

A Balancing Act: Understanding the role of mother guilt and self-compassion in health-promoting behaviours in mothers with young children

By

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A Thesis submitted to the Faculty of Graduate Studies of
The University of Manitoba
in partial fulfillment of the requirements of the degree of

MASTER OF ARTS

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Abstract

The maternal ethics of care dictates that being a ‘good mother’ entails mothers sacrificing their own needs to meet the needs of their family. Under this influence, some mothers report feeling guilty about taking time to engage in health-promoting behaviours like physical activity, eating healthy and getting enough sleep and may put these behaviours on hold. Self-compassion, treating oneself kindly in difficult times, has a mitigating influence on negative emotions, including guilt and is associated with a commitment to and engagement in health-promoting behaviours. Self-compassion may play a role in how women negotiate the ethics of care and how much guilt they feel when taking time or thinking about taking time, to engage in health behaviours. The purpose of this study was to explore how mothers with young children negotiate their feelings of guilt by considering levels of self-compassion and their effect on health-promoting behaviours. Procedures: In this online, observational study, 143 mothers, with at least one child five years of age or younger, completed measures of physical activity, nutritious eating, sleep quality and quantity and overall healthy-behaviours as well as self-compassion, state guilt, demographics and self-esteem and trait guilt, which was measured as a covariate. Results: Regression analyses determined that mother guilt was significantly related to taking the time to get a good night’s sleep and engaging in overall health-promoting behaviours but was not significantly related to healthy eating or engagement in physical activity. Healthy eating, getting a good night’s sleep and engagement in overall health-promoting behaviours were significantly related to self-compassion however physical activity engagement was not. When considering whether self-compassion related to guilt about engaging in the health behaviours examined, analyses determined a significant association of self-compassion with getting enough sleep and overall health-promoting behaviours, but no association when considering engagement in

physical activity and eating healthy. Mediation analysis, using Hayes' PROCESS macro for SPSS showed that mother guilt mediated the relationship between self-compassion and getting enough sleep and engagement in overall health-promoting behaviours but no mediating relationship was found between self-compassion and engagement in physical activity and healthy eating. Self-compassion may offer mothers a positive way to deal with guilty feelings about looking after oneself. A future self-compassion intervention could help researchers understand the implications of increased self-compassion levels on individual health-promoting behaviours among mothers of young children.

Acknowledgements

First and foremost I would like to acknowledge the support and invaluable assistance of my thesis advisor, Dr. Shaelyn Strachan. You embraced my experiences from working in the field and always respected and appreciated my view from an applied perspective. Your understanding and guidance helped me achieve a long-held dream of mine to complete a Master's degree.

Thank you to my advisory committee, Dr. Amanda Johnson (Professor, Vancouver Island University) and Dr. Robert Renaud (Associate Professor, University of Manitoba) who opened my world up to new ways of understanding knowledge and providing the skills to articulate that knowledge to a wider audience.

Most importantly, thank you to my family. To my mom and dad who forever support all my endeavors. To my little boys who have changed my life and who inspire me to be the best person I can be, each and everyday. To my husband which whom I could never say enough thank you's for supporting me, helping me, listening to me and for taking an active interest in all my undertakings at school. You've been my anchor that has allowed me to sail and succeed in the world of academia.

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Chapter I

My Story

The first thing that ran through my head after the nurse told us we could go home was, ‘are you kidding? You want us to take home this small, vulnerable human being and look after it? On our own?’ Like so many before me, she looked at my face, smiled, and said, “You’ll be fine.” It was at that point that my motherhood journey began.

As it turned out, I was fine. In fact, a mere nine months later I decided to switch careers and was getting ready to launch my new business. With support from my husband and parents and several fitness certifications under my belt, I made the leap from communications professional to becoming a personal fitness trainer specializing in pre- and postnatal fitness. I decided to offer one-on-one training, specialized group training classes and outdoor stroller fitness classes. It was a perfect job for me – I could make my own schedule, bring my baby to work, get a workout in and also be with other moms sharing stories and advice.

Very quickly, though, I started to notice that my story wasn’t always the same as other mothers in my class. Some similarities emerged – confidence in their mothering abilities (their crying baby wasn’t going to stop them), support at home and exercise as a main priority. But what about all those other mothers out there, some of them friends, some of them family, who weren’t physically active? With our Western society in agreement with the benefits of engaging in health-promoting behaviours, such as exercising regularly and eating healthy, what was happening with this particular group of women and their unique situation in life?

To answer these questions I turned to higher education, enrolling in some undergraduate kinesiology classes and eventually into the graduate program. However, the more I learned and expanded my knowledge base the more questions I had. How could I reach these mothers? What could I do as a new researcher to help make physical activity and in turn a healthy lifestyle, attainable?

All these questions floated around as I tried to decide what direction my thesis project would take. Was there one answer? Or were there an infinite number of answers? My research meandered through many different theories and models until one day I happened upon a feminist theory called ‘an ethics of care’ and more specifically, a ‘maternal ethics of care’. I knew this was it - this constant, eternal struggle to be ‘the good mother’. This was the problem.

I started to listen to my participants more. I started to listen to the mothers on the playground and at playgroup. I started to pay more attention to the language of ‘motherhood’ that was used not just in the media, but also among mothers. What I heard was guilt. Anything you could think of, from bumper pads in cribs, to putting your child in a car seat still wearing their jacket, to questions about going to work or day care options, there was guilt, attaching itself to every decision. For some it was debilitating, for others a conscious bucking-the-trend attitude and for others a resigning, “oh well”.

From this jumping off point, I began to wonder what mechanism was at play that allowed mothers in my fitness classes as well as my own commitment to engagement in health-promoting behaviours to overcome/negotiate/dispel this ever-present guilt specific to mothers and specific to taking care of oneself. Self-compassion, a construct stemming from

Buddhist philosophy and grounded in the idea of treating oneself with kindness in difficult times, seemed like a natural fit. It was at that point that the research questions started to come and a direction for my project was born.

Introduction

The health and wellbeing of our population continues to be a priority as well as a concern, at the individual, community and policy level. Individual level factors are one area of focus to increase health-promoting behaviours. Other areas where health-promotion plays a prominent role is in political platforms, industry marketing, media news segments, talk shows, community programming and fundraising drives. All these various mediums influence individual decision-making every day. However, researchers find that even with these diverse and continuous forms of messaging, Canadians are not engaging in sufficient levels of important health-promoting behaviours such as physical activity, eating a balanced diet and getting enough sleep. Adult obesity continues to rise (Public Health Agency of Canada; PHAC, 2011), hours of sleep continue to decrease (Hurst, 2012) and most Canadians are not meeting the recommended amount of physical activity per week (PHAC, 2011).

A one-size-fits-all approach may not be the solution to increasing healthy behaviours especially when one considers the unique needs and lifestyles of various populations. This is especially true for mothers with young children who not only experience a variety of postpartum physiological changes but also changes to their mental state and lifestyle (Sampelle, Seng, Yeo, Killion, & Oakley, 1998). Researchers show that mothers are less

physically active (Bellows-Riecken & Rhodes, 2008), show lower sleep efficiency (Lee, Zaffke & McEnany, 2000) and have higher intakes of sugary drinks, saturated fat and overall calories (Berge, Larson, Bauer & Neumark-Sztainer, 2011) than women without children. When considering barriers to engaging in health-promoting behaviours for mothers with young children, researchers find mixed results. However, it is not a lack of knowledge about the benefits of health-promoting behaviours that is at issue (Hamilton & White, 2010). Rather researchers suggest that an ecological approach, including personal, social and environmental factors should and needs to be considered (Cramp & Bray, 2013; Lewis & Ridge, 2005; Verhoef & Love, 1994).

In broadening the scope of factors, this thesis acknowledges the pervasive influence of an ethics of care on mothers and its prevalence in our society. An ethics of care is deep-rooted in the interdependence and responsiveness we have towards others (Gilligan, 1982). The socially and culturally constructed idea of a maternal ethics of care represents, in part, both a social and societal level factor that can influence the individual. An individual-level influence examined in this thesis is the concept of self-compassion. Self-compassion is a way of relating to the self, made up of three components – self-kindness, a sense of common humanity and mindfulness (Neff, 2003). I explore how mothers with young children negotiate their feelings of guilt within the broader concept of an ethics of care by considering mothers' levels of self-compassion and their effect on health-promoting behaviours.

The remainder of this chapter will include a review of the literature that begins by addressing mothers engagement in and barriers to overall healthy behaviours in addition to specific health-promoting behaviours including physical activity, eating a balanced diet and getting enough sleep. An overview of what an ethics of care is, what a maternal ethics of

care is and what it means to mothers' health, and how it is associated with guilt, will provide context for this thesis. This section is followed by an explanation of self-compassion, its relation to self-esteem and self-indulgence, and how it may play an important role in how mothers negotiate their feelings of guilt when considering taking the time they need to look after themselves. Further to that, measurement considerations relative to guilt, self-compassion and physical activity, diet, sleep and overall healthy behaviours are discussed and findings shared. This is followed by the discussion of the results and implications for future research.

Literature Review

Motherhood can be a challenging role in a woman's life and the onset of this role is often characterized by a shift in lifestyle, priorities and personal time. It can be both physically and emotionally demanding (McVeigh, 1997). Mothers of young children must look after themselves in the context of taking on a larger proportion of the family's childcare duties, relative to their male partners (in heterosexual families). According to Statistics Canada (2011) mothers with children under the age of five spend twice as much time on child care (67.5 hours/week) compared to fathers (30.2 hours/week). Along with childcare, mothers must also contend with bearing more than their share of household responsibilities (Kay, 1998). In order to cope with this new life role, it becomes integral for mothers to take care of themselves (Ahn & Youngblut, 2007). Although more important than ever, taking the time to look after oneself becomes much more difficult for mothers to achieve than before motherhood. One way that mothers can look after themselves is through engagement in

behaviours that promote their health. The extent to which mothers engage in these health-promoting behaviours during the postpartum period can have a lasting effect on their future health outcomes (Cramp & Bray, 2013).

Motherhood and Engagement in Health-Promoting Behaviours

Making improvements in health-promoting behaviours such as physical activity, getting quality sleep and healthy eating are common targets for interventions designed for new mothers as these behaviours tend to get overlooked when a new baby is introduced into a mother's life (Taveras et al., 2011; Boothe, Brouwer, Carter-Edwards, & Østbye, 2011). Researchers have shown that being a woman with children is associated with less physical activity than being a woman without children (Verhoef & Love, 1992; Bellows-Riecken & Rhodes, 2008; Berge et al., 2011; Adamo, Langois, Brett, & Colley, 2012). Mothers with *young* children are especially at risk for inactivity. For example, regardless of whether or not they work outside of the home, being a parent - but especially a mother with children under the age of five - is significantly related to less time exercising (Nomaguchi & Bianchi, 2004).

While physical activity engagement is often constrained by adjustment to the motherhood role, other health-promoting behaviours may also be challenged. Good sleep is associated with good health. However, mothers, and especially those with very young children, can experience disrupted sleep, frequent night awakenings or simply may choose to postpone sleep to attend to household responsibilities (Buysse, 2014; Burgard & Ailshire, 2013). Compared to pre-pregnancy sleep patterns, mothers of young children report significantly lower sleep efficiency (Lee et al., 2000; Nishihara, Horiuchi, Eto, & Uchida,

2001) and shorter sleep time (Karasan, Heine, Agnew, Williams, Webb, & Ross, 1968). Researchers have found that poor sleep quality in mothers was positively associated with negative emotions resulting in poor overall wellbeing, difficulty coping with maternal challenges as well as a negative outlook on the future (Coo, Milgrom, Kuppens, Cox & Trinder, 2014; Park, Meltzer-Brody & Stickgold, 2013).

Along with sleep, the benefits of following a nutritious and healthy diet have been well documented (Willett & Stampfer, 2013). Mothers of young children may miss out on these benefits because nutritious eating during pregnancy sharply drops off postpartum (Olson, 2005). New mothers are also more susceptible to keeping some of their pregnancy weight after baby is born. The gestational weight that mothers gain during pregnancy can have lasting negative effects on them not only physically due to the carrying of excess weight after the birth and poor eating habits but also psychologically through low self-esteem (Shloim, Rudolf, Feltbower, & Hetherington, 2014). Further, poor dietary habits of mothers of young children put them at increased risk of further weight gain. A study by Berge, Larson, Bauer and Neumark-Sztainer (2011) compared the health behaviours of parents to non-parents, showing that compared to women without children, mothers had higher BMI's, engaged in less moderate-to-vigorous physical activity a week and had higher intake of sugary drinks, saturated fat and overall calories.

Combined, this research suggests that mothers of young children may have difficulty engaging in health-promoting behaviours. This is concerning in light of consistent findings by researchers that show the impact that these health behaviours can have on overall health. For physical activity, the benefits have been well documented showing that following Canada's physical activity guidelines can "reduce the risk of multiple chronic disease

simultaneously” (Warburton et. al, 2010). For mothers specifically, researchers have shown a link between physical activity, positive affect and overall wellbeing (Guerin, Fortier, & Williams, 2013). Other researchers have shown that physical activity can be especially beneficial to new mothers by increasing energy levels and improving sleep quality and coping skills (Cramp & Brawley, 2006; Coo et al., 2014; Stephens, 1988). The underrepresentation in the literature of research addressing nutrition and diet and its negative implications for mothers underscores the need for further research (Aschemann-Witzel, 2013) as healthy eating practices can have lasting benefits not only for mothers but for their children (Berge et. al, 2011). Although the literature on sleep and motherhood is also limited, those mothers who report sleeping better also report better health (Casey, 2000). However, for mothers to enjoy the benefits of engaging in these behaviours they must do so in the midst of the multiple obligations that come with motherhood.

