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Work-family conflict, eating behaviors, and the role of coping

Ashley G. Walvoord
University of South Florida

Work-Family Conflict, Eating Behaviors, and the Role of Coping

by

Ashley G. Walvoord

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University of South Florida

Major Professor: Tammy D. Allen, Ph.D.
Paul Spector, Ph.D.
Michael Coovert, Ph.D.
Vicky Phares, Ph.D.
David Himmelgreen, Ph.D.

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Dedication

This dissertation is dedicated to my amazing, loving, and unbelievably supportive husband, Garrett. He encouraged me through the all-consuming project execution and accepted my 70 hour work weeks as temporary and necessary for my development. During data analysis, and the composition of a job talk and the written dissertation, my amazing partner bolstered my efforts when I was weary (e.g., accompanied me during daily 5am study sessions at Starbucks, and late nights in the library for consecutive months). Garrett was instrumental in my ability to keep the 'big picture' in site, and he helped me maintain a positive attitude. Above all, Garrett shared my perspective that temporary sacrifices would be met with personal growth, joy, and success at the "end of the road" in my doctoral journey. To my dear husband – you never left my side when life rolled at 120mph, you carried me through times of exhaustion, you believed in me when my confidence waivered, and you celebrated when I experienced great success… now we begin a new journey, and the path is bright. Thank you, thank you -- for the rest of our lives.

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ABSTRACT

There were two primary aims of the present study. The first aim was to examine the relationships between work-interference-with-family (WIF) and specific eating behaviors (eating vegetables, fruits, snack foods) reported by employed mothers, as it relates to health criteria such as BMI. Related to this first aim, household coping strategies were proposed as playing a significant role in the relationship between WIF and eating behaviors. The second aim was to investigate the crossover of WIF to specific child eating behaviors via mother feeding practices or mother eating behaviors.

Self-report and other-report survey data were collected from working mothers and their children (recruited from the YMCA Afterschool Program in Hillsborough County), yielding a sample of 262 employed mothers and 238 mother-child dyads. Mother self-report results supported a negative relationship between WIF and mother eating vegetables on work days, but no relationships emerged for eating fruits or snack foods. Regarding the role of coping in the context of the WIF – eating behavior relationship, results were more supportive of a suppression effect than of a moderating effect of coping. There was no support for an indirect relationship between WIF and BMI via eating behaviors.

Analysis of the crossover hypotheses revealed support for a negative association between WIF and the mother's feeding practices (monitoring behaviors), but no evidence was found for the hypothesized meditational relationships between mother WIF and child eating behavior (via mother eating and mother feeding) using multisource data. However, the results of supplementary analyses using only mother-report data supported several of the meditational crossover relationships. The results have implications for theoretical development and future research in the growing area of work-family and health. Major findings regarding WIF and specific eating behaviors, coping, and mother vs. child report are discussed.

Chapter One: Introduction

The last two decades marked the emergence of a sizeable body of research that explores the interplay between work and family roles (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). The emphasis of these issues in research appropriately mirrors the steadily increasing demands of the contemporary work world -- globalized and technologically advanced. The demands of the workplace have clearly manifested in longer work hours, non-traditional work hours, overtime, and taking work home (e.g., Bond, Thompson, Galinsky, & Prottas, 2003; Brett & Stroh, 2003). These trends are accompanied by a general increase in the number of adults who work outside of the home, including working mothers (especially mothers of young children; Halpern, 2004). Escalating demands and changing structures suggest an inevitable rise in the conflict between work and family responsibilities (Bailyn, Drago & Kochan, 2001; Baltes & Heydens-Gahir, 2003), and researchers have responded with considerable effort to identify the antecedents and consequences of work-family conflict (WFC; see reviews, Allen, Herst, Bruck & Sutton, 2000; Byron, 2005; Kossek & Ozeki, 1999). Research has provided ample evidence to support relationships between physical and psychological health outcomes and WFC, but limited work has focused on *how* WFC is linked to health. A recent study unveiled the role of eating behaviors in facilitating the spillover of work to health outcomes (Allen & Armstrong, 2006). Building upon the theory and support presented by Allen and Armstrong, the first aim of this dissertation is to further examine

the role of eating behaviors as a link between work-interference with family (WIF) and health, and determine whether coping strategies may influence these relationships. To this end, Chapter Two reviews relevant work-family literature with regard to role conflict, health and coping, followed by the hypothesized basic WIF-health behavior relationships and the role of coping as a moderator.

The second aim of the present study is to extend the theoretical framework from Chapter Two, in response to numerous calls for research to examine how employment issues impact parent and child health (e.g., Cleveland, 2005; Friedman & Greenhaus, 2000; Galambos, Sears, Almeida & Kolaric, 1995; Kinnunen & Pukkinen, 2001). Specifically, crossover of WIF is expected to occur via parent feeding behaviors and corresponding parent and child eating behaviors. In Chapter Three, support for parent-child crossover is reviewed in the context of WIF and eating behaviors, and a theoretical model of parent-child crossover relationships is proposed.

This effort marks the first examination of the relationship between parent WIF and child health behaviors. The results may provide a link to “the bottom line" wherein employers are convinced to invest in employee work-life balance. Scholars typically struggle to persuade organizations that the financial interest of the company is served by prioritizing employee work-life balance, but health insurance is reportedly the most expensive benefit for employers, with the average employer paying as much as 77% of the cost of family insurance plans in recent years (Study: Employer share of health care costs, 2003; Trend of the month, 2004). Support for the impact of WIF on health behaviors could provide rationale for organizations to implement family-supportive policies and benefits to minimize employee WIF (Allen, 2001).

Chapter Two: The WIF Health Mechanism

Work-Family Conflict

Work-family conflict (WFC) occurs when experiences in the work or family domain make it difficult to perform in the other domain, or simply when the demands of the two domains are incompatible (Greenhaus & Beutell, 1985). WFC is considered to be bidirectional, such that work demands conflict with the family domain, or family demands may conflict with the work-domain (termed 'work interference with family' and 'family interference with work'; WIF and FIW, respectively). There is evidence for the discriminant validity of these constructs (Mesmer-Magnus & Viswesvaran, 2005), and research suggests that adults experience WIF to a greater degree than FIW (e.g., Frone, Russell, & Cooper, 1992b). According to the domain specificity hypothesis, WIF and FIW generally have distinct antecedents and consequences such that the antecedents of WIF (FIW) usually reside in the work (family) domain, while the consequences of WIF (FIW) often manifest in the family (work) domain (Frone, 2003). This domain specificity effect is stronger for WIF than FIW, as research demonstrates relationships between FIW and some work antecedents and with family outcomes (Byron, 2005; Mesmer-Magnus & Viswesvaran, 2005). Extensive reviews of WFC consequences illustrate the penetrating reach of WFC influences on work, family, and well-being, such as domain satisfaction, turnover intentions, work absences, performance, mental health,

and physical health (Allen et al., 2000; Eby et al., 2003; Kossek & Ozeki, 1999; Mesmer-Magnus & Viswesvaran, 2005).

Domain specificity can make it difficult to persuade organizations to adopt programs targeted at WIF. Because consequences of WIF are not typically experienced by the organization (consequences tend to materialize in the family domain), there may seem little reason for employers to address employee WIF issues with intervention or prevention initiatives. By contrast, FIW has been shown to negatively impact turnover intentions, absences, and performance (self-ratings and supervisor ratings; e.g., Allen et al., 2000; Kossek & Ozeki, 1999; Mesmer-Magnus & Viswesvaran, 2005). Accordingly, organizations implementing work-family programs aimed at decreasing FIW (e.g., on-site day care, help with day care costs, elder care assistance, information on community day care, paid parental leave, unpaid parental leave, maternity or paternity leave with reemployment, and flexible scheduling) report improved organizational performance (Perry-Smith & Blum, 2000). While several meta-analyses also demonstrate relationships between WIF and turnover intentions and certain types of absences, the relationship with more convincing criteria like job performance is inconsistent at best (the few significant relationships are based on self-reported performance, while nonsignificant relationships occur with supervisor ratings or objective ratings). Regardless of direction, research has shown that employees who experience work family conflict are more likely to use health care resources (Duxbury & Higgins, 2001). Therefore, an alternative route for securing organizational consideration of employee WIF may be via a relationship with employee and family health.

WFC and Health

To date, empirical research targets several health-related variables: physical health symptoms, health-related conditions, and general health status. Studies of physical health symptoms often use symptom checklists or frequency scales to measure symptoms such as headaches, lightheadedness, dizziness, sleepiness, dry mouth, chest tightness, insomnia, and sweaty palms. Health-related conditions include blood pressure and overweight/obesity (e.g., body mass index calculated from self-report height and weight). Adult general health status is typically assessed with self-reports of overall health or psychological well-being (single item, "Overall, how would you rate your health at this time", or multiple items "to what extent have you experienced/ been …able to concentrate, playing useful part, capable of making decisions, under stress, enjoy normal activities, feeling unhappy and depressed, losing confidence, feeling reasonably happy").

Direct evidence and indirect evidence support the relationship between health and WFC. Direct support comes from research employing explicit measures of WFC (bi-directional and directional self-report scales). Indirect support is inferred from studies that examine contextual factors, such as participation in multiple roles. In general, the measurement of subjective WFC perceptions allows inference about the relationship between the experience of conflict and other variables. Indirect research examines objective factors which signify involvement in multiple roles (e.g., an adult who has children at home and a full-time job), rather than the perception of role conflict. The following sections review the WFC-health literature with respect to direct and indirect evidence for each type of outcome.

Physical Health Symptoms. Bi-directional WFC demonstrates a positive relationship with somatic complaints (Allen, et al., 2000; Schmitt, Colligan & Fitzgerald, 1980; Thomas & Ganster, 1995), suggesting that perceptions of role conflict are related to health symptoms, regardless of the domain in which the conflict originates. Studies distinguishing between WIF and FIW have not yielded consistent results. WIF demonstrates reliable positive relationships to reported physical symptoms (Burke & Greenglass, 2001; Kinnunen & Mauno, 1998; Klitzman, House, Israel & Mero, 1990; Netemeyer, Boles, & McMurrian; 1996). There is general support for a positive relationship between FIW and health symptoms (Burke & Greenglass, 2001; Netemeyeret al, 1996; Klitzman, et al., 1990; Grzywacz, 2000), although significant associations are not always observed with females (Kinnunen & Mauno, 1998). While both WIF and FIW exhibit significant relationships with health symptoms, sometimes WIF is stronger (Burke & Greenglass, 2001; Grzywacz, 2000; Netemeyer, et al., 1996), but at least one study reports that the relationship with 'non-work' interference-with-work is stronger than with work-interference-with-'non-work' (Klitzman, et al., 1990). The discrepancies between studies are difficult to interpret because the researchers did not incorporate any behavioral or perceptual factors that may also be contributing to the reported health symptoms.

Health-Related Conditions. Objective health-related conditions such as blood pressure and hypertension are predicted by bi-directional WFC, and by FIW (Frone, Russell, & Cooper, 1997; Thomas & Ganster, 1995). Indirect examination of WFC through participation in multiple roles is associated with decreased blood pressure from daytime to evening (presumed to represent work to home) in women with no children,

while women with children do not experience as large of a decrease in blood pressure (Goldstein, Shapiro, Chicz-DeMet, & Guthrie, 1999). Similarly, women who reported high job strain in addition to a lot of family responsibility had higher blood pressure than women who only reported strain in one role (Brisson, Laflamme, Moisan, Milot, Masse, & Vezina, 1999). Another objective health outcome, obesity, was predicted by WIF, but not FIW (Grzywacz, 2000).

General Health Status. Cross-sectional and longitudinal studies yield negative correspondence between overall ratings of physical health and perceived FIW/WIF (Adams & Jex, 1999; Allen & Armstrong, 2006; Frone, Russell & Barnes, 1996; Grandey & Cropanzano, 1999; Mesmer-Magnus & Viswesvaran, 2005). As noted with physical health symptoms, there is evidence for stronger relationships between WIF and general self-reported health, compared to FIW (Adams & Jex, 1999; Grandey & Cropanzano, 1999; Grzywacz, 2000; Judge, Boudreau & Bretz, 1994). FIW negatively predicted overall health across a four year time lag in the only known study not supporting a relationship between WIF and overall health ratings (Frone, et al., 1997). This is perhaps attributable to the 4 year time lag, as other studies used cross-sectional or a shorter lag (five months; Grandey & Cropanzano, 1999).

Health Behaviors: A Link Between WFC and Health Outcomes

The research evidence for the health outcomes just discussed provides guidance for framing the interplay between WFC and health. However, without examination of the links through which WFC leads to these health outcomes, the theory and targets for developing interventions remain elusive. Experts emphasize the need to understand the processes driving WFC-health associations, rather than simply reporting simple

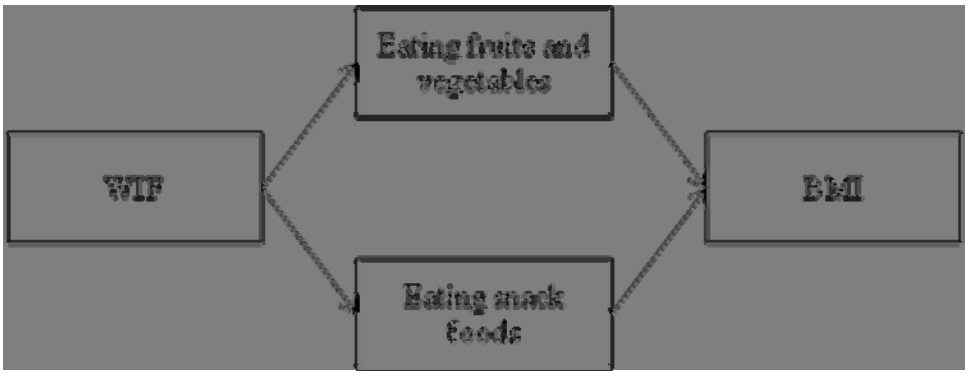
relationships between WFC and health outcomes (Allen & Armstrong, 2006; Greenhaus, Allen, & Spector, 2006). Examining eating behaviors exemplifies one response to this plea for process consideration, including eating low-fat nutritious foods such as fruits and vegetables, and eating snack foods whose calories offer less nutritional value WFC research has dedicated very little attention to eating behaviors, with only several studies addressing them. Of particular interest, findings recently reported by Allen and Armstrong (2006) indicate that these behaviors may play an important part in linking WFC with health outcomes.

Figure 1 presents the basic WFC-health relationships proposed in the present research. The illustration represents a portion of the model tested by Allen and Armstrong (2006) which hypothesized that eating behaviors and physical activity mediate the relationships between WIF and health outcomes. The first objective of the present research is to qualify the role of eating behaviors in linking WIF with health, and to determine how coping influences the process in Figure 1. What follows is a review of relevant work from the role strain, stress, eating, and medical science literatures, accompanied by hypotheses for specific paths in the model.

WFC and Eating: A Case for WIF. Allen and Armstrong (2006) published the first quantitative examination of WFC and eating behaviors. FIW and WIF corresponded with eating fewer "healthy foods" (i.e., fruits, fiber, and vegetables), while fatty food consumption was related to FIW only. The relationship with healthy eating was stronger for WIF than FIW, and the authors note that the association between WIF and healthy food consumption may indicate the influence of WIF on certain food choices that are connected to perceptions of time (e.g., preparing fruits or vegetables takes time and

effort). This explanation is plausible considering that perceived time scarcity (Jabs & Devine, 2006), long work hours and schedule inflexibility (Byron, 2005; Eby et al., 2003) are known antecedents of WIF. In addition, eating foods which suggest convenience such as ready-to-eat or prepackaged snack foods (e.g., chips, popcorn, granola bars, crackers) might be more likely to correspond with WIF than the fatty-food checklist that yielded a non-significant relationship.

Figure 1. Basic model of WIF-health.



A second quantitative study addressing the link between WFC and health outcomes found that the occurrence of family dinners was negatively related to parent WIF (Allen, Shockley, & Poteat, 2008). This is consistent with Allen and Armstrong's findings, as family dinners have been found to consist of more healthy foods (e.g., vegetables) and less fried food and 'bad' fats (Gillman, Rifas-Shiman, Frazier, Rockett, Camargo, Field, Berkey, & Colditz, 2000). The theme of time scarcity is also a

documented contributor to a reduction in family dinners and "convenience food" habits (Jabs, Devine, Bisogni, Farrell, Jastran & Wethington, 2007).

Research that is indirectly related to WFC also indicates that perceptions of limited time contribute to poor food choices (Hagdrup, Simoes, & Brownson, 1998) such as eating fewer fruits and vegetables (Trieman, Freimuth, Damron, Lasswell, Anliker, Havas, et al., 1996), buying ready-to-eat foods, and "eating out" more often (Devine, Connors, Sobal, & Bisogni, 2003). It is important to note that shortage of time is only one theme operating through WIF; stress-strain and behavioral influences of WIF on eating are also suggested by related literatures.

Beyond the issue of time limitation, the stress literatures suggests that eating in response to emotional stress is a complex reaction, which varies according to emotion (e.g., fear, joy, anger, sadness, tension) and purpose of eating (e.g., to distract, to relax, to feel better, to satiate hunger; Macht & Simons, 2000). Adults increase their overall consumption of food, and eat more high fat foods in response to feelings of stress (Cartwright, Wardle, Steggles, Simon, Croker, & Jarvis, 2003; Hellerstedt & Jeffery, 1997; McCann, Warnick, & Knopp, 1990; Ng & Jeffery, 2003; Zellner, Loaisa, Gonzalez, Pita, Morales, Pecora & Wolf, 2006). In other words, perceptions of stress predict the decision to eat and food choice strategies (Macht & Simons, 2000; Zellner, et al., 2006). This yields a familiar outcome: choosing more fast/convenient food, and less fruits and vegetables (Cartwright, et al., 2003; Pak, Olsen, & Mahoney, 2000). Even the stressors that trigger perceived stress, such as long work hours and experiencing high job demands, have been shown to influence behaviors such as fat intake and food choices,

and outcomes such as weight gain (Devine, Jastran, Jabs, Wethington, Farell, & Bisogni, 2006; Hellerstedt & Jeffery, 1997; Shields, 1999).

Turning from research which examines antecedents or components of WIF to that which addresses the perception of negative spillover from work, qualitative research reveals that adults who engage in unhealthy eating at work (e.g., eating foods with low nutritional value, such as foods from the vending machine) sometimes perceive that these eating habits at work spill over into home life and impact decisions about what to eat, and what to cook for one's family (Devine, et al., 2003). The employed participants in that research perceived a lack of resources such as time and energy which obstructed healthy food choices. Further, from other qualitative work on food choices emerges a glimpse of truth regarding causality (amidst a sea of inference-limiting cross-sectional evidence). Employed parents have reported that food choices were used as a tool to manage negative spillover from work to home, indicating that food choices involving low-preparation effort were made in response to WIF (Devine et al., 2006). For example, meal preparation was perceived by participants as one more task to be done, and consequently more convenient foods were selected in an effort to manage feelings of stress and work fatigue and to reduce time and effort for food. In consideration of the domain-specific hypothesis, the evidence suggesting WIF-eating effects, and the anecdotal support for directionality cited above, the present study proceeds with a deliberate focus on the WIF direction of WFC.

