflect a retained yet dynamic sense of self (i.e., body agency) as well as behavioral responses to these needs (i.e., MSC) which are thought to be critical to the well-being of the mother. Systematic assessment of the embodiment experience during pregnancy in relation to MSC practices could help to expand our understanding of maternal health. Further, it remains uncertain how MSC may function in the relationships between positive or negative (i.e., agency or estrangement) pregnancy embodiment and both well-being and psychological distress which could have important implications for prenatal intervention and health promotion science.

1.4   Specific Aims and Hypotheses

The present study attempts to replicate and extend existing findings regarding embodiment during the developmental context of pregnancy. Qualitative research suggests that women may be navigating a unique experience of embodiment during pregnancy (e.g., Schmied & Lupton, 2001), which may relate to their self-care behaviors and to their sense of affective well-being, as represented by both positive and negative affect. Furthermore, preliminary data regarding body experiences during

pregnancy suggests that body agency is positively associated with indicators of well-being and negatively associated with indicators of psychosocial distress, whereas body estrangement is negatively associated with indicators of well-being and positively associated with indicators of psychosocial distress (Talmon & Ginzburg, 2018). Finally, MSC behaviors have demonstrated negative associations with indicators of psychosocial distress (Webb et al., 2019). The intermediate stage of this area of research, characterized mainly by qualitative accounts of pregnant embodiment and continued work toward replicating and further specifying relevant predictive relationships, suggests that support does not yet exist to hypothesize point estimates of the strength of relationships. However, broadly directional hypotheses informed by prior research along with exploratory hypotheses could provide guidance for more precise estimates of effects in the future (Edmondson & Mcmanus, 2007).

Thus, the primary aims of the present study are to examine the associations between body agency, body estrangement, mindful self-care practices, positive aspects of well-being, and psychosocial distress (e.g., negative affect) to replicate and extend prior work in this area (e.g., Talmon & Ginzburg, 2018). Additional exploratory aims included evaluation of the use of the Warwick-Edinburgh Mental Wellbeing Scale in a pregnant population (e.g., through comparison with norms/published distributions associated with non-pregnant populations). Aligned with these aims, the following specific associations are hypothesized:

1. Body agency will be positively associated with well-being, and mindful self-care and negatively associated with body estrangement and psychosocial distress.

2. Body estrangement will be positively associated with psychosocial distress and negatively associated with well-being and mindful self-care.

3. It is anticipated that the hypothesized positive relationships between body agency and well-being will be stronger for women scoring higher in mindful

self-care relative to those scoring lower. Whereas it is hypothesized that the negative link between body agency and psychosocial distress will be stronger for women scoring higher versus lower in mindful self-care.

4. It is anticipated that the predicted positive associations between body estrangement and psychosocial distress will be stronger for women scoring lower in mindful self-care relative to those scoring higher. Meanwhile, it is hypothesized that the negative link between body estrangement and well-being will be stronger for women scoring lower versus higher in mindful self-care.

CHAPTER 2: METHODS

2.1   Participants

Study participants ($N = 219$) were recruited from online forums targeted toward the experience of pregnancy, email listservs, and social media groups (e.g., Reddit, Facebook, Instagram), using a mixture of general convenience and snowball sampling. Participants met the following inclusion criteria: 18-44 years of age, female individuals with a self-reported confirmed pregnancy and gestational age greater than 12 weeks, comfort with reading and writing in English, and located in the United States or Canada. No additional exclusionary criteria were imposed. Participants who completed at least 90% of the measures of focus in the present work were eligible for retention to analysis.

2.2   Materials and Procedure

Participants who clicked the initial link were routed to an eligibility survey to assess the degree to which they met inclusion criteria for the present study. After the eligibility survey, eligible individuals were electronically routed to an (online) informed consent, with the opportunity to download an offline copy for their records. Individuals determined to be ineligible were offered the opportunity to provide their contact e-mail to receive information about future research for which they may be eligible, and were also provided with a list of additional behavioral health support resources they were encouraged to access on their own. Eligible participants who indicated their agreement with the informed consent were re-routed to the full set of questionnaires in a separate survey, ensuring separation from identifying information. After completion of the questionnaires (which were presented in a fixed order), participants

were offered the option to be routed to another questionnaire to provide their full name and e-mail contact information to enter a drawing for a $25 Amazon.com gift card, in order to provide separation between this identifying information and their questionnaire data. Those who provided their contact information for the gift card drawing could also elect to be contacted regarding future research for which they may be eligible. All procedures were approved by the Institutional Review Board at the University of North Carolina at Charlotte (IRB # 19-0688).

Data collection began in May 2020 and data for the present analyses were extracted in October 2020. Of note, Coronavirus Disease 2019 (i.e., COVID-19, the disease caused by the virus SARS-Cov-2) was spreading (and at the time of writing continues to spread) rapidly across the globe. Along with increasing numbers of cases, severe complications, and deaths recorded every day, more distal impacts of the pandemic (in an effort to limit the spread of illness) include but are not limited to restrictions placed on healthcare, travel, work, education, and entertainment, and precautions ranging from cancellation of appointments, to tele- or video-services in place of in-person services, to visitor limitations in hospitals and clinics (CDC, 2020).

2.3   Measures

2.3.1   Body agency

Body agency was measured via the Body Agency subscale of the Body Experience during Pregnancy Scale (BEPS; Talmon & Ginzburg, 2018). The BEPS is a 28-item scale assessing body experience during pregnancy across three subscales: Body Agency, Body Estrangement, and Body Visibility. Respondents are asked to rate items (with regard to how well they describe the respondent's body experience over the past month) on a four-point scale from never (1) to always (4). Subscale scores are calculated as the average of the responses to all of the items within that subscale. Subsequent evaluation of the fit of the measurement model (i.e., assessment of body experiences during pregnancy by measuring body agency, body estrangement, and

body visibility) indicated a statistically significant relationship between the three measured indicators and the hypothesized latent variable of body experiences during pregnancy (Talmon & Ginzburg, 2018; Talmon et al., 2019). The Body Agency subscale consists of 12 items, such as "I trusted my body to know what to do" (with scores ranging from 1 to 4). In initial validation work, scores on the Body Agency subscale were negatively correlated with scores on the Body Estrangement subscale, had adequate internal consistency ($\alpha = .88$), and demonstrated expected relationships with measures of well-being (i.e., life satisfaction and positive affect), negative affect, and depression (Talmon & Ginzburg, 2018). In the present study, the Body Agency subscale also demonstrated adequate internal consistency ($\alpha = .86$) and a confirmatory factor analysis supported the presence of three intercorrelated factors consistent with Body Agency, Body Estrangement, and Body Visibility ($\chi^2 = 709.95$, $df = 347$, p < .001; CFI = 0.808; RMSEA = 0.076). Standardized factor loadings for the Body Agency factor ranged from 0.42 to 0.74.