Barriers to Health-Promoting Behaviours

Researchers have uncovered various possible explanations for the difficulty mothers have engaging in health-promoting behaviours such as eating healthy, getting enough sleep and exercising; lack of self-discipline (Adachi-Meija, Drake, MacKenzie, Titus-Ernstoff, & Longacre, 2010; Bellows-Reicken & Rhodes, 2007), social support (Bellows-Reicken & Rhodes, 2007), time (Berge et al., 2011), lack of information on implementing positive postpartum lifestyle behaviours (Evenson, Aytur, & Borodulin, 2009) as well as the number and intensity of maternal stressors (Urizar et al., 2005). The research support regarding some barriers is mixed. In the area of physical activity, one study that used data from a one-time 12-month recall questionnaire, suggested that the number of children under a mother’s care

influences leisure activity (Cramp & Bray, 2009) yet a 25-study meta-review presented mixed results (Bellows-Reicken & Rhodes, 2007). Moreover, an intervention study (Urizar et al., 2005) and a retrospective analysis study (Nomaguchi & Bianchi, 2004) provided no support for this association. Further, a systematic review by MacKay, Shofield and Oliver (2011) revealed that the frequent use of self-report measures of physical activity might not accurately capture postpartum physical activity levels.

Researchers also report inconsistent conclusions when considering socio-economic status as a possible barrier to postpartum physical activity. The findings of a cross-sectional descriptive study suggested that a lower family income is associated with a significant reduction in physical activity levels (Keller, Alan & Tinkle, 2006). Another study using semi-structured interviews concluded that socio-economic status played no role in mothers' pursuit of health-promoting behaviours such as physical activity (Miller & Brown, 2005).

Mixed findings also arise when lack of partner support is considered as a barrier. In their intervention study, Miller, Trost and Brown (2002) found that partner support facilitated mothers' active leisure participation yet other studies have shown inconsistent (Bellows-Reicken & Rhodes, 2007) or non-supportive findings regarding partner support (Miller & Brown, 2005). Amongst all the mixed findings, what is conceivably one of the most important findings in this area of research is that mothers with young children *perceive* more barriers to exercising than women without children, resulting in less overall physical activity (Verhoef & Love, 1994).

Conflicting findings also exist regarding barriers to healthy eating and sleep practices. Researchers of a longitudinal population-based cohort study provided their own conflicting reasons for why mothers have poor dietary intake, suggesting that mothers

wanted to model good dietary choices for their children but due to lack of time they would eat foods high in saturated fat (Berge et al., 2011). In terms of quality sleep for women with young children, barriers such as night feedings, children's sleep patterns (Hunter, Rychnovsky & Yount, 2009) and working outside the home more than 35 hours a week or working nonstandard schedules (Kalil, Dunifon, Crosby & Su, 2014) have been established in the literature. A qualitative study by Venn, Arber, Meadows and Hislop (2008) found that compared to fathers, mothers were more likely to take on physical and emotional caring of the children during the night resulting in disrupted sleep patterns. However, researchers found in a survey study that mothers slept the same amount as women without children even while accounting for nighttime care giving (Burgard & Ailshire, 2012). Although the sampling of research presented here show mixed findings by way of diverse methodologies, it highlights not only the pervasive need of researchers to understand this unique population, but that researchers from all areas are having a difficult time finding consensus.

This lack of agreement on barriers to engagement in health-promoting behaviours for mothers with young children provides little direction for future researchers and practitioners. However, within this lack of agreement in the literature there is a consistent suggestion that the role of mother and motherhood *itself* is the real barrier and this barrier needs further exploration (Verhoef & Love, 1994; Kay, 1998; Miller & Brown, 2005; Bellows-Reicken & Rhodes, 2007). In the next section I turn my attention to the concept of an ethics of care and specifically to the maternal ethics of care, which I use to explain how the motherhood role may serve as a barrier to health-promoting behaviours in mothers with young children.

Ethics of Care

The connection of the motherhood role to an ethics of care may clarify why this role poses a barrier to engagement in health-promoting behaviours for mothers of young children. Carol Gilligan first highlighted the idea of an ethics of care in her 1982 book where she drew attention to the differences between men and women's moral development. According to Gilligan, an ethics of care is the voice of caring, where one considers themselves within the context of others and which is developed through moral dilemmas encountered in one's life (1982). Standing in contrast to the male's voice, which Gilligan found to focus on justice and rights, there is the female's voice, which focuses on responsibility and relationships, hence, an ethics of care voice. Gilligan's book offered a starting point to giving voice to women's lived experiences (Manicom, 1983).

Research suggests that one's environment and those with whom one interacts can lead to an ethics of care being integrated into one's identity. In a longitudinal study, Juujarvi (2006) drew upon Gilligan's reasoning that an ethics of care stems from one's moral development. Juujarvi considered the development of care amongst 59 students from the start of their studies and then two years later. The researchers compared ethics of care development among students in nursing and social work, where care-based issues are consistently taught, against students in law-enforcement where the emphasis is put on justice-based learning. The researchers found that 45 per cent of social work students and 50 per cent of nursing students showed higher scores on care reasoning after two years while law-enforcement student scores were constant over the same period, with very little care-based growth. Juujarvi's study shows that an ethics of care can be instilled and eventually becomes part of one's moral fiber.

Since the publication of Gilligan's book and the emergence of ethics of care as a moral theory, many researchers have considered the ethics of care from a feminist perspective since the theory is often associated with feminine traits (Larrabee, 1993). Most researchers who employ this perspective do so within traditionally gendered professions such as nursing (Huggins & Scalzi, 1988), school-based therapy (Brown & Gabriel, 1995), education (Gabriel, 2009), and social work (Dybicz, 2012) where the value of caring within those professions is validated. Other researchers have focused on the underpinnings of an ethics of care - responsibility and relationships - not as a gendered theory but as a general positive moral construct that can be implemented to improve ethics committee protocols (Madjar & Higgins, 1996), issues of justice and impartiality (Zembylas, 2009), as well as in the development of social policy (Sevenhuijsen, 2003). Although these studies substantiate the value of caring in professions where interpersonal interactions are daily occurrences, ethics of care can have a negative effect when caring for others takes priority over caring for oneself, which is often the case within the motherhood role.

Ethics of Care and Motherhood

Much like Juujarvi's study, which showed the development of an ethics of care in an environment where it is taught and expected, we see that mothers learn that a maternal ethics of care is a part of society's traditionally held view of motherhood (McGannon & Schinke, 2013). The dominant role associated with being a mother is as primary care giver and her ethics of care means she is mainly responsible for the care of her children while putting her own needs aside. In the context of the motherhood role, adoption of an ethics of care may come at a cost.

Ethics of Care and Women's Health

This dominant ideology of a maternal ethics of care can influence mothers' willingness to take care of their own needs (Miller & Brown, 2005). Indeed, the maternal ethics of care has been associated with a lack of a sense of entitlement for some mothers to take time for themselves (Henderson & Allen, 1991). When mothers consider balancing their own needs with their family's needs, it is important to understand the broader context of their decisions and how our cultural and social expectations of what a mother is and should be places pressure on mothers to meet those expectations (Verhoef & Love, 1992). Even if mothers could overcome certain individually perceived barriers to their own care such as lack of partner support, motivation or childcare, they still must contend with their own internal feelings about resisting current social expectations (Miller & Brown, 2005). Some mothers' ability to make decisions within the context of the maternal ethics of care can cause an additional barrier to engaging in health-promoting behaviours above and beyond those that others might face. Certain barriers to taking time for oneself may be even more pronounced for mothers given the additional pressures of thinking they must be the primary caregiver (Miller & Brown, 2005).

Researchers considering gender role and the associated ethics of care as a barrier to mothers taking time to focus on their health offer insight into the lived experiences of women as mothers (Lewis & Ridge, 2005). However, studies looking specifically at an ethics of care as a barrier to health-promoting behaviours have to-date only focused on physical activity, with no literature about the effects of an ethics of care on healthy eating and getting enough sleep. Within the literature focusing on an ethics of care and physical

activity, research supports the idea that societal expectations put on mothers interfere with their willingness to care for themselves. For example, some mothers think they will take care of themselves when their children are older. These mothers may consider other mothers who do take that time as resisting their role as a mother (Bialeschki & Michener, 1994; Lewis & Ridge, 2005; Miller & Brown, 2005). Outside of the ethics of care literature, researchers have suggested that mothers who identify with the primary caregiver role are more vulnerable to weight gain, poorer diets, less physical activity and more interrupted sleep patterns than fathers (Berge et al., 2011). It is evident that the overarching ethics of care placed on mothers can be associated with some mothers' compromised ability to engage in health-promoting behaviours such as physical activity, and possibly other behaviours such as eating healthy and getting enough sleep which have yet to be explored.

Ethics of Care and Mother Guilt

Assuming that all mothers are influenced by a maternal ethics of care, what is happening, then, for mothers when they act on or even think about taking time for themselves to engage in health-promoting behaviours such as physical activity, eating well or getting enough sleep? Guilt is one of the main emotions often associated with mothers who describe their experiences when taking time away from their family or their mother-role obligations to look after themselves (to be referred to as mother guilt throughout this thesis) (Kay, 1998; Miller & Brown, 2005; Martinez, Carrasco, Gonzalo, Blanco, & Espinar, 2011). It is not surprising that mothers report feelings of guilt. Guilt is a distressful, social emotion, stemming from interpersonal relationships between individuals (Baumeister, Stillwell & Heatherton, 1994). It is a feeling that most individuals work to avoid as it conjures up the

“possibility that one may be in the wrong or that others may have such a perception” (Baumeister et al., 1994). The pressure to live up to the good mother ideal has been shown as a source of guilt in mothers (Rotkirch & Janhunen, 2009; Liss, Schiffrin, & Rozzo, 2013). This maternal guilt is related to their sense of responsibility for their child as well as negative perceptions from society towards their choices. Feelings of guilt can be intensified when mothers cannot be constantly available to their child or when they ask for help in matters they feel a mother should be doing (Martinez et al., 2011). Consequently, they are impeded by their feelings of guilt for leaving their children (Kay, 1998; Miller & Brown, 2005). Even mothers who resist the idea of the good mother ideal will measure their actions against this cultural norm (Deutsch, 1999; Lewis & Ridge, 2005; Liss et al., 2013). A 2013 study by Liss, Schiffrin and Rizzo showed that when mothers scored themselves low on an adjective list of “ideal” mothering qualities, they experienced high levels of both guilt and shame. The more self-discrepancy there was between what they considered a “good mother” and how they measured themselves against that ideal, the more guilt and shame these mothers felt.

While there is much research supporting the idea that mothers who take time away from the motherhood role to look after themselves experience guilt, some mothers seem to see this time differently. Researchers have shown that although mothers live under the influence of an ethics of care in our society (Miller & Brown, 2007; McGannon & Schinke, 2013), some mothers feel that taking care of their health needs is the best way to accomplish being a “good mother” (Lewis & Ridge, 2005). Bialeschki and Michener (1994), in their qualitative study using a symbolic interaction framework, found that women defined leisure time as time for themselves and words such as “balance”, “non-obligation”, “time for me”

and “function well” were associated with that time. Consistent with this perspective, other researchers have found that some mothers take the time to engage in health-promoting behaviours and categorize that time as necessary. They may also view other mothers who do not take time to look after themselves as women who must be coping well and do not need the time away from family (Lewis & Ridge, 2005). Such alternative views of motherhood may allow mothers to make space for their own health-promoting behaviours while playing out the good mother role. This idea is reinforced by recent qualitative research on physically active mothers where researchers reveal how mothers incorporate their athletic identity within the good mother ideal by positioning themselves as an example for their family. Even in their “role mothering”, the discourses of these mothers suggest that their family is still their primary responsibility (McGannon, McMahon & Gonsalves, 2017). However, such alternative views stand in contrast to the prevailing view of motherhood. In light of these contrasting views, how do some mothers overcome the prevailing attitudes and ideals about the role of a “good mother” and set aside any guilt they may have in order to take their own needs into consideration? One explanation could be a mother’s level of self-compassion.

Self-Compassion

Self-compassion is a relatively new concept in psychology, specifically in the area of self and identity. Stemming from Buddhist philosophy, self-compassion involves showing kindness and understanding to oneself in difficult times (Neff, 2003). Self-compassion stems from the more general concept of compassion. Compassion is a distinct emotion and entails a caring response to seeing *others’* unnecessary suffering (Goetz, Keltner & Simon-Thomas, 2010). Self-compassion, therefore, is a caring and understanding response towards *oneself* in

the face of pain, disappointment or difficulties. According to Neff (2003), self-compassion is made up of three components. The first component, self-kindness, reflects ones' ability to accept and view personal failures in a nonjudgmental way. It is a person's immediate caring response towards himself or herself in the face of adversity. The second component involves the knowledge that one is not alone in suffering; rather, suffering is a shared human experience. The last component, mindfulness, is knowledge of ones' present situation, thoughts and feelings, and viewing them in a balanced way rather than repeatedly mulling them over or ignoring them. These three components together comprise self-compassion. Self-compassion is a way of relating to the world around us and showing consideration for oneself as fully human, with all our imperfections and foibles (Neff, 2003).

