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Work-Family Dynamics Among Working Mothers in the United States

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WORK–FAMILY DYNAMICS AMONG WORKING MOTHERS
IN THE UNITED STATES

A DISSERTATION

Submitted to the Faculty of
Montclair State University in partial fulfillment
of the requirements
for the degree of Doctor of Philosophy

by

M. HASSAN RAZA

Montclair State University

Montclair, NJ

2017

Dissertation Chair: Dr. Bradley van Eeden-Moorefield

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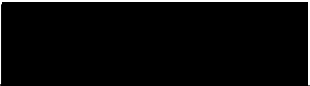
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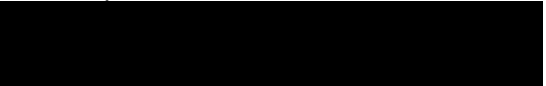


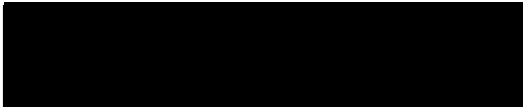
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ABSTRACT

WORK–FAMILY DYNAMICS AMONG WORKING MOTHERS IN THE UNITED STATES

by M. Hassan Raza

The current research consists of three studies evaluating the body of work–family conflict literature and examining work–family balance and work–family conflict experiences of working mothers in the United States. The first study addressed the research question: To what extent are voices of marginalized individuals and families recognized in work–family conflict studies? Content analysis was conducted of sixty-seven empirical articles containing 245 hypotheses/research questions in work–family conflict studies (1980–2016). A conceptual framework, “The Ecology of Justice,” was developed to analyze data. Results indicated work–family conflict studies were less inclusive and less representative of underprivileged working individuals and families, but were theoretically grounded and methodologically strong. The second study used bioecological theory in a longitudinal examination of work–family balance among working mothers, asking the question: What is the role of positive work–family spillover in relationships between a nonstandard work schedule and work–family balance, and between relationship quality and work–family balance, and do these relationships differ based on education level, family-friendly workplace policies, and race? Path analysis was used on longitudinal data consisting of four time periods and 302 full-time working mothers with children age 4 to 9. Results showed the association between relationship quality and work–family balance was partially mediated by positive family–to–work spillover, and moderated by

availability of family-friendly policies. The third study used bioecological theory to examine within- and between-person differences in work–family conflict experiences of working mothers, asking the question: Are there within- and between-person differences among working mothers in their work–to–family and family–to–work conflict experiences over time, and what factors account for these differences? Multilevel modeling was used on longitudinal data consisting of four time periods and containing 302 full-time working mothers with children age 4 to 9. Results illustrated significant within- and between-person variance in work–to–family and family–to–work conflict experiences of working mothers over time. Taken together, underprivileged working mothers face high levels of work–family conflict and struggle to maintain a healthy work–family balance, yet they remain under-represented in work–family literature.

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DEDICATION

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WORK–FAMILY DYNAMICS AMONG WORKING MOTHERS
IN THE UNITED STATES

Chapter 1

Introduction

Researchers have found substantial changes in the working lives and conditions of United States (U.S.) employees such that, on average, they now work more hours for less pay (when adjusted for inflation), experience longer commutes, face greater work demands, and are more likely to work at home and while on vacation (Bianchi & Milkie, 2010; Hoffman, 1987; Perry-Jenkins, Repetti, & Crouter, 2000). These changes have increased work stress among working Americans and are linked to several negative impacts on their well-being (Bianchi & Milkie, 2010). Additional research has shown that 83% of working Americans have at least one type of work stress (Work Stress Survey, 2013). The most common factors responsible for creating work stress include: having low wages (14%), commuting (11%), disliking one's job (8%), struggling to find work–family balance (7%), lacking professional advancement opportunities (6%), and fearing involuntary termination (6%; Work Stress Survey, 2013). The 24-hour, 7-day-a-week nature of the current economy, coupled with technological advancements that provide employee-employer work access outside of traditional scheduled work hours and days (Bianchi, Robinson, & Milkie, 2006), have fueled such increases in stressful experiences (Schneider, 2006). Further, scholars have linked increased work stress to increased work demands (e.g., intensive work schedules, nonstandard work, and lack of family-friendly policies; Kelly et al., 2014) reported by employees (Stewart, 2013). “Work demands”

refers to the job responsibilities that a person must perform through mental or physical effort (Voydanoff, 2004).

Importantly, work demands are experienced differently based on employees' family structure, such as single-parent compared to two-parent families (Voydanoff, 2005b), and gender, because women experience more work demands than men (Dyrbye et al., 2013). Accordingly, single mothers may be a particularly vulnerable group when it comes to work–family demands. In the United States, nearly 29% of currently working women with young children are single mothers, and this number continues to grow (American Community Survey, 2010). Researchers found that single working mothers faced several work-related difficulties, such as job insecurity and intensive work schedules, which caused them to report increased work demands (Son & Bauer, 2010). Single working mothers also faced financial challenges due to lack of spousal support, which made them more likely to work a nonstandard job (Grzywacz, Tucker, Clinch, & Arcury, 2010). These work demands can potentially affect employees' family demands (Voydanoff, 2006). “Family demands” refers to the family responsibilities that a person must perform through mental or physical effort including, but not limited to, household labor and child care responsibilities (Voydanoff, 2006).

Researchers have reported considerable contextual changes in the larger economy and, as a result, in the workplace (Bianchi & Milkie, 2013; Hoffman, 1987; Perry-Jenkins et al., 2000). For instance, dual-earner households comprised 31% of all households in 1970, a statistic which had increased to 46% by 2014 (Pew Research Center, 2015). The labor force participation rate (the percentage of the population who currently hold a job,

and those who are seeking a job) in the United States followed an upward trend, from 60% in the 1960s to 67.3% in 2000 (Juhn & Potter, 2006). According to the United States Bureau of Labor Statistics (2016), the rate had decreased to 62.7% by December 2016. The unemployment rate was 5% in 2007, rose to 9.5% by June 2009, and then hit 10% in the months following the recession (for the first time since 1982, when the unemployment rate was 10.8%; United States Bureau of Labor Statistics, 2012). The 2014 unemployment rate varied across different groups: adult men (4.7%), adult women (4.6%), Whites (4.4 %), African Americans (9.2%), Asians (3.6%), and Hispanics (6.4%; United States Department of Labor, 2015a). The number of women in the labor force has increased consistently, from 20.5% in 1950 (Toossi, 2002) to 47% in 2013 (United States Department of Labor, 2013b). Unlike previous decades, in the 2010s, 25.2 million mothers now work outside the home in the United States (Pew Research Center, 2015), nearly 71.1% of working mothers have children under 18 years of age (United States Department of Labor, 2015, and 29% of working mothers with young children are single mothers (American Community Survey, 2011). This indicates that U.S. workplaces have become increasingly diverse and dynamic compared to the 1950s.