2.3.2   Body estrangement

Body estrangement was measured via the Body Estrangement subscale of the BEPS (Talmon & Ginzburg, 2018). The Body Estrangement subscale consists of 11 items, such as "I felt my body was betraying me" (with scores ranging from 1 to 4). In initial validation work, scores on the Body Estrangement subscale had adequate internal consistency ($\alpha = .89$), demonstrated expected relationships with measures of well-being (i.e., life satisfaction and positive affect), negative affect, body shame, disruption of bodily boundaries, and depression (Talmon & Ginzburg, 2018). In the present study, standardized factor loadings for the Body Estrangement factor in the confirmatory factor analysis described above ranged from .09 to .79, and the Body Estrangement subscale also demonstrated adequate internal consistency ($\alpha = .85$). For purposes of the present study, the Body Visibility subscale was not used.

2.3.3 Mindful self-care

Mindful self-care behaviors were illustrated by the overall score on the Mindful Self-Care Scale (MSCS; Cook-Cottone & Guyker, 2018), a measure of specific self-care practices from a variety of life domains. The MSCS is a 33-item scale with six subscales (physical care, supportive relationships, mindful awareness, self-compassion, purpose, mindful relaxation, and supportive structure). Additionally, three global items assess internal and external domains and the connection between them, aligned with models of positive embodiment such as the AMWESR (Cook-Cottone, 2015). Respondents are asked to rate the frequency of the behavior described by each item within the past week on a scale from 1 (never) to 5 (always). Scores are calculated by averaging the items within each subscale (excluding the three general items which are to be considered separately) to create subscale scores (ranging from 1 to 5). The subscale scores are then summed to create a total MSC score (ranging from 5 to 30). Example items include "I ate a variety of nutritious foods," (Physical care), "I felt supported by people in my life," (Supportive relationships), "I had a calm awareness of my feelings" (Mindful awareness), "I gave myself permission to feel my feelings," (Self-compassion and purpose), "I sought out images to relax," (Mindful relaxation), and "I maintained a manageable schedule," (Supportive structure). The full-scale has demonstrated a high level of internal consistency ($\alpha = .87$-$.89$), and subscale scores demonstrated adequate to high levels of internal consistency ($\alpha = .70$-$.94$). Scores on the MSCS have been observed to relate negatively to measures of eating pathology and positive relationships with some indicators of body esteem (Cook-Cottone & Guyker, 2018). Recent research has also documented negative associations between scores on the MSCS and indicators of poor mental health during pregnancy and postpartum (Sheffield, 2019; Webb et al., 2019). In the present study, the full-scale had a comparable level of internal consistency ($\alpha = .85$), and confirmatory factor analysis was supportive of a six-factor sub-structure, consistent with the elements

of physical care, supportive relationships, mindful awareness, self-compassion and purpose, mindful relaxation, and supportive structure, and one higher-order factor consistent with overall MSC ($\chi^2 = 750.95$, $df = 489$, $p < .001$; CFI = 0.846; RMSEA = 0.057). Standardized factor loadings for the subfactors ranged from 0.33 to 0.88.

2.3.4   Psychosocial distress

Psychosocial distress was assessed by scores on the General Distress subscale of the Prenatal Distress Measure (Pre-DM; Hirsch, Fingerhut, & Allison, 2017), a 10-item scale which measures both general and obsessive-compulsive aspects of distress during pregnancy. An exploratory factor analysis supported the presence of two separate factors (General Distress and Obsessive-Compulsive Symptoms; Hirsch et al., 2017). The Pre-DM is an adaptation of the Postpartum Distress Measure (Allison, Wenzel, Kleiman, & Sarwer, 2011) originally designed to assess depression and anxiety symptoms in women during the postpartum period. Respondents are asked to rate statements describing experiences over the past week, on a scale of 0 (not true) to 3 (true most of the time), such as "I am frustrated and quick to anger." The General Distress scale consists of six items (responses are summed to calculate subscale scores ranging from 0 to 18) and demonstrated adequate internal consistency in initial validation work ($\alpha = .84$), as well as strong positive correlations ($rs > .40$; $ps < .01$) with other measures of psychosocial distress (Hirsch et al., 2017). In the present sample, the General Distress subscale had lower internal consistency ($\alpha = .69$), though a confirmatory factor analysis was generally supportive of a two-factor sub-structure for the overall measure, consistent with the factors of General Distress and Obsessive-Compulsive Symptoms ($\chi^2 = 74.41$, $df = 34$, $p < .001$; CFI = 0.877; RMSEA = 0.085). Standardized factor loadings for the General Distress factor ranged from 0.49 to 0.71.

2.3.5 Well-being

Well-being was captured by the overall score on the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS; Tennant, Fishwick, Platt, Joseph, & Stewart-Brown, 2006), a measure of positive mental health. The WEMWBS is a 14-item scale that assesses both affective and cognitive aspects of well-being, in accordance with a multi-dimensional conceptualization of mental well-being (e.g., Diener, 2009; Ryan & Deci, 2001). Example items include "I've been feeling relaxed," and are rated on a scale from 1 (none of the time) to 5 (all of the time) over the past two weeks. Item scores are summed to create a total score ranging from 14 to 70, and population surveys have not resulted in observable ceiling or floor effects, suggesting that the WEMWBS is appropriate to assess mental well-being at a variety of levels (Tennant et al., 2007). In initial and subsequent validation work with a variety of diverse groups (e.g., adults, adolescents, individuals identifying as Pakistani and Chinese), test-retest reliability was acceptable (ICC = 0.66 - 0.83), factor analysis supported the presence of a single underlying factor (i.e., mental well-being) assessed by the items, and internal consistency of the items was relatively high ($\alpha = 0.89$; Clarke et al., 2011; Stewart-Brown et al., 2011; Tennant et al., 2006, 2007). Additionally, a secondary analysis evaluating the responsiveness of the WEMWBS to mental health interventions suggested that this measure is sensitive to change (Maheswaran, Weich, Powell, & Stewart-Brown, 2012). In the present work, internal consistency of the WEMWBS was comparable to that in previously studied non-pregnant samples ($\alpha = .87$) and a confirmatory factor analysis supported the hypothesized unidimensional structure ($\chi^2 = 139.04$, $df = 65$, $p < .001$; CFI = 0.894; RMSEA = 0.083). Standardized factor loadings for the well-being factor ranged from 0.29 to 0.83.

2.3.6   Demographic questionnaire

Participants were asked to report the following demographic information: maternal age, gestational age, gestational weight gain (adjusted for gestational age), pregnancy history, pre-pregnancy weight, height, method of pregnancy confirmation, socioeconomic status (as reflected by perceived socioeconomic status), occupation type, education level, physical/mental health concerns and current treatment, current relationship status, sexual orientation, gender identity, disability status, and race/ethnicity identification.

2.4   Data Analysis

Data exploration, evaluation of normality assumptions, and all visualizations were conducted in *RStudio*, using *R*v4.0.2 (R Core Team, 2020; RStudio Team, 2019). Missing data were analyzed via the construction of histograms, matrix plots, and tables to assess possible patterns of missingness (Tierney, Cook, McBain, & Fay, 2020). Primary descriptive statistics and zero-order correlations were examined to evaluate distributions and the presence of expected relationships (based on theory and prior research) in the present sample (Korkmaz, Goksuluk, & Zararsiz, 2014; Revelle, 2020; Fox & Weisberg, 2019). Histograms and scatterplots of focal variables and relationships, respectively, were examined to assess normality of distributions and form of relationships to determine the degree to which the sample distributions met assumptions for the proposed analyses. Additionally, plots were constructed to assess for the presence of multivariate outliers. Finally, variance inflation factors for the predictor variables for each model stage were assessed to assess for possible data multicollinearity.