Self-Compassion, Self-Esteem and Self-Indulgence

Before exploring self-compassion and how it may help mothers take time to care for themselves, I first consider how self-compassion relates to other self-constructs as a means of offering clarity about its definition. Much of the literature on self-compassion uses self-esteem as a comparison model or in conjunction with self-compassion, as another identity construct associated with self-acceptance (Magnus, Kowalski & McHugh, 2010; Neff, Rude & Kirkpatrick, 2007; Neff, 2003). Self-esteem is the positive or negative evaluation we attribute to our understanding of our self (Smith & Mackie, 2007). Like self-compassion, self-esteem is related to positive feelings such as optimism and happiness (Neff & Vonk, 2009). However, the constructs differ in that self-esteem, but not self-compassion, has an evaluative component (Neff, 2009). Self-esteem is influenced by people's judgments about their self-worth based on how they measure up to approved standards. Self-esteem can also

be influenced by one's perception of what others think or how one compares to others (Harter, 1999). Self-compassion does not involve these self-judgments but focuses on identifying one's shortcomings, accepting them, and taking steps to change unhealthy or harmful behaviours (Neff, 2009). Although self-compassion and self-esteem are correlated in studies that consider both constructs, self-esteem loses its effect on a variable once self-compassion has been taken into account (Neff & Vonk, 2009). According to Neff and Vonk (2009) this may be because self-compassion captures all the 'good' that is part of self-esteem, such as positive self-affect but not the bad, such as narcissism, anger towards others and self-worth contingent on social approval. In this thesis, I followed the common practice of controlling for self-esteem in order to show the benefits of self-compassion on health behaviours beyond those ascribed to self-esteem.

Self-compassion is not self-indulgence or complacency, as might be suggested by self-compassion's main feature - accepting oneself. Being self-compassionate does not encourage complacency or resignation to maintain one's situation (Terry & Leary, 2011). In fact, research shows that people with high self-compassion take responsibility for their actions (Leary, Tate, Allen, Adams, & Hancock, 2007). For example, self-compassion helps individuals to not only accept their perceived shortfalls but to take the initiative to make the changes they need to in order to bring about improvements to their lives (Neff et al., 2007). Self-compassionate people report more self-improvement motivation such as viewing their weaknesses as easier to change or committing to not making the same mistakes in the future (Breines & Chen, 2012). In the area of health research, Neff, Rude and Kirkpatrick (2007) found that self-compassion had a significant positive association with personal initiative towards one's own health and wellbeing. Their research showed that self-compassionate

people seek health and wellbeing even when it meant they needed to engage in more demanding activities like exercising or eating healthy. Although there may be a fear that being self-compassionate towards oneself may lead to self-indulgence (Breines & Chen, 2012), this fear is ungrounded as researchers demonstrate that self-compassion helps people to accept their weaknesses or failings and try to make changes while a self-indulgent person may simply do nothing (Neff, 2003).

Self-Compassion in Research

Although self-compassion is a relatively new concept in Western philosophy, researchers have been studying self-compassion in various ways. For example, researchers have considered the association between self-compassion and academic burn out (Kyeong, 2013), body image (Schoenefeld, & Webb, 2013), social anxiety disorder (Werner et al., 2012), clinical depression (Krieger, Altenstein, Baettig, Doerig & Holtforth, 2013) and psychological wellbeing (Zessin, Dickhauser & Garbade, 2015). A recent meta-analysis by Zessin, Dickhauser and Garbade (2015), which considered the role of self-compassion and wellbeing, found a strong association between self-compassion and psychological wellbeing, negative affect, cognitive wellbeing and positive affect, all with medium to large effect sizes. These researchers suggest that self-compassionate people may reframe negative experiences, diminishing the effects of negative emotions when faced with their own shortcomings. Given the benefits of being self-compassionate, it is not surprising that researchers have also conducted self-compassion interventions to address binge-eating (Kelly, Vimalakanthan & Carter, 2015), social stress response (Arch et al., 2014), resilience and wellbeing (Smeets, Neff, Alberts & Peters, 2014), self-criticism (Mosewich, Crocker, Kowalski & DeLongis,

2013) and smoking reduction (Kelly, Zuroff, Foa & Gilbert, 2010) all with positive outcomes. Together, these studies support Neff's (2003) assertion that having high levels of self-compassion is an adaptive way of relating to oneself in challenging times.

Self-compassion may be a key variable that influences the extent to which mothers of young children are able to overcome the guilt they may feel about, and ultimately engaging in, health-promoting behaviours such as physical activity, healthy eating and getting enough quality sleep. In the face of the maternal ethics of care that mothers face, self-compassion may help them see that in addition to taking care of others, they also need to take care of themselves through caring for their own health. In support of this idea, Terry and Leary (2011) argue that people with high levels of self-compassion not only take their health more seriously than those lower in self-compassion but they should be more likely to actively seek out healthy behaviours (Terry, Leary, Mehta & Henderson, 2013). In their four-study investigation, Terry, Leary, Mehta and Henderson (2013) demonstrated that self-compassion positively correlated with health consciousness, motivation to avoid unhealthiness, health satisfaction and health status. Further, self-compassionate people were documented to approach health behaviours through positive self-talk, motivation for self-kindness and a tendency to be proactive about their approach to health. These researchers also showed that people with high levels of self-compassion were more likely to seek out medical attention than those with low levels of self-compassion. A study by Magnus, Kowalski and McHugh (2010) found that self-compassion was positively related to adaptive (e.g. intrinsic) and negatively related to less adaptive (e.g. introjected) motivation for exercise and accounted for unique variance in these outcomes beyond that of self-esteem. More recently, a cross-sectional study by Dunne, Sheffield and Chilcot (2016) found that self-compassion was

positively related to health-promoting behaviours such as exercise, eating healthy, and getting enough sleep. They also found that self-compassion and health-promoting behaviours were negatively related to physical symptoms. These researchers suggest that individuals higher in self-compassion are more likely to engage in health-promoting behaviours. This body of research suggests that self-compassion is a reliable correlate of a commitment to and motivation for one's health. Given this association, self-compassion may offset or override the guilt that mothers of young children may otherwise feel about taking time for themselves to engage in health-promoting behaviours.

Self-Compassion and Mother Guilt

Self-compassion may also help mothers deal adaptively with any guilt they do feel in taking time to engage in health-promoting behaviours. This idea is plausible because self-compassion has a documented mitigating effect on negative emotions. Self-compassionate people can more easily overcome negative emotions because self-compassion makes it less likely that they will over-identify with their emotions or let those emotions deter them from looking after themselves (Neff, 2011; Terry et al., 2013). Therefore, mothers with young children with high levels of self-compassion should be less likely to feel guilty about taking time for themselves or be better able to deal with negative emotions they may feel about doing so.

Research supports the idea that self-compassion can have a positive influence on negative emotions (Hollis-Walker & Colosimo, 2011; Leary et al., 2007; Magnus et al., 2010). A study by Hollis-Walker and Colosimo (2011) showed that self-compassion can alleviate negative feelings such as guilt and self-criticism which in turn facilitates well-

being. In a study by Leary, Tate, Adams, Allen and Hancock (2007), participants high in self-compassion, when asked to recall the worst thing that had happened to them in the last four days, showed lower levels of negative emotions, specifically self-conscious emotions such as guilt, and instead demonstrated an ability to ‘keep things in perspective’. In terms of health-promoting behaviours, a meta-analysis by Sirois, Kitner and Hirsch (2015) found an association with engagement in general health-promoting behaviours such as getting enough sleep, eating well and exercising. Their study demonstrated that self-compassion is related to positive health behaviours through the indirect effect of low levels of negative emotions. Negative emotions may have interfered with participants starting or continuing health-promoting behaviours while high levels of positive emotions may have allowed those with a positive self-view to move towards more healthy behaviours. This is one of the first studies to show a link between self-compassion and behaviour, rather than motivation towards a behaviour or other social psychological constructs.

These studies provide evidence that self-compassion can reduce negative emotions, including guilt, which in turn is associated with health-promoting behaviours. However, no studies to date have considered whether guilt - specifically the guilty feelings a mother may have when considering her own needs – mediates the relationship between self-compassion and health-promoting behaviours. If self-compassion is associated with engagement in health-promoting behaviours, it may exert its influence on these healthy behaviours through influencing the extent to which mothers feel guilty about and their likelihood of engaging in health-promoting behaviours.

The purpose of my research is to explore how mothers with young children negotiate their feelings of guilt within the broader concept of an ethics of care by considering levels of

self-compassion and their effect on health-promoting behaviours. After considering the literature on mother guilt, ethics of care and its influence on dominant “good mother” ideologies, as well as the relationship between self-compassion and health-promoting behaviours, the following research questions and their accompanying hypothesis guided this study:

1. Does mother guilt relate to mothers’ engagement in health-promoting behaviours?

H₁: Mother guilt will negatively relate to mother’s engagement in health-promoting behaviours.

2. Does self-compassion relate to mothers’ engagement in health-promoting behaviours?

H₂: Self-compassion will positively relate to mother’s engagement in health-promoting behaviours.

3. Does self-compassion relate to mother guilt?

H₃: Self-compassion will negatively relate to mother guilt.

4. Does mother-guilt mediate the relationship between self-compassion and engagement in health-promoting behaviours?

H₄: Mother guilt will mediate the relationship between self-compassion and engagement in health-promoting behaviours.

Anticipated Contributions

Through this research, I make several contributions to the literature. First, this research contributes to the understanding of why mothers of young children often neglect their own health-promoting needs. I also contribute to the self-compassion literature. Indeed, I am, to the best of my knowledge, the first to examine associations between self-compassion and health-promoting behaviours among mothers of young children. I also contribute to other self-compassion studies that have examined associations between self-compassion and negative emotions (e.g. guilt). Finally, through examining the relationships between self-compassion, guilt and health-promoting behaviours, including the potential mediating role of guilt, I am able to offer preliminary, informed suggestions about how to effectively address the guilt that some mothers may feel about taking time for their health.

Chapter II

Methods

Design

In conducting this cross-sectional, correlational study design, I employed a self-administered, web-based questionnaire. There are many aspects of online questionnaires that make them a desirable choice for this study. First, online questionnaires offer practical advantages in that they allow researchers to reach a large number of participants in a short amount of time (Wright, 2005). Online questionnaires are anonymous in nature and can reduce the number of socially desirable responses (Holbrooke, Green & Krosnick, 2003). They also offer a convenient and easy way for people to participate who might otherwise not

have the time to travel or spend in a face-to-face session, such as mothers with young children (Wright, 2005). Indeed, mothers with young children express a desire to participate in studies with a flexible mode of delivery and minimal face-to-face contact (Fledjsoe, Miller & Marshall, 2010). Another advantage of the use of a web-based questionnaire is that this type of data collection has been shown to offer an effective way to capture information about health-promoting behaviours such as physical activity (van Stralen, de Vries, Mudde, Bolman, and Lechner, 2011; Winett, Anderson, Wojcik, Winett, Moore, & Blake, 2011).

However, a limitation of this method of data collection is that online research may attract a larger proportion of participants who are interested in completing a survey and have access to a computer. As well, the open accessibility of an online questionnaire cannot guarantee the validity of the data collected.

Participants

Participants for this study included 144 mothers who met the inclusion criteria of speaking and reading English, and with at least one child 5 years of age or younger living in the same home (Appendix B). Researchers have shown that women with children are less likely than women without children to consistently engage in health-promoting behaviours, however, those results are even more profound for mothers with children under the age of 5 (Berge et al., 2011; Nomaguchi & Bianchi, 2004; Hamilton & White, 2010). Participants were excluded if they have reported injuries or medical conditions that limited their ability to engage in physical activity, eating a healthy diet or getting enough sleep. I aimed to recruit a minimum of 120 participants to achieve 80% power, with a two-sided 5% significance level (G*Power3: Faul, Erdfelder, Lang & Buchner, 2007). This power calculation is based on an

effect size derived by Sirois, Kitner and Hirsch's (2015) meta-analysis, which found an effect size of .25 between self-compassion and positive health-promoting behaviours.

Measures

Demographics. Participants were asked to provide the following demographic and descriptive information: age, education, marital status, number and age of children, employment status, income range and ethnicity (Appendix A, Measure 1).

Health-promoting behaviour: Physical activity. The Godin Leisure-Time Exercise Questionnaire (GLTEQ) (Godin & Shephard, 1997) is a self-report measure of the frequency of light-intensity, moderate-intensity, and vigorous-intensity leisure-time physical activity and was used to assess leisure-time exercise habits in participants (Appendix A, Measure 2, 2 items). Scores were derived from the Godin-Shephard Leisure-Time Physical Activity Questionnaire (GSLTPAQ) and include total weekly leisure-time physical activity, called a Leisure Score Index (LSI). The LSI combines the number of 15-minute bouts at each of the three intensities, multiplied by 3, 5, and 9 metabolic equivalents (METs), respectively, and summed. The content validity and test-retest reliability has been previously established for this scale (Amireault & Godin, 2015).

Health-promoting behaviour: Healthy eating. The Healthy Eating Habits Scale, informed by the Canadian Food Guide (Health & Welfare Canada, 1992) and developed by Pelletier, Dion, Slovinec-D'Angelo and Reid (2004) is an 8-item questionnaire separated into two factors: "healthy foods" and "foods that should be eaten in moderation". Using a 5-point Likert scale ranging from 1 (not at all) to 5 (all of the time), participants were asked the frequency with which they consume each type of food. The 4-items that comprise "foods

eaten in moderation” were reversed coded. All scores were then summed and a mean score established. Results from confirmatory factor analyses support the 2-factor structure of the scale (Pelletier, Dion, Slovinec–D’Angelo, & Reid, 2004). For this study, Cronbach’s alpha coefficient was .73 (8-items). (Appendix A, Measure 3, 8 items).