Eating patterns have been observed to vary between weekdays-weekends or work days-days off (Striegel-Moore, Franko, Thompson, Affenito & Kraemer, 2006; Waterhouse, Edwards & Reilly, 2005) and are likely influenced by perceptions of time

and convenience. For example, foods requiring preparation are less likely to be consumed on work days. As previously discussed, eating fruits and vegetables is sometimes perceived to require more time, while ready-to-eat snack foods (e.g., chips, crackers, granola bars) are likely to be perceived as requiring virtually no time. Taken together, these issues prompt separate consideration of eating behaviors on work and non-work days. In particular, eating fruits and vegetables is more likely to be restricted on work days, whereas eating snack foods may not vary across work days and days off.

H1a. WIF is negatively related to eating fruits and vegetables on work days.

H1b. WIF is unrelated to eating fruits and vegetables on days off.

H2. WIF is positively related to eating snack foods on work days and weekends.

Eating Behaviors and Obesity

A fair amount of research in the medical sciences literature supports the link between eating behaviors and various health outcomes. Although a well-balanced diet includes dietary fat, dietary fat is typically studied in the context of an unhealthy behavior, similar to fast food. The recognized consequences of consuming too much dietary fat (typically saturated and trans-fats) include high BMI, poorer overall health, increased incidence or risk of cardiovascular disease, and obesity (Allen & Armstrong, 2006; Bray & Popkin, 1998; Hu & Willett, 2002; Oh, Hu, Manson, Stampfer, & Willett, 2005). Similarly, fast food, food eaten away from home, snacks and convenience food are positively related to weight gain, body fat, and BMI (Burke, Beilin, Durkin, Stritzke, Houghton, & Cameron, 2006; Gillis & Bar-Or, 2003; Niemeier, Raynor, Lloyd-

Richardson, Rogers & Wing, 2006; Thompson, Ballew, Resnicow, Must, Bandini, & Dietz, 2004), although one study found that a frequency operationalization of fast food was not related to overweight status (French, Story, Neumark-Sztainer, Fulkerson & Hannan, 2001). Snack foods have predicted risk for obesity and waist circumference (Fisher & Birch, 2002; McCarthy, Robson, Livingstone, Kiely, Flynn, Cran, & Gibney, 2006).

Fruit and vegetable consumption has been linked to reduced insomnia and weight gain; lower risks for obesity, cancer, stroke, hypertension, diverticulosis, and coronary heart disease; fewer instances of cataracts; and better self-ratings of overall health (Allen & Armstrong, 2006; Block, Patterson & Subar, 1992; He, Hu, Colditz, Manson, Willett, & Liu, 2004; Hirayama, 1994; Liu, Manson, Lee, Cole, Hennekens, Willett, & Buring, 2000; Steinmetz & Potter, 1996; Van Duyn & Pivonka, 2000). Given the solid support for the association eating behaviors with weight and body fat, BMI is a valuable health-related outcome. It is targeted in the present examination of the WIF-health mechanism. The following hypotheses are proposed:

H3a. Consumption of fruits and vegetables on work days is negatively related to BMI.

H3b. Consumption of eating fruits and vegetables on work days mediates the relationship between WIF and BMI.

H4a. Consumption of snack foods, irrespective of day, predicts BMI.

H4b. Consumption of snack foods, irrespective of day, mediates the relationship between WIF and BMI.

WIF and Coping

Building upon the basic relationships hypothesized in Figure 1, a key factor that is theoretically likely to affect the WIF-health process is coping. Research shows that in the midst of perceived conflict employees attempt to satisfy demands from conflicting domains in an effort to reduce work-family conflict (Voydanoff, 2002). Coping, defined as "cognitive and behavioral efforts to manage demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141), encompasses behaviors aimed at altering a stressful context (problem-focused coping) and attempts to cognitively readjust or regulate emotional stress (emotion-focused coping). Coping with work-related stress has garnered appreciable research attention in the I/O-OB literature, with evidence from several studies suggesting that coping strategies may be more effective in alleviating distress in domestic or family domains compared with the work domain (Menaghan & Merves, 1984; Perlin & Schooler, 1978; Shinn, Rosario, Morch & Chestnut, 1984). This trend indicates that coping has the capacity to play a meaningful role with family domain variables such as eating behaviors and health outcomes.

Parkes (2000) identified two primary functions of coping that are observed in stress-outcome relationships: main effects and interactive effects. Coping main effects are a common hypothesis in research, typically specifying that coping and the outcome are related, and that this relationship is not affected by stress. Interactive effects are manifested in moderation hypotheses, where coping affects the strength of the relationship between stressor and outcome. Some researchers argue that inconsistent evidence exists for how coping fits as a moderator of the relationship between stressors and their outcomes (Fortes-Ferreira, Peiro, Gonzalez-Morales & Martin, 2006). Indeed,

main effects, moderation effects, and mediation effects of coping are observed in relevant literatures.

As noted by Parkes (1990), the theoretical appropriateness of main, mediating, or moderating effects is dependent on the specific stressors, outcomes and context of interest, not on a general coping function that is universally observed across paradigms. Findings from role-conflict research specifically suggest a moderating effect from coping behaviors or strategies. Coping behaviors have moderated between role conflict and emotional exhaustion and depressive symptoms; between life event stress and depression; between job disruption and depression, between occupational stress or work overload and affective distress (Lam & McBride-Chang, 2007; Osipow, & Davis 1988; Parasuraman & Cleek, 1984; Pearlin, Menaghan, Lieberman, & Mullan, 1981; Pomaki, Supeli, & Verhoeven, 2007). Problem-focused coping is also evidenced as a moderator between work demands and subjective health complaints (Eriksen & Ursin, 1999).

Prior to hypothesizing a specific integration of coping in the present research, it is important to note that an appropriate specification of the coping construct should reflect aspects of the stressor as well as the domain of the outcomes. The stressor of interest in the present research is WIF (work interference with the family domain). The outcome of interest is eating behavior (and later the eating behavior of children in the home) which generally implicates non-work responsibilities or the family domain. Therefore, a relevant form of coping would represent cognitions and/or behaviors that aid the employee in managing multiple roles with specific implications for non-work responsibilities in the family domain. Household coping strategies (Steffy & Jones, 1988) represent both structural redefinition of one's family or non-work role and

personal-role redefinition, whereby adults alter expectations and personal attitudes associated with household responsibilities. Structural role redefinition may manifest in numerous ways, such as taking action that encourages family members to expect less, or organizing the sharing of one's household responsibilities among others family members. Personal role redefinition suggests prioritizing family role activities and taking on the most important activities first. In the context of WIF and health, a moderating effect of coping is predicted (Figure 2). The interpretation of 'moderation' in this context is that coping may buffer the effects of WIF on eating strategies. When low household coping efforts are reported, WIF is hypothesized to demonstrate a stronger negative relationship with eating fruits and vegetables and a stronger positive relationship with eating snack foods.

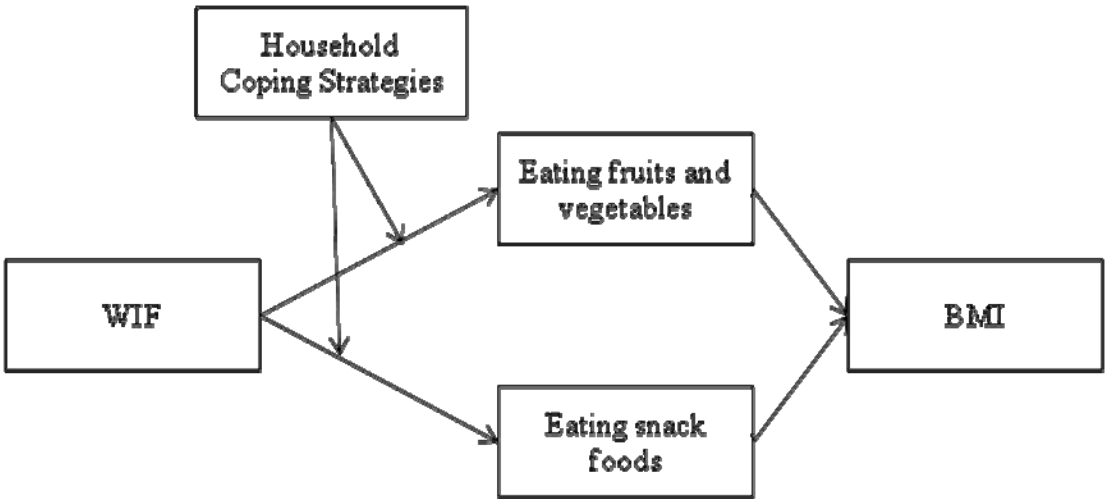
H5. The relationship between WIF and eating fruits and vegetables on work days is moderated by household coping strategies, such that stronger WIF-eating associations occur when little or no household coping strategies are reported.

H6. The relationship between WIF and eating snack foods, irrespective of day, is moderated by household coping strategies. Stronger WIF-eating relationships will occur when little or no household coping strategies are reported.

Alternative Roles of Coping. Given the many functions of coping demonstrated in the literature, two alternate roles for coping will be considered from an exploratory perspective. First, Figure 3 presents a main effect of coping in the WIF-health mechanism. Main effects represent the most commonly hypothesized role of coping in stressor-strain relationships (Parkes, 1990). A comprehensive review and meta-analysis of the literature revealed that problem-focused coping positively related to overall health

outcomes, such as objective weight gain, and self-reported physical health ratings (Penley, Tomaka, & Wiebe, 2002), providing support for a main effect of coping. Eating behaviors themselves could function as a type of coping response to WIF, and as depicted in the model, eating fruits, vegetables and snack foods may be influenced by WIF and household coping strategies.

Figure 2. Model of WIF-health moderated by coping.



At least two studies have demonstrated a mediating capacity for coping between WFC and affective outcomes (Perrone, Aegisdottir, Webb & Blalock, 2006; Voydanoff, 2002). The results reported by Perrone et al (2006) suggested that the influence of WFC on domain satisfaction was partially mediated by coping. In the context of health behaviors, Figure 4 models the WIF-eating behavior relationship as being partially mediated by coping. Specifically, the model predicts that WIF is directly associated with both the adoption of household coping strategies and eating behaviors. Household

coping strategies are subsequently related to eating behaviors, constructing an indirect relationship between WIF and eating behaviors.

Figure 3. Coping as a main effect

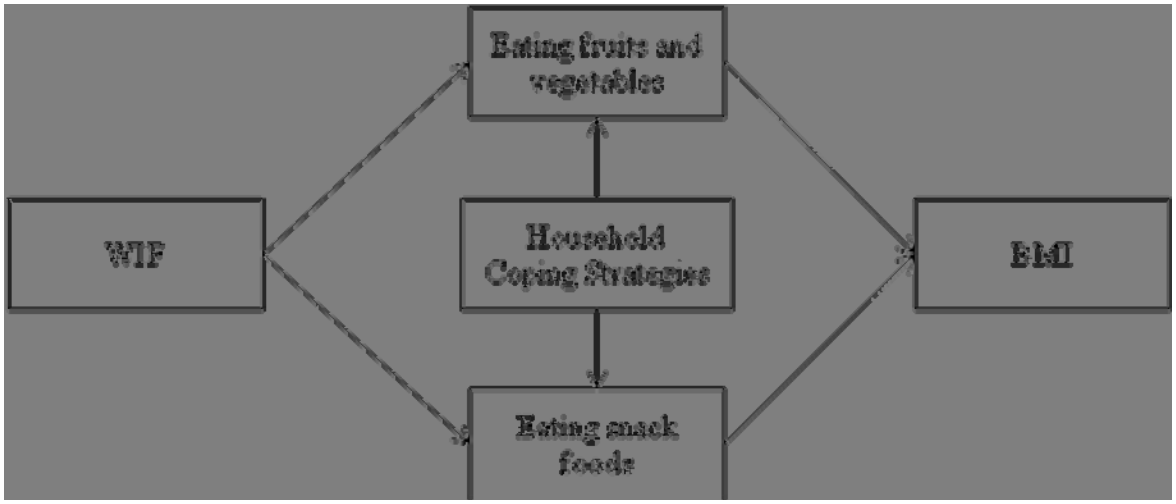
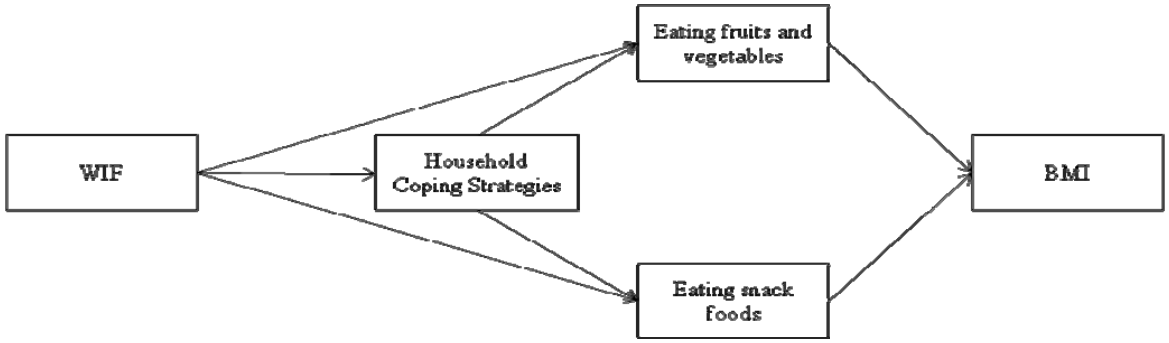


Figure 4. Coping as a partial mediator



Chapter Three: Crossover of WIF to Child Health

Despite repeated calls for research to examine parental influence in the development of children's health, the contextual factors shaping the influence, and the ways in which parental work stress and employment issues affect children (e.g., Crouter & Bumpus, 2001; Davison & Birch, 2001; Galambos, et al., 1995; Greenhaus, et al., 2006; Kinnunen & Pukkinen, 2001; Prochaska, Rodgers, & Sallis, 2002; Trost, Sallis, Pate, Freedson, Taylor, & Dowda, 2003), the relationships between parent WIF and child physical health have not been examined. Experts argue that contextual factors (e.g., parent employment and WIF) are likely to impact parent-child health behaviors (Davison & Birch, 2001). Documenting the potential crossover of WIF to child health carries considerable significance. Whereas less malleable contributing factors to obesity (e.g., genes) are not easily targeted by policy and intervention, other significant influences such as behavioral choices (e.g., poor eating habits) can be more readily managed through strategic intervention and public education. The prevalence of childhood obesity has increased significantly over the past 20 years, and present-day estimates indicate that approximately 20% of children in the U.S. are obese (Torgan, 2002; Troiano & Flegal, 1998; U.S. Department of Health and Human Services, 2000). Many adult obesity-related conditions such as high blood pressure, early signs of hardening of the arteries, asthma, type 2 diabetes, and sleep apnea are now being observed in children with increasing frequency (Daniels, 2006).

The WFC crossover literature primarily addresses the crossover of affective and cognitive outcomes between spouses (e.g., Hammer, Allen, & Grigsby, 1997; Westman & Etzion, 2005). There is some evidence of crossover between parent and child in which conflict or work demands influences parent behaviors and subsequently child behaviors and affect (negative spillover from work to parent-adolescent interaction, Sallinen, Ronka, & Kinnunen, 2007; crossover of parent affect to child behaviors and affect, Stewart & Barling, 1996). Similarly, parent stress (general stress and job-related stress) can also lead to parent-child interactions and parenting behaviors that negatively affect child/adolescent emotional outcomes (e.g., Barling, MacEwen, & Nolte, 1993; Galambos et al.,1995; Galinsky, 2000; Kinnunen & Pukkinen, 2001; MacEwen & Barling, 1991; McLoyd & Wilson, 1991; Perry-Jenkins, Repetti, & Crouter, 2000; Stewart & Barling, 1996). Physical health is not addressed in any of this work, allowing only theoretical inference about health-related crossover. The available findings on crossover support the domain specificity hypothesis (Frone, 2003), such that the WIF of one spouse can crossover and lead to family-related consequences for the child or other spouse. This basic process is in line with the theory of the present research and is bolstered by indirect support from the parenting and obesity literatures, described next.

Parent Eating and Feeding

Davison and Birch (2001) indicate that dietary intake is one of the most proximal predictors in their ecological model of childhood overweight predictors. Next in proximity are parent influences (e.g., child feeding practices, parent dietary intake, parent food preferences). Beyond affecting his or her own health, the parent plays a critical role in shaping the family eating environment (Birch & Fisher, 1995). It has been suggested

that both parent eating practices and child eating behaviors should be considered in order to understand the impact that parent variables can have on child health (Birch, 2006). Parent practices for child-feeding have been identified as an environmental risk factor in childhood obesity, as they are linked to child weight status (Birch & Fisher, 1998, Johnson & Birch, 1994). Furthermore, experts emphasize that child feeding practices shape the child's eating environment, child food preferences, child eating behaviors, and child self-regulation of energy intake (Birch, 2006). The feeding construct-domain encompasses parent restriction of foods, pressure to eat, and monitoring child eating. These practices are related to child eating and health differently. BMI, food intake and weight are positively predicted by both restriction of foods and monitoring child eating, but negatively predicted by pressure to eat (Birch & Fisher, 1998; Faith, Scanlon, Birch, Francis, & Sherry, 2004; Johnson & Birch, 1994; Kaur, Li, Nazir, Choi, Resnicow, Birch & Ahluwalia, 2006). Restriction of food can increase the child's interest in and preference for the restricted food. Further, restriction has been linked to an increase of children eating when they aren't hungry (Birch, Fisher & Davison, 2003; Fisher & Birch, 1999). In the present context, the experience of work-interference-with-family may represent work demands directly interfering with the parent's family demands or responsibilities for feeding other family members. Feeding practices are likely to be negatively related to WIF in terms of reduced physical and psychological availability to control (pressure and restriction), and maintain awareness of (monitoring), child eating.

Beyond feeding practices, there is evidence that children exhibit stronger preferences for high fat foods if their parents are obese (Birch & Fisher, 1995, Klesges, Eck, Hanson, Haddock, & Klesges, 1990). Such findings are typically explained by role-

modeling eating behaviors which influence the impressionable child (speed and duration of parent eating, Agras, Berkowitz, & Hammer, 1988; mother's fruit and vegetable intake, Galloway, Fiorito, Lee, & Birch, 2005; parents with high dietary intake, Davison, Francis, & Birch, 2005; Laskarzewski, Porrison, Khoury, Kelly, Glatfelter, Larsen, & Glueck, 1980; Oliveria, Ellison, Moore, & Gillman, 1992; Patterson, Rupp, Sallis, Atkins, & Nader, 1988; Perusse, Leblanc, & Bouchard, 1988; Vauthier, Lluch, Lecomte, Artur, & Herbeth, 1996; similar parent-child food preferences, Borah-Giddens & Falciglia, 1993). As hypothesized in Chapter Two, WIF is expected to be related to parent fruit, vegetable and snack intake behaviors, which may function as parent role-modeling of eating behaviors to the child.