These increases in women's participation in the workplace have shaped women's work-family experiences. For instance, continuously increasing work-family demands make it harder for working women to maintain a healthy work-family balance (Bianchi & Milkie, 2010) or to fulfill the expectations established by important individuals in both work and family domains (Grzywacz & Carlson, 2007). Research has shown that 38% of mothers who work full-time and 25% of mothers who work part-time struggle to

maintain a healthy work–family balance (Helmrich, 2015). “Work–family balance” refers to meeting responsibilities and expectations raised by important people in both the work and family domains (Carlson, Kacmar, Grzywacz, Tepper, & Whitten, 2013). Working mothers face substantial challenges in the workplace because, due to high family demands, they are perceived differently than men by their employers and coworkers. For instance, employers perceive working mothers to be less committed to the workplace and thereby unable to fulfill the job duties expected of ideal workers (Carlson, Grzywacz, & Kacmar, 2010). Employers perceive workers to be more committed if they are free from family demands, which creates negative perceptions about working mothers in the workplace (Crowley, 2013). Researchers have illustrated that working mothers are recognized as a distinctive category among employers due to their motherhood status, and thereby face substantial challenges in the workplace throughout their career trajectories (Zhao & Mattila, 2013). Many other micro- and macro-level factors, such as gender ideology, may also help to create, maintain, and perpetuate such perceptions about working mothers among employers and coworkers (Grose & Grabe, 2014; Rawat, 2014). In contrast, men benefit after getting married and having children, as employers perceive them to be more responsible and committed overall, and thus more committed to the workplace (Bear & Glick, 2016; Fernandez & Campero, 2017; Lyness & Judiesch, 2014).

Additionally, as a result of gendered perceptions and organizational hierarchies in the workplace, mothers are often appointed to clerical jobs, which are more labor intensive than many positions held by men (Leventhal, Karuza, & Fry, 1980; Moorman, 1991; Thibaut & Walker, 1975). Single working mothers who lack spousal financial

support and who belong to a low socioeconomic background do not have many options for getting an appropriate job (Crowley, 2013), so they accept any job that is available to them (Zhao & Mattila, 2013). Consequently, their jobs may lack schedule flexibility (Carlson et al., 2011), which prevents them from maintaining a healthy work–family balance (Carlson et al., 2010). “Schedule flexibility” refers to workers’ ability to determine the start and stop time of their work (Carlson et al., 2010).

At the same time, working mothers must perform additional household labor and child care responsibilities to meet the expectations set by their spouse/partner and/or children (Lam, McHale, & Crouter, 2012). Researchers have shown that the division of labor between heterosexual couples is currently more equal compared to 1980, but mothers are still performing more household work (Mullan & Craig, 2010). Household chores performed by mothers, such as cleaning, cooking, and child care, are more time consuming and labor intensive compared to fathers, who do most of the logistical work, such as picking up children from school or dropping them off to after-school activities (Perry-Jenkins, Newkirk, & Ghunney, 2013). Hence, women experience inequity compared to men in both the work and family domains, which makes it more difficult for them to achieve a healthy work–family balance. Consequently, failure to maintain a healthy work–family balance increases both work–to–family conflict (Edgell, Ammons, & Dahlin, 2012; Glass & Finley, 2002) and family–to–work conflict (Schieman & Young, 2010) of working mothers, which, in turn, affects their physical and psychological well-being (Sojo, Wood, & Genat, 2016).

“Work-to-family conflict” refers to a form of inter-role conflict that happens when the time devoted to or strain created by the job interferes with the individual’s ability to perform family roles or responsibilities (Netemeyer, Boles, & McMurrin, 1996; Voydanoff, 2005a). Working mothers who face a less supportive workplace environment (e.g., lack of family-friendly policies) and greater work demands (e.g., a nonstandard and/or intensive work schedule) may feel overwhelmed, which can increase work-to-family conflict (Rupert, Stevanovic, & Hunley, 2009). “Family-to-work conflict” is a form of inter-role conflict that occurs when the time devoted to or strain created by the family interferes with the ability to perform job roles or responsibilities (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Mesmer-Magnus & Viswesvaran, 2009). Mothers who must perform most of the domestic work or child care responsibilities along with their work duties feel more stressed and overwhelmed, which leads to greater family-to-work conflict (Stewart, 2013). Work-to-family conflict and family-to-work conflict are separate, but they are interrelated and play important roles in shaping the work-family experiences of working individuals (Eby et al., 2005; Rupert et al., 2009).

According to research, 60% of working fathers and 47% of working mothers reported work-to-family and family-to-work conflict in 2008, increased from 35% and 41%, respectively, in 1977 (The Council of Economic Advisers, 2014). Researchers have also illustrated that the portion of household labor delegated to mothers has declined due to increases in their education, working status, income, and job autonomy (Lam et al., 2012). However, mothers still perform more child care and domestic work than fathers,

even when both are employed (Mullan & Craig, 2010). These family demands can interfere with work responsibilities and create family-to-work conflict for working mothers (Kotila, Schopp-Sullivan, & Dush, 2013). Additionally, researchers found that one-fifth of working Americans follow a nonstandard work schedule, which is either a rotating shift in the evening, or overnight (Presser & Ward, 2011). “Nonstandard work schedule” refers to the extent of variation from a standard work schedule (i.e., 9 to 5; Grzywacz et al., 2010). Those mothers who work a nonstandard schedule struggle to perform their family responsibilities, which increases their family-to-work conflict (Grzywacz, Daniel, Tucker, Walls, & Leerkers, 2011).