Health-promoting behaviour: Sleep. The Jenkins Sleep Scale (JSS; Jenkins, Stanton, Niemcryk & Rose, 1988) was used to assess sleep quality in participants (Appendix A, Measure 4a). The 4-item Likert-type scale asks participants to evaluate their difficulty falling asleep, frequent awakenings during the night, trouble remaining asleep and subjective feelings of fatigue and sleepiness over a one-month period. The scale has an internal consistency ranging from .63 to .79. This study reports Cronbach’s alpha coefficient of .83 (4-items). The JSS has been used in studies considering the association between positive affect, psychological well-being and good sleep (Steptoe, O’Donnell, Marmot & Wardle, 2008) as well as assessing poor parental sleep and its association with child sleep quality (Rönnlund, Elovainio, Virtanen, Matomäki & Lapinleimu, 2016). As an addition to assessing sleep quality in mothers, a separate, single-item question was used to assess sleep quantity as another potential sleep attribute (Appendix A, Measure 4b). This item was measured as its own outcome and asked participants, “Do you get enough sleep? Never, sometimes, often, routinely.” This item was taken from the stress management subscale of the Health-Promoting Lifestyle Profile II (Walker, Sechrist & Pender, 1995).

Health-promoting behaviour: Overall healthy behaviours. The Wellness Behaviour Inventory (WBI) scale, developed by Sirois (2001; Appendix A, Measure 5), assesses how often common health-promoting behaviours are performed. The 10-item WBI scale is scored on a 5-point scale with responses ranging from 1 (less than once a week or never) to 5 (every

day of the week) with questions 3 and 9 reverse coded. The questions asked participants to recall in the past 3 months their engagement in behaviours such as physical activity, sleep quality, healthy eating and stress reduction. The original scale reported a Cronbach's alpha of .75. In this study, Cronbach's alpha coefficient was .67 (10-items). A recent meta-analysis found that the WBI was positively correlated with self-compassion (Sirois, Kitner, & Hirsch, 2014), an important component in this study.

Mother Guilt. Mother guilt was assessed as state guilt and measured by the State Shame and Guilt Scale (SSGS; Marschall, Saftner, & Tangney, 1994; Appendix A, Measure 6a, 6b, 6c and 6d). The original 15-item questionnaire measures feelings of shame, guilt, and pride *in the moment*. Participants considered how they feel in moments when they engage in, or think about taking time to engage in each of: physical activity, getting enough quality sleep, eating a healthy diet and overall health-promoting behaviours. They rated their feelings of guilt relative to each health-promoting behaviour as well as the overall health-promoting behaviours on a 5-point Likert scale (1-not feeling this way at all; 5-feeling this way very strongly). For example, participants were asked, "I feel like apologizing [when I think about taking time, or I do take the time, to engage in physical activity]." The guilt score was derived by summing the responses provided from the scale. In the original study, Cronbach's alpha was .82 for guilt. For this study, state guilt was measured four times, reporting the following Cronbach's alpha coefficient for 5 items: physical activity ($\alpha = .84$), healthy diet ($\alpha = .86$), quality sleep ($\alpha = .94$) and overall healthy behaviours ($\alpha = .91$).

I only used the guilt subscale of the SSGS (and not the shame subscale) because this study focuses specifically on mothers' *guilt*. Guilt is associated with an action/inaction and is often accompanied by remorse and regret, whereas shame is a negative evaluation of the self

(Baumeister et al., 1994). This study focuses on the feelings mothers have about taking a specific action, such as taking time away from the family, in order to engage, or not, in health-promoting behaviours. Therefore, guilt, and not shame, was the appropriate emotion to assess. This measure was chosen as it offers separate measures of shame and guilt, whereas some other related measures assess multiple forms of negative affect (e.g. shame and guilt) together. Further, this measure has been used in previous studies considering guilt specifically in mothers who are trying to live up to the ‘good mother’ ideal (Liss, Schiffrin & Rozzo, 2013). This measure is also one of the few scales that measure shame and guilt separately with separate validity (Marschall et al., 1994). Therefore, results from the guilt subscale were only used in this study to allow me to focus specifically on guilt.

Self-Compassion. Self-compassion was measured using the 26-item Self-Compassion Scale (SCS; Neff, 2003). The SCS assesses the three main components of self-compassion: self-kindness, common humanity and mindfulness (Appendix A, Measure 7). The scale includes both positively and negatively worded items. A total self-compassion score was calculated by reverse scoring the negative items then computing a grand mean. This scale has been used previously in studies considering health-promoting behaviours and self-compassion (Magnus et al., 2010; Terry et al., 2013; Sirois et al., 2015). Recent empirical evidence validates the use of a total scale score: “at least 90 per cent of the reliable variance in SCS scores can be explained by an overall self-compassion factor in five different populations” (Neff, 2016). Internal consistency for the 26 SCS items was found to be a $\alpha = .92$ (Neff, 2003b) and in a recent study considering self-compassion and health-promoting behaviours was found to be $\alpha = .94$ (Dunne et al., 2016). For this study, Cronbach’s alpha coefficient for the 26-item scale was found to be highly reliable ($\alpha = .94$).

Controlled Variables

Trait Guilt. To control for the possibility that participants who are characteristically guilt-prone – and therefore guilty in all situations, not just the ones I assess here - the Test of Self-Conscious Affect v. 3 was used to measure trait guilt (Tangney, 1990; Appendix A, Measure 8). The questionnaires consist of 11 situations where participants were asked to rate their reactions to each, from 1 – not a likely reaction to 5 – a very likely reaction. Each score for each situation corresponds with shame self-talk, guilt self-talk or blaming others. For the purpose of this study, the guilt self-talk scores were assessed, with previous reported alphas of .70. In the current study, Cronbach's alpha coefficient was .61 (11-items). This internal reliability is low but comparable to reports by Tangney and associates ($\alpha = .66$ for adult populations and $\alpha = .62$ for student populations; Tangney, 1996). Unlike the state guilt questionnaire (which was assessed relative to each health-promoting behaviour and overall health-promoting behaviours in question), the trait guilt scale was assessed once, following the self-compassion scale as a general measure.

Self-Esteem. The Self-Esteem Scale (Rosenberg, 1965; Appendix A, Measure 9) is a 10-item scale that measured participants' level of general self-esteem. The participants considered each statement and decided whether they Strongly Agree (SA), Agree (A), Disagree (D) or Strongly Disagree (SD) with the statement. Scoring is as follows: SA = 3, A = 2, D = 1, SD = 0. The score was summed for the 10 items and the higher the score the higher the self-esteem. The Rosenberg Self-Esteem scale demonstrates an excellent internal consistency with a coefficient of reproducibility of .92 and test-retest reliability over a two week period (.85 and .88, respectively). In the current study, Cronbach's alpha coefficient

for the 10 items was .89. The scale also demonstrates concurrent, predictive and construct validity using known groups (Rosenberg, 1979).

Procedures

Recruitment and eligibility screening. Upon approval from the Nursing/Education Ethics Review Board at the University of Manitoba, participants were recruited through posters throughout the community (e.g. University of Manitoba campus, community centres, Health Action Centres, Healthy Baby program centres); within community distribution lists (Winnipeg *in motion*), and through social media (e.g. Facebook and Twitter (through University of Manitoba Recreation Services), and Kijiji (posted in Winnipeg)). An e-mail address was provided on all recruitment materials for potential participants to express their interest in participating in the study. Upon emailing the researcher potential participants received a link to the study website.

Once logging onto the study website, potential participants received a brief description of the study. If participants met the requirements for the study they were asked to read a consent form. They clicked on a box indicating that they gave consent. If they agreed to participate they were asked to complete the online survey that included all study questionnaires (see Appendix A). Once the survey was completed, participants saw a debriefing page that included information on the true purpose of the study.

Analytical Plan

Statistical Analysis: To address my first research question, I employed four separate hierarchical regression analyses to determine if level of mother guilt was associated with

engagement in each health-promoting behaviour (physical activity, healthy eating and getting enough quality sleep) as well as overall health-promoting behaviours.

1. Does mother guilt relate to mothers' engagement in health behaviours?

In each hierarchical linear regression analysis, I included the control variable M_1 (trait guilt) entered first followed by the main variable M_2 (mother guilt). In separate regression analyses, the dependent variable, the health-promoting behaviour outcomes of Y_1 (physical activity), Y_2 (healthy eating), Y_3 (quality sleep) or Y_4 (overall health-promoting behaviours) was then regressed on the independent variable of M_2 (state guilt) while controlling for M_1 (trait guilt).

To address the second research question, I used four hierarchical regression analyses to determine if level of self-compassion was associated with each health-promoting behaviour (physical activity, healthy eating and getting enough quality sleep) and overall health-promoting behaviours.

2. Does self-compassion relate to mothers' engagement in health-promoting behaviours?

In each hierarchical linear regression analysis, I included the control variable X_1 (self-esteem) entered first followed by the main variable X_2 (self-compassion). In separate regression analyses, the dependent variable, Y_1 (physical activity), Y_2 (healthy eating), Y_3 (quality sleep) or Y_4 (overall health-promoting behaviours) was then regressed on the independent variables of X_2 (self-compassion) while controlling for X_1 (self-esteem).

To address the third research question, I used a single, separate, hierarchical regression analysis for each of the four outcome-associated mother guilt variables to determine if level of self-compassion was associated with mother guilt.

3. Does self-compassion relate to mother guilt?

In each hierarchical linear regression analysis, I included the control variables X_1 (self-esteem) and M_1 (trait guilt) followed by the main variables X_2 (self-compassion) and each of the outcome-associated mother guilt score, M_2 (mother guilt – physical activity; mother guilt – healthy eating; mother guilt – getting enough quality sleep; mother guilt – overall healthy behaviours).

To answer the fourth thesis question, I tested for mediation.

4. Does mother-guilt mediate the relationship between self-compassion and engagement in health-promoting behaviours?

To test the effect of the presumed mediating variable (M ; mother guilt), I used the Preacher and Hayes (2008) procedure, which uses bootstrapping. To consider the significance of the indirect effect, I used a confidence level of 95% and entered 1000 bootstrap samples into the Hayes macro PROCESS (Hayes, 2013). The statistical output included the regression with self-compassion predicting state guilt, guilt predicting each health-promoting behaviour and whether guilt reduced the relationship between self-compassion and each health-promoting behaviour. Although the mediation analysis produced regression models between the variables, the PROCESS model only yields unstandardized betas, which is standard for reporting mediation but difficult to interpret for

regression (Hayes, 2013). For each test of the mediating effect, the beta and bootstrapped standard error provide an interval range. If zero does not fall within this range then the mediating effect of guilt is statistically significant.

Choosing covariates: Past research has considered both self-compassion and self-esteem together as both constructs are correlated (Neff & Vonk, 2009). However, self-compassion often captures the ‘good’ that is part of self-esteem without some of the negative aspects such as self-worth contingent on social approval (Neff & Vonk, 2009). Therefore, self-esteem was chosen as a covariate in this study as is common practice. For analyses considering mother guilt, or guilty feelings towards a particular situation as was measured in this study, trait guilt was considered as a covariate to control for participants who may be characteristically guilt-prone in all situations. Number of children was also considered as a covariate as it may influence mothers’ ability to engage in health-promoting behaviours, over and above guilt or self-compassion levels.

Chapter III

Results

Data Management

Upon meeting and surpassing the number of participants required to meet power needs for this project, the data from the online questionnaire were exported into IBM SPSS Statistics Grad Pack 23.0. The data were then checked and examined according to recommendations by Pallant (2010) and Tabachnick and Fidell (2007). Any negative scale item scores were recoded. Next, composite scores were produced and checked for errors and

a percentage for missing values was calculated. After running analyses for patterns of missingness, six variables had 5% or less missing data. The remaining four variables had missing data above the 5% threshold: Self-compassion scale (5.8%), physical activity scale (8.2%), trait guilt scale (11.5%) and self-esteem scale (13.3%). Scores were then checked for univariate outliers by standardizing scores into z-scores and identifying values beyond ± 3.29 (Tabachniak and Fidell, 2007). After assessing all variables, seven outliers were found and these scores were changed by altering the original score to be one unit larger or smaller than the next most extreme score (Tabachniak and Fidell, 2007).

Four new datasets were created, one for each of the four research questions. Data were then tested for randomness of the missing values, confirmed by the non-significance of the Little's MCAR test (Field, 2014). As recommended by Tabachniak and Fidell (2007), missing values with less than 5% missing were estimated based on mean substitution. Data with 5% or more missing were replaced using multiple imputations, which creates several datasets showing different estimate values for each missing score. Multiple imputations provide a pooled estimate, which measures the true uncertainty of the dataset where there are missing values (Tachniak & Fidell, 2007). When used for inferential statistical purposes, all multiple imputation data sets are used and the output provides pooled results.

Normality was checked in all four datasets. I used ± 2 as a guideline for acceptable limits of skewness and kurtosis (Trochim & Donnelly, 2006; Field, 2000 & 2009; Gravetter & Wallnau, 2014). Variables in all datasets showed no significant skewness or kurtosis except for within the physical activity dataset, which showed significant skewness and kurtosis for moderate and mild bouts of activity. A square root transformation for scores of

moderate bouts of activity and a logarithm transformation for scores of mild bouts of activity reduced skewness and brought the values closer to zero.

Description of Participants

A total of 215 participants logged on to the study website. Twenty-five participants (11.63%) were not eligible while a further 28 (13.02%) were eligible but did not consent to being part of the study. An additional 16 (7.44%) participants consented to the study but completed only the demographics section. The remaining 144 participants provided responses to two or more of the eleven questionnaires within the core study (67.44%) and were included in the data analysis.

Participants' ages ranged from 18 to 46 with the mean age being 34 years ($SD = 5.24$). The average number of children each participant had was 1.8 ($SD = .79$). This is slightly higher than the national average of number of children at home per family of 1.1 (Statistics Canada, 2011). Fifty-four per cent of participants had a university undergraduate degree, forty-nine per cent worked fulltime (30 hours or more) outside the home, while eighty-one per cent were married and the same number of participants lived in Manitoba.