Building upon the hypotheses presented in Chapter Two, the available support for parent-child crossover, and for parental influence via feeding and role-modeling, the second aim of this study is to examine parent-child WIF crossover to health. The theoretical framework in Figure 5 delineates a process in which parent WIF crosses over from parent feeding and eating behaviors to child eating behaviors. Coping is expected to function in the same capacity as hypothesized in Chapter Two. WIF is expected to be negatively related to the parent's child-feeding practices, which subsequently have the opportunity to directly relate to child eating behaviors.

H7. WIF is negatively related to pressure, monitoring and restriction feeding practices.

H8a. Feeding practices are related to child consumption of fruits and vegetables (positive relationships with monitoring, negative relationship with pressure), and

snack foods (negative relationship with monitoring and positive relationship with restriction).

H8b. Feeding practices mediate the relationship between WIF and child eating behaviors.

Role-modeling is represented by the top path in Figure 5, from WIF to parent eating behaviors to child eating behaviors. It is expected that parent healthy and unhealthy eating behaviors will exhibit a direct relationship with child healthy and unhealthy eating behaviors, respectively.

H9. Parent fruit and vegetable consumption will be positively related to child fruit and vegetable consumption.

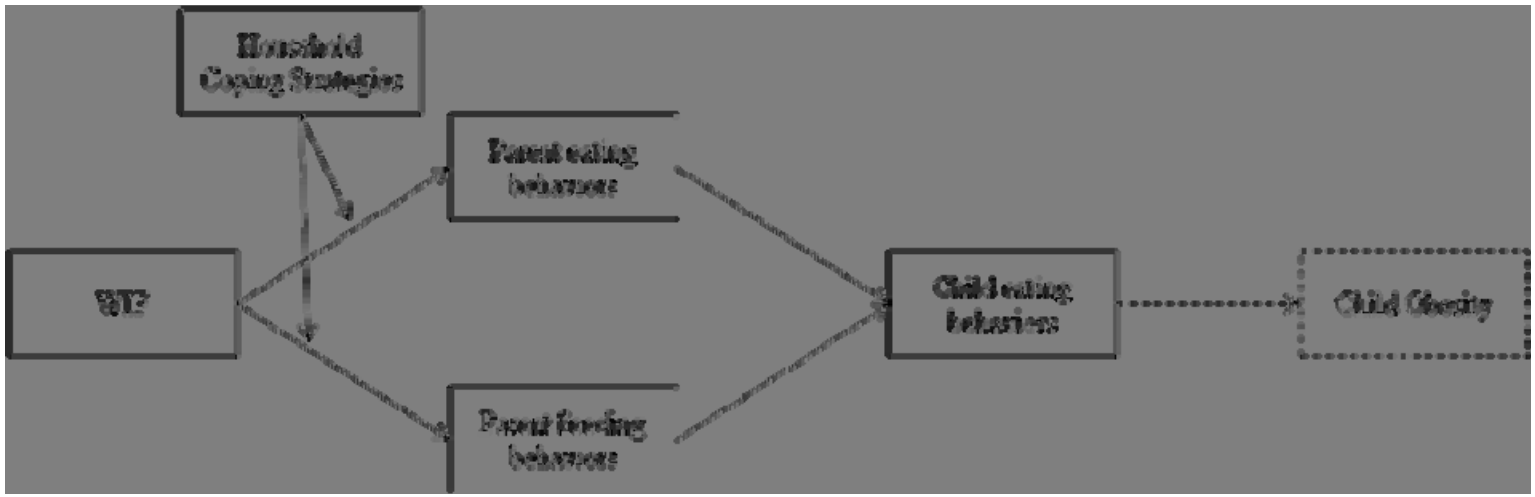
H10. Parent snack food consumption will be positively related to child snack food consumption.

H11. Parent healthy and convenience eating will mediate between WIF and child healthy and convenience eating behaviors.

Current Study

The present study investigated the association between WIF, eating behaviors, BMI and the role of household coping strategies in adults. Next, crossover between parent WIF and child health behaviors via parent feeding and eating behaviors was examined. Full explication of the hypothesized relationships will ultimately require research targeting a number of specific populations that vary in ethnicity, culture (e.g., Ahye, Devine, & Odoms-Young, 2006), marital status, dual-employment, gender of parent, and gender of child. Further, mother vs. father role-modeling and active parent involvement may influence adolescents differently (Barber & Delfabbro, 2000; Patock-

Figure 5. Model of WIF-health crossover between parent and child



Peckham & Morgan-Lopez, 2006), as could traditional vs. non-traditional parenting roles. For the purposes of conducting the first research to evaluate the proposed spillover of WIF onto child health behaviors, dyads of employed mothers and their children were prioritized in the present study. As previously noted, workforce trends have indicated a substantial increase in the number of mothers in the workplace (Halpern, 2004) and mothers are traditionally more closely involved with a child's feeding and eating behaviors (e.g., Harrell, 1995). There is evidence that mothers tend to have or exert more influence regarding eating behaviors than do fathers (Fisher & Birch, 1999; Smolak, Levine, & Schermer, 1999). Research is certainly warranted for fathers as well, and father-based extension of the present effort will be described in the future research directions of Chapter Seven: Discussion. Additionally, the child age range deemed most relevant for the hypothesized relationships was prepubescent because puberty may cloud the role of parent influence in child eating behaviors (e.g., eating more in relation to sporadic growth spurts and hormonal changes while unrelated to parent influence), and parent influence may be less relevant for older children who tend to have more autonomy over what they consume (e.g., teenagers).

Chapter Four: Method

Participants and Sampling

An a priori power analysis was conducted using Fritz and MacKinnon's (2007) methods for determining adequate sample sizes in meditational analyses. To achieve statistical power of .80 with small-medium effect sizes ($\alpha = .26$) for the alpha (independent variable to mediator) and beta (mediator to dependent variable) paths, samples of 148, 162 or 196 participants were required for the bias-corrected boostrap, percentile bootstrap, and Sobel mediation procedures, respectively. The target sample size during recruitment was 200 mothers or mother-child dyads.

Approximately 509 families were recruited from a random sample of 20 YMCA Afterschool programs in Tampa, Florida. From this recruitment sample, 334 families indicated their interest and intent to participate in the study. Although this yields an approximate 65.6% positive response to recruitment, the estimate is conservative. The true response rate cannot be calculated due to inconsistent YMCA records across the 20 sites, therefore it is not possible to determine whether nonresponse was due to nonenrollment in the YMCA at the time of recruitment (e.g., students who may not have been enrolled at the time of recruitment, but study materials were left for the families because the child name and age were on the YMCA roster), ineligibility for the study (no mother in the family, unemployed mother, child age different from YMCA records and outside of eligible range), or intentional nonresponse/disinterest in the study. The child

age range of 8 to 11 years old was targeted in order to recruit primarily prepubescent children who were still old enough to read survey items and provide a reasonable assessment of their food intake and physical activity.

From the 334 families successfully recruited, a total of 262 mother surveys were received which suggests an observed mother response rate of 78.4%, although the issues described above also render this estimate conservative. Survey data was collected from 283 of the 306 children for whom parent consent to participate was obtained (17 children were repeatedly absent during administrations, 2 children opted out during informed assent procedures, and 4 child surveys were administered but the data was lost). A final sample of 262 mothers and 283 children provided 238 matched mother-child dyads.

Mother participants worked between 20 and 70 hours per week (M = 41.72, SD = 7.09) and all mothers had at least one child living at home. The demographics of the sample of mothers are displayed in Table 1. The sample was predominantly Caucasian (52.9%), Black/African-American (22%), and Hispanic (18.5%). The majority of mothers reported being married (55.1%) or living with a partner (10.2%), and 65% had more than one child living at home. Age ranged from 24 to 61 years old (M = 37.26, SD = 6.95). The modal level of education was "Some college" (27%), and education level in the sample ranged from some high school to graduate degrees. A quarter of the sample reported an annual household income of $80,000 or higher (25.1%), with $30,000 – $39,999 (17.3%) and $20,000 - $29,999 (14.8%) as the brackets with subsequently highest representation. Records from the YMCA indicate that approximately 25% of all enrollees attend the Afterschool program at a reduced cost or for free. The distribution of body mass index (BMI) in the sample was examined in comparison to national and

Table 1. Demographic characteristics of mother participants

	Variable	%
Ethnicity	Caucasian, Non Hispanic	52.9%
	Hispanic	18.5%
	Black / African American	22.0%
	Asian	1.5%
	American Indian	0.5%
	Multiracial	4.2%
Marital Status	Married	55.1%
	Not married but living with partner	10.2%
	Not married	34.8%
Children	One child living at home	35.0%
	Two children living at home	42.3%
	Three or more children living at home	22.7%
Education	Some high school	2.7%
	High school diploma/GED	21.2%
	Some College	27.0%
	2-year college degree	15.4%
	4-year college degree	19.3%
	Some graduate school or graduate degree	14.3%

Note. $N = 262$

Table 1. (cont'd)

	Variable	%
Annual Household Income	$10,000 - $19,999	7.8%
	$20,000 - $29,999	14.8%
	$30,000 - $39,999	17.3%
	$40,000 - $49,999	10.3%
	$50,000 - $59,999	10.7%
	$60,000 - $69,999	6.2%
	$70,000 - $79,999	7.8%
	$80,000 or higher	25.1%
Body Mass Index (BMI)	BMI < 25 (Normal weight)	54.3%
	BMI = 25 – 29.9 (Overweight)	25.3%
	BMI > 30 (Obese)	22.2%

Note. $N = 258$

state norms. In 2005 estimates suggest that between 20 and 24% of adults in the state of Florida were obese (BMI > 30), and in 2006 experts estimated that approximately 23.5 % of women in the U.S. were obese (Ogden, Carroll, Curin, McDowell, Tabak & Flegal, 2006). In the sample for the present study, 20.2% of mothers reported height and weight measurements that yielded a BMI of greater than 30 and the designation of being obese.

The demographics of the child participants are displayed in Table 2. The child sample exhibited ethnic representation similar to the sample of mothers, across Caucasian (46.3%), Hispanic (13.9%) and Black/African-American (20.5%) ethnicities, with a slightly higher percentage of multiracial ethnicities reported (14.7%). Fifty-six percent of

the child sample were girls, and the children's ages were eight (35.1%), nine (32.6%), ten (27.6%) and eleven (4.7%) years old.

Table 2. Demographic characteristics of child participants

	Variable	%
Ethnicity	Caucasian, Non Hispanic	46.3%
	Hispanic	13.9%
	Black / African American	20.5%
	Asian	1.5%
	American Indian	.5%
	Multiracial	14.7%
	Other	2.7%
Child Age	8 years old	35.1%
	9 years old	32.6%
	10 years old	27.6%
	11 years old	4.7%
Gender	Boy	44%
	Girl	56%

Note. $N = 283$

Measures

Overview. Mother self-report was used to measure mother constructs (WIF, coping), mother eating behaviors, and mother BMI. Child self-report was used to represent child eating behaviors.

Eating Behaviors. Based on pilot-tests, items were developed to represent consumption of vegetables (8 items), fruits (8 items), snack foods (8 items). Each item separately probes the frequency of consumption at breakfast, lunch, snacks and dinner. The breakfast-lunch-snack-dinner questions are presented twice for each food group (fruits, vegetables, snack foods), once referring to work days, and a second time referring to non-work days. Mothers responded to these items using themselves as a referent (Appendices A, B), and a second time shifting the referent to the child (school days and weekends). Children responded to these items in the same format (e.g., self report, Appendices C, D), and although child report of mother eating behaviors was not targeted by the hypotheses, this data was also collected for exploratory purposes.

Work Interference with Family. WIF was measured using five items developed by Netemeyer et al. (1996) ("Due to work-related duties, I have to make changes to my plans for family activities."; "The demands of my work life interfere with my home and family life"; Appendix E). Responses were measured on a 5-point scale that ranges from "no, never" to "yes, always. This measure has demonstrated good internal consistency, strong dimensionality (differentiating between family interference with work and WIF), it does not confound the WIF construct with consequences of WIF, and evidence supports its discriminant and convergent validity (Netemeyer et al., 1996). Mother self-report data indicated strong internal consistency ($\alpha = .94$).

Household Coping Strategies. Household Coping Strategies was assessed by an adaptation of the Steffy and Jones (1988) Household Coping Strategies scale. The adapted nine-item scale uses a five-point Likert frequency scale to measure the respondent's cognitive and behavioral efforts to handle their household responsibilities

(Sample item, “Do you hire people to help with chores, for example, babysitters, cleaning help, yard help, etc?”; Appendix F). The mother self-report data suggests adequate scale reliability (α = .78).

Feeding Behaviors. Feeding Behaviors was measured using three mother self-report scales from the Child Feeding Questionnaire (CFQ; Birch, Fisher, Grimm-Thomas, Markey, Sawyer, & Johnson, 2001; Appendix G). The three types of feeding behaviors assessed included: monitoring (3 items; α = .94; e.g., “Do you keep track of the sweets that your child eats?”), restriction (8 items; α = .76; e.g., “I have to be sure that my child does not eat too many high fat foods.”), and pressure (4 items, α = .74; e.g., “If my child says ‘I'm not hungry’, I try to get him or her to eat anyway.”). In order to examine the dimensionality of the three feeding behavior subscales, competing confirmatory factor analyses were performed. A three factor, two factor, and one factor model were specified (Table 3), and resulting fit statistics examined. The chi-square test of fit was significant for all models, but reduced in size as the number of factors specified increased, suggesting better fit of the three-factor model. Complementary fit statistics also improved as the number of factors modeled increased, including RMSEA (target: below .08), CFI (target: at or above .95), TLI (target: at or above .90). The fit of the three-factor model was not ideal, however, it demonstrated the best fit of the competing factor structures. Thus, the three individual feeding behavior scales were retained in their original form.

Minor wording alterations were applied to the CFQ items in order to provide respondents with examples of foods mentioned by the items. Child report of the mother’s feeding behaviors was not required for hypothesis testing, but this data was collected for

exploratory purposes by reframing the questions to reflect the mother's behavior (monitoring, α = .82; restriction, α = .54; and pressure = .55).

BMI. Mother weight (pounds) and height (feet, inches) was self-reported (Appendix H). Parent weight was converted to kilograms, height was converted to centimeters, and BMI was calculated from the mother self-report data (BMI = weight (kg) / [height (m)]^2; Center for Disease Control, 2007).

Table 3. Confirmatory factor analysis models: Mother feeding behaviors

Model	x^2	df	RMSEA	CFI	TLI
One Factor	1015.79**	90	.20	.50	.42
Two Factor	726.70**	90	.16	.66	.60
Three Factor	502.03**	90	.13	.78	.74

Note. N = *263* **p < *.01*

Procedure

Piloting. Two pilot survey sessions were conducted at a YMCA summer camp to determine the feasibility having children in our target age group respond to the survey questions and to obtain feedback from mothers regarding the adult survey. Four children (ages nine to ten years old) and their mothers participated in the first pilot. Feedback from the child administration inspired a number of item-wording changes as well as the incorporation of brief presentations about fruit, vegetables, snack foods and physical activity placed directly before the beginning of the survey. Feedback from the pilot mothers suggested the need for additional instruction in two areas of the mother survey. The second pilot was conducted with five children (ages eight to eleven years) to assess

child response to the revised survey. The pilot session indicated that the revised protocol and survey functioned more efficiently than the previous wording and protocol. The second pilot revealed the need to administer the survey separately and with less instruction for ten and eleven year-olds, due to their higher reading and comprehension level compared to eight and nine year-olds.

Recruitment. The Tampa Metro YMCA granted permission to recruit participants and conduct the proposed research in the "Afterschool" programs in Hillsborough County (41 program sites in operation, 20 randomly selected for recruitment). Each Afterschool site was visited one week before the scheduled child-survey administration to recruit children and parents. During this visit, a brief introduction was made to the children to explain the purpose of the study and what child involvement and compensation entails. Parents of eligible children were approached when the parent arrived to sign out the child to go home from the program. Parents were offered a brief verbal explanation of the study and the study informed consent for child participation was presented to be read and signed or taken home to review. Eligible children had to be between the ages of eight and eleven years old (as of August 1st, 2007) and enrolled in a YMCA Afterschool Program. To be eligible a mother must have had a child in the targeted age range who attended a YMCA Afterschool program, she must have been employed at least 20 hours per week, she must have been the child's biological mother, adoptive mother, step mother, or female legal guardian, and she had to indicate that she felt comfortable reading and writing in English without a translator. Accompanying the consent was a parent letter, an extra copy of consent to keep for their records, and the mother survey to fill out in the next 14 days. Parents who did not give informed consent on the recruitment day

had seven days to return the consent, in order for the child to participate. If a mother had multiple children in the target age range, she was asked to participate with the *oldest* child (if the mother had twins, one twin was randomly selected to participate with the mother). Non-selected twins and younger siblings in the age range were given the opportunity to participate in the survey themselves to earn the same compensation, but their data was not used when testing the hypotheses.

Survey Administration. On the scheduled survey administration day, a research team returned to the Afterschool site seven days prior to collect data from child participants whose parents provided informed consent. A brief interactive presentation was made to the child participants to establish a frame of reference for the fruit, vegetables, and physical activity survey items. At the end of the presentation, special care was taken to communicate two key elements to the children: 1) Child were told that the survey is about themselves; the answers of other children don't matter because children are to answer about themselves. 2) Children were instructed to answer whatever was 'true' about themselves. The research team emphasized that there were no right or wrong answers to the survey, the children could only get the question right by answering what is true for them. These steps were taken to improve the quality of child responses, and temptation to use or seek another child's answers to the survey.

Informed assent was obtained from the children, communicating that the child may stop any time and still receive compensation. Survey administration took place in small groups with a researcher assigned to every five (or fewer) children, depending on the overall child participant-researcher ratio (smaller groups preferred). When possible, eight and nine year-olds were grouped together, and ten and eleven year-olds grouped

together (to better match basic comprehension ability). Survey proctors verbally accompanied all children through the entire survey, and a bank of allowable and recommended comments and clarifications was provided to encourage consistent administration across research assistants and across collection sites. As a general rule, every question was read to eight and nine year-olds, along with a description of scale anchors every time the scale changed between items. Ten and eleven year-olds were read *at least* one question from every scale, and received a description of scale anchors every time the scale changed between items. Recognizing that not all children in either age group would have identical ability, the survey proctor was allowed to repeat any comments from the bank of accepted comments without restriction. Likewise, scale anchors could have been read additional times throughout a scale, and each question read aloud for the older age group if the proctor deemed appropriate according to the ability displayed by the child. Children were encouraged to 'think in their head' and not out loud, to avoid influencing other children.

Participant mothers were encouraged to take the survey home to complete and they were instructed to complete their questionnaire without discussing the content with the child. Because the mother survey was unproctored, mothers did not receive verbal instructions for specific sections, nor did they receive the frame-of-reference training. To encourage similar perceptions of the eating behavior items reader-friendly written instructions were provided with examples that mirror the child presentation. Reminder phone calls were made to mothers at seven, ten, and fourteen days, with additional surveys dropped off as needed. Survey return boxes were set up at each site for staff to deposit returned materials. Follow-up visits to pick up returned materials and leave

reminder slips were scheduled as needed. To improve the expected response rates for mothers (15 -20%) participants were compensated for their participation.