Moreover, the work-family experiences of working mothers also vary based on their education level and race (Grzywacz et al., 2010). Two studies have shown that less educated African American mothers are more likely to have a nonstandard work schedule (Grzywacz et al., 2010; Grzywacz et al., 2011). Working a nonstandard job leads to mothers having negative moods and brings negative spillover from the work to the family (Gassman-Pines, 2011). “Negative work-to-family spillover” refers to the stressors at work that carry over into the family and shape the family life of working mothers (Repetti, Wang, & Saxbe, 2009). For instance, mothers feel more stressed and overwhelmed when they work in an environment in which they do not receive any support from supervisors or coworkers and the policies are not family-friendly (Keene & Reynolds, 2005). Mothers bring these stressors at home, which negatively affects their relationships with family members and shapes their experience in the family (Zhu & Li, 2015). This negative work-to-family spillover interferes with mothers’ ability to perform

family roles or responsibilities, and creates work-to-family conflict (Edgell et al., 2012; Glass & Finley, 2002).

Conversely, supportive work and family environments can create positive work-to-family and family-to-work spillovers for working mothers, which can help them maintain a healthy work-family balance (Lourel, Ford, Claire, Guéguen, & Hartmann, 2009). “Positive work-to-family spillover” describes the extent to which experiences within the workplace improve the quality of life in the home (Dawn, Ferguson, Kacmar, Grzywacz, & Whitten, 2011), whereas “positive family-to-work spillover” is the extent to which experiences within the family improve the quality of life in the workplace (Lourel et al., 2009). For instance, a supportive supervisor who understands the work demands of working mothers and facilitates them to effectively maintain a healthy work-family balance creates positive family-to-work spillover (Kelly et al., 2014). Similarly, when partnered mothers have a good relationship with their significant other, it increases their positive family-to-work spillover, reduces stress, and allows them to perform well in the workplace (O’Brien, Ganginis Del Pino, Yoo, Cinamon, & Han, 2014).

Mothers’ individual characteristics and dispositions may also have important effects on their work-family experiences (Chesley, 2005). For instance, mothers who have depressive symptoms or neuroticism (i.e., anxiety and becoming overwhelmed with life events) feel stressed and overwhelmed, which results in less work-family balance when compared to their counterparts (Cho, Tay, Allen, & Stark, 2013; Michel & Clark, 2009). In addition, individuals’ negative perceptions about work-to-family and family-to-work conflicts serve to increase these conflicts, whereas individuals’ positive

perceptions and self-evaluation help them reduce their work–to–family conflict (Michel & Clark, 2013). Negative characteristics expressed by individuals may be exaggerated by work–family demands, which increases the levels of work–to–family and family–to–work conflicts and decreases work–family balance of working mothers (Zhao & Mattila, 2013). Hence, individuals’ characteristics may directly affect work–family balance, and indirectly affect mothers’ work–family balance by magnifying the negative effects of their work–family conflicts (work–to–family conflict and family–to–work conflict) and work–family spillovers (work–to–family spillover and family–to–work spillover) and decreasing the positive effects of these positive work–family spillovers on work–family balance of working mothers (Prati & Zani, 2016).

The aforementioned discussion indicates the likelihood that working mothers may lack a healthy work–family balance and face high levels of work–to–family and family–to–work conflicts due to their own negative characteristics (e.g., depression), social location (e.g., race, gender, and marital status), and work–family demands (e.g., nonstandard work schedule, intensive work environment, and poor relationship qualities). However, the effects of these factors may be decreased by creating positive work–family spillovers, positive individual characteristics (e.g., education), and family-friendly workplace policies. Improving these elements may help working mothers reduce negative effects on work–family balance and work–family conflict, while also magnifying the positive effects on work–family balance and work–family conflict.

Given the dynamics in contemporary workplaces, growing diversities in U.S. families, and existing studies of work–family issues, it is easy to identify several broad

gaps in work-family literature. First, current work-family literature lacks a systematic and theory-driven content analysis of work-family studies that is needed to provide important insights about the progress of the field (Perry-Jenkins et al., 2013). Second, work-family studies have failed to incorporate the use of an explicit social justice perspective (Buettner-Schmidt & Lobo, 2012), while also rarely employing the latest version of Bioecological Theory (Bronfenbrenner & Morris, 2006; Tudge, Mokrova, Hatfield, & Karnik, 2009). Third, the mediating role of work-to-family and family-to-work spillovers in the relationships between a nonstandard work schedule and work-family balance, and between relationship quality and work-family balance, and how these relationships are moderated by individuals' characteristics and immediate context (e.g., work and family) are understudied. Fourth, because working mothers differ from each other in their work-to-family and family-to-work conflicts, it is imperative to examine the within- and between-differences in work-family conflicts, the change in work-family conflicts over time, and what factors account for the within- and between-differences in these conflicts. Fifth, it also is important to use sophisticated research designs (e.g., longitudinal research design and intensive longitudinal design) and advanced statistical techniques (e.g., multilevel modeling and structural equation modeling) to examine the temporal structure of work-family conflict and work-family balance experiences of working mothers. Sixth, most work-family research has been conducted in Industrial Organizational Psychology and Organizational Behavior literature. As a result, use of a family sciences lens, which might provide a unique perspective to understanding women's work-family experiences, is underdeveloped.

Particularly lacking in work–family literature is the use of family science lens with bioecological theory, which may provide a contextualized understanding of work–family experiences of working individuals (White & Klein, 2008). Finally, in Organizational Psychology and Organizational Behavior literature, the social justice perspective is conceptualized and used in terms of distributive justice and procedural justice (Moorman, 1991; Thibaut & Walker, 1975). “Distributive justice” refers to employees’ perception of the fairness of outcomes they receive, such as pay (Adams, 1965; Folger & Martin, 1986). “Procedural justice” refers to how employees define fairness, not only in terms of the outcomes that employees receive but also in terms of the organizational procedures used to determine these outcomes (Leventhal et al., 1980; Moorman, 1991; Thibaut & Walker, 1975). Use of the social justice perspective has thus far occurred only at the workplace (micro) level, thereby limiting researchers’ ability to understand work–family experiences in a broader context (i.e., at the macro-level). It is necessary to use the social justice perspective at the macro-level to have a contextualized understanding of any social phenomenon, such as the work–family balance of working mothers. The social justice perspective plays an important role as a lens to evaluate whether the voices of marginalized individuals and families are recognized in work–family studies and to examine the diversities among working mothers which shape their work–family balance and work–family conflict experiences. The current study was conducted to fill these gaps, and consists of three different investigations clustered around a singular research topic and question. The general research question of the current study is: What are the work–family dynamics among working mothers in the United States? The overall goal of this