Mothers in this study reported a total GLTEQ score of 33.7 for physical activity engagement. Canada's physical activity guidelines state that individuals should aim for 150-minutes of moderate-to-vigorous physical activity a week. Individuals achieving this guideline would score a mean minimum of 70 on GLTEQ. Evidently, mothers in this study are not getting enough physical activity to receive the health benefits of regular exercise. Mean scores for mothers in this study for healthy eating ($M = 3.63$) and overall health-promoting behaviours ($M = 3.52$) suggest that mothers, on average, are eating healthier and

are engaging in overall health-promoting behaviours higher than normal. Mean sleep scores of mothers in this study ($M = 1.92$) suggest they are experiencing lower than average sleep difficulties.

Table 1. Participant Demographics

Variable	N	%
<i>Number of Children</i>		
1	51	35.2
2	72	49.7
3	19	13
4	2	1.4
5	0	0
6	1	.7
<i>Education</i>		
High School	21	14.5
University Undergraduate	54	37.2
College/Vocational School	31	21.4
Postgraduate	38	26.2
Some University	1	.7
<i>Working Status</i>		
Fulltime – outside the home (30+ hours/week)	71	49
Stay-at-Home parent	28	19.3
Part time – outside the home (>30 hours/week)	17	11.7
Fulltime – at home (30+ hours/week)	6	4.1
Part time – at home (>30 hours/week)	2	1.4
Student	2	1.4
Self-Employed	1	.7
Unemployed	1	.7
<i>Marital Status</i>		
Single	9	6.2
Common-Law	16	11
Married	117	80.1
Separated	2	1.4
Divorced	1	.7
<i>Province</i>		
Manitoba	118	81.4
British Columbia	4	2.6
Alberta	18	12.5

Saskatchewan	2	1.4
Ontario	2	1.4
Quebec	1	.7
<i>Ethnicity</i>		
Caucasian	136	93.8
Aboriginal	3	2.1
Hispanic	2	1.4
Asian	1	.7
Philippine	1	.7
Eastern Europe	1	.7
African	1	.7
<i>Income</i>		
Under \$16,000	2	1.4
\$16,000 - \$45,000	11	7.6
\$45,000 - \$75,000	25	17.2
\$75,000 - \$95,000	36	24.8
\$95,000 - \$110,000	19	13.1
\$110,000 - \$150,000	26	17.9
\$150,000 - \$200,000	17	11.7
Over \$200,000	4	2.8

Descriptive Analysis

Correlations were conducted to explore relationships amongst the variables in this study. Variables were normally distributed and the assumption of linearity was not markedly violated. Table 2, 3, 4 and 5 present the descriptive statistics and Pearson product-moment correlation coefficients for the predictor variables and each of the four outcome variables: physical activity engagement, healthy eating, getting enough quality sleep¹ and overall healthy behaviours. Number of children was not correlated with any health-promoting behaviour, self-compassion or guilt. A partial correlation was conducted for each of the four health-promoting behaviour variables using number of children as a covariate as a possible influence on the various healthy behaviours. Once again number of children was not

correlated with any of the health-promoting behaviours and so was not included as a covariate in analyses.

Table 2. Descriptive statistics of all study variables)

Variable	Mean	Std. Deviation	N
Self-Compassion	3.04	.64	137
Physical Activity	33.26	24.37	133
Mother Guilt – Physical Activity	2.06	.89	143
Healthy Eating	3.63	.49	142
Mother Guilt – Healthy Eating	1.35	.57	140
Sleep	1.92	1.35	143
Mother Guilt - Sleep	2.29	1.23	142
Overall Healthy Behaviours	3.53	.58	139
Mother Guilt – Overall Healthy Behaviours	1.8	.86	141
Trait Guilt	48.16	3.98	129
Self-Esteem	19.69	5.5	128

**Note: Self-Compassion scale, Mother Guilt scale, Healthy Eating scale and Overall Healthy Behaviours scale measured on a 5-point Likert, PA scale measured by a total leisure activity score calculated by summing the products of the different components. Sleep scale uses a Likert-type scale to answer questions regarding the frequency with which they have experienced certain sleep difficulties over the past month: 0 means “not at all,” while 5 means “22–31 days.” Higher scores indicate more acute sleep difficulties.*

Table 3. Pearson Product-Moment Correlations between the independent variables, four main outcome variables and two covariates (N = 144)

Variable	1	2	3	4	5	6	7	8	9	10
1. Self-Compassion										
2. Physical Activity	-.01									
3. Mother Guilt – Physical Activity	-.4**	-.11								
4. Diet	.3**	.12	-.22**							
5. Mother Guilt – Diet	-.24**	-.08	.38**	-.14						

6. Sleep	-.34**	-.07	.35**	-.18*	.18*					
7. Mother Guilt – Sleep	-.43**	-.05	.6**	-.28**	.32**	.57**				
8. Overall Healthy Behaviours	.33**	.25**	-.28**	.56**	-.12	-.38**	-.26**			
9. Mother Guilt – Overall Healthy Behaviours	-.35**	-.15	.73**	-.18*	.4**	.42**	.63**	-.19*		
10. Trait Guilt	-.09	.09	.13	.01	.06	.18*	.09	-.01	.13	
11. Self-Esteem	.57**	-.04	-.29**	.2*	-.27**	-.31**	-.36**	.32**	-.24**	-.04

** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed)

Main Analysis

Hierarchical multiple regression analyses were then used to test the first three research questions in this project. (Statistics are reported as recommended by J. Pallant, 2010).

1. Does mother guilt relate to mothers' engagement in health-promoting behaviours?

I hypothesized that mother guilt would have a negative relationship with engagement in health-promoting behaviours. For each analysis for each outcome variable, trait guilt was entered at Step 1 as the control variable. Mother guilt (state guilt) and the dependent variable (scores from physical activity engagement, healthy eating, sleep or overall healthy behaviours) were then entered in Step 2. The analyses determined that mother guilt was not significantly related to healthy eating or engagement in physical activity behaviours.

However, mother guilt about taking the time to get a good night's sleep was related to getting a good night's sleep. At Step 1, the control variable, trait guilt was entered, contributing 3.4%² of the variance in getting a good night's sleep ($F(1, 141) = 4.96, p < .05$).

After entering mother guilt about getting a good night's sleep at Step 2, the total model

accounted for 34% ($F(2, 140) = 36.52, p < .001$). After controlling for trait guilt, mother guilt explained an additional 31% of the variance in getting a good night's sleep, R squared change = .309, F change (1, 141) = 65.80, $p < .001$, signifying that the more guilt a mother felt about taking time to get a good night's sleep the less likely they were to actually get a good night's sleep. Only mother guilt (state guilt) added a unique significant contribution when beta weights were examined ($\beta = .558, p < .001$) to the overall model.

When considering the association between mother guilt and overall healthy behaviours, the control variable, trait guilt, when entered, did not contribute to the model. However, after entering mother guilt (state guilt) at Step 2, the total model accounted for about 4% ($F(1, 141) = 2.71$) of the variance in engaging in overall healthy behaviours. Only mother guilt added a unique significant contribution when beta weights were examined ($\beta = -.191, p = .03$) however the overall model did not quite reach the conventional level of significance of .05, but neared this level at $p = .076$.

2. Does self-compassion relate to mothers' engagement in health-promoting behaviours?

I hypothesized that self-compassion would positively relate to mothers' engagement in physical activity, eating a healthy diet, getting enough sleep as well as a combination of all three behaviours. For the analysis for each health-promoting behaviour, the control variable, self-esteem, was entered at Step 1. Self-compassion was then entered at Step 2. The model for physical activity engagement was not statistically significant. For healthy eating, self-esteem accounted for 3.6% of the variance ($F(1, 143) = 5.31, p < .05$). After entering self-compassion, the total model accounted for 9%, $F(2, 143) = 7.94, p < .001$ of the variance in eating healthy. Self-compassion explained an additional 6.5% of the variance in eating

healthy after controlling for self-esteem, R squared change = .065, F change (1, 141) = 10.24, $p < .05$). In the final model, only self-compassion made a unique significant contribution ($\beta = .31, p = .002$).

To determine whether mothers' self-compassion was related to getting a good night's sleep, the control variable self-esteem was entered at Step 1 and explained 9% of the variance in getting a good night's sleep ($F(1, 142) = 15.20, p < .001$). After entering self-compassion at Step 2, the overall model explained 12% of the variance, $F(2, 142) = 10.77, p < .001$. Self-compassion explained an additional 3.6% of the variance in getting a good night's sleep, R squared change = .036, F change (1, 140) = 5.81, $p < .05$). In the final model, only self-compassion, not self-esteem, made a unique statistically significant contribution ($\beta = -.229, p < .05$) suggesting that the more self-compassion a mother has the more likely she is to take the time to get a good night's sleep.

Self-compassion was also positively related to overall healthy behaviours. Self-esteem accounted for 9.6% of the variance in overall healthy behaviours ($F(1, 141) = 15.98, p < .001$). The model as a whole accounted for 12.8% ($F(2, 141) = 11.38, p < .001$) of the variance. Self-compassion made an additional unique contribution of 4% of the variance, R squared change = .038, F change (1, 139) = 6.18, $p < .05$, after controlling for self-esteem. Only self-compassion made a significant contribution to overall healthy behaviours ($\beta = .239, p < .05$).

3. Does self-compassion relate to mother guilt about engaging in health-promoting behaviours?

I hypothesized that when considering the guilt mothers reported about taking time to engage in three specific health-promoting behaviours as well as overall healthy behaviour engagement, self-compassion would be negatively related to mother guilt after controlling for self-esteem and trait guilt. At Step 1, the control variables self-esteem and trait guilt were entered. At Step 2, self-compassion and mother guilt related to either of the four outcome variables, were entered. Analyses determined that self-compassion does not relate to guilt about taking the time to eat healthy or engage in physical activity.

However, self-compassion was negatively related to mother guilt about taking time to get a good night's sleep. At Step 1, 11% of the variance in getting a good night's sleep could be attributed to the control variables ($F(2, 140) = 10.27, p < .001$). After entering self-compassion and guilt about taking to get a good night's sleep at Step 2, the model as a whole explained 34% of the variance in mother guilt, $F(4, 142) = 19.29, p < .001$. Self-compassion and mother guilt explained an additional 23% after controlling for self-esteem and trait guilt ($R^2 \text{ change} = .23, F \text{ change}(2, 138) = 24.93, p < .001$). In determining the contribution of each variable, only feeling guilty about taking time to get enough sleep made a unique significant contribution ($\beta = .42, p < .001$).

Self-compassion was also negatively related to mother guilt explaining 12.5% of the variance in guilt about taking time to engage in overall healthy behaviours. After the control variables self-esteem and trait guilt were entered, the model explained 9% of the variance in overall healthy behaviours ($F(2, 139) = 8.11, p < .001$). At Step 2, the total model explained 12.5% variance in guilt about taking time for healthy behaviours ($F(4, 141) = 6.03, p < .001$). Self-compassion, after controlling for self-esteem and trait guilt, explained an additional 4.5% in the variance of guilt, $R^2 \text{ change} = .045, F \text{ change}(2, 137) = 3.64,$

$p < .05$). In the final model, only self-compassion added a unique, yet modest, contribution to the final model ($\beta = .214, p < .05$).

Mediation Analysis

The last research question considered the mediating effect of mother guilt (state guilt) between self-compassion and the three individual health-promoting behaviours as well as overall healthy behaviours. (Statistics reported as recommended by Leech, Barrett, & Morgan, 2015).

4. Does mother-guilt mediate the relationship between self-compassion and engagement in health-promoting behaviours?

Mediation analysis, using Hayes' PROCESS macro in SPSS, was used to consider the hypothesis that mother guilt will mediate the relationship between self-compassion and engagement in health-promoting behaviours. Mother guilt did mediate the relationship between self-compassion and sleep behaviours. The mediating effect of guilt on self-compassion and sleep behaviours was statistically significant, $\beta = -.47$, Bca CI (-.6731, -.2955) with a bootstrapped standard error of .10 and a 95% confidence interval (Leech, Barrett, & Morgan, 2015; Hayes & Rockwood, in press).

The output reported that self-compassion explained 19% of the variance in mother guilt to getting a good night's sleep and was statistically significant ($\beta = -.63, t = -3.4, p < .001$). A combination of self-compassion and mother guilt explained 35% of the variance in getting enough sleep ($F(4, 142) = 15.78, p < .001$). The beta's and their significance are shown in Figure 1.

Mother guilt also mediated the relationship between self-compassion and overall healthy behaviours and was statistically significant, $\beta = .05$, Bca CI (.0014, .1133) with a bootstrapped standard error of .03 and a 95% confidence interval (Leech, Barrett, & Morgan, 2015; Hayes & Rockwood, in press).

The output reported that self-compassion explained 15% of the variance in mother guilt in engaging in healthy behaviours ($\beta = -.47$, $t = -3.5$, $p < .001$). A combination of self-compassion and mother guilt explained 16% of the variance in overall healthy behaviours ($F(4, 141) = 5.5$, $p < .001$). The betas and their significance are shown in Figure 2.