Incentives. Children received an inexpensive toy for their participation, and mothers received a $15 giftcard of their choice (Walmart, Target, AMC Theaters, Starbucks) for completing and returning the time one survey. In an effort to benefit study participants and encourage healthy lifestyle behaviors, participant dyads who completed and returned the study materials received a "Healthy Living" pamphlet and free five-day passes for their family to visit any YMCA facility (provided by the Tampa Metro YMCA). The free YMCA passes were not announced prior to receipt of the completed surveys, to avoid self-selection into the study by mothers who may have prioritized physical activity or family activities.

Chapter Five: Results

Preliminary Analyses.

The data were screened for outliers and normality (skewness, kurtosis). Three of the study variables had between one and three outlier values, therefore the hypothesis analyses were run with and without the outliers and the results examined for agreement (Table 4). Neither the direction of effects nor significance differed when results were rerun without the outliers; therefore they were not removed from the final dataset. Six study variables were identified as having distribution issues of either skew and/or kurtosis (5 with a positive skew, 1 with a negative skew, 3 with a leptokurtotic distribution; as calculated by dividing kurtosis or skewness statistic by its standard error and identifying variables with resulting values greater than 3.3). These variables (Table 4) were graphed for visual inspection, and the distribution violations deemed minor. Therefore no transformations were applied to the data. Descriptive statistics for the study variables are presented in Tables 5 (Mother self-report), 6 (Child report of mother, exploratory), 7 (Child self-report), and 8 (Mother report of child, exploratory).

Hypothesized Operationalization of Variables: Special Considerations

Mother Report of Child vs. Child Self-Report. Hypotheses were developed with the intent of representing variables about the mother by mother self-report, and the variables about the child by child self-report. The intercorrelations between mother self-report and child self-report study variables are reported in Table (9). Data were also

Table 4. Normality of study variables

Outliers	#
Mother self-report of BMI	3
Mother self-report of Snack foods on Work days and Days off	2
Mother self-report of Snack foods on Work days	3

Normality	+/- Skewed, L/P Kurtosis
Mother self-report of WIF	+S
Mother self-report of BMI	+S, LK
Mother self-report of Monitoring (Feeding)	-S
Mother self-report of Snack foods on Work days and Days off	+S, LK
Mother self-report of Snack foods on Work days	+S, LK
Child self-report of Snack foods on School Days and Weekends	+S

collected in which the mother reported about the child (also in Table 9) and in which child reported about the mother (Table 10) for exploratory purposes. The self vs. other-report data will be discussed in Chapter Six: Supplementary Results.

On vs. Off Days in Child-Focused Hypotheses. The hypotheses involving mother and child eating behaviors (H9, H10, H11) were operationalized to reflect the mother-focused hypotheses involving WIF and eating behaviors (H1a, H2). Specifically, fruits and vegetables were examined with an emphasis on work/school days, and snack foods were examined across work/school days *and* days off/weekends. The hypotheses addressing mother feeding behaviors and child eating behaviors were analyzed with the child eating behaviors always operationalized across work/school days *and* days

Table 5. Descriptive statistics: Mother variables (Mother self-report)

Variable	Items	Min	Max	Mean	SD	Skew	Kurt	α
BMI	-	16.60	45.76	25.99	5.65	1.192	1.300	-
WIF	5	1	5	2.09	0.92	.821	.357	.94
Coping	9	9	41	26.99	6.40	-.285	-.249	.78
Monitoring	3	3	15	11.11	3.36	-.682	-.154	.94
Pressure	4	4	20	10.44	4.59	.265	-.871	.74
Restriction	7	8	40	25.87	6.55	-.411	-.207	.76
Fruit & Vegetables (All)	16	16	72	44.28	9.55	-.085	.307	-
Fruit & Vegetables (Wk)	8	8	35	22.04	5.05	-.043	.118	-
Fruit & Vegetables (Off)	8	8	38	22.36	5.22	.009	.294	-
Fruit (All)	8	8	36	21.69	5.56	-.027	.064	-
Fruit (Wk)	4	4	20	10.58	3.16	.127	.143	-
Fruit (Off)	4	4	20	11.17	3.02	.012	.181	-
Veggies (All)	8	8	40	22.64	5.19	.186	.717	-
Veggies (Wk)	4	4	20	11.48	2.69	.205	.802	-
Veggies (Off)	4	4	20	11.19	2.91	.235	.252	-
Snack foods (All)	8	8	39	18.15	4.70	.777	1.889	-
Snack foods (Wk)	4	4	20	9.08	2.65	.792	1.434	-
Snack foods (Off)	4	4	20	9.05	2.52	.547	1.177	-

Note. N = 245-258

Table 6. Descriptive statistics: Mother variables (Child report)*

Variable	Items	Min	Max	Mean	SD	Skew	Kurt	α
Monitoring	3	3	15	11.72	3.31	-.888	-.049	.82
Restriction	8	8	40	27.00	5.66	-.102	.027	.54
Pressure	4	4	20	15.32	3.58	-.718	-.042	.55
Fruit & Vegetables (All)	16	18	80	49.65	12.7	.077	-.153	-
Fruit & Vegetables (Wk)	8	8	40	25.08	6.88	.101	-.504	-
Fruit & Vegetables (Off)	8	8	40	24.46	6.99	.171	-.177	-
Fruit (All)	8	8	40	25.79	7.16	-.115	-.431	-
Fruit (Wk)	4	4	20	13.03	3.97	-.066	-.520	-
Fruit (Off)	4	4	20	12.68	4.10	-.079	-.636	-
Veggies (All)	8	8	40	23.88	6.59	.197	-.117	-
Veggies (Wk)	4	4	20	12.12	3.67	.118	-.218	-
Veggies (Off)	4	4	20	11.74	3.68	.330	-.037	-
Snack foods (All)	8	8	40	19.15	6.17	.464	.373	-
Snack foods (Wk)	4	4	20	9.56	3.39	.453	.032	-
Snack foods (Off)	4	4	20	9.57	3.59	.543	.194	-

Note. N = 268 – 275

*Child report of mother data collected for exploratory purposes.

Table 7. Descriptive statistics: Child variables (Child self-report)

Variable	Items	Min	Max	Mean	SD	Skew	Kurt	α
Fruit & Vegetables (All)	16	17	80	45.33	10.93	.234	-.201	-
Fruit & Vegetables (Sc)	8	9	40	23.35	6.46	.255	-.346	-
Fruit & Vegetables (We)	8	8	40	22.07	5.93	.202	-.291	-
Fruit (All)	8	8	40	24.38	6.20	.082	-.328	-
Fruit (Sc)	4	4	20	11.83	3.48	.133	-.521	-
Fruit (We)	4	4	20	12.60	3.86	.068	-.581	-
Veggies (All)	8	8	40	20.93	6.02	.286	-.168	-
Veggies (Sc)	4	4	20	10.26	3.29	.406	-.035	-
Veggies (We)	4	4	20	10.68	3.49	.343	-.243	-
Snack foods (All)	8	8	40	22.57	6.05	.389	.197	-
Snack foods (Sc)	4	4	20	11.20	3.43	.504	.002	-
Snack foods (We)	4	4	20	11.42	3.46	.269	-.036	-

Note. N = 275-281

Table 8. Descriptive statistics: Child variables (Mother-report)*

Variable	Items	Min	Max	Mean	SD	Skew	Kurt	α
Fruit & Vegetables (All)	16	16	75	43.90	9.16	.132	.599	-
Fruit & Vegetables (Sc)	8	8	38	21.96	4.67	.150	.739	-
Fruit & Vegetables (We)	8	8	40	21.94	5.30	.249	.343	-
Fruit (All)	8	8	40	23.25	5.39	.170	.564	-
Fruit (Sc)	4	4	20	11.65	2.84	.224	.495	-
Fruit (We)	4	4	20	11.60	3.19	.335	.363	-
Veggies (All)	8	8	37	20.63	4.97	.296	.495	-
Veggies (Sc)	4	4	19	10.30	2.53	.257	.329	-
Veggies (We)	4	4	20	10.35	2.91	.491	.793	-
Snack foods (All)	8	8	36	18.90	4.53	.249	.412	-
Snack foods (Sc)	4	4	20	9.40	2.48	.238	.850	-
Snack foods (We)	4	4	20	9.48	2.65	.546	.715	-

Note. N = 259-262

*Child report of mother data collected for exploratory purposes.

Table 9. Intercorrelations (Mother self-report and report of child, child self-report)

								Fruits							
			Mother SR					Mother SR			Mother report of child			Child SR	
			1	2	3	4	5	6	7	8	9	10	11	12	13
	Mother SR	1. Marital St.													
		2. Income	.50**												
		3. BMI	-.06	-.11											
		4.WIF	.06	.18**	-.04										
		5. Coping	.15*	.23**	-.11†	.19**									
Fruits	Mother SR	6. Fruit (Tot)	.03	.05	.00	-.05	.07								
		7. Fruit (Wk)	.07	.07	-.03	-.04	.06	.91**							
		8. Fruit (Off)	-.01	.02	.05	-.02	.08	.90**	.63**						
	Mother report of child	9. Fruit (Tot)	.00	-.12†	-.01	.00	.19**	.53**	.43**	.53**					
		10. Fruit (S)	-.10	-.18**	.02	.00	.16*	.42**	.35**	.40**	.88**				
		11. Fruit (W)	.08	-.05	-.02	-.02	.15*	.53**	.41**	.54**	.90**	.60**			
	Child SR	12. Fruit (Tot)	-.01	-.10	-.07	.01	.05	.07	.06	.09	.32**	.30**	.27**		
		13. Fruit (S)	-.03	-.07	-.01	.00	.02	.05	.02	.09	.24**	.23**	.18**	.82**	
		14. Fruit (W)	.03	-.12†	-.09	.01	.06	.06	.07	.05	.31**	.29**	.27**	.86**	.42**

Note. N = 202 -256. SR = Self-Report. † $p < .10$ * $p < .05$ ** $p < .01$

Table 9. (cont'd)

			Fruits													
			Mother SR					Mother SR			Mother report of child			Child SR		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
Vegetables	Mother SR	15. Veg (Tot)	.05	.04	-.01	-.08	.11†	.57**	.50**	.53**	.37**	.28**	.37**	.07	.03	.07
		16. Veg (Wk)	.03	.03	.00	-.14*	.11†	.50**	.48**	.42**	.29**	.23**	.29**	.02	.00	.02
		17. Veg (Off)	.07	.03	.00	.01	.10	.55**	.45**	.55**	.39**	.29**	.39**	.11	.06	.11†
	Mother report of child	18.Veg (Tot)	.09	-.09	.02	-.08	.21**	.36**	.30**	.36**	.56**	.49**	.50**	.25**	.21**	.23**
		19.Veg (S)	.04	-.12†	.03	-.16*	.16*	.32**	.28**	.30**	.51**	.51**	.41**	.21**	.20**	.18**
		20. Veg (W)	.11†	-.06	.00	-.01	.21**	.34**	.28**	.35**	.51**	.40**	.50**	.23**	.17**	.24**
	Child SR	21.Veg (Tot)	.10	.00	.05	.10	.06	-.02	-.04	.02	.18**	.16*	.16*	.61**	.50**	.52**
		22.Veg (S)	.05	-.04	.07	.02	.06	-.08	-.11	-.03	.15*	.15*	.12†	.54**	.54**	.37**
		23.Veg (W)	.13*	.05	.02	.15*	.04	.04	.03	.06	.16*	.12†	.16*	.55**	.36**	.56**
Snack Foods	Mother SR	24.Snack (Tot)	.01	.02	.07	-.09	-.06	-.03	-.06	.00	-.13*	-.14*	-.08	.06	.07	.03
		25.Snack (Wk)	.02	-.01	.04	-.08	-.08	.03	.01	.05	-.09	-.09	-.06	.05	.05	.04
		26.Snack (Off)	.00	.04	.09	-.09	-.04	-.10	-.12*	-.06	-.15*	-.16*	-.10	.05	.08	.02
	Mother report of child	27.Snack (Tot)	.14*	.08	-.06	.09	.06	-.12*	-.07	-.15*	-.14*	-.14*	-.12†	-.03	-.02	-.01
		28.Snack (S)	.12†	.08	-.10	.12†	.10	-.08	-.01	-.12†	-.09	-.09	-.08	-.04	-.03	-.04
		29.Snack (W)	.13*	.07	.00	.04	.00	-.12*	-.10	-.13*	-.16*	-.16**	-.12*	-.01	-.01	.01
	Child SR	30.Snack (Tot)	.06	-.08	-.05	-.06	-.02	-.04	-.05	-.03	.02	.04	-.01	.23**	.17**	.23**
		31.Snack (S)	.07	-.06	-.07	-.03	-.02	-.04	-.03	-.05	.00	.02	-.02	.20**	.15*	.20**
		32.Snack (W)	.05	-.07	-.01	-.06	-.01	-.04	-.06	-.02	.03	.05	.01	.22**	.16**	.21**

Note. N = 202 -256. SR = Self-Report. $^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$

Table 9. (cont'd)

			Vegetables									Snack Foods							
			Mother SR			Mother report of child			Child SR			Mother SR			Mother report of child			Child SR	
			15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Vegetables	Mother SR	16. Veg (Wk)	.92**																
		17. Veg (Off)	.93**	.71**															
	Mother report of child	18.Veg (Tot)	.47**	.43**	.44**														
		19.Veg (S)	.39**	.39**	.34**	.90**													
		20. Veg (W)	.47**	.40**	.47**	.93**	.67**												
	Child SR	21.Veg (Tot)	-.05	-.07	-.01	.25**	.23**	.21**											
		22.Veg (S)	-.03	-.05	.00	.22**	.25**	.16*	.88**										
		23.Veg (W)	-.06	-.09	-.02	.22**	.16*	.21**	.90**	.59**									
Snack Foods	Mother SR	24.Snack Tot)	-.06	-.08	-.04	-.04	.03	-.08	.00	.00	.00								
		25.Snack Wk)	-.02	-.03	.00	-.03	.04	-.08	.00	-.02	.03	.92**							
		26.Snack Off)	-.09	-.11†	-.07	-.04	.02	-.06	-.01	.02	-.03	.91**	.66**						
	Mother report of child	27.Snack Tot)	.06	.05	.05	-.07	-.10	-.04	-.03	-.04	-.01	.37**	.29**	.39**					
		28.Snack (S)	.08	.09	.06	-.11†	-.13*	-.08	-.05	-.05	-.03	.32**	.27**	.32**	.87**				
		29.Snack (W)	.03	.01	.04	-.01	-.04	.02	.00	-.01	.02	.32**	.24**	.36**	.89**	.50**			
	Child SR	30.Snack Tot)	.01	-.05	.06	-.07	-.11†	-.03	.16**	.17**	.12*	.10	.05	.13†	.17**	.10	.20**		
		31.Snack (S)	.01	-.03	.04	-.10	-.14*	-.06	.07	.11†	.04	.07	.02	.11	.15*	.11	.15*	.88**	
		32.Snack (W)	.00	-.06	.05	-.02	-.06	.01	.22**	.21**	.19*	.11†	.08	.12†	.16*	.07	.20**	.88**	.55**

Note. N = 202 -256. SR = Self-Report. † $p < .10$ * $p < .05$ ** $p < .01$

Table 9. (cont'd)

							Fruits								
		Mother SR					Mother SR			Mother report of child			Child SR		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Mother SR	33.Monitoring	.01	-.01	.08	-.13*	.18**	.09	.08	.08	.18**	.16*	.16**	.06	.12†	-.01
	34. Pressure	.00	-.22**	-.04	-.04	-.11†	-.07	-.09	-.03	-.07	-.04	-.08	.02	.00	.04
	35. Restriction	.12*	.11†	.17**	.06	.06	.07	.06	.07	.05	.03	.06	.02	.02	.02

Note. N = 202 -256. SR = Self-Report. † $p < .10$ * $p < .05$ ** $p < .01$

Table 9. (cont'd)

		Vegetables								
		Mother SR			Mother report of child			Child SR		
		15	16	17	18	19	20	21	22	23
Mother SR	33.Monitoring	.10	.13*	.06	.25**	.25**	.21**	.00	.02	-.02
	34. Pressure	-.04	-.05	-.02	.00	.01	.00	.00	.00	.00
	35. Restriction	.02	-.01	.06	.09	.05	.10	.01	.02	.00

		Snack Foods										
		Mother SR			Mother report of child			Child SR			Mother SR	
		24	25	26	27	28	29	30	31	32	33	34
Mother SR	33.Monitoring	-.04	-.02	-.05	-.07	-.06	-.05	.03	.03	.02		
	34. Pressure	.20**	.20**	.15*	.07	.08	.06	.09	.11	.04	.02	
	35. Restriction	.18**	.15*	.17**	.18**	.14*	.17**	.11†	.11	.08	.34**	.14*

Note. N = 202 -256. SR = Self-Report. † $p < .10$ * $p < .05$ ** $p < .01$

Table 10. Supplementary intercorrelations (Child report of mother)

		Mother SR					Mother report of child			Child SR		
		WIF	Coping	Fruit (Tot)	Fruit (Wk)	Fruit (Off)	Fruit (Tot)	Fruit (S)	Fruit (W)	Fruit (Tot)	Fruit (S)	Fruit (W)
Child report of Mother	Fruit (Tot)	.09	.09	.25**	.26**	.22**	.22**	.22**	.17**	.51**	.31**	.54**
	Fruit (Wk)	.07	.14*	.22**	.23**	.19**	.15*	.14*	.13†	.42**	.27**	.43**
	Fruit (Off)	.12†	.05	.21**	.21**	.19**	.24**	.25**	.18**	.50**	.29**	.53**
	Veg (Tot)	.04	.15*	.19**	.15*	.21**	.17*	.14*	.17*	.41**	.27**	.41**
	Veg (Wk)	.03	.17*	.19**	.17*	.20**	.09	.06	.11†	.38**	.29**	.34**
	Veg (Off)	.06	.09	.14*	.09	.16*	.20**	.19**	.18**	.35**	.19**	.39**
	Snack food (Wk)	-.03	-.10	-.02	-.05	.00	.08	.05	.10	.27**	.20**	.25**
	Snack food (Wk)	-.05	-.08	-.02	-.05	.01	.03	.00	.06	.24**	.18**	.23**
	Snack food (Off)	.00	-.08	-.02	-.03	-.01	.11†	.10	.11†	.24**	.18**	.22**
	Monitoring	-.06	.03	.15*	.16*	.12†	.20**	.18**	.19**	.21**	.10	.25**
	Pressure	-.03	-.08	.07	.07	.06	-.01	.01	-.01	.12†	.10†	.10
	Restriction	.11	.05	.02	.03	.00	.03	.02	.04	.12*	.07	.13*

Note. N = 202 -256. SR = Self-Report. † $p < .10$ * $p < .05$ ** $p < .01$

Table 10. (cont'd)