research was to evaluate work–family conflict studies and to examine work–family balance and work–family conflict experiences of working mothers over time. An additional applied goal was to provide important guidelines to researchers and policy makers for better understanding mothers’ work–family experiences and addressing their needs, especially those who might be particularly vulnerable. The first investigation involved a systematic content analysis of work–family conflict studies conducted between 1980 and 2016. A conceptual framework called “The Ecology of Justice,” which was grounded in the social justice perspective and bioecological theory, was developed to evaluate work–family conflict studies and to assess the extent to which the voice of marginalized individuals and families is recognized in work–family conflict studies. In the second investigation, three moderated-mediating models were tested to examine the effects of a nonstandard work schedule and relationship quality on work–family balance of working mothers of children between 4 and 9 years of age. This investigation also tested the mediating effects of positive work–to–family spillover and family–to–work spillover on the relationships between a nonstandard work schedule and work–family balance, and between relationship quality and work–family balance. Further, the second investigation tested the moderating effects of education level, family-friendly workplace policies, and race on these associations, while controlling for age, race, and marital status. The third study examined within- and between-person differences in the work–to–family and family–to–work conflicts of working mothers. The temporal structures of work–to–family conflict and family–to–work conflict were also analyzed in this investigation. The researcher also examined the effects of a nonstandard work schedule and relationship

quality on work-to-family conflict and family-to-work conflict of working mothers, and whether the relationships between these variables were moderated by an intensive work environment and race.

Chapter 2

A Content Analysis of Work and Family Scholarship in the United States, 1980-2016

Abstract

The current content analysis examines work–family conflict research published between 1980 and 2016. A conceptual framework called “The Ecology of Justice” was developed and used to guide content coding (study characteristics and the nature of hypotheses/research question trends). Sixty-seven empirical articles containing 245 hypotheses/research questions were included in the sample. Results indicate that work–family conflict literature was dominated by quantitative methods (95.5%), and theory was either implicitly or explicitly used in most of the studies. Cross-sectional research designs were used most frequently, and samples used in these 67 studies often excluded under-represented populations. Hierarchical multiple regression techniques were used more often than other statistical techniques. Moreover, the microsystem and mesosystem were examined more than other ecological systems, and race, sexual orientation, and disability were the least studied dimensions of diversity. Taken together, these findings suggest that future work needs to examine macro-level influences as well as use more inclusive samples.

Keywords: Bioecological theory; content analysis; methodology; social justice; work–family conflict literature

Chapter 2

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A changing workplace environment, recent economic challenges, and growing diversities in the population have led to multiple difficulties for employees that both directly and indirectly shape their work–to–family conflict and family–to–work conflict experiences, (Bianchi & Milkie, 2010). “Work–to–family conflict” refers to an inter-role conflict that occurs when time devoted to or strain created by the job interferes with the individual’s ability to perform family roles or responsibilities (Netemeyer, Boles, & McMurrin, 1996; Voydanoff, 2005a). Conversely, family–to–work conflict occurs when the time devoted to or strain created by the family interferes with performing job roles or responsibilities (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Mesmer-Magnus & Viswesvaran, 2005). In fact, 60% of working fathers and 47% of working mothers reported work–family conflicts (work–to–family and family–to–work) in 2008, up from 35% and 41%, respectively, in 1977 (The Council of Economic Advisers, 2014). Consequently, 83% of working Americans reported at least one type of work stress (Work Stress Survey, 2013), and 57% of full-time working parents struggle to maintain a healthy work–family balance (Pew Research Center, 2015). These experiences are quite different from those encountered by working parents in the past due to increased work–family demands (Hoffman, 1987) and the mental and/or physical effort necessary to fulfill roles and responsibilities in contemporary work and family domains (Voydanoff, 2004).

Recent decades have witnessed a change in the working lives and conditions of United States (U.S.) employees such that, on average, they now work more hours for less pay (when adjusted for inflation), experience longer commutes, face greater work demands, and are more likely to work at home and while on vacation (Bianchi & Milkie, 2010; Hoffman, 1987; Perry-Jenkins, Repetti, & Crouter, 2000). Such experiences have resulted in increased work–family conflicts, thereby demonstrating the importance of studying work–family conflict experiences of the working population in the U.S. (Bianchi & Milkie, 2010; Perry-Jenkins et al., 2000). Moreover, the 2008 recession in the U.S. impacted most families, particularly through job loss, the replacement of many full-time jobs with part-time jobs, and reduced household income (Borbely, 2008). Research has shown that nearly 40% of households faced financial crisis during the recession (National Bureau of Economic Research, 2016). The unemployment rate, which was 5% in 2007, rose to 9.5% in June 2009, and to 10% in the months following the recession (United States Bureau of Labor Statistics, 2012). This was the first time since 1982 that the unemployment rate reached 10.8% (United States Bureau of Labor Statistics, 2012).

Since the recession, wealthier groups made a quick recovery, while the middle and working classes continue to struggle. For those living in poverty, the struggle is dire (Smeeding, 2012). Similarly, given uneven post-recession impacts and increasing inequalities between groups of the working population — including an increasing wage gap between the upper and working classes, and more people working either part-time jobs or losing their jobs entirely (Smeeding, 2012) — it is imperative to examine the extent to which marginalized individuals and families are included in studies on work–

family conflict. Given the need to understand the unevenness in work–family conflict experience and its impact, as well as the need to capture those who are marginalized, the use of a social justice perspective (Buettner-Schmidt & Lobo, 2012; Crethar, Torres-Rivera, & Nash, 2008; Drevdahl, 2002; Pangman & Seguire 2000; Redman & Clark, 2002; Vera & Speight, 2003), is particularly warranted. Such accounts may help to better inform programs and policies and enhance their inclusivity.

There are some gaps in work–family conflict literature that the current study intends to fill. First, prior overviews of work–family content relied on subjective literature review approaches, thereby lacking a more objective, systematic, and theory-driven analysis of work–family conflict literature (Bianchi & Milkie, 2010; Hoffman, 1987; Perry-Jenkins et al., 2000). Second, of existing literature reviews, none covered work–family conflict studies from their initiation until present (1980-2016). Third, most of the reviews were conducted in the Industrial Organizational Psychology and Organizational Behavior literatures (Morgeson, 2014) and lack a theoretically grounded family focus that captures the changing and uneven experiences of work–family conflict experience and its interrelations with the larger environment.