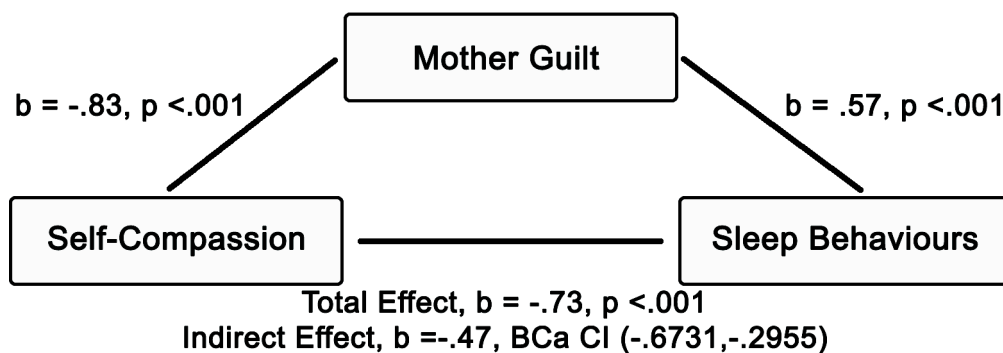


Figure 1. Mediation Model with Regression Coefficients, Indirect Effect and Bootstrapped CIs for getting enough sleep.

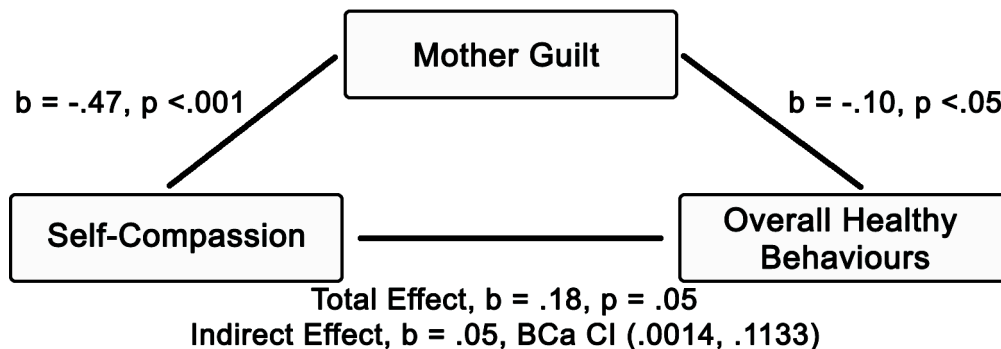


Figure 2. Mediation Model with Regression Coefficients, Indirect Effect and Bootstrapped CIs for overall healthy behaviours.

¹ To measure sleep, an additional question was added after the Jenkin's Sleep Scale. Statistical results for this one question were essentially the same as the Jenkin's Sleep Scale results. Therefore, they were not included in the overall results.

² All regression and mediation statistical results are pooled results.

Chapter IV

Discussion

The purpose of this study was to explore how mothers with young children negotiate feelings of guilt about taking the time to, or actually engaging in, health-promoting behaviours within the broader concept of an ethics of care. Specifically, I considered the interrelationships between feelings of guilt, self-compassion and self-reported health-promoting behaviours (physical activity, healthy eating, getting enough quality sleep and overall health-promoting behaviours). I also examined whether mother guilt mediates the relationship between self-compassion and these behaviours. As predicted, self-compassion was associated with engagement in overall health-promoting behaviours and getting a good nights' sleep and this effect was mediated by feelings of guilt about taking time to engage in these behaviours. Mother guilt did not mediate between self-compassion and the other health

behaviours examined. However, when the direct associations between self-compassion, mother guilt and behaviour were examined, some associations were found. These results make a unique contribution to the self-compassion literature as no study has considered the relationship between self-compassion, mother guilt and health-promoting behaviours, nor explored self-compassion and health-promoting behaviours among mothers of young children.

Mediating role of mother guilt

In this study, the guilt mothers felt about both taking time to get enough sleep and engaging in overall health-promoting behaviours mediated the effect of self-compassion on getting a good night's sleep and overall healthy behaviours. That is, as a mother's level of self-compassion increased, the association with their reported guilt about both taking time to get enough sleep and engaging in overall health-promoting behaviours, decreased. In turn, these diminished levels of guilt were associated with reported increased quality sleep and engagement in overall health-promoting behaviours. These results are to be expected as self-compassionate individuals overcome negative emotions, allowing them to look after themselves (Neff, 2011; Terry et al., 2013). Indeed, individuals high in self-compassion spend less time ruminating about health-related negative feelings such as guilt (Terry, Leary, Mehta & Henderson, 2013). Further, individuals with higher levels of self-compassion are more intrinsically motivated to make behaviour changes that are in the best interest of their well-being than they are to be governed by external pressures (Magnus, Kowalski and McHugh, 2010; Neff, 2003), including feelings of guilt.

For mothers, guilt can emanate from the maternal ethics of care and comparison to the ‘good mother’ ideal (Liss, Schiffrin & Rizzo, 2013). Self-compassion appears to buffer mothers against this maternal guilt. Though I am only able to report a negative association between self-compassion and guilt, one way in which mothers may have negotiated these guilt feelings is through determining that engaging in health-promoting behaviours is an extension of society’s definition of a ‘good mother’ (Lewis & Ridge, 2005). Another way they may navigate their guilty feelings is by finding identities (e.g. “runner” or “athlete”) outside of the primary caregiver role (McGannon, McMahon & Gonsalves, 2017). Free from guilt, self-compassionate mothers may feel comfortable taking time for themselves to engage in health-promoting behaviours.

It is important to note that mother guilt scores in this study were below the scale mean ($M = 2.06$ (physical activity), $M = 1.35$ (eating healthy), $M = 2.29$ (getting enough sleep), and $M = 1.8$ (overall healthy behaviours)). These low numbers suggest that, relative to taking time for health-promoting behaviours, mothers experience mild levels of guilt. It may be that today’s mothers ascribe less to the maternal ethics of care than mothers once did. This idea is speculative; I was not able to compare the levels of guilt experienced by mothers in my sample to similar levels from an earlier time. Further, there are no current measures to assess maternal guilt where validity and reliability of that measure has been established. Liss, Schiffrin & Rizzo (2013) have proposed a scenario-based measure, much like the TOSCA scale, based on specific parenting scenarios as a way to more accurately capture the guilt (as well as shame) of mothers (Dunford & Granger, 2017). Future research should consider creating a measure specific to mothers’ feelings of guilt, and hence the extent of the maternal ethics of care.

The maternal ethics of care and the ideology of the ‘good mother’ is often restricted to married, white, middle-class, heterosexual women (O’Reilly, 2010). This represents a challenge for researchers to identify and categorize mother guilt within the ethics of care construct as it may have different meanings within different populations. Researchers should consider the extent to which different populations identify with the ‘good mother ideal’ and how the strength of that identity influences health-promoting behaviours and its subsequent relationship to self-compassion.

Through this study, I offer a unique finding in terms of self-compassion, mother guilt and sleep through identifying a mediating effect of mother guilt between self-compassion and getting a good night’s sleep. This finding is encouraging as a lack of sleep can be detrimental to a mother’s ability to cope in the motherhood role (McVeigh, 1998; Coo, Milgrom, Kuppens & Trinder, 2014). Further, researchers in the behavioural sciences recognize sleep as an important part of a healthy lifestyle (Kroese & Griva, 2016). It is therefore of practical significance to identify correlates of healthy sleeping patterns among mothers of young children, such as self-compassion.

In this study, I also found that increased levels of self-compassion were negatively related to the guilty feelings mothers have about taking the time to engage in overall healthy behaviours. Confirming mother guilt’s mediating effect between self-compassion and overall healthy behaviours reinforces past findings (Hollis-Walker & Colosimo, 2011; Leary et al., 2007; Magnus et al., 2010) regarding self-compassions’ impact on negative feelings such as guilt, in a demographic that is weighed down by societal expectations. This study also contributes to a small but growing body of research demonstrating the association between

self-compassion and health-promoting behaviours (see Sirois et al., 2015 and Dunne et al, 2016).

It is interesting that levels of maternal guilt did not mediate between self-compassion and physical activity or healthy eating that mothers reported. Further, when I examined the direct relationships between variables, self-compassion was negatively related to guilt about taking time for some but not all the health-promoting behaviours examined. Similarly, guilt was associated to self-report of some but not all behaviours. These varying findings for different health-promoting behaviours may have to do with the difference between these behaviours.

The relationship between self-compassion and healthy eating was not mediated by feeling guilty about taking time to eat healthy, nor was there any relationship between mother guilt and reported healthy eating. One explanation for this finding is that mothers dietary choices may not be driven by their own desires and needs; mothers' diets are often closely tied to her children's diet (Johnson, Sharkley, Dean, McIntosh, Kubena, 2011). Mothers may want to make healthy personal food choices for themselves but due to lack of time or the need to ensure their children eat, they may make food choices that prioritize their child's taste preferences (Berge et al., 2011) or specific nutritional needs (e.g. full fat dairy) over their own nutritional needs or goals. If their diet is focused more towards their child than levels of guilt about meeting their own nutritional needs may not influence their own eating behaviour. The construct, perceived behavioural control, from the Theory of Planned Behaviour suggests that people engage in a behaviour only when they feel they are in command of performing an intended behaviour (Ajzen, 2002). In this case, if mothers feel they have to prepare food that meets their children's needs, they may not feel in control of

their own eating, and so this behaviour would not be regulated by variables, such as guilt, that may otherwise influence volitional behaviours.

Mother guilt also did not mediate the relationship between self-compassion and self-reported physical activity. The simple relationships between these variables were also not supported. This finding is at odds with past research (Miller & Brown, 2007; Sirois, 2015). The total leisure-time exercise score for mothers in this study ($M = 33.7$) is considerably low; a mean score of 70 would be consistent with Canada's Physical Activity Guidelines of 150 minutes of moderate-to-vigorous intensity physical activity per week. It is possible that feeling guilty about taking the time to engage in physical activity did not resonant with mothers of young children, as overall engagement in this behaviour was quite low.

Self-compassion's direct influence on health-promoting behaviours

Self-compassion had a direct effect on sleep and healthy eating specifically and healthy behaviours generally, which contributes to an accumulating body of literature that links self-compassion to various health behaviours. Neff (2003) suggests that self-compassionate individuals will take action to behave in ways that will promote their wellbeing. In this case, mothers high in self-compassion report engaging in overall health-promoting behaviours as well as taking the time to get enough sleep and eat a healthy diet. This falls in line with Sirois, Kitner and Hirsch's (2015) study, in which these researchers demonstrated a positive relationship between self-compassion and engagement in health-promoting behaviours, including getting enough sleep and eating well. My study extends these findings to mothers of young children.

In this study, self-compassion related to all examined behaviours but physical activity, when measured as its own variable. These findings stand in contrast to our own and others' (Sirois et al., 2015) findings of a positive association between self-compassion and general health-promoting behaviours, which included physical activity. The measurement used to assess health-promoting behaviours in my study as well as that of Sirois et al. (2015) involved assessing physical activity *along with* other healthy behaviours (healthy eat, getting enough sleep and taking time to relax) as a part of a health-promoting behaviour inventory. When a measure that considers healthy behaviours together (such as the measure used in this study to assess engagement in *overall* health-promoting behaviours) is used, behaviours that may be relatively strongly associated with self-compassion may compensate for those that are less strongly associated and mask the unique nature of these different relationships. When measured on their own, behaviours such as physical activity may fail to demonstrate an association with self-compassion, given a weak relationship. If this speculative explanation is correct, a multiple-behaviour measure cannot decipher whether individual behaviours are associated with self-compassion. To the best of my knowledge, no other study has directly measured physical activity levels in relation to self-compassion levels. Researchers may need to employ unique scales for each health-promoting behaviour if they are interested in the unique association between specific health-promoting behaviours and self-compassion.

When considering the lack of support for a relationship between self-compassion and reported engagement in physical activity, it is also possible that mothers may engage in physical activity for reasons unrelated to self-compassion. Indeed, mothers may be engaging in physical activity with consideration of the interest of others. For example, Lewis and

Ridge (2005) and McGannon, McMahon and Gonsalves (2017) both found that physical activity served as a way for mothers to provide an active family environment. These findings reveal the underpinnings of an ethics of care in physical activity decision-making, where mothers are motivated by the best interest of their families. It also demonstrates the internal struggle mothers face between fulfilling their own needs and the pressure to always be the ‘good mother’ by consistently fulfilling their family’s needs first (Butson et al., 2014; Martinez, Carrasco, Aza, Blanco & Espinar, 2011). If mothers engage in physical activity to meet others versus their own needs, then physical activity may not represent a way through which they carry out self-compassion.

The idea that physical activity may *not* be a self-compassionate act for mothers of young children seems plausible for other reasons. Self-compassion has been associated with setting realistic and achievable goals (Neff, 2003) but also goals that contribute to one’s overall wellbeing (Terry & Leary, 2014). For mothers with young children, physical activity may be neither realistic nor contribute to their sense of wellbeing. Indeed, mothers of young children report great difficulty in being regularly physically active and, as a group, report very low levels of physical activity (Butson et al., 2014). Mothers in this study also reported low levels of physical activity suggesting that at this stage of their lives, physical activity may not represent a realistic goal and may be something they can put “on hold” until their children are older (Hamilton & White, 2010).

Individuals high in self-compassion can remove their self-judgment within a situation and see a negative mood or feeling more clearly, therefore transforming the negative state into a more positive outlook (Neff, 2003). Neff (2003) states that with this self-clarity, individuals can see how their own actions may be maintaining or contributing to their

negative state. Within this realization, individuals will actively do something to resolve their issue. Self-compassion research has focused on this ‘negative turn around’, demonstrating self-compassion’s healing powers (Leary et al., 2007; Terry, Leary, Mehta & Henderson, 2013; Neff, Rude & Kirkpatrick, 2006). However, research has failed to consider an individual’s choice to *not* engage in certain specific healthy behaviours *because* it is causing stress, in turn causing negative feelings. This may be a reason for the lack of association between physical activity and self-compassion as well as physical activity and mother guilt. Mothers may be making a self-compassionate choice when they decide to let go of their goals around physical activity instead choosing to engage in other health-promoting behaviours such as eating healthy and getting enough sleeping as these behaviours may be seen as easier to achieve while still staying consistent with their values of staying healthy.