		Mother SR			Mother report of child			Child SR		
		Veg (Tot)	Veg (Wk)	Veg (Off)	Veg (Tot)	Veg (S)	Veg (W)	Veg (Tot)	Veg (S)	Veg (W)
	Fruit (Tot)	.09	.10	.08	.12†	.11†	.09	.46**	.36**	.45**
	Fruit (Wk)	.08	.09	.06	.15*	.14*	.12†	.41**	.33**	.40**
	Fruit (Off)	.09	.08	.09	.07	.06	.06	.41**	.32**	.40**
	Veg (Tot)	.20**	.16*	.21**	.23**	.20**	.23**	.56**	.48**	.52**
	Veg (Wk)	.16*	.12†	.18**	.19**	.15*	.19**	.51**	.44**	.47**
Child report of Mother	Veg (Off)	.17*	.14*	.17*	.22**	.20**	.21**	.48**	.40**	.46**
	Snack food (Wk)	-.11	-.13†	-.08	.04	.04	.04	.34**	.32**	.28**
	Snack food (Wk)	-.11	-.11†	-.08	.06	.07	.05	.30**	.30**	.23**
	Snack food (Off)	-.08	-.11	-.05	.01	.01	.01	.30**	.27**	.26**
	Monitoring	.11†	.13*	.08	.15*	.14*	.12†	.27**	.21**	.27**
	Pressure	.00	.04	-.04	-.06	-.04	-.05	.15*	.14*	.12*
	Restriction	.04	.05	.03	.03	.04	.02	.12*	.12†	.10

Note. N = 202 -256. SR = Self-Report. $^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$

Table 10. (cont'd)

		Mother SR			Mother report of child			Child SR		
	Child report of Mother	Snack (Tot)	Snack (Wk)	Snack (Off)	Snack (Tot)	Snack (S)	Snack (W)	Snack (Tot)	Snack (S)	Snack (W)
	Fruit (Tot)	-.07	-.02	-.11†	-.08	-.12††	-.03	.23**	.20**	.21**
	Fruit (Wk)	-.11†	-.06	-.15*	-.09	-.14*	-.01	.16**	.16*	.13*
	Fruit (Off)	-.02	.00	-.06	-.05	-.07	-.02	.25**	.20**	.26**
	Veg (Tot)	-.01	-.02	.00	-.02	-.06	.04	.24**	.20**	.23**
	Veg (Wk)	-.02	-.02	-.03	.00	-.04	.05	.22**	.17**	.22**
Child report of Mother	Veg (Off)	.00	-.02	.01	-.03	-.06	.01	.20**	.18**	.18**
	Snack food (Wk)	.17*	.13*	.17**	.07	.04	.09	.44**	.29**	.49**
	Snack food (Wk)	.17*	.14*	.16*	.12†	.07	.15*	.36**	.23**	.40**
	Snack food (Off)	.13*	.09	.15*	.01	.01	.01	.42**	.28**	.46**
	Monitoring	-.01	.03	-.04	-.05	-.04	-.05	-.06	-.05	-.05
	Pressure	.05	.05	.04	.03	.02	.05	.03	.01	.05
	Restriction	.09	.10	.06	-.02	-.04	.02	.12†	.07	.15*

Note. N = 202 -256. SR = Self-Report. $^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$

Table 10. (cont'd)

		Mother SR		
		Monitoring	Pressure	Restriction
Child report of Mother	Fruit (Tot)	.01	-.08	-.01
	Fruit (Wk)	.01	-.07	-.04
	Fruit (Off)	.00	-.10	.01
	Veg (Tot)	.00	-.03	.02
	Veg (Wk)	.03	.02	.04
	Veg (Off)	-.03	-.08	.01
	Snack food (Wk)	-.05	.07	.04
	Snack food (Wk)	.02	.14*	.08
	Snack food (Off)	-.10	-.01	-.01
	Monitoring	.12†	.00	.06
	Pressure	.01	.16*	.01
	Restriction	.17*	.08	.13†

Note. N = 202 -256. SR = Self-Report. † $p < .10$ * $p < .05$ ** $p < .01$

off/weekends. General feeding tendencies were not predicted to vary according to on vs. off days for mothers or children, therefore feeding behaviors were examined (Hypotheses 8a and 8b) in relation to: child eating fruits, vegetables, and snack foods irrespective of day of the week.

Data Analysis

Hypotheses 1a – 3a, 4a, 7, 8a, 9, and 10 were evaluated with simple correlations. Mediation hypotheses (H3b, H4b, H8b, H11) were tested using two analysis methods: a bootstrapping procedure to estimate indirect effects (Preacher & Hayes, 2004), and the Sobel test. The Preacher and Hayes' bootstrap methodology was employed to circumvent certain limitations of Sobel tests, namely the assumption of a normal distribution, conservative estimates, and the need for large samples (e..g, Fritz & Mackinnon, 2007; Mackinnon, Warsi, & Dwyer, 1995; Shrout & Bolger, 2002). The bootstrapping approach draws a predefined number of random samples from the data and calculates an indirect effect for each sample. As the process repeats, a distribution based on the bootstrap samples is formed, and this bootstrap distribution forms the basis for confidence intervals around the indirect effect for determining significance. All analyses utilizing this procedure were run with the specification of 1000 bootstrap samples, and 95% confidence intervals. Further, each analysis was conducted a second time, controlling for marital status and annual household income. In interest of triangulating the results across different analytic methods, each analysis of an indirect effect was also investigated using the Sobel test (Sobel, 1982).

Mother-Focused Hypotheses

Hypotheses 1 and 2. The first three hypotheses addressed the relationship between mother WIF and mother eating behaviors. Partial support was observed for Hypothesis 1a, which predicted a negative relationship between WIF and eating fruits and vegetables on work days. The data supported a negative relationship between WIF and eating vegetables on work days (r = -.14, p < .05), but there was no relationship between WIF and eating fruit on work days (r = -.04, *ns*). As predicted by Hypothesis 1b, there was no significant relationship between WIF and weekend consumption of vegetables (r = .01, *ns*) or fruits (r = -.02, *ns*). WIF did not demonstrate a significant relationship with eating snack foods on work days and off days (r = .09, *ns*), therefore Hypothesis 2 was not supported.

Hypothesis 3. Hypothesis 3 concerned the relationship between eating fruits and vegetables on work days and BMI (H3a) and the mediating role of this work-day fruit and vegetable consumption in the relationship between WIF and BMI (H3b). No relationship was observed between BMI and eating fruits and vegetables on work days ($r_{Fruits\ (Off)}$ = -.03, *ns;* $r_{Vegetables\ (Off)}$ = .00, *ns*), thus this hypothesis was not supported. The results for Hypothesis 3b using both the Preacher and Hayes (3004) bootstrapping meditational procedure and the Sobel test did not exhibit notable differences between fruits and vegetables, therefore the results for eating fruits and vegetables are reported together here for parsimony (Table 11). The indirect relationship between WIF and BMI via eating fruits and vegetables on work days was not significant based on the results of either analysis procedure (Indirect effect = .011, 95% CI [-.057, .152]), failing to provide support for Hypothesis 3b.

Table 11. H3b: WIF and BMI mediated by fruits and vegetables (Mother self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.51 (.36)			IV to Mediator (a)	-.75* (.37)		
Mediator to DV (b)	-.02 (.08)			Mediator to DV (b)	.00 (.08)		
Total Effect IV to DV (c)	-.31 (.41)			Total Effect IV to DV (c)	-.23 (.43)		
Direct Effect IV on DV (c')	-.32 (.41)			Direct Effect IV to DV (c')	-.23 (.43)		
DV Model R^2	.003			DV Model R^2	.009		
		.011	-.057, .152			.002	-.129, .150
N =231, 1000 bootstra*p* samples				N = 217, 1000 bootstra*p* samples			

Note. Standardized regression coefficients. $^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$

Table 12. H4b: WIF and BMI mediated by snack foods (Mother self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.49 (.34)			IV to Mediator (a)	-.48 (.34)		
Mediator to DV (b)	.09 (.08)			Mediator to DV (b)	.11 (.08)		
Total Effect IV to DV (c)	-.24 (.40)			Total Effect IV to DV (c)	-.18 (.42)		
Direct Effect IV on DV (c')	-.20 (.40)			Direct Effect IV to DV (c')	-.13 (.42)		
DV Model R^2	.008			DV Model R^2	.017		
		-.036	-.259, .020			-.045	.-.272, .029
N = 235, 1000 bootstrap samples				N = 221, 1000 bootstrap samples			

Note. Standardized regression coefficients. $^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$

Hypotheses 4a and 4b. Hypothesis 4a posited a relationship between BMI and eating snack foods on work days and days off, and Hypothesis 4b predicted that eating snack foods, irrespective of day, would mediate between WIF and BMI. No significant relationship emerged between eating snack foods and BMI (r = .07, *ns*). The results for Hypothesis 4b using the bootstrapping procedure are presented in Table 12. There was no support for an indirect effect based on the bootstrapping results (Indirect effect = -.036, 95% CI [-.259, .020]) or the Sobel analysis (z_{Sobel} = -.90, *ns*).

Hypotheses 5 and 6. The last two mother-focused hypotheses proposed that household coping strategies would moderate the relationships between WIF and eating fruits and vegetables on work days (H5) and between WIF and eating snack foods, irrespective of day. The moderated regression results did not indicate significant moderation for vegetables on work days (Table 13), fruits on work days (Table 14), or snack foods (Table 15). However, WIF and coping appeared to be meaningful predictors of eating vegetables on work days (β_{WIF} = -.17, p < .05; β_{Coping} = .14, p< .05; Table 13), and the significance of the WIF and coping regression coefficients remained after controlling for marital status and annual household income (β_{WIF} = -.23, p < .01; β_{Coping} = .16, p< .05). The alternative roles of coping (mediating vs. direct relationship with eating behaviors) will be examined as supplemental analyses in Chapter Six.

Table 13. H5: Coping as a moderator between WIF and eating vegetables

Step 1	Model 1	Model 2	*Step 1*	Model 1	Model 2	Model 3
WIF	-.17*	-.17*	Marital Status	.06	.05	.05
Coping	.14*	.14*	Annual Household Income	-.01	-.01	-.01
Step 2			*Step 2*			
WIF X Coping		.02	WIF		-.23**	-.23**
			Coping		.16*	.16*
			Step 3			
			WIF X Coping			.00
R^2	.039**	.040	R^2	.003	.065	.065
ΔR^2		.01	ΔR^2		.062	.000
Final *F*	4.81**	3.21*	Final *F*	.285	3.71**	2.96*

Note. Standardized regression coefficients. $^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$

N = 237 N = 219

Table 14. H5: Coping as a moderator between WIF and eating fruits

Step 1	Model 1	Model 2	*Step 1*	Model 1	Model 2	Model 3
WIF	-.06	-.06	Marital Status	.08	.08	.08
Coping	.07	.07	Annual Household Income	.00	.01	.01
Step 2			*Step 2*			
WIF X Coping		.02	WIF		-.11	-.11
			Coping		.03	.03
			Step 3			
			WIF X Coping			.03
R^2	.007	.007	R^2	.006	.017	.018
ΔR^2		.001	ΔR^2		.011	.001
Final *F*	.785	.563	Final *F*	.664	.918	.778

Note. Standardized regression coefficients. $^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$

N = 238 N = 220

Table 15. H6. Coping as a moderator between WIF and snack foods

Step 1	Model 1	Model 2	*Step 1*	Model 1	Model 2	Model 3
WIF	-.08	-.08	Marital Status	-.06	-.05	-.05
Coping	-.05	-.05	Annual Household Income	.04	.06	.06
Step 2			*Step 2*			
WIF X Coping		-.05	WIF		-.08	-.07
			Coping		-.05	-.05
			Step 3			
			WIF X Coping			-.03
R^2	.010	.013	R^2	.003	.012	.012
ΔR^2		.003	ΔR^2		.009	.001
Final *F*	1.21	1.01	Final *F*	.279	.633	.543

Note. Standardized regression coefficients. $^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$

N = 239 N = 221

Table 16. H8b: Location of results

Mediator	Child Eating	Report of Child Eating	Bootstrap Method
Monitoring	Fruits	Child self-report	Table 17
	Vegetables	Child self-report	Table 18
	Snack foods	Child self-report	Table 19
Pressure	Fruits	Child self-report	Table 20
	Vegetables	Child self-report	Table 21
	Snack foods	Child self-report	Table 22
Restriction	Fruits	Child self-report	Table 23
	Vegetables	Child self-report	Table 24
	Snack foods	Child self-report	Table 25

Mother and Child - Focused Hypotheses

Hypotheses 7 and 8. Hypotheses 7 and 8 concerned the relationship demonstrated by feeding tendencies and WIF and child eating behaviors. Consistent with Hypothesis 7, the relationship between WIF and monitoring was negative (r = -.13, p < .05), but no relationship emerged between WIF and pressure feeding practices (r = -.04, *ns*) or restriction feeding practices (r = .06, *ns*). Therefore Hypothesis 7 was supported only with respect to monitoring feeding behaviors.

Hypothesis 8a predicted that feeding practices would be related to child consumption of fruits and vegetables (positive relationships with monitoring, negative relationship with pressure), and snack foods (negative relationship with monitoring and positive relationship with restriction). Mother self-report of monitoring feeding practices was not related to the child self-report of eating fruits (r = .06, *ns*) or vegetables (r = .00,

ns). Mother self-report of pressure feeding tendencies and of restriction feeding tendencies were not related to child self-report of eating fruits ($r_{Pressure\ \&\ Fruits}$ = -.02, *ns*; $r_{Restriction\ \&\ Fruits}$ = .02, *ns*) or vegetables ($r_{Pressure\ \&\ Vegetables}$ = .00, *ns*; $r_{Restriction\ \&\ Vegetables}$ = .01, *ns*). Mother report of monitoring and of pressure were not related to child report of child eating snack foods ($r_{monitoring}$= .03, *ns;* r_{pressure} = .09, *ns*). However, mother report of restriction feeding behaviors was positively related to child self-report of eating snack foods, but the significance of this relationship was marginal (r = .11, p < .10). In summary, Hypothesis 8a was not supported

Hypothesis 8b predicted that feeding behaviors would mediate between WIF and child eating behaviors. These results will be reported according to feeding behavior (monitoring, pressure, restriction), and within each group, results will be presented in the following order: 1. Child eating fruits; 2.Child eating vegetables; 3.Child eating snack foods. The organization of these analyses and their respective tables is displayed in Table 16.

As reported in Table 17. the bootstrapping results and Sobel test did not indicate a significant indirect relationship between WIF and child self-report of eating fruits on school days and weekends via monitoring (Indirect effect = -.051, 95%CI [-.284, .027]; z_{Sobel} = -.844, *ns*). The indirect relationship between WIF and child self-report of eating vegetables on school days and weekends via monitoring was not significant based on the results of either analysis procedure (Indirect effect = -.011, 95%CI [-.157, .089]; z_{Sobel} = -.248, *ns*; Table 18). The indirect relationship between WIF and child self-report of eating snack foods via monitoring also received no support (Indirect effect = -.010, 95%CI [-.184, .083]; z_{Sobel} = -.248, *ns*; Table 19).

Table 17. H8b: WIF and child eating fruit mediated by mother monitoring (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.39 (.25)			IV to Mediator (a)	-.42 (.26)		
Mediator to DV (b)	.12 (.13)			Mediator to DV (b)	.18 (.13)		
Total Effect IV to DV (c)	.12 (.46)			Total Effect IV to DV (c)	.29 (.49)		
Direct Effect IV on DV (c')	.17 (.46)			Direct Effect IV to DV (c')	.36 (.49)		
DV Model R^2	.005			DV Model R^2	.026		
		-.051	-.284, .027			-.077	-.352, .032
N =222, 1000 bootstra*p* samples				N = 204, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † p < .10 * p < .05 ** p < .01

Table 18. H8b: WIF and child eating vegetables mediated by monitoring (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.43* (.25)			IV to Mediator (a)	-.47† (.26)		
Mediator to DV (b)	.03 (.12)			Mediator to DV (b)	.08 (.12)		
Total Effect IV to DV (c)	.60 (.43)			Total Effect IV to DV (c)	.63 (.45)		
Direct Effect IV on DV (c')	.61 (.43)			Direct Effect IV to DV (c')	.66 (.45)		
DV Model R^2	.009			DV Model R^2	.039		
		-.011	-.157, .089			-.032	-.275, .038
N =226, 1000 bootstrap samples				N = 207, 1000 bootstrap samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 19. H8b: WIF and child eating snack foods mediated by monitoring (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.41 (.25)			IV to Mediator (a)	-.45† (.26)		
Mediator to DV (b)	.03 (.12)			Mediator to DV (b)	.09 (.12)		
Total Effect IV to DV (c)	-.36 (.44)			Total Effect IV to DV (c)	-.19 (.46)		
Direct Effect IV on DV (c')	-.35 (.44)			Direct Effect IV to DV (c')	-.14 (.47)		
DV Model R^2	.003			DV Model R^2	.026		
		-.010	-.184, .083			-.042	-.281, .038
N = 226, 1000 bootstra*p* samples				N = 207, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Both analyses indicated that the indirect relationship between WIF and child self-report of eating fruits on school days and weekends via pressure was not significant (Indirect effect = -.007, 95%CI [-.079, .060]; z_{Sobel} = -.209, *ns*; Table 20). The indirect relationship between WIF and child self-report of eating vegetables on school days and weekends via pressure was not significant based on the results of either analysis procedure (Indirect effect = -.003, 95%CI [-.052, .078]; z_{Sobel} = .109, *ns* ;Table 21). The indirect relationship between WIF and child self-report of eating snack foods via pressure also received no support (Indirect effect = -.010, 95%CI [-.191, .061]; z_{Sobel} = -.566, *ns*; Table 22).

As reported in Tables 23 – 25, the indirect relationships between WIF and child self-report of eating behaviors via restriction were not significant for fruits on school days and weekends (Indirect effect = .003, 95%CI [-.054, .138]; z_{Sobel} = .160, *ns*), vegetables on school days and weekends (Indirect effect = .003, 95%CI [-.035, .145]; z_{Sobel} = .311, *ns*), or for snack foods (Indirect effect = .049, 95%CI [-.024, .256]; z_{Sobel} = .786, *ns*).