More importantly, it is imperative to consider the reciprocal relationship between theory and research to build scientific knowledge and advance the field of family science (Hill & Hansen, 1960; Reynolds, 1971; Lavee & Dollahite, 1991). This reciprocal relationship works through a feedback loop in terms of input from theory to empirical research (Denzin, 1970; Merton, 1957; Williams, 1960) and output from empirical research to existing scientific theories (Burr, 1973). Researchers have found that this

reciprocal interaction between scientific theory and research is essential to advance knowledge and find new ways to explain any phenomenon (Burr, Mead, & Rollins, 1973). Researchers also explain that if the feedback loop, which is created through this reciprocal interaction, is neglected, it may impair the important function of a scientific theory to organize, revise, explain, and extend the construction of scientific knowledge (Schumm, 1982). This can limit advancement in the field (Olson, 1976; Sprenkle, 1976).

To fill the aforementioned gaps, I focused my content analysis on work–family conflict studies using U.S. population samples that were published 1980-2016. An integrated conceptual framework, called “The Ecology of Justice,” was developed and used to guide coding and analysis. This framework was grounded in social justice perspective (Prilleltensky, 2001) and bioecological theory (Bronfenbrenner & Morris, 1998), and was developed to ensure that the resulting analysis would consider fairness, equity, and inclusion in the identification of empirical trends and directions for the future of the field. More specifically, to achieve these goals, I described characteristics of the empirical literature and identified trends in hypotheses/research questions used across studies. Finally, the current study examined the characteristics of empirical articles and evaluated the extent to which researchers articulated and applied the reciprocal interactions between theory and empirical research.

Historical Context of Work–family Research and Study Characteristics

Research on work and family began during the 1960s when an organized second wave of the women's movement focused on achieving fairness of opportunities and equity in resource distribution for women (Friedan & O'Farrell, 1997). Work–family conflict research was begun by feminist scholars, who observed how issues of fairness and equity were shaping women's experiences in work and family domains (Coontz, 1992). Feminist scholars highlighted how unfair social structures forced women to internalize external norms and prioritize being a mother and housewife above everything else in their lives, which further increased women's vulnerabilities and expanded disparities between men and women. This further allowed men enhanced access to resources and participation in social and political spheres (Coontz, 1992).

During the 1980s, the issue of work and family received more attention as scholars from different disciplines began studying it through various theoretical perspectives and methodological approaches (Hoffman, 1987). These early studies were more descriptive than analytical, and used simple approaches to study women's employment (Harrison & Minor, 1984). During that time, researchers focused solely on the negative aspects of women's employment (Ferree, 1976). Most of the research discussed women's employment status and its determinants rather than its consequences (McAdoo, 1981). Moreover, research concentrated mostly on White middle-class families, failing to consider the diversity of the U.S. population (Ybarra, 1982). The research studies tended to target married couples (i.e., husband–wife families) and ignored addressing other households, such as single-parent families (Hoffman, 1987).

This indicates that early work-family conflict scholarship failed to capture the voice of marginalized individuals and families. Accordingly, work-related programs and policies developed in this era likely were not inclusive or able to support minorities in the workforce.

The 1990s saw substantial growth in the American economy and, subsequently, an increase in workers' financial stability. However, these impacts were uneven for different groups of the population, based on their social location (i.e., race, class, and gender) and due to unfair and unequal social structures (White & Rogers, 2000). These changes in the U.S. economic context convinced researchers to further explore work-family conflict experiences of the working population (Mishel, Bernstein, & Schmitt, 1999). Maternal employment remained the central topic in work-family conflict research, but research on work stress and division of labor also occurred during this period (Perry-Jenkins et al., 2000). In addition, issues related to the specific definitions of "work" and "family" were highlighted because past researchers focused only on the nuclear family and 9-5 paid jobs (Ishii-Kuntz, 1994). Due to changing dynamics in the workplace (i.e., schedule flexibility and nonstandard work schedules) and growing diversities in family structures (i.e. single parent and gay and lesbian families), the need to define these broader terms and develop appropriate measures of work and family received greater emphasis (Ferree, 1990). Calls were made to select diverse samples to promote the inclusion of marginalized individuals and families of the working population, while more sophisticated research designs, such as the daily diary and longitudinal designs, were utilized (Ishii-Kuntz, 1994). However, work-family conflict research still focused largely

on White middle class nuclear families, to the exclusion of others (e.g., single working mothers, gay- and lesbian-headed families; Perry-Jenkins et al., 2000).

During the 2000s, scientific theories, sophisticated statistical techniques (e.g., structural equation modeling and multilevel modeling), and advanced research designs (e.g., longitudinal and daily diary) — which were used to examine the temporal structure of the work–family conflict experience (Blair-Loy, 2003) — were used to a greater degree in work–family conflict research. There was also an increase in the use of randomized-controlled and quasi-experiment designs, as well as a growing trend in the use of qualitative studies (Townsend, 2002). Maternal employment, division of labor, and work stress were the focused research areas during this period. Finally, the study of work–family conflict following retirement, and the change in caring patterns over the course of adulthood received greater attention (Bianchi & Milkie, 2010). Despite these developments, the inclusion of marginalized individuals or families was still not adequately addressed, further illustrating a lack of consideration of the issue of fairness and equity in work–family conflict studies (Bianchi & Milkie, 2010).

Conceptual Framework

“The Ecology of Justice,” grounded in a social justice perspective (Prilleltensky, 2001) and bioecological theory (Bronfenbrenner & Ceci, 1994), was developed to guide the current study. In the study, four constructs (i.e., context, individuals’ characteristics, fairness, and equity) of “The Ecology of Justice” framework were used. Bioecological theory has been a conceptual mainstay in examining many domains of the work–family conflict literature, particularly in family science (Perry-Jenkins, Newkirk, & Ghunney,

2013), making it ideal for assessing where theoretical knowledge exists and where we need to ask new theoretical questions if we are to continue developing the field.

However, it fails to account for how the individual-context reciprocal relationship is influenced by the way fairness and equity are developed, maintained, and perpetuated in society. Each of these are important considerations (Few-Demo, 2014; Perry-Jenkins et al., 2013).

The social justice perspective conceptualizes individuals' experiences in relation to fairness and equity (Redman & Clark, 2002): how unfair and unequal socially constructed norms and structures provide privileges to some individuals or groups over others, which can be seen in different layers of society, such as family, work, community, and at the macro-level (Drevdahl, 2002). This makes it ideal to extend the ability of bioecological theory (Bronfenbrenner, 1994; Bronfenbrenner & Evans, 2000) to account for such factors.