Support for hypothesized relationships was evaluated through separate specification, estimation and significance testing of the parameters (e.g., model fit) of the proposed models. Research questions were examined with two separate, three-stage

hierarchical multiple regression models. Prior to analyses, focal predictor variables were mean centered. At stage one of each separate regression model (i.e., one each for well-being and psychosocial distress), control variables were entered to adjust for potential confounding influences. Maternal age, education, and parity were selected as control variables, given existing support for their relationships with body agency and body estrangement (Aguinis & Vandenberg, 2014; Talmon & Ginzburg, 2018). Maternal education was polychotomized (High school graduate/some college, Associate/Bachelor's degree, Master's/Doctoral/Professional degree) to reflect that the nature of graduate education may vary by field. Furthermore, parity was dichotomized to reflect nulliparity (no previous pregnancies carried to term) or multiparity (one or more previous pregnancies carried to term, including stillbirths). At stage two, focal predictors (i.e., body agency, body estrangement, and MSC) were entered simultaneously to examine their linear effects. Finally, at stage three, the interaction term (i.e., of either body agency or body estrangement with MSC) was entered to determine any additional variance explained above and beyond linear effects.

All models were estimated using the full information maximum likelihood (FIML) method, available in the *lavaan* package (Rosseel, 2012), and nonparametric bootstrapping (with 10,000 resamples) was used to construct basic 95% confidence intervals for estimated parameters using the *boot* package (Canty & Ripley, 2020; Davison & Hinkley, 1997). For each model, explained variance (as reflected by change in R^2) was examined to assess model fit, and Cohen's f^2 was calculated for the difference between model R^2) values to reflect the incremental contribution of the predictors added at each stage. For any statistically significant interactions, plots of simple slopes at one standard deviation above and below the mean were planned to further illustrate the nature of the interaction effects.

CHAPTER 3: RESULTS

3.1   Sample Characteristics

Of the 219 participants who had consented to participate by the time of analysis (October, 2020), 54 (24%) completed less than 90% of the measures relevant to the focal research questions and were not retained for further analyses. Of the 165 participants remaining, missingness on variables ranged from .06% to 3% for focal variables, and up to 9% for covariates, and this pattern was fairly consistent across sections of variables. Notably, participants tended to complete either approximately half of the survey, or nearly all of it (demographic data were collected at the end of a series of questionnaires), and the focal variables in the present analyses were restricted to the initial half of the questionnaire set. Within the items related to the variables of interest, no consistent pattern of missingness was observed, thus the missing data were considered to be missing at random.

Participant age was in the middle of the inclusionary range of 18 to 44 ($M_{age} =$ 31.4, $SD = 4.08$; $n = 15$ participants did not provide their age), and approximately 85% of the present sample identified as White ($n = 125$; 19 participants did not provide information regarding this dimension of racial identification) and 95% identified as non-Hispanic or Latinx/o/a ($n = 144$; 21 participants did not provide information regarding this dimension of ethnic identification). Forty women reported having carried at least one pregnancy to term prior to the present pregnancy (which included stillbirths; $n = 15$ women did not provide information regarding pregnancy history). Sample characteristics are presented in Table 5.1.

3.2   Descriptive Statistics

On average, this sample appears to have evidenced a slightly lower level of well-being ($M = 46.28$; $SD = 6.98$) as measured by the WEMWBS in comparison to previously observed scores in non-pregnant individuals ($M = 50.7$, $SD = 8.79$; Tennant et al., 2006). In addition, the participants reported a moderate level of MSC practices ($M = 19.97$, $SD = 2.64$), low levels of distress ($M = 4.96$, $SD = 3.38$), a moderate level of body agency ($M = 2.66$, $SD = 0.46$), and a low-moderate level of body estrangement ($M = 1.75$, $SD = 0.49$).

3.3   Bivariate Associations

Examination of bivariate correlations generally reflected an expected pattern of relationships in this sample, consistent with hypothesized relationships (Hypotheses 1 and 2) within the context of the guiding AMWESR framework. Body agency was positively associated with both well-being ($r = 0.71$) and MSC ($r = 0.64$), and negatively associated with body estrangement ($r = -0.65$) and psychosocial distress ($r = -0.45$). Conversely, body estrangement was positively associated with psychosocial distress ($r = 0.42$) and negatively associated with well-being ($r = -0.47$) and MSC ($r = -0.42$; all ps $< .001$). Notably, maternal education level demonstrated a small but statistically significant negative association with body agency ($r = -0.17$, $p = 0.04$). Descriptive statistics and zero-order correlations are presented in Table 5.2.

Examination of partial correlations (controlling for the relationships between the other focal variables in each model) reflected that the relationship between body estrangement and body agency appeared to be largely preserved. In contrast, the association between body agency and distress was markedly attenuated. Similarly, the association between body estrangement and well-being was noticeably smaller when controlling for the relationships with the other focal variables in the model.

3.4 Hierarchical Linear Regression Analyses for Body Agency, Body Estrangement, Mindful Self-Care, and Well-being

A model which included pre-specified covariates (i.e., maternal age, maternal education, and parity) and examined the main associations of body agency, body estrangement, and MSC accounted for approximately 62% of the variance observed in well-being ($R^2 = 0.62$, 95%CI[0.50, 0.68]), which represented a 60% increase ($R^2\Delta = 0.60$, Cohen's $f^2 = 1.61$) over the variance accounted for by the model including only the covariates ($R^2 = 0.02$, 95%CI[-0.07, 0.03]). Notably, only the unique associations of body agency ($b = 6.58$, 95%CI[4.29, 9.62], $p < .001$) and MSC ($b = 1.09$, 95%CI[0.68, 1.49], $p < .001$) with well-being surpassed traditional thresholds of statistical significance. The contribution of body estrangement to this model was minimal ($b = -0.44$, 95%CI[-2.35, 2.46], $p = .64$).

The addition of a term representing the interaction of body agency and MSC ($b = -0.22$, $p = 0.38$, 95%CI[-0.72, 0.29]) resulted in no appreciable improvement to the model fit ($R^2\Delta = 0.60$, Cohen's $f^2 = 0.003$), thus Hypothesis 3a was not supported. Similarly, the addition of a term representing the interaction of body estrangement and MSC to this model ($b = 0.009$, $p = .97$, 95%CI[-0.65, 0.58]) resulted in no appreciable improvement to model fit ($R^2\Delta < .01$, Cohen's $f^2 = 0.003$), thus Hypothesis 4b was not supported. Of note, calculated variance inflation factors for the aforementioned model stages were not in excess of 2.35. Model results are summarized in Table 5.3.