Hypotheses 9, 10 and 11. The final set of hypotheses predicted the relationships between mother eating behaviors and child eating behaviors, and mother eating behaviors as a mediator between WIF and child eating behaviors. Mother eating of fruits on work days was not related to child eating of fruits (r = .02, *ns*) or vegetables (r = -.05, *ns*) on school days, thus failing to support Hypothesis 9. Hypothesis 10 specified a relationship between mother eating snack food with child eating snack food. This hypothesis was not supported by the child self-report of eating snack food (r = .10, *ns*) except with child self-

Table 20. H8b: WIF and child eating fruit mediated by pressure (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.07 (.33)			IV to Mediator (a)	.09 (.34)		
Mediator to DV (b)	.02 (.04)			Mediator to DV (b)	-.03 (.10)		
Total Effect IV to DV (c)	.10, (.46)			Total Effect IV to DV (c)	.26 (.49)		
Direct Effect IV on DV (c')	.10 (.46)			Direct Effect IV to DV (c')	.26 (.49)		
DV Model R^2	.000			DV Model R^2	.016		
		-.007	-.079, .060			-.005	-.127, .062
N = 223, 1000 bootstra*p* samples				N = 205, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 21. H8b: WIF and child eating vegetables mediated by Pressure (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.18 (.33)			IV to Mediator (a)	-.01 (.34)		
Mediator to DV (b)	-.01 (.09)			Mediator to DV (b)	.02 (.09)		
Total Effect IV to DV (c)	.62 (.43)			Total Effect IV to DV (c)	.67 (.45)		
Direct Effect IV on DV (c')	.62 (.43)			Direct Effect IV to DV (c')	.67 (.45)		
DV Model R^2	.009			DV Model R^2	.038†		
		-.003	-.052, .078			-.004	-.069, .080
N = 227, 1000 bootstra*p* samples				N = 208, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 22. H8b: WIF and child eating snack foods pressure (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.10 (.33)			IV to Mediator (a)	.08 (.34)		
Mediator to DV (b)	.12 (.09)			Mediator to DV (b)	.09 (.09)		
Total Effect IV to DV (c)	-.36 (.44)			Total Effect IV to DV (c)	-.19 (.46)		
Direct Effect IV on DV (c')	-.35 (.44)			Direct Effect IV to DV (c')	-.20 (.46)		
DV Model R^2	.011			DV Model R^2	.028		
		-.010	-.191, .061			.004	-.062, .167
N = 227, 1000 bootstra*p* samples				N = 208, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 23. H8b: WIF and child eating fruit mediated by restriction (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	.50 (.49)			IV to Mediator (a)	.41 (.50)		
Mediator to DV (b)	.01 (.06)			Mediator to DV (b)	.05 (.07)		
Total Effect IV to DV (c)	.09 (.47)			Total Effect IV to DV (c)	.27 (.50)		
Direct Effect IV on DV (c')	.09 (.47)			Direct Effect IV to DV (c')	.24 (.50)		
DV Model R^2	.000			DV Model R^2	.019		
		.003	-.054, .138			.013	-.023, .227
N = 222, 1000 bootstra*p* samples				N = 204, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 24. H8b: WIF and child eating vegetables mediated by restriction (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	.38 (.49)			IV to Mediator (a)	.30 (.50)		
Mediator to DV (b)	.02 (.06)			Mediator to DV (b)	.00 (.07)		
Total Effect IV to DV (c)	.49 (.44)			Total Effect IV to DV (c)	.49 (.46)		
Direct Effect IV on DV (c')	.49 (.4)			Direct Effect IV to DV (c')	.50 (.46)		
DV Model R^2	.006			DV Model R^2	.036		
		.003	-.035, .145			-.007	-.089, .073
N = 226, 1000 bootstra*p* samples				N = 207, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 25. H8b: WIF and child eating snack foods mediated by restriction (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	.44 (.49)			IV to Mediator (a)	.36 (.50)		
Mediator to DV (b)	.11† (.06)			Mediator to DV (b)	.14* (.07)		
Total Effect IV to DV (c)	-.38 (.44)			Total Effect IV to DV (c)	-.21 (.47)		
Direct Effect IV on DV (c')	-.43 (.44)			Direct Effect IV to DV (c')	-.26 (.47)		
DV Model R^2	.017			DV Model R^2	.044		
		.049	-.024, .256			.057	-.068. .284
N = 226, 1000 bootstrap samples				N = 207, 1000 bootstrap samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

report of eating snack foods on weekends and mothers eating snack foods on off days, specifically, where it exhibited marginal significance ($r = .12$, $p < .10$).

Hypothesis 11 predicted mother consumption of fruits, vegetables and snack foods would act as a mediator between WIF and the respective child eating behaviors. There was no support for the indirect relationship between WIF and child eating fruit on school days using child self-report (Indirect effect = -.009, 95%CI [-.099, .033]; $z_{Sobel} = -.25$, *ns*; Table 26). Results also did not support an indirect relationship between WIF and child self-report of eating vegetables on school days via mother eating vegetables on work days (Indirect effect = .016, 95%CI [-.067, .119]; $z_{Sobel} = .369$, *ns*; Table 27). Finally, there was no evidence of the hypothesized meditational relationships involving eating snack foods on work/school days (Indirect effect = -.043, 95%CI [-.256, .036]; $z_{Sobel} = .036$, *ns*; Table 28).

Table 26. H11: WIF and child eating fruit mediated by mother eating fruit (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.20 (.23)			IV to Mediator (a)	-.36 (.25)		
Mediator to DV (b)	.02 (.07)			Mediator to DV (b)	.02 (.08)		
Total Effect IV to DV (c)	-.08 (.26)			Total Effect IV to DV (c)	-.01 (.27)		
Direct Effect IV on DV (c')	-.08 (.26)			Direct Effect IV to DV (c')	.00 (.27)		
DV Model R^2	.001			DV Model R^2	.006		
		-.009	-.099, .033			-.013	-.129, .048
N = 221, 1000 bootstra*p* samples				N = 203, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 27. H11: WIF and child eating vegetables mediated by mother eating vegetables (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.51** (.19)			IV to Mediator (a)	-.68** (.20)		
Mediator to DV (b)	-.03 (.08)			Mediator to DV (b)	-.05 (.09)		
Total Effect IV to DV (c)	.10 (.24)			Total Effect IV to DV (c)	.18 (.25)		
Direct Effect IV on DV (c')	.09 (.25)			Direct Effect IV to DV (c')	.15 (.26)		
DV Model R^2	.002			DV Model R^2	.017		
		.016	-.067, .119			.033	-.071,.159
N = 224, 1000 bootstrap samples				N = 205, 1000 bootstrap samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 28. H11: WIF and child eating snack foods mediated by mother eating snack foods (All self-report)

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.41 (.35)			IV to Mediator (a)	-.40 (.37)		
Mediator to DV (b)	.11 (.08)			Mediator to DV (b)	.12 (.09)		
Total Effect IV to DV (c)	-.40 (.44)			Total Effect IV to DV (c)	-.26 (.46)		
Direct Effect IV on DV (c')	-.36 (.44)			Direct Effect IV to DV (c')	-.21 (.46)		
DV Model R^2	.010			DV Model R^2	.036		
		-.043	-.256, .036			-.049	-.304, .037
N = 224, 1000 bootstra*p* samples				N = 208, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Chapter Six: Supplemental Results

Supplemental analyses were conducted to allow exploration of two issues: alternate roles of coping and mother-child perception. As noted in the introduction, the literature is not in agreement about the role of coping regarding stressors and behaviors; it may function as a moderator, as a mediator, and as a separate direct effect across various contexts. Given the lack of support for the hypothesized moderating effect, two alternate models of coping were examined, the first with coping as a predictor of mother behaviors in addition to WIF, and the second with coping as a partial mediator between WIF and mother behaviors.

Supplemental analyses were also conducted to learn more about mother-child perceptions. The agreement between mother and child report was examined first with respect to child eating behaviors and then for mother eating behaviors. In the second set of supplementary analyses of mother-child perceptions, the similarity between single-source reports of one's own eating behaviors and the eating behaviors of one's counterpart was investigated using the child's perspective and then using the mother's perspective. Building upon these results, the third and last set of supplemental analyses related to mother-child perception explored the retesting of mother and child – focused hypotheses (H8 – H11) using mother-report only for all variables (only significant results tabled and reported in detail).

Alternate Roles of Coping

In the interest of exploring the role of coping beyond the moderating hypotheses (H5 & H6), several supplementary analyses were performed. First, coping was explored as having a direct relationship with the mother eating or feeding behavior ("Model 1"; Figure 6), accounting for variance above and beyond that of WIF. Next, coping was examined as a mediator between WIF and the mother eating or feeding behavior ("Model 2"). These results are reported in the following sections (using mother self-report only), with tables presented for significant results only.

Model 1 was supported by multiple regression results when the dependent variable was mother eating vegetables on work days (β_{WIF} = -.17, $p < .05$; β_{Coping} = .14, $p < .05$, R^2 = .049; Table 29), and when the dependent variable was monitoring (β_{WIF} = -.15, $p < .05$; β_{Coping} = .22, $p < .01$, $R^2 = .057$; Table 30),. Coping accounted for variance above and beyond that of WIF, and these results were still significant after controlling for marital status and household income. There was partial support for Model 1 from two dependent variables.

Bootstrapping results for Model 2 (Figure 6) revealed a significant positive indirect effect when the dependent variable was mother eating vegetables on work days (Indirect effect = .089, 95%CI [.016, .227], R^2 = .053; Table 31). This positive indirect effect was also supported when monitoring was the dependent variable (Indirect effect = .153, 95%CI [.033, .361], R^2 =.057; Table 32). However, in both cases the direct effect (IV to DV after partialling out the mediator) was negative. The opposite signs of indirect and direct effects suggest inconsistent mediation. The regression coefficients between IV and DV were further examined with and without the inclusion of the mediator, to

Figure 6. Supplementary analysis: Alternate roles of coping

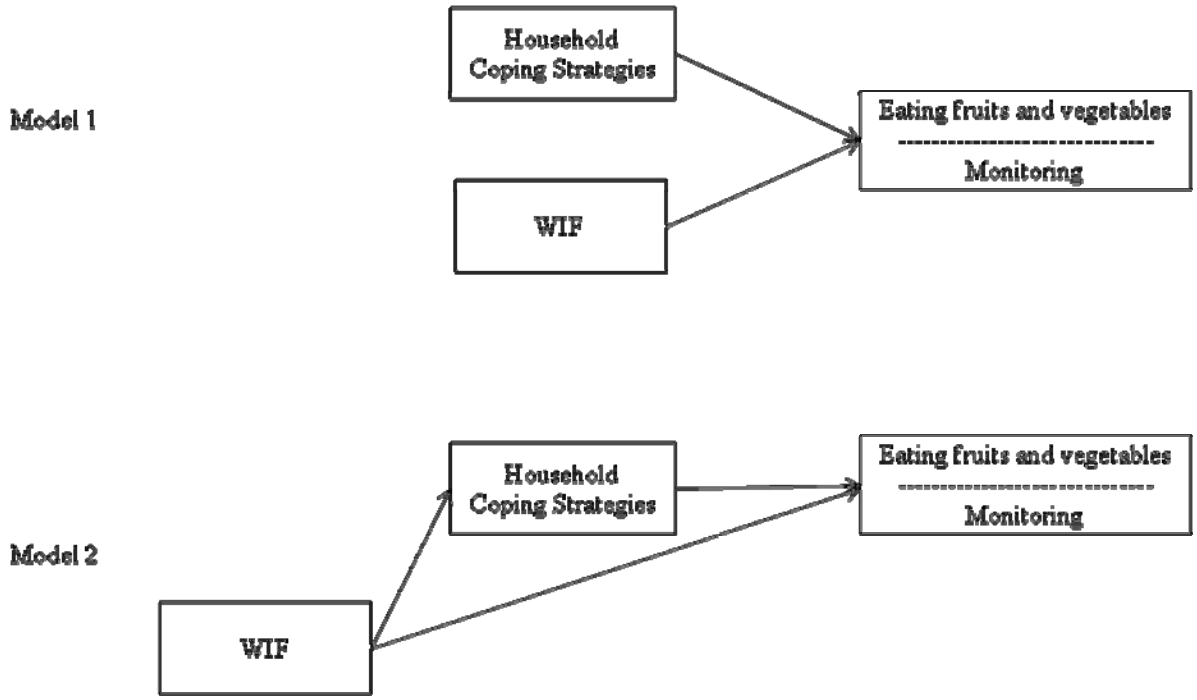


Table 29. Supplementary, role of coping: Direct to mother eating vegetables

Step 1	Model 1	Model 2	*Step 1*	Model 1	Model 2	Model 3
WIF	-.14*	-.17*	Marital Status	.01	.05	.02
			Annual Household Income	.02	.07	.02
Step 2			*Step 2*			
Coping		.14*	WIF		-.20*	-.23**
			Step 3			
			Coping			.16*
R^2	.020	.049	R^2	.001	.04	.06
ΔR^2		.02*	ΔR^2		.039*	.02*
Final *F*	4.73*	4.81**	Final *F*	.073	3.03*	3.60**

Note. Standardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 30. Supplementary, role of coping: Direct to monitoring

Step 1	Model 1	Model 2	*Step 1*	Model 1	Model 2	Model 3
WIF	-.11†	-.15*	Marital Status	.02	.05	.01
			Annual Household Income	-.06	-.05	-.07
Step 2			*Step 2*			
Coping		.22**	WIF		-.14†	-.17*
			Step 3			
			Coping			.23**
R^2	.013	.057	R^2	.002	.024	.067
ΔR^2		.045*	ΔR^2		.018*	.047*
Final *F*	3.05†	7.21**	Final *F*	.254	1.49	3.92*

Note. Standardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 31. Supplementary, role of coping: WIF and mother eating vegetables mediated by coping

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	1.46** (.46)			IV to Mediator (a)	1.05* (.47)		
Mediator to DV (b)	.06* (.03)			Mediator to DV (b)	.076* (.03)		
Total Effect IV to DV (c)	-.43* (.19)			Total Effect IV to DV (c)	-.61** (.20)		
Direct Effect IV on DV (c')	-.51* (.19)			Direct Effect IV to DV (c')	-.68** (.20)		
DV Model R^2	.039**			DV Model R^2	.065		
		.089	.016, .227			.069	.006, .208
N = 237,1000 bootstrap samples				N = 219, 1000 bootstrap samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 32. Supplementary, role of coping: WIF and monitoring mediated by coping

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	1.33** (.45)			IV to Mediator (a)	.94* (.45)		
Mediator to DV (b)	.11** (.03)			Mediator to DV (b)	.12** (.04)		
Total Effect IV to DV (c)	-.42† (.24)			Total Effect IV to DV (c)	-.49† (.25)		
Direct Effect IV on DV (c')	-.57* (.24)			Direct Effect IV to DV (c')	-.60* (.25)		
DV Model R^2	.057			DV Model R^2	.068		
		.153	.033, .361			.111	.007, .296
N =241,1000 bootstra*p* samples				N = 223, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

determine whether a suppression effect was present. In the case of eating vegetables as the dependent variable, the strength of the relationship with WIF (c path; $b_{unstandardized}$ = -.43, $p < .05$, or $\beta_{standardized}$ = -.14, $p < .05$) increased with the inclusion of household coping in the model (c' path; $b_{unstandardized}$ = -.51, $p < .05$ or $\beta_{standardized}$ = -.17, $p < .05$). With monitoring as the dependent variable, the strength of the relationship with WIF (c path; $b_{unstandardized}$ = -.42, $p < .10$, or $\beta_{standardized}$ = -.11, $p < .10$) also increased with the inclusion of household coping in the model (c' path; $b_{unstandardized}$ = -.57, $p < .05$, or $\beta_{standardized}$ = -.15, $p < .05$). The pattern of increasing magnitude of the WIF relationships for both dependent variables suggest suppression. Further, the directionality of the observed path coefficients resulting from this model were consistent with theory. All effects were still significant after controlling for marital status and household income.

The results of mediation analyses suggest that coping functioned as a suppressor variable (a form of inconsistent mediation) rather than a partial mediator; the analyses yielded theoretically appropriate path coefficient directions and accounted for the more variance in the dependent variables than did the other alternate role of coping (coping as main effect). The theoretical implications of these results for the domain of work-family conflict and health behaviors will be considered in Chapter Seven: Discussion.

Mother-Child Perceptions Part I: Similarity in Mother Report and Child Report

The similarity of perspectives across mother and child sources was explored first by comparing the correlations between mother and child reports of child eating behaviors. The agreement between mother and child about the child's eating behaviors ranged from small to medium positive effect sizes. The relationship between sources was strongest for the child eating fruit across school days and weekends (r = .32, $p < .01$),

followed by the child eating vegetables across school days and weekends ($r = .25$, $p < .01$), and the child eating snack foods ($r = .17$, $p < .01$).

Review of the similarity of mother and child perspectives regarding the mother's eating behaviors also revealed small to medium positive effects sizes. As was observed in the multisource agreement for child eating behaviors, the mother eating fruits across work days and days off showed the strongest association ($r = 25$, $p < .01$), followed by the mother eating vegetables across work days and days off ($r = .20$, $p < .01$), and the mother eating snack foods ($r = .17$, $p < .05$).

Overall, agreement across sources tended to be slightly higher when reporting about the child's behavior than when reporting about the mother's behavior, specifically for eating fruits and for eating vegetables (although snack foods demonstrated identical effect sizes for mother eating and for child eating). In other words mother and child demonstrated stronger agreement in their perceptions of the child's behavior. Mother and child demonstrated slightly weaker agreement in their perceptions of the mother's behavior.

Mother-Child Perceptions Part II: Self-Other Similarity Using Single Source Data.

The data were also examined for similarity between reported mother and child behaviors, first according only to the child's perspective and then according only to the mother's perspective. The child report variables demonstrated medium to large correlations between mother and child eating behaviors. The largest magnitude of relationship was exhibited by mother and child eating vegetables across work days/school days and off days/weekends ($r = .56$, $p < .01$), followed by mother and child eating fruit across work days/ school days and off days/weekends ($r = .51$, $p < .01$), and mother and

child eating snack foods across work days/ school days and off days / weekends (r = .44, p< .01).

The mother report variables also demonstrated medium to large effect sizes of the similarity between mother and child eating behaviors. The strongest relationships between mother report variables were observed for mother and child eating fruit across all days (r = .53, p < .01), followed by mother and child eating vegetables across all days (r = .47, p < .01), and mother and child eating snack foods across all days (r = .37, p < .01). These correlations essentially represent the extent that the respondents perceive similarity between their eating behaviors and those of their counterpart.

The observed relationships revealed that mothers tended to report their child's eating behaviors similarly to how they reported their own, and the children tended to report their mother's eating behaviors as similar to their own. Interestingly, both mother and child reports indicated the most perceived similarity (regarding behaviors between themselves and their counterpart) on off- days/weekends, than on work days/school days. Mother's self report of child eating fruit and the mother's own fruit consumption was more strongly correlated regarding off days/weekends ($r_{Fruit\ Off/Weekend}$ = .54, p< .01) than work days/school days ($r_{Fruit\ Work\ days/School\ days}$ = .35, p< .01), and child self-report of mothers eating fruit and the child's own fruit consumption was more strongly correlated for off days/weekends ($r_{Fruit\ Off/Weekend}$ = .53, p< .01) than work days/school days ($r_{Fruit\ Work\ days/School\ days}$ = .27, p< .01). These trends were also present for eating vegetables according to mother report ($r_{Vegetables\ Off/Weekend}$ = .47, p< .01; $r_{Vegetables\ Work\ days/School\ days}$ = .39, p< .01), and for snack food according to mother report ($r_{Snack\ Foods\ Off/Weekend}$ = .36, p< .01; $r_{Snack\ Foods\ Work\ days/School\ days}$ = .27, p< .01). For child report of the variables, the same

trend did not emerge for eating vegetables as these correlations were very similar in magnitude ($r_{Vegetables\ Off/Weekend} = .46$, $p < .01$; $r_{Vegetables\ Work\ days/School\ days} = .44$, $p < .01$), but off day/ weekend relationship for snack foods was again stronger than the work day/school day relationship ($r_{Snack\ Foods\ Off/Weekend} = .46$, $p < .01$; $r_{Snack\ Foods\ Work\ days/School\ days} = .23$, $p < .05$).

In summary, sizable relationships were found between mother and child eating behaviors when single source data was used (mother-report only and child report only). Further, both sources reported more similarity between themselves and their counterpart when answering about eating behaviors on off days/ weekends, than when reporting about work days/school days. These supplementary analyses provide a different perspective of the non-significant relationships observed when using multi-source self report.