Bronfenbrenner developed the Process–Person–Context–Time (PPCT) model of human development (Bronfenbrenner & Morris, 1998). The purpose of this model is to examine how the development of individuals is affected by reciprocal relationships with persons, objects, and symbols in both immediate and remote ecological contexts (e.g., microsystem, mesosystem, exosystem, macrosystem, and chronosystem); and how these relationships may change depending upon the social and historical contexts in which they take place (Bronfenbrenner & Ceci, 1994). According to bioecological theory, a microsystem is the immediate context in which individuals have direct and reciprocal interactions with persons, objects, and symbols, such as work and family

(Bronfenbrenner, 1994). The microsystem is more proximal to individuals than other ecological contexts, thereby having more influence on development (Bronfenbrenner, 1995a). Proximal processes, which are central to individuals' development, more frequently occur in the microsystem in which individuals spend most of their time (Bronfenbrenner, 1999). For mothers, this may be interactions with their husbands in the family and with supervisors in the workplace (Bronfenbrenner, 2005b).

A mesosystem connects two microsystems, such as work and family. (Bronfenbrenner, 1995b). Conflict can potentially arise in a mesosystem. For instance, single working mothers may lack support from supervisors and coworkers in the workplace microsystem (Michel & Clark, 2013) and support from family members in the home microsystem (Crowley, 2013). When these two microsystems connect in a mesosystem, work–family conflict for single working mothers can arise (Bronfenbrenner, 1999).

The exosystem is another ecological system that does not directly affect individuals, but rather affects them indirectly (Bronfenbrenner, 1989). For instance, the workplace of a working mother is an exosystem for her child. Although, her child does not interact directly with the workplace, the mothers' workplace experiences affect her child's well-being (Bronfenbrenner & Crouter, 1982). A macrosystem encompasses societal beliefs, values, culture, and macro-level policies (Bronfenbrenner, 1989), and envelops other ecological systems (i.e., microsystems, mesosystems, and exosystems; Bronfenbrenner, 1994). The macrosystem is distal from individuals but its influences dictate how people behave and interact in other ecological systems/contexts

(Bronfenbrenner, 2005b). Finally, the chronosystem is the social and historical time and the lifespan of individuals (Bronfenbrenner, 1999). For the current study, two constructs of bioecological theory, such as context and individuals' characteristics, were used, while only the demand characteristics were conceptualized and operationalized.

According to bioecological theory, proximal processes are central to individuals' development and occur through reciprocal interactions of an individual with persons, objects, and symbols in his/her immediate environment (Bronfenbrenner, 1995a). In addition, proximal processes are a function of context and of individuals' characteristics (Bronfenbrenner, 1994). These characteristics refer to demand characteristics (e.g., age, gender, and race), resource characteristics (e.g., intelligence, level of education needed to succeed in society, past experiences, access to housing, food, and caring parents), and force characteristics (e.g., motivations, consistency, and persistency in perusing and achieving a goal). For instance, working mothers face more challenges throughout their careers than men because of their gender (Dyrbye et al., 2013), which is a demand characteristic (Bronfenbrenner, 1995b). The higher education needed to obtain a higher-level job is considered a resource characteristic for working mothers (Bronfenbrenner, 1999), while some individuals are more successful in achieving their goals than others due to their persistent efforts and consistent thinking, both of which are force characteristics (Bronfenbrenner, 2005a).

Equally important for the functioning of proximal processes is the element of time (Bronfenbrenner, 2005b). "Time" refers to the current stage of an individual's lifespan as well as their social and historical contexts, all of which shape individuals' interactions

with and their experiences within different ecological contexts (Bronfenbrenner, 1999). For instance, two working mothers of different ages may experience work–family conflict differently (Bronfenbrenner & Evans, 2000). Therefore, it is imperative to include a time element to examine individuals’ work–family conflict experiences. For the current study, two constructs of bioecological theory, such as context and individuals’ characteristics, were used. Hypotheses/research questions were assessed through these constructs (i.e., context and individuals’ characteristics) and I examined whether work–family researchers studied these two constructs in their hypotheses/research questions, since proximal processes are central to individuals’ development and are dependent on context and individuals’ characteristics (Bronfenbrenner & Morris, 2006).

According to Buettner-Schmidt and Lobo (2012), social justice ensures full participation of all citizens in a society and balances the burdens and benefits of all of them, which results in an equitable and fair ordering of society. There are five main components attributed to social justice: 1) fairness of opportunities; 2) equity in resource distribution, power, and process; 3) just societal structures, systems, institutions, and policies; 4) equity in human rights, development, and sustainability; and 5) sufficiency of well-being. For the current study, I operationalized the constructs of fairness and equity to assess the study characteristics of the articles to examine the extent to which the voice of marginalized individuals or families is recognized in work–family conflict studies.

There were two reasons to select these two constructs: 1) the construct of equity overlapped with another equity construct included in the definition; 2) the remaining two constructs, justice and well-being, were too broad and difficult to operationalize given the

context of the current study. It is worth mentioning that I still had no measures to specifically operationalize fairness and equity; this will be the focus of future research to refine, test, and develop “The Ecology of Justice.”

A social justice perspective asserts that any contextualized understanding of experiences must encompass how fairness and/or equity are established, maintained, or perpetuated by individuals’ behavior and interactions between both groups of individuals and larger ecological systems (Buettner-Schmidt & Lobo, 2012). Given the growing diversity in the working population (Bianchi & Milkie, 2010; Hoffman, 1987; Perry-Jenkins et al., 2000) and social discourse about increasing socioeconomic disparities (Few-Demo, 2014; Perry-Jenkins et al., 2013), using a social justice perspective uniquely adds to our ability to assess work–family conflict studies. If work–family conflict studies are not evaluated in relation to fairness and equity, then researchers may not be able to appropriately examine the voice of marginalized individuals and families, resulting in misleading research evidence (Bronfenbrenner, Kessel, Kessen, & White, 1986). This may further increase the disparities among diverse groups of the working population and negatively affect the well-being of marginalized individuals and families (Bronfenbrenner & Evans, 2000).

It is important to understand how two different microsystems (e.g., work and family) function together in a mesosystem to shape working mothers’ work–family conflict experiences, but it also is imperative to examine how fairness and equity change the interaction of two microsystems that connect in a mesosystem. In addition, it is important to know how neighborhood arrangements affect children’s social and academic

outcomes and how the role of social support at the exosystem level helps working mothers adequately supervise their children (Blocklin, Crouter, & McHale, 2012). It is also important to examine why and how the exosystem works differently for different groups of the population and whether support at the exosystem level is fair and equal for all groups because the degree of fairness and equity of support received may affect the influence of the exosystem on individuals and families.