3.5 Hierarchical Linear Regression Analyses for Body Agency, Body Estrangement, Mindful Self-Care, and Distress

A model which included pre-specified covariates (i.e., maternal age, maternal education, and parity) and examined the main associations of body agency, body estrangement, and MSC accounted for approximately 29% of the variance observed in

prenatal psychosocial distress ($R^2 = 0.29$, 95%CI[0.17, 0.39]), which represented a 28% increase ($R^2\Delta = 0.28$, Cohen's $f^2 = 0.39$) over the variance accounted for by the model including only the covariates ($R^2 = 0.01$, 95%CI[-0.06, 0.03]). Only the unique associations of body estrangement ($b = 1.52$, 95%CI[0.03, 2.97], $p = .01$) and MSC ($b = $ -0.39, 95%CI[-0.68, -0.21], $p = .001$) with well-being surpassed traditional thresholds of statistical significance. The contribution of body agency to this model was markedly less ($b = $ -0.76, 95%CI[-2.35, 0.79], $p = .32$).

The addition of a term representing the interaction of body agency and MSC ($b = 0.38$, 95%CI[-0.04, 0.68], $p = .02$) in their association with prenatal distress was associated with a statistically significant point estimate as well as a bootstrapped confidence interval inclusive of zero, suggesting some instability in this estimate. However, the inclusion of this term did result in a small improvement to the model fit ($R^2\Delta = 0.03$, Cohen's $f^2 = 0.03$). Overall, from a conservative perspective, uncertainty with respect to the stability of the point estimate and consideration of the range of the confidence interval collectively did not result in support for Hypothesis 3a. Somewhat in contrast, the addition of a term representing the interaction of body estrangement and MSC to this model ($b = $ -0.51, 95%CI[-0.80, -0.03], $p = .004$) resulted in a slightly more stable estimate, as well as a small improvement to model fit ($R^2\Delta = 0.04$, Cohen's $f^2 = 0.05$), indicating some support for Hypothesis 4a. Of note, calculated variance inflation factors for the aforementioned model stages were not in excess of 2.35. Model results are summarized in Table 5.4.

To further explore the interactions highlighted in the models examining relationships with prenatal distress, simple slopes plots were constructed using the *interactions* package in R (Long, 2019). Though the model estimated value was marked by instability, visual examination of the overall patterns in the simple slopes plot visualizing the interaction of MSC and body agency suggested that at higher levels of MSC, the relationship between body agency and prenatal distress may be more

consistent across levels of body agency (i.e., one standard deviation above and below the mean), whereas at lower levels of MSC, body agency appears to have a stronger negative link with prenatal distress (see Figure 5.2). Conversely, at higher levels of MSC, the link between body estrangement and prenatal distress appears weaker (in comparison to lower levels of MSC; see Figure 5.3).

CHAPTER 4: DISCUSSION

The present work, as a partial replication and exploration of the interplay between appraisals, behavior, and affective gestational experiences, provided preliminary support for a buffering role of MSC in the relationship between body estrangement and psychosocial distress. More broadly, body agency and MSC were positively associated with well-being, and body estrangement was positively associated with distress, whereas MSC was negatively associated with distress. However, MSC was not observed to consistently modify the relationship between body agency and psychosocial distress. Overall, results suggest that (dis)connection with the body and engagement in intentional self-care are part of a complex system with respect to women's experiences of well-being and distress during pregnancy.

At a surface level, bivariate relationships among body agency, body estrangement, MSC, well-being, and distress emerged as expected. These associations were generally consistent with observed relationships between body agency and positive affective indicators and between body estrangement and negative affective indicators (Talmon & Ginzburg, 2018). Additionally, observed bivariate associations were consistent with previously reported relationships between mindfulness-related aspects (e.g., MSC; awareness and acceptance) and positive and negative affective indicators (Webb et al., 2019; Dimidjian et al., 2016; Dunn et al., 2012). However, further examination suggested little if any unique association between body agency and distress, and similarly, between body estrangement and well-being. This is largely consistent with co-occurring observations of both negative and positive affective experiences of the pregnant body (e.g., Bergbom et al., 2017), and with the emphasis on balance within the context of the AMWESR (Cook-Cottone, 2015, 2006), versus a focus on positive

or negative affect exclusively. However, the present findings were inconsistent with qualitative research indicating that women who experience pregnant embodiment negatively are also less likely to engage in self-care practices (e.g., Cook-Cottone, 2017; Mulder et al., 2002), as well as with observations of negative unique associations between body agency and negative affect (Talmon & Ginzburg, 2018).

In the present study, MSC did not appear to modify the relationships between body estrangement and well-being, or between body agency and distress. While the point estimate for the interaction of body agency and MSC in their relationship with prenatal distress surpassed traditional statistical significance thresholds, the bootstrapped confidence interval for this term was inclusive of zero. This inconsistency suggests that the effect may not be robust, and underscores the importance of future replication efforts. Notably, MSC and body agency were strongly and positively correlated in the present sample, which may have constrained the degree to which the model could assess potential interactive effects. Taken together, results could suggest that, at average levels of MSC, simply having positive body experiences (i.e., agency) does not necessarily co-occur with experiencing less distress, and conversely, that having negative body experiences (i.e., estrangement) does not necessarily co-occur with less well-being.

The observed interaction of MSC and body estrangement in their relationship with distress is generally consistent with prior work supporting a buffering role of mindfulness aspects (observing and describing) in the relationship between stress and negative affective symptoms (Bergin & Pakenham, 2016). In the context of the present work, findings suggest that, for those who endorse some degree of body estrangement, engaging in more intentional self-care practices may be associated with a lower level of distress (than for those who engage in fewer intentional self-care practices).

Notably, MSC, body agency, and body estrangement have not previously been examined together with respect to their association with well-being and distress.

Specifically, comparison of full and partial correlations suggested that MSC and body experiences are focal to the overall experience of pregnancy. The presence of both well-being and distress as assessed in this sample highlight the importance of a holistic conceptualization of maternal health. More generally, mindfulness-based interventions have accrued support (more commonly in non-randomized controlled trials) for their potential to mitigate anxiety, depression, perceived stress, and to improve overall mindfulness, adaptive emotion regulation, and mindful eating, though this continues to be an emerging area of study (Dhillon et al., 2017; "Mindfulness-based programme on the psychological health of pregnant women", 2019; Vieten et al., 2018).

Extending from the present research, given the consistently prominent contribution of MSC in models examining both well-being and distress, healthcare providers (e.g., medical providers, therapists, doulas, midwives) could assess for the presence of MSC behaviors during pregnancy (perhaps also acknowledging the context of body experiences during this period of physical and psychological change). Given the unique roles of healthcare providers within the breadth of maternal healthcare, providers may occupy different positions with respect to potential screening and psychoeducation regarding the important role of MSC during pregnancy. Moreover, the relevance of body experiences and MSC to experiences of well-being and distress during pregnancy in the present sample suggest that these relationships may continue to be an area of focus into the postpartum period. While beyond the scope of the present work, the postpartum period is also reflective of myriad physical and psychological transitions. Hence, extending this work into the postpartum period may be a fruitful area of exploration. Finally, MSC during pregnancy may potentially have downstream implications for child-related outcomes (e.g., via processes such as modeling and parenting behaviors).

The present work had some notable strengths. Specifically, its focus on prenatal body experiences and well-being contributes to a continuing expansion of our under-

standing of maternal holistic health, above and beyond the historical exclusive focus on prenatal care engagement and fetal health indicators. Importantly, the inclusion of both positively (e.g., body agency and well-being) and negatively (e.g., body estrangement and distress) valenced facets of experience in the context of this study underscores a growing emphasis on defining and understanding health and well-being outside of the mere absence of negative indicators. In the context of the COVID-19 pandemic, recruitment was conducted entirely online and across social media platforms, which expanded the range of individuals who were exposed to recruitment material and opportunities to participate in the study.