Strengths and Limitations

This study has both strengths and limitations that should be considered in interpreting the findings. My results expand on our understanding of self-compassion’s impact on health-promoting behaviours through focusing on mothers with young children, a population that is among the most inactive (Bellows-Reicken & Rhodes, 2007). It also contributes to the literature considering the association between self-compassion and negative emotions, such as guilt. Finally, I consider not only overall health-promoting behaviours as an outcome but the individual behaviours independently.

This study contributes to the underrepresentation in the literature of research addressing nutrition and diet and its negative implications for mothers. It underscores the need for further research (Aschemann-Witzel, 2013) as healthy eating practices can have

lasting benefits not only for mothers but also their children (Berge et. al, 2011). The argument for underrepresentation in the literature of mothers and certain health-promoting behaviours and possible negative implications can be extended to lack of quality sleep in mothers as well.

Although online questionnaires offer several advantages, such as convenience and the ability to reach a large number of participants quickly (Wright, 2005), this choice to employ a quantitative design could also be seen as a limitation as most studies considering mother guilt and the maternal ethics of care use qualitative research methods to capture the nuances and individual differences of participants. Indeed, I have advanced a number of possible explanations for my study findings that would be interesting to explore through qualitative methods. For example, it would be interesting to ask mothers of young children how they exercise self-compassion, and which, if any, health-promoting behaviours make up their self-compassion practices and why, and whether guilt factors into this relationship.

Due to the open accessibility of the Internet, other limitations of this study include my inability to determine that each participant was indeed a mother, nor could I verify that each participant considered each question before answering (Evans & Mathur, 2005). However, for mothers with young children, online studies offer a convenient and realistic way to participate in studies (Fledjsoe, Miller & Marshall, 2010). Further, cross-sectional studies can provide a resource-conservative way to establish proof of concept for an idea prior to more intensive investment, for example, in prospective, multi-time point research designs or interventions. However, cross-sectional data is not optimal for testing mediation where prospective designs, in which the proposed predictor, mediators and outcome variables are measured at temporarily distinct times, is recommended to align with the

proposed order of the mediated relationship (Frazier, Tix & Baron, 2004). Given the cross-sectional nature of this study, the variables studied may relate to each other in any possible ordering. For example, as mothers with young children negotiate their feelings of guilt surrounding society's expectations as primary caregiver, self-compassion may mediate the relationship between levels of guilt mothers feel and their engagement in health-promoting behaviours. Notwithstanding this limitation, the mediated-sequence I propose is theoretically-driven (Frazer et al., 2004) and the present analyses provide preliminary support for some of the proposed mediated relationships that warrant further testing using prospective designs.

The self-selected study participants may not provide a representative sample of all mothers with young children. The sample was mainly composed of Caucasian, married, educated, middle- to upper-middle-class women, who volunteered to take part in a study on health-promoting behaviours. These limitations mean that study findings cannot be generalized to lower socioeconomic and ethnically diverse populations and less health-focused populations. While my focus on mothers of young children allowed me to focus on a population where self-compassion had not been studied previously, the results are therefore not generalizable to the broader public. Further, data were based on retrospective self-reports and, thus, may be subject to recall errors and other biases such as social desirability.

Through focusing on 'health-promoting behaviours', I take a post-positivist viewpoint centered on statistical measures and quantifiable effects. While often not acknowledged in quantitative studies, this narrow view of 'health' does pose a limitation as the value of more socio-political, cultural and humanistic approaches are excluded. This exclusion, therefore, limits our understanding of 'health' outside of this more Westernized

research approach. However, the methodological approach taken in this study was not intended to undervalue structural issues within the promotion of healthy behaviours, and in fact the ethics of care would fall under that umbrella, but rather to reflect my view and belief in the power of individual behavioural change.

Practical Implications and Next Steps

Being a mother of young children is challenging. Feelings of guilt may abound as one starts to realize their responsibility and implications of action in raising a small human. Those feelings of guilt are personal and individualistic. However, additional guilt from society, such as that layered on through an ethics of care, is overarching, touching all mothers' lives and can be detrimental to a woman's health (Lewis & Ridge, 2005; Henderson & Allen, 1991; Miller & Brown, 2005). Although this guilt exists for all mothers, some mothers have found a way around it – and that way may be through self-compassion. This study suggests that self-compassion may offer mothers a positive way to deal with guilty feelings about looking after their health. In the future, researchers should consider these relationships over time and consider a self-compassion intervention to further understand the implications of self-compassion levels on individual health-promoting behaviours among mothers of young children. This study also brings to light the possibility that for mothers of young children, being self-compassionate may mean *not* behaving in a way that is considered healthy, such as engagement in physical activity. Researchers could explore the implications of this alternative view of self-compassion, possibly through a qualitative study.

The results impart valuable knowledge, both in raising levels of self-compassion and reducing guilty feelings about looking after oneself, for those that support mothers of young children, including health care providers, midwives and nurses, healthy baby initiatives, programs for mothers with young children as well as partners and families. Ideally, the discourse on what it means to be a mother needs to change. This study shows that there are women who are extending that definition of “mother as primary caregiver” to include looking after themselves. However, more work needs to be done to change the story as those mothers are still the exception and not the norm.

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Appendix A: Measures

Measure 1: Demographic Measures

1. Please tell us your age

2. How did you hear about the study?
 - a. Through Facebook
 - b. Email
 - c. University of Manitoba advertisement
 - d. Community advertisement
 - e. Other
3. Please indicate your cultural background.
 - a. Caucasian
 - b. Aboriginal
 - c. Hispanic
 - d. African American
 - e. Asian
 - f. Other
4. Please indicate your marital status.
 - a. Single
 - b. Common-law
 - c. Married
 - d. Separated
 - e. Divorced
5. What is the highest level of education that you have completed?
 - a. Elementary
 - b. Secondary
 - c. College/vocational school
 - d. University
 - e. Postgraduate
6. How many children do you have living with you?
 - a. 1
 - b. 2
 - c. 3
 - d. 4
 - e. 5

7. What are the ages of your children?
- Child 1 _____
 - Child 2 _____
 - Child 3 _____
 - Child 4 _____
 - Child 5 _____
8. What is your current employment situation?
- Stay at home parent
 - Student
 - Employed full time
 - Employed part time
9. Please indicate the province or territory in which you live.
- Yukon Territory
 - Saskatchewan
 - Quebec
 - Ontario
 - NW Territories
 - Nova Scotia
 - Newfoundland
 - New Brunswick
 - Manitoba
 - British Columbia
 - Alberta

Measure 2: Physical Activity. Godin Leisure-Time Physical Activity Questionnaire

During a typical **7-Day period** (a week), how many times on the average do you do the following kinds of exercise for **more than 15 minutes** during your free time (write on each line the appropriate number).

a) **STRENUOUS EXERCISE**

(HEART BEATS RAPIDLY)

(e.g., running, jogging, hockey, football, soccer, squash, basketball, cross country skiing, judo, roller skating, vigorous swimming, vigorous long distance bicycling)

Times Per Week _____

b) **MODERATE EXERCISE****(NOT EXHAUSTING)**

(e.g., fast walking, baseball, tennis, easy bicycling, volleyball, badminton, easy swimming, alpine skiing, popular and folk dancing)

Time Per Week _____

c) **MILD EXERCISE****(MINIMAL EFFORT)**

(e.g., yoga, archery, fishing from river bank, bowling, horseshoes, golf, snow-mobiling, easy walking)

Times Per Week _____

2. During a typical **7-Day period** (a week), in your leisure time, how often do you engage in any regular activity **long enough to work up a sweat** (heart beats rapidly)?

OFTEN

SOMETIMES

NEVER/RARELY

1.

2.

3.

Measure 3: Healthy Diet. Health Eating Habits Scale

	Not at all	Rarely	Sometimes	Often	All of the time
I eat fruits, vegetables and grain products					
I eat a variety of foods from each of the four groups recommended by the Canadian Food Guide.					
I eat foods that are low in fat, saturated fat and cholesterol.					
I drink water.					
I eat foods such as chips,					

chocolate and candies.					
I eat fried food.					
I use white sugar.					
I use salt.					

Measure 4a: Sleep. Jenkins Sleep Scale

How often in the past month did you:	Not at all	1-3 days	4-7 days	8-14 days	15-21 days	22-13 days
1. Have trouble falling asleep?						
2. Wake up several times per night (not related to your child)?						
3. Have trouble staying sleep?						
4. Wake up after your usual amount of sleep feeling tired and worn out?						

Measure 4b: Sleep Quantity

	Never	Sometimes	Often	Routinely
Do you get enough sleep?				

Measure 5. Overall Healthy Behaviours. Wellness Behaviour Inventory scale

Please indicate approximately how often you currently perform the behaviours listed below by checking the appropriate box for each item. Think about how often you do these things in general, that is over the **past 3 months**.

	Less than once a week or never	One day a week	2–3 days a week	4-5 days a week	Every day of the week
1. I eat breakfast.					
2. I get a good night's sleep, for example, uninterrupted, restful sleep.					
3. I drink 3 or more caffeinated beverages, such as coffee, tea or colas.					
4. I exercise for 20 continuous minutes or more, to the point of perspiration.					
5. I eat at least 3 meals a day.					
6. I take time to relax.					
7. I eat fresh fruits and/or vegetables.					
8. I walk as much as possible, for example, I take the stairs not the elevator, etc.					
9. I eat junk foods, such as chips, candy/candy bars, French fries, etc.					
10. I eat healthy, well-balanced meals.					

Measure 6a: State Guilt Scale – Physical Activity

The following are some statements, which may or may not describe how you are feeling *right now*. Please think about how you feel when you think about taking time, or do take the time, to engage in physical activity. Rate each statement using the 5-point scale below.

	Not feeling this way	Feeling this way	Feeling this way very strongly
1. I feel remorse, regret	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
2. I feel tension about something I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
3. I cannot stop thinking about something bad I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
4. I feel like apologizing	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
5. I feel bad about something I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5

Measure 6b: State Guilt Scale – Healthy Eating

The following are some statements, which may or may not describe how you are feeling *right now*. Please think about how you feel when you think about or do spend time buying or making something healthy to eat for yourself. Rate each statement using the 5-point scale below.

	Not feeling this way	Feeling this way	Feeling this way very strongly
1. I feel remorse, regret	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
2. I feel tension about something I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
3. I cannot stop thinking about something bad I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
4. I feel like apologizing	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
5. I feel bad about something I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5

Measure 6c: State Guilt Scale – Sleep

The following are some statements, which may or may not describe how you are feeling *right now*. Please think about how you feel when you think about taking time, or do take the time, to try to get enough sleep. Rate each statement using the 5-point scale below.

	Not feeling this way	Feeling this way	Feeling this way very strongly
1. I feel remorse, regret	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
2. I feel tension about something I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
3. I cannot stop thinking about something bad I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
4. I feel like apologizing	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
5. I feel bad about something I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5

Measure 6d: State Guilt Scale – Overall Health-Promoting Behaviours

The following are some statements, which may or may not describe how you are feeling *right now*. Please think about how you feel when you think about taking time, or do take the time, to engage in physical activity. Rate each statement using the 5-point scale below.

	Not feeling this way	Feeling this way	Feeling this way very strongly
1. I feel remorse, regret	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
2. I feel tension about something I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5
3. I cannot stop thinking about something bad I have done	1 - - - - -	2 - - - - -	3 - - - - - 4 - - - - - 5

happier than I am.

- _____ 14. When something painful happens I try to take a balanced view of the situation.
- _____ 15. I try to see my failings as part of the human condition.
- _____ 16. When I see aspects of myself that I don't like, I get down on myself.
- _____ 17. When I fail at something important to me I try to keep things in perspective.
- _____ 18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.
- _____ 19. I'm kind to myself when I'm experiencing suffering.
- _____ 20. When something upsets me I get carried away with my feelings.
- _____ 21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
- _____ 22. When I'm feeling down I try to approach my feelings with curiosity and openness.
- _____ 23. I'm tolerant of my own flaws and inadequacies.
- _____ 24. When something painful happens I tend to blow the incident out of proportion.
- _____ 25. When I fail at something that's important to me, I tend to feel alone in my failure.
- _____ 26. I try to be understanding and patient towards those aspects of my personality I don't like.

Measure 8. Controlled Measure: Test of Self-Conscious Affect

Below are situations that people are likely to encounter in day-to-day life, followed by several common reactions to those situations.

As you read each scenario, try to imagine yourself in that situation. Then indicate how likely you would be to react in each of the ways described. We ask you to rate all responses because people may feel or react more than one way to the same situation, or they may react different ways at different times.

For example:

A. You wake up early one Saturday morning. It is cold and rainy outside.

- | | |
|--|---|
| a) You would telephone a friend to catch up on news. | 1---2---3---4---5
not likely very likely |
| b) You would take the extra time to read the paper. | 1---2---3---4---5
not likely very likely |
| c) You would feel disappointed that it's raining. | 1---2---3---4---5
not likely very likely |
| d) You would wonder why you woke up so early. | 1---2---3---4---5
not likely very likely |

In the above example, I've rated ALL of the answers by circling a number. I circled a "1" for answer (a) because I wouldn't want to wake up a friend very early on a Saturday morning -- so it's not at all likely that I would do that. I circled a "5" for answer (b) because I almost always read the paper if I have time in the morning (very likely). I circled a "3" for answer (c) because for me it's about half and half. Sometimes I would be disappointed about the rain and sometimes I wouldn't -- it would depend on what I had planned. And I circled a "4" for answer (d) because I would probably wonder why I had awakened so early.