As previously discussed, the effect of the macrosystem is revealed through individuals' interactions with persons, objects, and symbols in their immediate ecological system (i.e., microsystem; Bronfenbrenner, 1994). Fairness of opportunity and equity in resource distribution, power, and process may affect the influence of the macrosystem on other ecological systems and on individuals' interactions within each ecological system. Ecological systems may function in accordance with how fairness and equity are established, maintained, and perpetuated in society. For instance, in the context of work and family, researchers showed that the Family and Medical Leave Act (FMLA) does not adequately work for underprivileged single working mothers who work part-time and belong to a low socioeconomic status (O'Leary, 2007). Single working mothers cannot effectively perform within work and family microsystems if they are not accommodated according to the principles of fairness and equity at the macrosystem level, by having their issues addressed in public policy (Shepherd-Banigan & Bell, 2014).

Finally, at the chronosystem level, it is important to study how individuals' work–family conflict experiences are established, maintained, and changed over time based on social and historical contexts (Bronfenbrenner & Crouter, 1982). It is also important to

know how fairness and equity are established, maintained, and perpetuated at a single point of time as opposed to others, because differences in levels of fairness and equity may create distinctive individuals' experiences at different points of time.

The construct of fairness is important to use in the context of the current study to determine whether researchers who conducted work–family conflict studies provided fair opportunities to diverse individuals within the sample in terms of their social location (factors such as age, education, gender, income, marital status, working status, and work schedule) to ensure their participation in work–family conflict studies (Few-Demo, 2014). It is essential to know how inclusive work–family conflict studies were regarding respondents who were diverse based on social location. Social location may play an important role in work–family conflict (Few-Demo, 2014) by directly influencing individuals' experiences. Further, the effects of social location on work–family conflict experiences may vary depending on the conditions of societal structures (i.e., fair versus unfair; Few-Demo, Lloyd, & Allen, 2014; Ferree, 2010), and on broader ecological contexts (Bronfenbrenner & Crouter, 1982).

The construct of equity is important to use in the context of the current study for several reasons. First, it is important to know whether the research techniques used in work–family conflict studies were primarily fact-based (quantitative), or if researchers used qualitative and mixed method techniques to help them understand the experiences of marginalized individuals and families in their contextualized form (Herr, 1999; Herr & Anderson, 2015). Second, it is important to know if researchers used any scientific theory in work–family conflict studies since empirical research has a reciprocal relationship with

theory (Denzin, 1970; Merton, 1957; Williams, 1960). Third, because work–family conflict experiences are not static but rather follow a temporal structure, it is essential to know which research designs were used; examining the research designs may provide researchers with an understanding of the extent to which work–family conflict experiences were adequately studied. Fourth, it is imperative to know whether the sample type, sampling technique, and the nature of samples helped researchers to include marginalized individuals and families (Few-Demo, 2014). Fifth, to determine whether researchers were able to appropriately test their hypotheses, it is important to know whether the statistical techniques were consistent with and appropriate for the theory and research design of each study.

The current conceptual framework, “The Ecology of Justice,” suggests that the individual-context relationships should be studied by asking more explicit research questions and testing hypotheses. The reciprocal interaction between scientific theory and empirical research should be considered, applied, and maintained in work–family conflict literature to build, organize, explain, and extend scientific knowledge to better understand work–family conflict experiences of marginalized individuals and families. Work–family conflict research should be more inclusive in terms of diverse and marginalized individuals or families. This may help researchers to move the field of work and family forward in future. To this end, the current study has the following two research questions, which are grounded in the “Ecology of Justice.”

Research question 1: To what extent is the voice of marginalized individuals and families recognized in work–family conflict studies?

Research question 2: To what extent are the hypotheses/research questions included in work–family conflict studies aligned with the theory?

Method

Design

The current study conducted a systematic content analysis to examine study characteristics and the theoretical nature of hypotheses/research questions in work–family conflict studies published in scholarly peer-reviewed journals between 1980 and 2016 (Seedall, Holtrop, & Parra-Cardona, 2014). A content analysis design provides methods for a systematic process that can be used to identify and examine the occurrence of patterns and themes using a pre-specified coding scheme (Bailey, Pryce, & Walsh, 2002). The coding scheme is informed by the Ecology of Justice framework.

Sample

The current sample was limited to empirical studies (quantitative, qualitative, and mixed methods) that focused only on the U.S. population (i.e., those empirical studies that collected primary data or used secondary data of the U.S. population), specifically examined work–family conflict, and were published between 1980 and 2016. One hundred and six articles were initially found after performing the search, and 67 met the study criteria. Thirty-nine articles were excluded for the following reasons: 1) they were book reviews; 2) the studies were based on cross-cultural research; 3) they were traditional literature reviews; 4) they did not explicitly examine work–family conflict; and 5) the articles were theoretical papers. Across included articles, 245 hypotheses/research questions were identified for deeper analysis.

Procedure

For this content analysis, three databases (PsyInfo, Sociological Abstract, and Web of Science) were used to search for articles. The search terms entered were: work–to–family conflict, family–to–work conflict, work–to–family interference, family–to–work interference, and negative spillover. The researcher reviewed the abstracts of all search results to confirm they met the inclusion criteria. The purpose of the inclusion criteria and selected search terms was to ensure that the articles shared enough similar characteristics to justify identification of content themes and patterns (Fjorback, Arendt, Ornbol, Fink, & Walach, 2011; Foroughipour et al., 2013). This systematic approach allowed the researchers to achieve precise and meaningful results while minimizing error (Nikkhah, Jouybari, Mirzaei, Ghandehari, & Ghandehari, 2016). An Excel file was developed and the selected articles were coded for each variable. Descriptives were run in SPSS. Study characteristics were coded at the article level and hypotheses/research questions were coded within the article level such that any one article could contain multiple hypotheses/research questions. The PI coded all articles’ characteristics and hypotheses/research questions (Kayapinar, 2015). After completing the coding, the PI and one other researcher matched codes on a 5% random sample. Codes that were found to be inconsistent were discussed until consensus was reached (Llewellyn, Whittington, Stewart, Higgins, & Meader, 2015).