To our knowledge, this study is the first to use measures such as the WEMWBS with a sample of pregnant individuals, as well as the first to examine relationships between the WEMWBS and measures developed or modified for pregnant individuals (i.e., BEPS, Pre-DM). Notably, despite the WEMWBS having previously only been used with non-pregnant individuals, the WEMWBS items appeared to retain their one-factor structure and internal consistency in the present work, and resultant scores were largely comparable to those obtained with non-pregnant individuals studied in prior work (Tennant et al., 2006). Thus, it is possible that unique associations observed between the measurements utilized in the context of the present work contributed to differences observed when comparing findings from the present study with the results of prior work. As stated above, the unidimensional structure of the WEMWBS was replicated in the present sample, which suggests that the WEMWBS may function as a useful measure of well-being in women during pregnancy.

As noted above, data were collected during the first several months of the emergence of widespread COVID-19 infections, precautions, and restrictions across North America (CDC, 2020). As this is an entirely novel situation with uncertain depth and breadth of impact on the human experience, the degree to which this historical contextual shift may have impacted the relationships of focus in the present work (and

more broadly, the experience of pregnancy) remains unknown. Future work could continue to examine the current and lasting impact of the present pandemic, by developing measurements specific to these experiences and examining their potential relevance to the studied associations.

Surprisingly, despite this unique and likely distressing context, participants in this sample reported a relatively low mean level of distress, which may have contributed to some range restriction and thus constrained the extent to which we were able to examine the full range of possible relationships among the focal variables. Furthermore, the use of the Mindful Self-Care scale in the present sample as a total score reflective of overall engagement in MSC practices may have obscured important differential relationships between the facets of MSC assessed by the MSCS. Future work could examine the unique roles of aspects of MSC as they relate to body experiences, well-being, and distress.

Moreover, this was a relatively well-educated sample of cisgender women with relatively high levels of perceived socioeconomic status who identified primarily as non-Hispanic/Latinx/o/a and White. Relatedly, their experience of the COVID-19 pandemic and of pregnancy in general may have differed markedly from that of individuals with access to less financial, educational, and racial/ethnic privilege. Additionally, in the context of the present work, approximately 12% of participants did not indicate their racial, ethnic, or gender identification, and nine percent of participants did not indicate their educational level, relationship status, occupation, gestational age, or age. Thus, the results of the present work may have limited relevance to samples with differing socio-demographic compositions. Importantly, many of the measures used in the present work were created by and have to date been used primarily for individuals who hold majority and privileged identities. Consequently, the degree to which the constructs of interest are defined, sampled, and reflected by these measures in this sample may have little if any applicability for individuals at the intersection

of multiple minoritized and/or otherwise marginalized identities. Future research should intentionally engage in recruitment inclusive of or focused on aspects of socio-demographic diversity, to better understand the potential boundary conditions of the relationships observed in the present work.

Further, survey design in the present study utilized a fixed order of measures, and though this may have had limited effect on the focal variables due to their position at the beginning of the set of questionnaires, this may have contributed to systematic missingness in information regarding covariates or other socio-demographic facets. Thus, future research should utilize randomization in the order of measures presented to participants to reduce the likelihood of systematic missingness. In addition, though incentives in this study were structured as a possibility via a random drawing, future research could examine the potential impact and benefit (to participants) of guaranteed incentive options that also balance the cost to researchers (e.g., funds to purchase a smartphone application or electronic book).

Finally, this study utilized a cross-sectional, quantitative design, which may have limited both the depth and breadth of the data collected. Future longitudinal work could examine potential time-precedence of the studied relationships, which would enable a more stringent test of the relationships hypothesized by the AMWESR. Alternatively, micro-longitudinal work (e.g., ecological momentary assessment) could function to illuminate day-to-day or moment-to-moment trajectories as a test of linkages in the AMWESR. Finally, collection of additional context regarding areas such as social support and interaction with broader societal narratives, could aid in further exploring the more distal aspects of the AMWESR and the implications for health and well-being.

CHAPTER 5: CONCLUSIONS

The present work, as a partial replication and exploration of the interplay between appraisals, behavior, and affective gestational experiences, promotes inclusion of unique potential protective and risk factors for pregnancy well-being. In sum, results suggest that (dis)connection with the body, intentional self-care, and distress are tightly intertwined. Future work should focus on expanding the breadth, depth, and timeline of AMWESR components studied, to better understand the role of mindful self-care in the balance between internal and external demands during pregnancy.

Table 5.1: Sample characteristics

Sociodemographic characteristic (valid N)	$M \pm SD$ or $n(\%)$
Age (150)	31.43 ± 4.08
Gender identity (144)	
Cisgender female	144 (100)
Parity (150)	
Nulliparous	110 (73.33)
Multiparous	40 (26.67)
Perceived socioeconomic status (150)	7.03 ± 1.41
Gestational age (150)	22.29 ± 7.82
Education (150)	
Less than high school	0 (0)
High school graduate/equivalent	2 (1.33)
Some college	9 (6.0)
Associate's degree	6 (4.0)
Bachelor's degree	54 (36.0)
Master's degree	52 (34.67)
Doctoral degree	19 (12.67)
Professional degree	8 (5.33)
Racial identity (146)	
White	125 (85.61)
Black/African American	3 (2.05)
American Indian/Alaska Native	1 (0.68)
Asian	10 (6.85)
Native Hawaiian/Pacific Islander	1 (0.68)
Other/Self-identified	6 (4.11)
Ethnic identity (144)	
Spanish	0 (0)
Hispanic	6 (4.17)
Latinx/o/a	1 (0.69)
None of those listed	137 (95.14)

Note. Perceived socioeconomic status was measured on a 1-10 scale using the MacArthur Scale of Subjective Social Status (full measure available in Appendix).

Table 5.2: Bivariate associations between focal variables

	$M(SD)$	BA	BE	MSCS	WEMWBS
BA	2.66 (0.46)				
BE	1.75 (0.49)	-0.65***			
MSCS	19.97 (2.64)	0.64***	-0.42***		
WEMWBS	46.28 (6.98)	0.71***	-0.47***	0.71***	
PREDM-GD	4.96 (3.38)	-0.45***	0.42***	-0.48***	-0.62***

Note. $^{*}p{<}0.05$, $^{**}p{<}0.01$, $^{***}p{<}0.001$. $N = 165$. BA = Body Experiences during Pregnancy Scale, Body Agency Subscale; BE = Body Experiences during Pregnancy, Body Estrangement Subscale; MSCS = Mindful Self-Care Scale, total score; WEMWBS = Warwick-Edinburgh Mental Well-being Scale; PREDM-GD = Prenatal Distress Measure, General Distress Subscale.