Mother-Child Perceptions Part III: Revisiting Mother and Child-Focused Hypotheses

The last set of supplemental analyses involved the reexamining the mother and child-focused hypotheses using single-source data (only significant results tabled and reported in detail). These analyses investigated WIF crossover to child eating behaviors via mother behaviors using only mother-report.

Feeding and child's eating behaviors (Hypothesis 8a). The relationships between feeding practices and child eating fruits, vegetables and snack foods were explored first. Mother self-report of monitoring feeding practices was positively related to mother report of child eating fruits ($r = .18$, $p < .01$) and vegetables ($r = .25$, $p < .01$). Mother report of restriction feeding behaviors was also positively related to mother report of child eating snack foods ($r = .18$, $p < .01$), in the expected direction (restriction typically shown to

lead to more child consumption of foods; e.g., Birch, Fisher, & Davison, 2003). No other feeding behaviors demonstrated an association with mother report of child eating behaviors.

WIF and Child Eating Mediated by Feeding Behaviors (Hypothesis 8b). Feeding behaviors were examined as a mediator of the relationship between WIF and child eating behaviors. Bootstrapping results supported an indirect relationship between WIF and mother report of child eating fruits on school days and weekends (Indirect effect = -.138, 95%CI [-.399, -.016]; z_{Sobel} = -1.673, p < .10; Table 33) and this effect was still significant when controlling for marital status and household income (Indirect effect = -.161, 95%CI [-.461, -.010]).

The indirect relationship between WIF and mother report of child eating vegetables on school days and weekends via monitoring was not significant according to the bootstrapping results (Indirect effect = -.168, 95%CI [-.428, .003]; z_{Sobel} = -1.84, p < .10; Table 34), but the relationship became significant after controlling for marital status and household income (Indirect effect = -.177, 95%CI [-.518, -.005]). No other indirect effects via feeding behaviors approached significance.

WIF and Child Eating Mediated by Mother Eating (Hypothesis 11). Mother eating behaviors were also examined as a mediator of the relationship between WIF and child eating behaviors. The indirect relationship between WIF and child eating vegetables on school days via mother eating vegetables on work days was the only significant indirect effect (Indirect effect = -.145, 95%CI [-.289, -.004]; z_{Sobel} = -2.13, p < .05; Table 35) and it remained significant when marital status and household income were controlled.

Table 33. Supplementary, role of coping: Coping and mother eating vegetables mediated by WIF

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	.03**			IV to Mediator (a)	.02* (.01)		
Mediator to DV (b)	-.51* (.20)			Mediator to DV (b)	-.68** (.20)		
Total Effect IV to DV (c)	.05† (.03)			Total Effect IV to DV (c)	.05† (.03)		
Direct Effect IV on DV (c')	.06* (.03)			Direct Effect IV to DV (c')	.07* (.03)		
DV Model R^2	.039			DV Model R^2	.065		
		-.014	-.034, -.003			-.014	-.035, -.002
N = 237, 1000 bootstrap samples				N = 219, 1000 bootstrap samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 34. Supplementary, role of coping: Coping and monitoring mediated by WIF

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	.03** (.01)			IV to Mediator (a)	.02* (.01)		
Mediator to DV (b)	-.57* (.24)			Mediator to DV (b)	-.60* (.25)		
Total Effect IV to DV (c)	.10** (.03)			Total Effect IV to DV (c)	.11** (.04)		
Direct Effect IV on DV (c')	.11** (.03)			Direct Effect IV to DV (c')	.12** (.04)		
DV Model R^2	.057			DV Model R^2	.068		
		-.015	-.039, -.002			-.012	. -.039, -.0003
N = 241, 1000 bootstrap samples				N = 223, 1000 bootstrap samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 35. Supplementary, all mother report: WIF and child eating fruit mediated by monitoring

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.51 (.23)			IV to Mediator (a)	-.55* (.25)		
Mediator to DV (b)	.28** (.10)			Mediator to DV (b)	.29** (.11)		
Total Effect IV to DV (c)	.00 (.38)			Total Effect IV to DV (c)	.08 (.40)		
Direct Effect IV on DV (c')	.14 (.38)			Direct Effect IV to DV (c')	.24 (.40)		
DV Model R^2	.030*			DV Model R^2	.053*		
		-.138	-.399, -.016			-.161	-461, -.010
N =249, 1000 bootstra*p* samples				N = 229, 1000 bootstra*p* samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 36. Supplementary, all mother report: WIF and child eating vegetables mediated by monitoring

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.46* (.23)			IV to Mediator (a)	-.50 (.24)		
Mediator to DV (b)	.35** (.09)			Mediator to DV (b)	.36** (.09)		
Total Effect IV to DV (c)	-.46 (.35)			Total Effect IV to DV (c)	-.48 (.35)		
Direct Effect IV on DV (c')	-.30 (.34)			Direct Effect IV to DV (c')	-.30 (.35)		
DV Model R^2	.062**			DV Model R^2	.094**		
		-.168	-.428, .003			-.177	-.518, -.005
N =251, 1000 bootstrap samples				N = 231, 1000 bootstrap samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

Table 37. Supplementary, all mother report: WIF and child eating vegetables mediated by mother eating vegetables

Bootstrapped Indirect Effect Analysis				Controlling for Marital Status and Annual Household Income			
Path	Coeff (SE)	Indirect Effect	Corrected 95%CI	Path	Coeff (SE)	Indirect Effect	Corrected 95%CI
IV to Mediator (a)	-.39* (.19)			IV to Mediator (a)	-.52** (.20)		
Mediator to DV (b)	.36** (.06)			Mediator to DV (b)	.37** (.06)		
Total Effect IV to DV (c)	-.47* (.18)			Total Effect IV to DV (c)	-.42* (.19)		
Direct Effect IV on DV (c')	-.33† (.17)			Direct Effect IV to DV (c')	-.23 (.17)		
DV Model R^2	.169**			DV Model R^2	.191**		
		-.145	-.289, -.004			-.191	-.379, -.059
N =246, 1000 bootstrap samples				N = 26, 1000 bootstrap samples			

Note. Unstandardized regression coefficients. † $p < .10$ * $p < .05$ ** $p < .01$

In summary, the use of mother report for all variables when testing the study hypotheses revealed several significant indirect relationships between WIF and child eating behaviors, none of which were observed when multisource data were used (mother self report and child self-report). Specifically, these relationships occurred when monitoring was the mediating feeding behavior, and they occurred primarily with child eating fruits or vegetables as the dependent variable. Support was also found for mother eating vegetables on work days as a mediator between WIF and child eating vegetables on school days.

The three sets of supplementary analyses involving mother-child perceptions reveal an interesting pattern of self-other perception. The findings have implications for the theoretical tenets underlying the present study and will be discussed in Chapter Seven: Discussion.

Chapter Seven: Discussion

There were two primary aims in the present study. The first aim was to examine the relationships between WIF and specific eating behaviors reported by employed mothers, as they relate to health criteria such as BMI. Related to this first aim, household coping strategies were proposed as playing a significant role in the relationship between WIF and eating behaviors. The second aim of the present research was to investigate the crossover of WIF to specific child eating behaviors via mother feeding practices or mother eating behaviors.

Major Findings: WIF and Mother Health

Limited support was found for the first aim. Work-interference-with-family was negatively associated with eating vegetables on work days, but it was not associated with eating fruits on work days, nor was it associated with eating snack foods. The relationship between eating vegetables and WIF is consistent with previous research which observed a negative relationship between WIF and report of eating healthy foods (e.g., vegetables, fruits, fibers, whole grains; Allen & Armstrong, 2006). As predicted, eating vegetables on days off from work was not associated with WIF. This offers implications for improving the present theoretical framework of the relationship between WIF and health.

It is not possible to determine whether the nonsignificant relationship between fruit and WIF in the present study is directly inconsistent with previous research. The

only other study to directly evaluate WIF and healthy eating behaviors used a healthy foods dietary checklist (fruits, vegetables, whole grains) that was not designed for dimensional use; therefore it was analyzed in its entirety (Allen & Armstrong, 2006). In addition to the findings from Allen and Armstrong, the hypothesis addressing WIF and fruit was developed from research linking perceived stress with eating fewer servings of fruit and vegetables (e.g., in adolescents; Cartwright et al., 2003), and from qualitative findings which associated perceptions of incompatible role demands with food choices based on anticipated preparation (Devine et al., 2006). In the present study, it is possible that mothers perceived that different preparation effort was required for fruit vs. vegetables (e.g., most fruit requires only rinsing or peeling, while vegetables may need rinsing, peeling, cutting, cooking or preparation of a dip if eaten uncooked). This perception might suggest the avoidance of vegetables (but not fruit) when experiencing high WIF. Similar logic follows regarding the palatability of fruits vs. vegetables; fruits might be perceived to be highly palatable, while vegetables may be perceived as less palatable, leading to similar levels of fruit consumption regardless of perceived WIF, because it 'tastes good'.

The lack of significant findings for snack foods across all study hypotheses is attributed to ambiguity in the snack food group operationalization, as well as potentially limited value of the food group designation itself. Although other studies have reported increased snacking in response to stress (e.g., Oliver & Wardle,1999), this does not necessarily implicate an increase in consuming snack foods as a food group, as hypothesized in the present study. These issues will be further considered in *Study*

Limitations

Evidence was also lacking for the first aim of the study regarding the association between eating behaviors and BMI, as well as the indirect link between WIF and BMI via individual eating behaviors (fruits, vegetables, snack foods). The absence of a significant indirect relationship between WIF and BMI is consistent with the findings of Allen and Armstrong (2006) where self-report of WIF was only significantly associated with BMI when the mediating eating variable was dietary fat; while reports of eating more healthy foods (fruits, vegetables, fiber, whole grains) did not demonstrate a significant relationship with WIF. One reason for this insignificance involves the use of general food categories which may include high and low-fat foods without assessing calories and fat (respondents reporting vegetable consumption may have eaten zucchini uncooked alone, or as a main ingredient in a high-fat, high-calorie quiche); therefore, indicating a higher intake of vegetables would not necessarily be expected to relate to lower BMI. A second explanation is that the body mass index can vary according to a number of factors beyond eating fruits and vegetables, including (but not limited to) physical activity and genetics. BMI is limited in its sensitivity to the ratio of lean muscle/fatty tissue (adults with considerable proportions of lean muscle mass, and adults who are obese could have similar BMI values). Accounting for mother intake of calories or specific food items (rather than food categories), and mother level of physical activity in addition to their eating behaviors may contribute to a better understanding of WIF and BMI. For example, physical activity may interact with eating behaviors in the relationship with BMI (e.g., moderating effect).

The final objective of the first aim of the present study was to explore the role of household coping strategies in the relationship between WIF and eating behaviors. The primary moderation hypothesis was not supported. Exploratory analyses of alternate models of coping revealed support for coping as a suppressor of the relationship between WIF and eating vegetables on work days. Despite a negative direct association between WIF and eating behavior (which remained significant after partialling out the variance accounted for by the mediator) the indirect relationship via coping was positive. This pattern suggests the presence of a competing process in the relationship between WIF and mother consumption of vegetables. The indirect and direct paths are both meaningful, but care should be taken in interpreting the total effect of WIF on eating vegetables (Shrout & Bolger, 2002); The total effect cannot be explained by the two additive paths from WIF to coping and coping to eating vegetables (Mackinnon et al., 2000). The direct effect should be considered conditional, holding household coping strategies constant.

In summary, these results provide only partial support for the first aim of the study. WIF was related to one work-day eating behavior (vegetables), and coping exhibited a meaningful function when examined in an alternate model in the context of WIF and one work-day eating behavior (vegetables). However, eating behaviors did not relate to BMI as expected, and WIF did not relate indirectly to BMI as predicted.

Major Findings: Mother-child WIF and Health Behavior

Investigation of the second aim of the study revealed associations between WIF and feeding behaviors, feeding behaviors and child eating behaviors, and supplementary analyses identified interesting relationships among mother and child perceptions. Of the

three feeding behaviors examined, monitoring was negatively associated with WIF and no relationships were observed between WIF and pressure or restriction. The reason for non-significant relationships with pressure and restriction was not immediately apparent. The feeding behavior dimensions vary in the type of behavior they represent, such that restriction and pressure seem to represent active interaction from the mother, whereas monitoring might be active or passive. Additionally, restriction and pressure suggest intervention by the mother, whereas monitoring represents maintaining an awareness of the child's eating behaviors. Pressure and restriction can only occur when the mother is physically and psychologically available, and while WIF may be associated with how often the mother is available, it may not be associated to the extent that the mother perceives restriction and pressure as important feeding objectives or values. By contrast, the awareness implicated by monitoring is likely to decrease if the mother experiences incompatible role demands that render her less psychologically available. Finally, the items measuring pressure and restriction focus primarily on beliefs or values, whereas the monitoring items measure whether the mother monitors her child's consumption of various foods. Assessing the mother's restriction and pressure behaviors rather than restriction and pressure beliefs may have been more relevant for the hypothesized association with WIF.

The role of coping with regard to WIF and feeding behaviors was also relevant to the second aim of the present study according to the theoretical framework (Figure 6; although no formal hypotheses were made). Results of the supplementary analyses for coping and monitoring feeding practices were similar to those found for mother eating vegetables on work days. There was no support for a moderating coping effect between

WIF and any of the feeding behaviors, but evidence of suppression by coping emerged for monitoring practices, specifically. As with WIF and eating vegetables on work days, opposite signs were observed between direct and indirect effects; the indirect effect between WIF and monitoring was positive, while the direct relationship between WIF and monitoring (c') was negative. This pattern of relationships again suggests the presence of a competing process in the relationship between WIF and mother consumption of vegetables, and the total effect must be interpreted with caution. WIF was negatively related to monitoring when coping was held constant.

The crossover hypotheses from the second aim of the study were not supported in the primary analyses utilizing multisource data. There were no significant relationships between mother-reported feeding behaviors and child self-report of eating fruits and vegetables (when evaluated on all days), beyond a significant relationship between restriction and child eating snack foods. Previous work demonstrated a positive relationship between mother self-report of fruit and vegetable consumption and child self-report (grades 4 - 6) of fruit and vegetable consumption in low-income households (Sylvestre, O'Loughlin, Gray-Donald, Hanley, & Paradis, 2007). However, the relationship between child consumption of fruits and vegetables and childrens' perceptions of their parents modeling fruit and vegetable consumption was found to be moderated by perceived fruit and vegetable availability (Young, Fors, & Hayes, 2004). Perceived availability of certain foods was not measured in the present study and may play a role in the lack of significant association between mother and child eating behaviors using multisource data.

The positive association between restriction and child report of eating snack foods in the present study was consistent with theory and research which suggest that restriction practices lead to increased consumption by the child (Birch et al., 2003). No mediational relationships between WIF and child eating behaviors via mother feeding behaviors or mother eating behaviors were supported by multisource data. However, when these hypotheses were analyzed using mother report of all variables in the supplementary analyses, evidence was found for two of the hypothesized mediation patterns. The results supported full mediation for mother eating behaviors (mother-child eating vegetables on work/school days) and monitoring (child eating fruits and vegetables) with an overall indirect effect that was negative between WIF and child eating behaviors.

In comparison with the nonsignificant results of the multisource data, the significant relationships resulting from single source mother-report may suggest an inconsistent frame of reference across mother and child for reporting the child's eating behaviors. Supplementary analysis of mother and child perceptions revealed significant agreement between mother and child report of child eating behavior, but the effect sizes were modest (r = .17 to .32). Previous research reported correlations of .28 - .47 were found between child self-report of fruit and vegetable consumption and parent report of child fruit and vegetable consumption, which are slightly stronger in magnitude to the agreement observed in the present study. (Tak, te Velde, de Vies, & Brug, 2006). The variance unaccounted for between the two sources on any given behavior may be a function of the respondent's frame of reference, influenced by phenomena such as 1) differing adult-child interpretation of responses on a Likert-type frequency scale (e.g., what are the adult and child interpretation of 'most days' vs. 'some days'), 2) differing

adult-child interpretations of what one 'usually' eats behaviors (e.g., adults may hold broader or more long–term perspective on what is usual, and child may focus on the most recent behaviors), and 3) the use of different strategies for responding to the items (e.g., A mother may mentally catalogue what has been eaten or served over the preceding two weeks, then select an appropriate answer. A child may rely on a global perception such as "my mother likes fruit, so she eats it as a snack every day"). The literature is not in agreement about the validity of child self-report of dietary intake, suggesting that self-reporting of dietary intake by children is often subject to under-reporting, and this phenomena is related to body weight than age group or dietary survey technique (Livingstone, Robson, & Wallace, 2004). Another review concluded that there was higher validity of child report for specific survey techniques (e.g., food recall, food reporting) over others (e.g., food frequency questionnaires), and no systematic difference in reporting according to age among children aging 6 - 10 years (McPherson, Hoelscher, Alexander, Scanlon, & Serdula, 2000). Other findings suggest that starting around the age of 8 years, children quickly develop the ability to report their own food intake, and that this reporting is reliable by age 10 (Food Share Education & Research Office of Toronto, n.d., cf Sylvestre et al., 2007). Finally, the agreement between self- and other- report may be bound by the counterpart having a limited opportunity to observe all of the referent's eating behaviors, an issue that will be explored further in *Supplementary Findings: Mother-Child Perceptions*

In summary, support was observed for several instances of the WIF – health crossover targeted by the second aim of the study. However, this should be considered preliminary evidence because the relationships were supported only by single-source

data. Complementary methodology (for example, comprehensive checklists of specific food items rather than categories, other-report provided by another adult rather than by the child, food and/or caloric intake diaries rather than Likert-type response scales, observation rather than self-report) is needed in order to determine whether the single-source results represent meaningful relationships or a methodological artifact such as common method variance or social-desirability responding.

Supplementary Findings: Mother-child perceptions

As previously noted, the supplementary analyses helped to identify a meaningful pattern of coping relationships, as well as preliminary support for crossover hypotheses using single source data from mothers. The supplementary analyses also presented some interesting information about mother and child perceptions. First, the mother and child report of each child eating behavior were significantly correlated. Significant relationships were also observed between mother and child reports of each mother eating behavior (and these relationships tended to be slightly stronger than the correlations for child eating behavior). The magnitude of these correlations was moderate, suggesting that mother report of child eating behavior was corroborated by child self-report of eating behavior, and vice versa for mother eating behavior. Indeed, research has demonstrated that parents can report accurately about child fruit and vegetable consumption (preschool intake on the previous day, Linneman, Hessler, Nanney, Steger-May, Huynh, & Yhaire-Joshu, 2004).

Next, individuals reported similar eating behaviors between themselves and their counterpart (mothers reported similar levels of eating between themselves and their children, children reported similar levels of eating between themselves and their

mothers). It cannot be determined from the survey data alone whether these similarities in reporting about self and reporting one's counterpart represent a true similarity in behavior between mother and child, or if it is merely perceptual (i.e., each reports similarity between themselves and their counterpart based on an assumption or belief that they are similar to each other, but in reality the behaviors are less similar than reported). Certainly, if the reported similarity is indicative of objective similarities in mother-child behavior (similar behaviors reported because mother and child exhibit similar eating behaviors) it would lend credence to the internal validity of the mediation results supported by single-source mother-report.