Please do not skip any items -- rate all responses.

1. You make plans to meet a friend for lunch. At five o'clock, you realize you have stood your friend up.

- | | |
|--|---|
| a) You would think: "I'm inconsiderate." | 1---2---3---4---5
not likely very likely |
| b) You'd think you should make it up to your friend as soon as possible. | 1---2---3---4---5
not likely very likely |
| c) You would think: "My boss distracted me just before lunch." | 1---2---3---4---5
not likely very likely |

2. You break something at work and then hide it.

- | | |
|--|---|
| a) You would think: "This is making me anxious. I need to either fix it or get someone else to." | 1---2---3---4---5
not likely very likely |
| b) You would think about quitting. | 1---2---3---4---5
not likely very likely |

- c) You would think: “A lot of things aren’t made very well these days.” 1---2---3---4---5
not likely very likely
3. At work, you wait until the last minute to plan a project, and it turns out badly.
- a) You would feel incompetent. 1---2---3---4---5
not likely very likely
- b) You would think: “There are never enough hours in the day.” 1---2---3---4---5
not likely very likely
- c) You would feel: “I deserve to be reprimanded for mismanaging the project.” 1---2---3---4---5
not likely very likely
4. You make a mistake at work and find out a co-worker is blamed for the error.
- a) You would think the company did not like the co-worker. 1---2---3---4---5
not likely very likely
- b) You would keep quiet and avoid the co-worker. 1---2---3---4---5
not likely very likely
- c) You would feel unhappy and eager to correct the situation. 1---2---3---4---5
not likely very likely
5. While playing around, you throw a ball, and it hits your friend in the face.
- a) You would feel inadequate that you can’t even throw a ball. 1---2---3---4---5
not likely very likely
- b) You would think maybe your friend needs more practice at catching. 1---2---3---4---5
not likely very likely
- c) You would apologize and make sure your friend feels better. 1---2---3---4---5
not likely very likely
6. You are driving down the road, and you hit a small animal.

- a) You would think the animal shouldn't have been on the road. 1---2---3---4---5
not likely very likely
- b) You would think: "I'm terrible." 1---2---3---4---5
not likely very likely
- c) You'd feel bad you hadn't been more alert driving down the road. 1---2---3---4---5
not likely very likely
7. You walk out of an exam thinking you did extremely well, then you find out you did poorly.
- a) You would think: "The instructor doesn't like me." 1---2---3---4---5
not likely very likely
- b) You would think: "I should have studied harder." 1---2---3---4---5
not likely very likely
- c) You would feel stupid. 1---2---3---4---5
not likely very likely
8. While out with a group of friends, you make fun of a friend who's not there.
- a) You would feel small...like a rat. 1---2---3---4---5
not likely very likely
- b) You would think that perhaps that friend should have been there to defend himself/herself. 1---2---3---4---5
not likely very likely
- c) You would apologize and talk about that person's good points. 1---2---3---4---5
not likely very likely
9. You make a big mistake on an important project at work. People were depending on you, and your boss criticizes you.
- a) You would think your boss should have been more clear about what was expected of you. 1---2---3---4---5
not likely very likely
- b) You would feel as if you wanted to hide. 1---2---3---4---5
not likely very likely

c) You would think: "I should have recognized the problem and done a better job."

1---2---3---4---5
not likely very likely

10. You are taking care of your friend's dog while they are on vacation and the dog runs away.

a) You would think, "I am irresponsible and incompetent."

1---2---3---4---5
not likely very likely

b) You would think your friend must not take very good care of her dog or it wouldn't have run away.

1---2---3---4---5
not likely very likely

c) You would vow to be more careful next time.

1---2---3---4---5
not likely very likely

11. You attend your co-worker's housewarming party, and you spill red wine on a new cream-colored carpet, but you think no one notices.

a) You would stay late to help clean up the stain after the party.

1---2---3---4---5
not likely very likely

b) You would wish you were anywhere but at the party.

1---2---3---4---5
not likely very likely

c) You would wonder why your co-worker chose to serve red wine with the new light carpet.

1---2---3---4---5
not likely very likely

Measure 9. Controlled Measure: Self-Esteem

Instructions: Below is a list of statements dealing with your general feelings about yourself.

If you strongly agree, circle SA. If you agree with the statement, circle A. If you disagree, circle D. If you strongly disagree, circle SD.

1. On the whole, I am satisfied with myself.

SA A D SD

2. At times, I think I am no good at all.

SA A D SD

3. I feel that I have a number of good qualities.

SA A D SD

4. I am able to do things as well as most other people.	SA	A	D	SD
5. I feel I do not have much to be proud of.	SA	A	D	SD
6. I certainly feel useless at times.	SA	A	D	SD
7. I feel that I'm a person of worth, at least on an equal plain with others.	SA	A	D	SD
8. I wish I could have more respect for myself.	SA	A	D	SD
9. All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
10. I take a positive attitude toward myself.	SA	A	D	SD

Appendix B: Eligibility Requirements

1. Please indicate your age
 - a. 18-24
 - b. 25-35
 - c. 35-45
 - d. 45-50
 - e. over 50
2. Is your health status such that, whether you currently do or not, you are able to engage in physical activity, eating a healthy diet or getting enough sleep (free of any injury and/or health conditions)?
 - a. Yes
 - b. No
3. Are you comfortable reading and writing English?
 - a. Yes
 - b. No
4. Do you have good comprehension of the English language?
 - a. Yes
 - b. No
5. Is anyone else in your household a participant in this study?
 - a. Yes
 - b. No
6. Do you have at least one child aged 5 years of age or younger living in the same home as you?
 - a. Yes
 - b. No

Appendix C: Study Description

Thank you for your interest in participating in our study! The online questionnaire should take roughly 20 to 30 minutes for you to complete.

The purpose of this study is to increase the understanding certain cultural and social ideals and how they influence a mothers engagement in certain healthy behaviours such as physical activity, healthy eating and getting enough sleep. If you agree to participate in this research study you will be asked to read and give consent to your participation. All data collected will be kept private and is not associated with any one participant.

Thanks again for your interest in this study! If you have questions, please contact the principal researcher:

Cindy Miller
Faculty of Kinesiology and Recreation Management
University of Manitoba
Phone: 204-474-7878
millerc7@myumanitoba.ca

This research has been approved by the Education and Nursing Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at 474-7122 or humanethics@umanitoba.ca.

Appendix D: Recruitment

MOTHERHOOD RESEARCH PROJECT



We are looking for mothers with young children to be involved in an online healthy behaviours study!

You MAY be eligible if you:

Are a mother;

**Have at least 1 child between 6 months and 5 years of age,
living in the same home as you;**

Are comfortable reading and understanding English.

A few eligibility questions will be asked to ensure individuals meet the study's eligibility criteria. This is a one-time, online questionnaire study with a time commitment between 25 and 35 minutes.

**To learn more about this study and/or to participate,
contact millerc7@myumanitoba.ca**

This research is being conducted by Cindy Miller, a student at the U of M under the guidance of Dr. Shaelyn Strachan from the Faculty of Kinesiology. Results will be disseminated through a thesis. This research has been approved by the Education and Nursing Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at 474-7122.

Faculty of Kinesiology and
Recreation Management



UNIVERSITY
of MANITOBA

Appendix E: Consent Form



Health, Leisure & Human
Performance Research Institute

Motherhood Study - Consent Form

Below is the consent form containing important information about the study. It is important that you indicate your consent at the bottom.

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Principal Investigator

Cindy Miller, Masters student at U of M,
Faculty of Kinesiology and Recreation Management
(204) 474-7878
millerc7@umanitoba.ca

Advisor

Dr. Shaelyn Strachan, Associate Professor at U of M
Faculty of Kinesiology and Recreation Management
(204) 474-6363
Shaelyn.Strachan@umanitoba.ca

Purpose of the Study: The purpose of this study is to understand how certain cultural and social ideals about motherhood influence a mother's engagement in certain healthy behaviours such as physical activity, healthy eating and getting enough sleep. The results from this study will be used in the Principal Researcher's thesis.

Participation: Your participation will consist of completing an online questionnaire, which should take between 20 and 30 minutes to complete.

Risks: Your participation in this study will involve the disclosure of personal information, for example your age, number and age of children, and marital status and this may cause you

to feel slightly uneasy. However, it is acknowledged that all of the information provided will be kept in strict confidence, and no one other than the researcher and researcher's advisor might be able to trace your answers back to you.

Benefits: You may be helping to contribute to the understanding of factors that influence mothers and their ability to engage in healthy behaviours. If you are interested, you can ask for the study results once they are available.

Confidentiality and anonymity: If you participate in this study, the information that you share will remain strictly confidential. Your information and data will only be used to examine the research questions of this study. Also, the principal researcher will merge your data with that of the other participants and once the data analyses have been completed and the project is finished, your email address will be dissociated from your responses. The advisor for this project, Dr. Shaelyn Strachan will have access to the data as it will be stored in her office. Aggregated data stemming from this research could be presented at academic conferences and/or published in academic journals. All of the answers you provide will be kept confidential. Any information you provide will be stored on the encrypted and password protected site, Survey Monkey, and on password-protected computers affiliated with Dr. Strachan's lab. Your contact information responses will be kept on a password-protected computer in the advisor's locked lab. Any hard copies of your data will be kept in a locked filing cabinet in the principal investigator's locked lab as well. Neither your name nor contact information will appear in any publications stemming from this research.

Conservation of data: As explained above, the electronic data will be stored on the principal researcher's password-protected computer and on a USB mass storage device in her locked lab. The USB key will also be kept in a locked filing cabinet in her lab, as will any hard copies of the data. When the project will be completed, the electronic data files stored on the computer will be destroyed. The USB mass storage device with original data and any hard copies of this data will then be stored in a locked filing cabinet in the research advisor's locked office for five years. After this five-year period (approximately September 2021) all electronic data will be permanently deleted and any hard copies will be cross-shredded.

Voluntary Participation: You are under no obligation to participate and if you choose to participate, you can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If you wish to withdraw from the study you can contact the researcher at millerc7@myumanitoba.ca. If you choose to withdraw, you can ask that all of your data gathered until the time of withdrawal be deleted from computer files and the USB mass storage device, for hard copies to be cross-shredded, and for none of your data to be used in data analyses.

Debriefing: At the end of the study you will be debriefed on the study details and will be provided with the opportunity to leave your contact information and, when available (approximately June 2017), a summary of results will be emailed to you, if you so wish.

Research Dissemination: The results of this study will be disseminated through a thesis. For dissemination all data will be presented in aggregate form and neither your name nor

contact information will appear in any publications stemming from this research. The findings may be presented at academic conferences to other researchers and academics in the field and/or published in academic journals.

By indicating YES at the bottom of this form, you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researcher, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Education and Nursing Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at 474-7122 or humanethics@umanitoba.ca.

By indicating YES, you agree to the above terms of this study.

Yes
 No

Do you wish to receive a summary of results at the end of the study?

Yes
 No

If so, please enter your email address.

Appendix F: Debriefing Form

Debriefing Form

Thank you very much for participating in this study! Your participation is very valuable and contributes greatly to this research. We ask that you please not share the information in this form with others who may be participating in this study. It is important that participants complete the study without knowledge of its specific purpose.

Up to this point you were told that the purpose of this study was to increase our understanding how certain cultural and social ideals about motherhood influence a mother's engagement in certain healthy behaviours such as physical activity, healthy eating and getting enough quality sleep. Now that you have completed the study we can give you more specific information about it. The purpose of this study was to explore how mothers with young children negotiate their feelings of guilt when taking into consideration that our society encourages mothers to be the primary caregiver. As primary caregiver they should therefore put their own needs on hold. This is often referred to as a maternal ethic of care. The study also considers the levels of self-compassion of mothers in hopes of determining its influence on healthy behaviours. During the online questionnaire, measurements were taken to assess the level of mother guilt as well as level of self-compassion and its impact on healthy behaviours such as physical activity, eating healthy and getting enough quality sleep.

We do not yet have all of the study results, but we look forward to seeing how our research may contribute to our knowledge about the influence of mother guilt and self-compassion on these behaviours. We estimate that a summary of the results will be available by June 2017. If you would like a summary of these results please indicate at the bottom an email address you would like the summary of results sent to when they become available.

As some information about the true purpose of the study has been kept from you until this point, you have the right to withdraw your data. In this case, your data will be destroyed and not used in the analyses. Choosing to withdraw will not lead to any negative consequences for you. If you want your data removed, please contact the principal investigator.

If you have questions or comments about this study, please contact the principal researcher (contact information is listed below). Again, we ask that you not share the information presented here. It is possible that if participants know the whole purpose of the study, the results may be affected.

After completing this questionnaire, some participants may experience some feelings of stress. If you feel that way, I encourage you to contact the Canadian Association of Mental Health (<http://www.cmha.ca>) for information and local resources.

Thanks again!

Principal investigator:

Cindy Miller

University of Manitoba, Faculty of Kinesiology and Recreation Management

millerc7@myumanitoba.ca

(204)474-7878

Advisor:

Dr. Shaelyn Strachan

University of Manitoba, Faculty of Kinesiology and Recreation Management

Shaelyn_strachan@umanitoba.ca

204-474-6363

We would also like to assure you that the University of Manitoba Education/Nursing Research Ethics Board has approved of this research. If you have any questions regarding your rights as a participant, you may contact the Human Ethics Coordinator at: (204) 474-7122 or humanethics@umanitoba.ca.