Table 5.3: Hierarchical regression models - well-being

	Estimate[LL, UL]	z	p	R^2 [LL, UL]
WEMWBS				
Stage 1				
(Intercept)	45.44 [35.07, 55.20]	10.34	< .001	
Maternal education	-0.73 [-2.66, 1.25]	-0.77	.439	
Parity	-1.83 [-4.54, 0.86]	-1.41	0.159	
Maternal age	0.08 [-0.27, 0.42]	0.51	0.610	
				0.02 [-0.07, 0.03]
Stage 2				
(Intercept)	44.29 [38.12, 50.50]	16.19	< .001	
Maternal education	0.53 [-0.68, 1.67]	0.88	.381	
Parity	-1.00 [-2.74, 0.90]	-1.16	.246	
Maternal age	0.05 [-0.16, 0.26]	0.54	.591	
BA	6.58 [4.29, 9.62]	5.66	< .001	
BE	-0.44 [-2.35, 2.46]	-0.47	.639	
MSCS	7.01 [0.69, 1.49]	8.95	< .001	
				0.62 [0.50, 0.68]
Stage 3a				
(Intercept)	44.61 [38.03, 51.13]	16.20	< .001	
Maternal education	0.49 [-0.76, 1.63]	0.80	.423	
Parity	-1.06 [-2.79, 0.90]	-1.23	.220	
Maternal age	0.05[-0.17, 0.28]	0.52	.606	
BA	6.61 [4.17, 9.60]	5.69	< .001	
BE	-0.37 [-2.25, 2.51]	-0.39	.691	
MSCS	1.09 [0.68, 1.49]	6.17	< .001	
BA x MSCS	-0.22 [-0.71, 0.30]	-0.87	.383	
				0.62 [.50, .68]
Stage 3b				
(Intercept)	44.31 [38.00, 50.72]	16.02	< .001	
Maternal education	0.53 [-0.71, 1.67]	0.87	.383	
Parity	-1.01 [-2.74, 0.94]	-1.16	.246	
Maternal age	0.05 [-0.16, 0.27]	0.53	.594	
BA	6.58 [4.28, 9.67]	5.66	< .001	
BE	-0.44 [-2.48, 2.61]	-0.46	.648	
MSCS	1.09 [0.69, 1.51]	6.19	< .001	
BE x MSCS	0.009 [-0.65, 0.58]	0.03	.974	
				0.62 [0.49, 0.68]

Note. N = 165. BA = Body Experiences during Pregnancy Scale, Body Agency Subscale; BE = Body Experiences during Pregnancy, Body Estrangement Subscale; MSCS = Mindful Self-Care Scale, total score; WEMWBS = Warwick-Edinburgh Mental Well-being Scale. [LL,UL] indicates the lower and upper limits of a 95% confidence interval calculated based on 10,000 bootstrapped resamples.

Table 5.4: Hierarchical regression models - distress

	Estimate[LL, UL]	z	p	R^2 [LL, UL]
PREDM-GD				
Stage 1				
(Intercept)	4.16 [-0.42, 8.71]	1.97	.049	
Maternal education	0.61 [-0.24, 1.48]	1.34	.179	
Parity	0.38 [-0.82, 1.63]	0.60	0.546	
Maternal age	-0.006 [-0.16, 0.14]	-0.08	0.934	
				0.01 [-0.07, 0.03]
Stage 2				
(Intercept)	4.80 [0.88, 8.53]	2.64	.008	
Maternal education	0.24 [-0.59, 1.01]	0.59	.549	
Parity	0.28 [-0.73, 1.42]	0.49	0.620	
Maternal age	-0.009 [-0.14, 0.13]	-0.15	.880	
BA	-0.76 [-2.39, 0.77]	-0.99	.323	
BE	1.52 [0.01, 2.99]	2.47	.014	
MSCS	-0.39 [-0.68, -0.21]	-3.40	.001	
				0.29 [0.17, 0.39]
Stage 3a				
(Intercept)	4.32 [0.32, 8.09]	2.39	.016	
Maternal education	0.29 [-0.54, 1.06]	0.75	.453	
Parity	0.36 [-0.66, 1.53]	0.64	.525	
Maternal age	-0.006 [-0.13, 0.13]	-0.10	.918	
BA	-0.81 [-2.31, 0.84]	-1.07	.284	
BE	1.40 [-0.06, 2.92]	2.29	.022	
MSCS	-0.39 [-0.66, -0.19]	-3.38	.001	
BA x MSCS	0.38 [-0.05, 0.68]	2.28	.023	
				0.32 [0.18, 0.41]
Stage 3b				
(Intercept)	4.10 [0.17, 7.74]	2.29	.022	
Maternal education	0.27 [-0.54, 1.02]	.69	.490	
Parity	0.48 [-0.55, 1.66]	0.85	.398	
Maternal age	0.001 [-0.12, 0.13]	0.02	0.981	
BA	-0.81 [-2.36, 0.78]	-1.09	.277	
BE	1.17 [-0.38, 2.64]	1.91	.057	
MSCS	-0.41 [-0.68, -0.20]	-3.57	< .001	
BE x MSCS	-0.51[-0.81, -0.03]	-2.87	.004	
				0.33 [0.19, 0.43]

Note. $N = 165$. BA = Body Experiences during Pregnancy Scale, Body Agency Subscale; BE = Body Experiences during Pregnancy, Body Estrangement Subscale; MSCS = Mindful Self-Care Scale, total score; PREDM-GD = Prenatal Distress Measure, General Distress Subscale. [LL,UL] indicates the lower and upper limits of a 95% confidence interval calculated based on 10,000 bootstrapped resamples.

Figure 5.1: The Attunement Model of Wellness and Embodied Self-Regulation (Cook-Cottone & Guyker, 2018)

Note. This figure is reproduced from "The Development and Validation of the Mindful Self-Care Scale (MSCS): an Assessment of Practices that Support Positive Embodiment," by C. P. Cook-Cottone and W. M. Guyker, 2018, *Mindfulness, 9*, 161-175. Copyright 2017 by Springer Science+Business Media, LLC.

Figure 5.2: Interaction Plot for Body Agency and Mindful Self-Care in the Relationship with Prenatal Distress

Note. Predictors were mean-centered prior to creating interaction terms.

Figure 5.3: Interaction Plot for Body Estrangement and Mindful Self-Care in the Relationship with Prenatal Distress

Note. Predictors were mean-centered prior to creating interaction terms.

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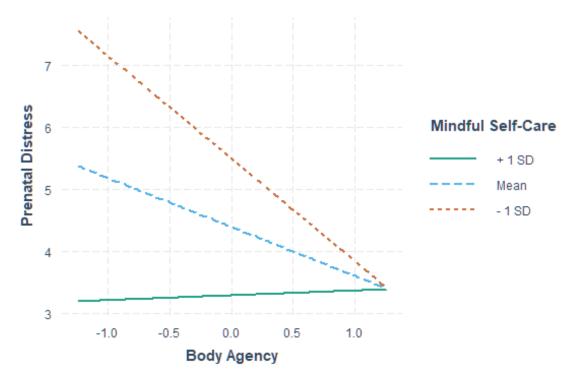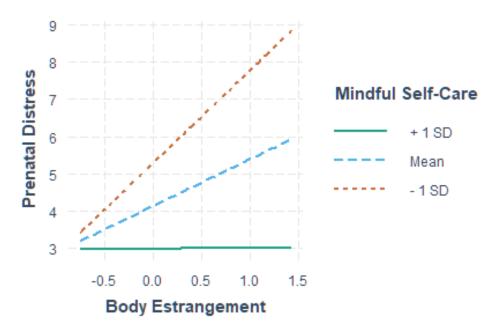
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APPENDIX