On the other hand, if the similarity is solely perceptual (self and other behaviors reported as similar, but exhibited behaviors are not actually similar), the present findings are still noteworthy. Future decisions that mothers make about what to eat and what to feed their child are likely to be influenced by their perception of what the child is currently eating and how similar it is to their own eating behaviors. From a behavior modeling perspective, the issue of whether the mother recognizes the similarity as being causal is even more intriguing (e.g, "my child and I eat pretty much the same foods" vs. "If I eat more fruits and vegetables, then my child will eat more fruits and vegetables"). The child's perception of similarity between the mother and the child's own eating behaviors is also likely to be associated with future decision making about what to eat, although this is less likely to occur if the child does not wield much control over what he or she eats (e.g., younger children may not have the opportunity to select or refuse foods that are served or accessible). While these propositions are speculative and cannot be

inferred from the current data, future research examining these issues would be worthwhile.

Also of interest, the similarity between self- and other-eating behavior according to mother-report, and between self- and other-eating behavior according to child-report, was stronger for "off-" day eating behaviors (non work days, weekends) than for "on-" days (work days, school days). In other words, mothers reported more similar eating behaviors between themselves and their children on off-days/weekends; children reported more similar eating behaviors between themselves and their mothers on weekends./off-days.

Assuming that the survey data is valid, there are competing explanations about the lesser degree of similarity between mother and child eating behaviors on work days. First, the different locations of mother and child are likely to be associated with different respective food options for each person (e.g., child eats lunch in cafeteria, or mother packs the child a bag lunch, either of which could be quite different from what the mother eats at home or at work for lunch that day). A second explanation might involve deliberate efforts by the mother on work days to maintain a certain quality of diet for the child that is prioritized over maintaining the same quality of her own diet. These possible explanations demonstrate the relevance of the issue for further theoretical development of WIF crossover to child health behaviors. Understanding this trend could assist in the development of boundary conditions for the meditational patterns on work days, as well as with developing a model of these patterns across time. However, it is also possible that the perceived stronger similarity on weekends is completely inaccurate; because child and mother are more likely to be physically away from each other during certain

meal times on work/school days it is simply more difficult to accurately report about the other eats. In this case, it would be possible that mother-child behaviors are actually just as similar on work days as they are on non-work days, but the behaviors are being reported inaccurately because the 'other' is not able to observe the referent as much.

Study Strengths and Limitations.

There are several strengths of the present study, including a cross-disciplinary foundation in theory and research, and evaluation of a new WIF crossover process between parent and child. The analytic procedure (bootstrapping indirect effects) offered relaxed assumptions regarding a normal distribution, conservative estimates, and the need for large samples (e..g, Fritz & Mackinnon, 2007; Mackinnon, Warsi, & Dwyer, 1995; Shrout & Bolger, 2002), findings were triangulated with a more conservative type of analysis (Sobel test), and the results were generally consistent between the two methods across the hypotheses. The response rates observed in recruitment and survey administration were very high, and the collection of multi-source data allowed comparison between results from multi-source data and results from single-source data.

Several limitations of the present study are also important to note. The study was cross-sectional and no variables were manipulated, therefore directional and causal inferences cannot be supported. Survey methodology was used to examine behaviors and perceptions related to a topic with considerable social desirability. However, these data offer insight to the subjective experiences between mothers and children, and they may predict future behavior, contributing to the development of longitudinal propositions in this area. Survey methodology also offers low cost and high feasibility, appropriate for initial exploration of a relatively new domain. Another potential limitation involved the

use of non-validated scales to measure eating behavior categories that were not sensitive to caloric or fat content. Pilot research contributed to the improvement of these measures, but validation against objective measurement is warranted. In retrospect, power may have been an issue for the mediation analyses, as effect sizes were smaller than anticipated (minimum sample size calculated using small-medium effect sizes (.26) but small effect estimations may have been more realistic). Fritz and Mackinnon (2007) recommend a sample of 368 to 450 respondents / dyads for bootstrapping and Sobel procedures, respectively, when IV to mediator and mediator to DV effect sizes are expected to be small (.14). Perhaps the most important limitation was the operationalization of the snack foods group. The example foods fitting this category ranged from junk food (chips) to breakfast bars (granola bars), comprising a group that was likely ambiguous to respondents and extremely limited in meaning for health outcomes (potentially including both high and low calorie, high and low fiber, high and low fat foods). The theme of convenience was certainly manifest in the operationalization, but the health outcome implications of eating snack foods could be difficult to determine; however, similar food groupings have shown significant association to child and adult indicators of obesity in previous research (e.g., Fisher & Birch, 2002; McCarthy et al., 2006; "savory snacks" grouping: popcorn, potato chips, tortilla chips, puffed corn snacks, pretzels, peanuts).

Theoretical Implications and Future Research Directions.

The results of the present study hold several implications for the development of the theoretical framework in the present study, although replication of the findings reported here is recommended. First, coping may be reconceptualized as a suppressor

variable, in the context of eating behaviors and feeding behaviors. Second, the designation of work/school day in the mother role-modeling paths of the model warrants consideration as a boundary condition to the modeled relationships. Third, based on the results of the present study, it would appear that the vegetables group is the only mother eating behavior that deserves representation in the framework. However, it is not clear *why* the relationships manifested with vegetables. It is imperative to further explore the characteristics of foods that may have driven the findings in this study, with respect to perceived effort, palatability, and cost or availability of the food.

Future directions for empirical research in this area include incorporating other self-report scales of eating behaviors, different self-report (e.g., experience sampling) and objective (e.g., observation) data collection methods, and replicating the study in a more heterogeneous sample of mothers (e.g., all mothers in the present sample had enrolled their children in a YMCA after-school program, which may be indicative of income, social support, and values towards physical activity). It would also be useful to target older child age ranges to observe the relationships in children with more autonomy for choosing what to eat. Beyond replication and extension to isolate boundary conditions of the proposed relationships, researchers are encouraged to develop the theoretical framework by incorporating the role of fathers and family structures. Given traditional gender roles, perhaps interaction between fathers and children is more likely to elicit the role-modeling path, whereas mothers and children exhibit the feeding path. Identifying the domestic roles that are specific to the family unit might reveal that the 'breadwinner' functions as the role model, regardless of whether it is the mother or father. Additionally, the composition of the family unit is extremely relevant to the issue of coping (e.g., adults

may engage in more or less coping according to the extent that family responsibilities are shared, and to the extent that social/marital/family support resources are available).

The characteristics of work days which contribute to the dissimilar mother-child eating behavior perceptions must be identified (e.g., physical space or intentional decisions), and the dissimilarity examined with supplementary data (e.g., observation, other-report by other adults). It will also be necessary to identify other feeding practices that share some of the relevant characteristics of monitoring, whereas pressure and restriction might be discarded as considerably less relevant to the WIF – child crossover. Regarding the mothers' eating behaviors, the characteristics of specific food groups must be further explored in order to strengthen future hypotheses (e.g., determine whether the difference in WIF findings between fruits and vegetables was due to perception of required effort vs. palatability). Finally, the constructs in the present theoretical framework were intended to represent behaviors; exploratory analysis of mother and child perspectives suggested that a comprehensive understanding of exhibited behaviors over time may require examining the decisions which drive those behaviors (e.g., awareness and salience of one's own eating behavior leading to a decision to change one's habits or keep them the same, awareness and salience of the eating behaviors of one's counterpart leading to a decision to change or stay the same). Following this, the characteristics of other relevant variables (type of WIF experienced, coping strategy employed, and characteristic of work day vs. weekend) may be more strategically pursued in theory and empirical research.

Implications for Practice

It is arguably premature to target these findings with organizational initiatives. However, the preliminary evidence from mother self-report suggests several avenues for intervention that will be relevant upon replicating the present results and further developing the WIF-health domain. Future organization efforts might adopt one or more of three primary objectives: 1) attempt to alleviate or reduce WIF, 2) educate employees, and 3) equip or train employees to adopt effective coping strategies. Amassing support for the association between WIF and the health of employees and their families, the bottom line impact of employer-contributions to health care (in an era of obesity in the U.S.) may provide the necessary rationale for organizations to implement family-friendly policy targeted at WIF (Allen, 2001). Beyond expensive policy interventions, organizations could easily support employee awareness initiatives regarding the implications of WIF for employee and family health, and the behaviors that are easily modified to improve various outcomes. Along the same lines, employers could sponsor in-house or external training efforts to equip employees with the ability to engage in effective coping strategies (e.g., resource accumulation, weighing which factors to sacrifice when necessary with regard to eating and feeding others in the family).

By adopting initiatives that target work-life issues, organizations may benefit from reduced health-care premiums for employees with full-time benefits, and the reputation of the employer is likely to benefit from perceptions of work-life responsibility for employees (e.g., placement in Working Mothers Magazine "Top 100 Companies to Work For").

Conclusion

Existing research has identified relationships between WIF and health outcomes (e.g., overall ratings of physical health; Adams & Jex, 1999; Allen & Armstrong, 2006; Frone, Russell & Barnes, 1996; Grandey & Cropanzano, 1999; Mesmer-Magnus & Viswesvaran, 2005), but little was known about the relationship between WIF and behaviors that are relevant to these health outcomes. Beyond adult WIF and health, experts have called for research to examine how employment issues impact parent and *child* health (e.g., Cleveland, 2005; Friedman & Greenhaus, 2000; Galambos, Sears, Almeida & Kolaric, 1995; Kinnunen & Pukkinen, 2001). Building upon the one study that examined WIF and dietary behaviors (eating healthy foods, dietary fat; Allen & Armstrong, 2006), the present study investigated the association between mother WIF and eating behaviors, the role of household coping strategies, and the crossover of mother WIF to child eating behaviors using multisource data.

Results provided evidence of a negative relationship between WIF and eating healthy foods (vegetables), clarifying the relevance of work-day (vs. off-days). A competing process emerged via household coping strategies, manifesting as suppressor of the WIF relationships. The study findings also revealed a negative association between WIF and feeding practices (monitoring behaviors), and this relationship was also subject to suppression by household coping strategies. Support for the hypothesized crossover from mother WIF to child eating behavior (via mother eating and monitoring) was observed in the mother-report data. Although there was significant agreement between mother and child report of eating behaviors, the proposed crossover relationships were not supported by multisource data. Therefore, until additional research accumulates, the

majority of these relationships are confined by the boundaries of mother perception. In conclusion, the present study contributes to the work-family and health literature by further clarifying the processes that link WIF with health, and by providing preliminary evidence of crossover between mother WIF and child health. The continued study of this area is likely to strengthen support for the relevance of work-family issues to “the bottom line" (e.g., employer contributions to health insurance), providing even stronger rationale for organizations to implement family-supportive policies and benefits.

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Appendices

Appendix A. Mother self-report eating behavior items (Work days)

Directions:
We want to know what you eat on the days that you work at your job. Think about what you eat on work days while you answer the next items.

Fruit means things like; apples, oranges, banana, raisins, strawberries, or glass of 100% fruit juice.

1) How often do you eat **fruit**…
   at breakfast time on work days?
   at lunch time on work days?
   as part of a snack on work days?
   at dinner time on work days?

Vegetables mean things like; salad, vegetable soup, and fresh or cooked vegetables like carrots or broccoli. DO NOT count french fries, onion rings, or fried okra.

2) How often do you eat **vegetables**…
   at breakfast time on work days?
   at lunch time on work days?
   as part of a snack on work days?
   at dinner time on work days?

Snack foods means things like chips, popcorn, granola bars and crackers.

3) How often do you eat **snack food**…
   at breakfast time on work days?
   at lunch time on work days?
   as part of a snack on work days?
   at dinner time on work days?

Appendix B. Mother self-report eating behavior items (Off days)

Directions:
Now, we want to know what you eat on the days that you don't work at your job. For some people this might be weekend, for others it might be other days of the week. Think about what you usually eat on your days off each week while you answer the next items.

Fruit means things like; apples, oranges, banana, raisins, strawberries, or glass of 100% fruit juice.

1) How often do you eat **fruit**…
   at breakfast time on your days off?
   at lunch time on your days off?
   as part of a snack on your days off?
   at dinner time on your days off?

Vegetables mean things like; salad, vegetable soup, and fresh or cooked vegetables like carrots or broccoli. DO NOT count french fries, onion rings, or fried okra.

2) How often do you eat **vegetables**…
   at breakfast time on your days off?
   at lunch time on your days off?
   as part of a snack on your days off?
   at dinner time on your days off?

Snack foods means things like chips, popcorn, granola bars and crackers.

3) How often do you eat **snack food**…
   at breakfast time on your days off?
   at lunch time on your days off?
   as part of a snack on your days off?
   at dinner time on your days off?

Appendix C. Child self-report eating behavior items (School days)

Directions.
We want to know what you eat on the days that you go to school. Think about what you eat on school days while you answer the next items!

Fruit means things like; apples, oranges, bananas, raisins, strawberries, or glass of 100% fruit juice.

1) How often do you eat fruit…
   at breakfast time on school days?
   at lunch time on school days?
   as part of a snack on school days?
   at dinner time on school days?

Vegetables mean things like; salad, vegetable soup, and fresh or cooked vegetables like carrots or broccoli. DO NOT count french fries, onion rings, or fried okra.

2) How often do you eat vegetables…
   at breakfast time on school days?
   at lunch time on school days?
   as part of a snack on school days?
   at dinner time on school days?

Snack foods means things like chips, popcorn, granola bars and crackers.

3) How often do you eat snack food…
   at breakfast time on school days?
   at lunch time on school days?
   as part of a snack on school days?
   at dinner time on school days?

Appendix D. Child self-report eating behavior items (Weekends)

Directions.
OK, NOW, we want to know what you eat on the WEEKEND!!! Think about what you usually eat on SATURDAY or SUNDAY while you answer the next items.

Fruit means things like; apples, oranges, bananas, raisins, strawberries, or glass of 100% fruit juice.

1) How often do you eat fruit…
   at breakfast time on the weekend?
   at lunch time on the weekend?
   as part of a snack on the weekend?
   at dinner time on the weekend?

Vegetables mean things like; salad, vegetable soup, and fresh vegetables like carrots or broccoli. DO NOT count french fries, onion rings, or fried okra.

2) How often do you eat vegetables…
   at breakfast time on the weekend?
   at lunch time on the weekend?
   as part of a snack on the weekend?
   at dinner time on the weekend?

Snack foods means things like chips, popcorn, granola bars and crackers.

3) How often do you eat snack food…
   at breakfast time on the weekend?
   at lunch time on the weekend?
   as part of a snack on the weekend?
   at dinner time on the weekend?

Appendix E. Mother self-report work-interference-with-family (WIF) items

1) The demands of my work interfere with my home and family life.
2) The amount of time my job takes up makes it difficult to fulfill family responsibilities.
3) Things I want to do at home do not get done because of the demands my job puts on me.
4) My job causes strain that makes it difficult to fulfill family duties.
5) Due to work-related duties, I have to make changes to plans for family activities.

Note. Netemeyer et al., 1996

Appendix F. Mother self-report Household Coping Strategies

1) Do you hire people to help with chores (for example, babysitters, cleaning help, yard help, etc.)?
2) The following questions are about ways you try to manage your work and non-work responsibilities. Do you hire people to help with chores (for example, babysitters, cleaning help, yard help, etc.)?
3) Do you coordinate your household schedule with family members or with your child?
4) Do you share your family duties (for example, babysitting, carpool, cleaning and yard work) with a family member, friend or your child?
5) Do you set priorities about which work or family activities are the most important?
6) Do you spend less time on less important duties? (for example, regular house cleaning, activities with friends you aren't close to)
7) Do you openly discuss problems in assigning household chores with your family?
8) Do you try to plan, schedule, and organize your work and family activities better?
9) Do you decide which work or family activities are the most important and then schedule time for each?
10) Do you lower your expectations for some activities when you can't get everything done? (for example, allowing your house to stay kind of messy, cooking easy meals like frozen dinners)

Note. Source: Steffy & Jones (1988)

Appendix G. Mother self-report items Child Feeding Questionnaire

Directions:
Please answer the following questions about you and your child. Remember there are no right or wrong answers! Please select the answer that best reflect your day to day life.

Restriction

1) I have to be sure that my child does not eat too many sweets (candy, ice cream, cake, poptarts or donuts).
2) I have to be sure that my child does not eat too many high fat foods (for example, fried food, cheese, cheeseburgers).
3) I have to be sure that my child does not eat too much of his or her favorite foods.
4) I intentionally hide or keep some foods out of my child's reach.
5) I offer sweets (candy, ice cream, cake, pastries, poptarts or donuts) to my child as a reward for good behavior.
6) I offer my child his or her favorite foods in exchange for good behavior.
7) If I did not guide or regulate my child's eating, he or she would eat too many junk foods.
8) If I did not guide or regulate my child's eating, he or she would eat too much of his or her favorite foods.

Pressure

1) My child should always eat all of the food on his or her plate.
2) I have to be especially careful to make sure that my child eats enough.
3) If my child says "I'm not hungry", I try to get him or her to eat anyway.
4) If I did not guide or control my child's eating, he or she would eat too much less than he or she should.

Monitoring

1) Do you keep track of the **sweets** that this child eats? (For example, candy, ice cream, cake, pies, poptarts or donuts)
2) Do you keep track of the **snack food** that this child eats? (For example, chips, crackers, granola bars)
3) Do you keep track of the **high-fat foods** that this child eats? (For example, fried food, cheese, cheeseburgers)

Note. Source: Birch et al. (2001)

Appendix H. Mother demographics

Please indicate your age in years.

Please circle the letter that best describes your ethnicity (circle all that apply).

White/Caucasian Black/African-American Hispanic/Latino

Native Amercian Asian-American Other _____

In what country were you born?

In what country were your parents born?

Please circle the letter that best describes your child's ethnicity (circle all that apply).

White/Caucasian Black/African-American Hispanic/Latino

Native Amercian Asian-American Other _____

What is your current marital status? (circle one)

Not married Not married but living with partner Married

What is the highest level of education you have completed?

In a typical week, how many times does your child spaced an entire day or night at a household other than your own?

How many children do you have living in your home?

How amny family members are living in your home?

What is your occupation?

What is your annual household income?

Your weigtht _____ pounds Your height _____ feet _____ inches

Your child's weigtht _____ pounds Your child's height _____ feet _____ inches

Has anyone in your household had any special dietary needs in the last month?

Have you tried to mostly eat low carb or low fat foods in the last month?

About the Author

Ashley Anne Marguerite Gray Walvoord completed her Psychology at Louisiana State University. She earned a Masters in Industrial-Organizational Psychology at the University of South Florida. Ashley's professional interests include work-life issues, teams, and performance feedback. Ashley has managed large-scale funded research projects addressing multimodal virtual communication (Army Research Lab), and work-family health (USF Interdisciplinary Initiative on Sustainable Communities). She enjoys teaching and mentoring students. Ashley was awarded the 2007 Eve Levine Graduate Student teaching award, was an honored finalist for the University Provost's award for exceptional teaching, and has advised two undergraduate honors theses. Ashley co-authored 17 peer-reviewed research papers at professional conferences, a chapter in the Oxford Handbook of Organizational Well-Being, and peer-reviewed publications in the Journal of Computers in Human Behavior, Human Performance, and IEEE Transactions. On the lighter side, Ashley loves music and regularly lets off steam by jamming in her stats professors' rock band ("The Outliers").