Body Experiences during Pregnancy Scale (Talmon & Ginzburg, 2018)

Please rate the extent to which each item has been relevant to you over the last month:

	Never	Rarely	Often	Always
1. I loved my body (A)	1	2	3	4
2. I felt clumsy and awkward* (A)	1	2	3	4
3. I felt like my fetus invaded my body (E)	1	2	3	4
4. I felt like I was losing control of my body (E)	1	2	3	4
5. I felt proud of my body and its abilities (A)	1	2	3	4
6. I felt that my body was alien to me (E)	1	2	3	4
7. I felt as if my body had been taken away from me (E)	1	2	3	4
8. I trusted my body to know what to do (A)	1	2	3	4
9. I felt as if my body was enslaved by the fetus (E)	1	2	3	4
10. I felt that I was sharing my body with another (E)	1	2	3	4
11. I was uncomfortable inside of my body/skin (E)	1	2	3	4
12. I felt my body was betraying me (E)	1	2	3	4
13. I felt that people were staring at my body (V)	1	2	3	4
14. My body looked different from how I expected it to look (V)	1	2	3	4
15. My body felt empty (E)	1	2	3	4

16. I felt that my body was exhausted* (A)	1	2	3	4
17. I felt my body was full of strength (A)	1	2	3	4
18. I felt I knew my body well (A)	1	2	3	4
19. I felt connected to my body (A)	1	2	3	4
20. I felt attractive (A)	1	2	3	4
21. I relished the sense of my fetus inside me (A)	1	2	3	4
22. I felt invisible inside my own body (E)	1	2	3	4
23. I felt my body was feminine (A)	1	2	3	4
24. I felt my body was pleasant and soft (A)	1	2	3	4
25. I felt that my private experience had become public (V)	1	2	3	4
26. I felt that people allowed themselves to touch my body as if it was partially theirs (V)	1	2	3	4
27. I was frightened by what was happening to my body (E)	1	2	3	4
28. I felt that the fact that I had sex was registered on my body and well known to all (V)	1	2	3	4

(A) Body Agency
   (E) Body Estrangement
   (V) Body Visibility
   * Reverse-scored

Mindful Self-Care Scale

The Mindful Self-Care Scale (MSCS, 2018) is a 33-item scale that measures the self-reported frequency of behaviors that measure self-care behavior. Note, there are an additional three general questions for a total of 36 items.

Self-care is defined as the daily process of being aware of and attending to one's basic physiological and emotional needs including the shaping of one's daily routine, relationships, and environment as needed to promote self-care. Mindful self-care addresses self-care and adds the component of mindful awareness.

Mindful self-care is seen as the foundational work required for physical and emotional well-being. Self-care is associated with positive physical health, emotional well-being, and mental health. Steady and intentional practice of mindful self-care is seen as protective by preventing the onset of mental health symptoms, job/school burnout, and improving work and school productivity.

This scale is intended to help individuals identify areas of strength and weakness in mindful self-care behavior as well as assess interventions that serve to improve self-care. The scale addresses 6 domains of self-care: mindful relaxation, physical care, self-compassion and purpose, supportive relationships, supportive structure, and mindful awareness. There are also three general items assessing the individual's general or more global practices of self-care: engaging in a variety of self-care activities, planning self-care, and exploring new ways of bringing self-care into the individual's life.

Contact information: Catherine Cook-Cottone, Ph.D. at cpcook@buffalo.edu

Circle the number that reflects the frequency of your behavior (how much or how often) within past week (7 days):

Never (0 days)	Rarely (1 day)	Sometimes (2 to 3 days)	Often (4 to 5 days)	Regularly (6 to 7 days)
1	2	3	4	5

Reverse-Scored:

Never (0 days)	Rarely (1 day)	Sometimes (2 to 3 days)	Often (4 to 5 days)	Regularly (6 to 7 days)
5	4	3	2	1

The questions on the scale follow.

Mindful Self-Care Scale

Mindful Relaxation (6 items)

I did something intellectual (using my mind) to help me relax (e.g., read a book, wrote)	1	2	3	4	5
I did something interpersonal to relax (e.g., connected with friends)	1	2	3	4	5
I did something creative to relax (e.g., drew, played instrument, wrote creatively, sang, organized)	1	2	3	4	5
I listened to relax (e.g., to music, a podcast, radio show, rainforest sounds)	1	2	3	4	5
I sought out images to relax (e.g., art, film, window shopping, nature)	1	2	3	4	5
I sought out smells to relax (lotions, nature, candles/incense, smells of baking)	1	2	3	4	5

Total _____

Average for Subscale = Total/# of items _____

Physical Care (8 items)

I drank at least 6 to 8 cups of water	1	2	3	4	5
I ate a variety of nutritious foods (e.g., vegetables, protein, fruits, and grains)	1	2	3	4	5
I planned my meals and snacks	1	2	3	4	5
I exercised at least 30 to 60 minutes	1	2	3	4	5
I took part in sports, dance or other scheduled physical activities (e.g., sports teams, dance classes)	1	2	3	4	5
I did sedentary activities instead of exercising (e.g., watched tv, worked on the computer) *reverse scored*	5	4	3	2	1
I planned/scheduled my exercise for the day	1	2	3	4	5
I practiced yoga or another mind/body practice (e.g., Tae Kwon Do, Tai Chi)	1	2	3	4	5

Total _____

Average for Subscale = Total/# of items _____

Mindful Self-Care Scale

Self-Compassion and Purpose (6 items)

I kindly acknowledged my own challenges and difficulties	1	2	3	4	5
I engaged in supportive and comforting self-talk (e.g., "My effort is valuable and meaningful")	1	2	3	4	5
I reminded myself that failure and challenge are part of the human experience	1	2	3	4	5
I gave myself permission to feel my feelings (e.g., allowed myself to cry)	1	2	3	4	5
I experienced meaning and/or a larger purpose in my _work/school_ life (e.g., for a cause)	1	2	3	4	5
I experienced meaning and/or a larger purpose in my _private/personal_ life (e.g., for a cause)	1	2	3	4	5

Total _____

Average for Subscale = Total/# of items _____

Supportive Relationships (5 items)

I spent time with people who are good to me (e.g., support, encourage, and believe in me)	1	2	3	4	5
I scheduled/planned time to be with people who are special to me	1	2	3	4	5
I felt supported by people in my life	1	2	3	4	5
I felt confident that people in my life would respect my choice if I said "no"	1	2	3	4	5
I felt that I had someone who would listen to me if I became upset (e.g., friend, counselor, group)	1	2	3	4	5

Total _____

Average for Subscale = Total/# of items _____

Supportive Structure (4 items)

I maintained a manageable schedule	1	2	3	4	5
I kept my work/schoolwork area organized to support my work/school tasks	1	2	3	4	5

Mindful Self-Care Scale

I maintained balance between the demands of others and what is important to me	1	2	3	4	5
I maintained a comforting and pleasing living environment	1	2	3	4	5

Total _____

Average for Subscale = Total/# of items _____

Mindful Awareness (4 items)

I had a calm awareness of my thoughts	1	2	3	4	5
I had a calm awareness of my feelings	1	2	3	4	5
I had a calm awareness of my body	1	2	3	4	5
I carefully selected which of my thoughts and feelings I used to guide my actions	1	2	3	4	5

Total _____

Average for Subscale = Total/# of items _____

General (3 items – not to be averaged)

I engaged in a variety of self-care activities	1	2	3	4	5
I planned my self-care	1	2	3	4	5
I explored new ways to bring self-care into my life	1	2	3	4	5

Mindful Self-Care Scale

Total Score Summary
Be sure you have correctly scored your reversed-scored item

Averaged Score	**Subscale**
_____	Mindful Relaxation
_____	Physical Care
_____	Self-Compassion and Purpose
_____	Supportive Relationships
_____	Supportive Structure
_____	Mindful Awareness
	General – 3 separate scores:
_____	Variety
_____	Planning
_____	Exploring

Shade in your average score for each subscale below:

5						
4						
3						
2						
1						
Scale	Mindful Relaxation	Physical Care	Self-Compassion & Purpose	Supportive Relationships	Supportive Structure	Mindful Awareness

For a long version of the scale and a detailed description of the source scale see:

Cook-Cottone, C. P. (2015). *Mindfulness and yoga for embodied self-regulation: A primer for mental health professionals.* **New York, NY: Springer Publishing.**

Prenatal Distress Measure (Hirsch et al., 2017)

Instructions: Please mark one answer for each question according to your experiences over the past week, including today.

1. I feel sad and hopeless.

0 No, this is not true
1 This is true only occasionally
2 This is true some of the time
3 This is true most of the time

2. I am less able to experience pleasure or look forward to things with enjoyment.

0 No, this is not true
1 This is true only occasionally
2 This is true some of the time
3 This is true most of the time

3. I am frustrated or quick to anger.

0 No, this is not true
1 This is true only occasionally
2 This is true some of the time
3 This is true most of the time

4. I have been less interested in social interaction.

0 No, this is not true
1 This is true only occasionally
2 This is true some of the time
3 This is true most of the time

5. I am more nervous while interacting with others than I used to be.

0 No, this is not true
1 This is true only occasionally
2 This is true some of the time
3 This is true most of the time

6. Sometimes, I think my family would be better off without me.

0 Not
1 Hardly ever
2 Sometimes
3 Yes, quite often

7. I have thoughts about harm coming to my baby that I can't get out of my mind.

0 No, this is not true
1 This is true only occasionally
2 This is true some of the time
3 This is true most of the time

8. I worry about bad things happening to my baby and/or my family.

0 No, this is not true
1 This is true only occasionally
2 This is true some of the time
3 This is true most of the time

9. I have intrusive thoughts or worries about giving birth to my baby.

0 No, this is not true
1 This is true only occasionally
2 This is true some of the time
3 This is true most of the time

10. I have thoughts about my baby that worry or scare me.

0 No, this is not true
1 This is true only occasionally
2 This is true some of the time
3 This is true most of the time

Scoring instructions:
Add all numbers for the total score. Add items 1-6 for the
General Distress scale and add items 7-10 for the Obsessive-
Compulsive Symptoms scale.

The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

Below are some statements about feelings and thoughts.

Please tick the box that best describes your experience of each over the last 2 weeks

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been feeling interested in other people	1	2	3	4	5
I've had energy to spare	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling good about myself	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been feeling confident	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5
I've been feeling loved	1	2	3	4	5
I've been interested in new things	1	2	3	4	5
I've been feeling cheerful	1	2	3	4	5

Demographics Questionnaire

1. What is the highest level of school you have completed or the highest degree you have received?

    a. Less than high school degree

    b. High school graduate (high school diploma or equivalent including GED)

    c. Some college but no degree

    d. Associate degree in college (2-year)

    e. Bachelor's degree in college (4-year)

    f. Master's degree

    g. Doctoral degree

    h. Professional degree (JD, MD)

2. Are you Spanish, Hispanic, Latinx/o/a or none of these?

    a. Spanish

    b. Hispanic

    c. Latinx/o/a

    d. None of these

1. Choose one or more races that you consider yourself to be:

    a. White

    b. Black or African American

    c. Asian

    d. Native Hawaiian or Pacific Islander

    e. American Indian or Alaska Native

    f. Self-identify:

2. Please select one or more options from the following to describe yourself:

    a. Cisgender

    b. Transgender

    c. Gender non-binary/third gender

    d. Intersex

    e. Self-identify:

3. Please select the best descriptor for your current relationship status from the following options:

    a. Single, never married

    b. Married/domestic partnership/committed relationship

    c. Widowed

    d. Divorced

    e. Separated

    f. Self-identify:

4. Current employment status (please select one):

    a. Management, professional, and related

    b. Service

    c. Sales and office

    d. Farming, fishing, and forestry

    e. Construction, extraction, and maintenance

    f. Production, transportation, and material moving

    g. Government

    h. Retired

    i. Student

    j. Unemployed

5. Please select any of the following that apply to you:

    a. Hearing difficulty (deaf or having serious difficulty hearing)

    b. Vision difficulty (blind or having serious difficulty seeing, even when wearing glasses)

    c. Cognitive difficulty (because of a physical, mental, or emotional problem, having difficulty remembering, concentrating, or making decisions)

    d. Ambulatory difficulty (having serious difficulty walking or climbing stairs)

    e. Self-care difficulty (having difficulty bathing or dressing)

    f. Independent living difficulty (because of a physical, mental, or emotional problem, having difficulty doing errands alone such as visiting a doctor's office or shopping)

    g. Self-identify:

    h. None

6. Please enter your current gestational age (in weeks):

7. Current age (years):

8. Pregnancy history:

   a. Number of previous miscarriages:

   b. Number of previous terminated pregnancies:

   c. Number of previous stillbirths:

   d. Number of previous live births:

9. Was your current pregnancy planned (i.e., before becoming pregnant, were you attempting to become pregnant)?

   a. Yes

   b. No

10. Please select any of the following methods that you used to confirm your pregnancy status:

    a. Home pregnancy test

    b. Pregnancy test at a healthcare provider's office or administered by a healthcare provider

    c. Ultrasound

    d. Other (please specify):

    e. None

11. Please select the option that best describes your current pregnancy:

    a. Single pregnancy

    b. Multiple pregnancy (e.g., twins, triplets)

    c. Unknown

12. Please enter your projected due date (MM/DD/YYYY):

13. Are you currently taking any drugs or medications (either prescribed or unprescribed)?

14. Do you currently have any physical or mental health concerns?

15. Are you currently receiving treatment for any physical or mental health concerns?

16. Please summarize the overall change in your weight since becoming pregnant:

    a. Increase (in lbs):

    b. Decrease (in lbs):

    c. Pre-pregnancy weight (approximate, in lbs):

    d. Height (inches):

MacArthur Scale of Subjective Social Status

Think of this ladder as representing where people stand in the United States.

At the **top** of the ladder are the people who are the best off – those who have the most money, the most education and the most respected jobs. At the **bottom** are the people who are the worst off – who have the least money, least education, and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom.

Where would you place yourself on this ladder?

Please place a large "**X**" on the rung where you think you stand at this time in your life, relative to other people in the United States.