Coding Scheme

Four constructs from “The Ecology of Justice” conceptual framework — context, individuals’ characteristics, fairness, and equity — were used to guide coding. The

construct of context was operationalized through microsystem, mesosystem, exosystem, macrosystem, and chronosystem (Bronfenbrenner & Evans, 2000). “Individuals’ characteristics” refers to individuals’ demand characteristics, resource characteristics, and force characteristics (Bronfenbrenner, 1994). Only demand characteristics were used and operationalized for the current study. The following codes were developed to operationalize individuals’ characteristics: individual disposition (e.g., depression and neuroticism), race, ethnicity, socioeconomic status, gender, marital status, disability, and sexual orientation. Each characteristic was treated as a single variable. If the selected article examined any of these characteristics, 1 was coded for “yes.” Otherwise, 0 was coded for “no” under that particular variable. To be clear, fairness coded some of these same characteristics. However, those were specific to sample demographics, whereas when coded here they were specific variables used in the hypotheses and research questions.

The following codes were used to operationalize equity: research type (quantitative, qualitative, and mixed method), theory explicitly used (theory is explicitly used in conceptualizing the hypotheses/research questions and explaining the meaning of the results; Doherty, Boss, LaRossa, Schumm, & Steinmetz, 1993; Dollahite, Morris, & Hawkins, 1997), theory implicitly used (theory is not explicitly used), atheoretical (no theory used), research design (cross-sectional, longitudinal, daily diary, randomized-controlled/quasi-experiment, and ethnography), sample type (national level and non-national level sample), sampling technique (random and non-random), and the nature of the sample (African American, mixed, mostly White and fewer non-White, White, and

not applicable/not reported). The following guidelines were used to differentiate mixed from predominately one category: those studied which were assigned a mixed category for sampling contained fairly equal proportions of all groups of the population, such as African Americans, Asians, Hispanics, Native Americans, and Whites. The next codes for statistical techniques developed were thematic analysis, t-test/ANOVA, hierarchical multiple regression, multilevel modeling, and structural equation modeling.

The following codes were developed for variables used to operationalize fairness: age (20-40, 41-60, and 61 and above), and education (high school or lower, more than high school, and mixed). The average values of age and education, which were discussed under the demographic characteristics of the sample or descriptive statistics in the articles, were used. These variables were recoded into categorical variables. The next codes developed were: gender (male, female, and mixed), and income in thousands (\$25-50, 51-75, 76 and above, and not reported). The same procedure used for recoding age, and education variables was used to recode the income variable.

Codes were also developed for: marital status (single, married, mixed, and not reported), working status (full-time, part-time, and mixed), and work schedule (standard work schedule, nonstandard work schedule, and mixed). Every selected article was assessed based on these characteristics. For instance, the following hypothesis is coded for microsystem and mesosystem: "Schedule flexibility will be negatively related to work-to-family conflict" (Carlson, Grzywacz, & Kacmar, 2010, p. 335), because schedule flexibility is related to the workplace microsystem and work-to-family conflict occurs in a mesosystem that connects two microsystems (work and family).

As another example, the following hypothesis is coded for gender, microsystem, and mesosystem: “Gender moderates the association between job adequacy and work-to-family conflict” (Bass & Grzywacz, 2011, p.325). In this hypothesis, the variables of gender, job adequacy, and work-to-family conflict are examined. The variable of gender is coded under the category of individuals’ characteristics, job adequacy is related to the workplace microsystem, and the work-to-family conflict occurs in the mesosystem.

Similarly, the following hypothesis is coded for individuals’ characteristics and mesosystem: “Passive coping will be positively related to work-family conflict” (Andreassi, 2011, p. 1478), because passive coping is an individuals’ characteristic and work-family conflict occurs in a mesosystem. The following hypothesis is coded for individuals’ characteristics and mesosystem: “Neuroticism will be positively related to work-family conflict” (Andreassi, 2011, p. 1481), because neuroticism is an individuals’ characteristic and work-family conflict occurs in a mesosystem.

Additionally, the following hypothesis/research question is coded for macrosystem and mesosystem: “Do these employee benefits reduce work-family conflict?” (Banerjee & Perrucci, 2012, p. 134), because employee benefits are related to the workplace policy that is required by the federal law and is therefore considered part of the macrosystem and work-family conflict occurs in a mesosystem.

Results

Nature of Hypotheses/Research Questions

Table 1 represents the theoretical nature of the 245 hypotheses/research questions tested in the 67 published work-family conflict studies. According to the results, 67.3%

of the hypotheses/research questions examined the microsystem, and 81.2% of the hypotheses examined the mesosystem. Although more hypotheses/research questions examined the microsystem, which is more proximal to individuals and central to the functioning of proximal processes (Bronfenbrenner, 1994), the mesosystem is a stronger way to study work–family conflict because it captures the interactive dynamics occurring between work and family. Moreover, approximately 2% of the hypotheses/research questions examined the exosystem and macrosystem. The chronosystem was used in 2.9% of the hypotheses/research questions. The exosystem, macrosystem, and chronosystem were the least examined in work–family conflict studies compared to the microsystem and mesosystem.

Next, results suggested that 34.7% of the hypotheses/research questions examined individual dispositional characteristics (e.g., depression, neurotic, emotional problems, passive coping). Race and ethnicity were used in 1.2% of the hypotheses. Socioeconomic status (class) was used in 0.4% of the hypotheses/research questions and gender was used in 16.3% of the hypotheses. 4.1% of the hypotheses/research questions examined marital status. Only 0.4% of the hypotheses/research questions used the variable of disability and no hypothesis/research question examined the variable of sexual orientation.

Study Characteristics

Table 2 shows the study characteristics of the articles by equity. According to the results, 95.5% of work–family conflict studies were quantitative, 1.5% of the studies were qualitative, and 3% used a mixed method approach. Slightly over 49% of studies

explicitly used theory and 7.5% of the studies implicitly used theory, whereas 43.2% of the studies did not use theory.

Results also demonstrated that the most frequently used research designs in work–family conflict studies were cross-sectional (80.6%) or longitudinal (10.4%). A similar number of studies (4.5%) used daily diary and experimental designs. Almost 51% of the studies used a national level sample and 63% of the studies used a random sampling technique.

The nature of samples used in these studies were less diverse in that 7.5% of the studies selected an African American sample and 13.4% of the studies consisted of a mixed sample (i.e., African American, Asian, Hispanic, Native American, and White). Similarly, 20.9% of the studies consisted of mostly White and fewer Non-White populations. In addition, 49.2% of the studies sampled all White participants, whereas 9% of the studies selected employers/organizations as their sample.

Only 1.5% of the studies used thematic analysis, 9% of the studies used t-test/ANOVA as an analytical technique, and 7.5% of the studies used logistic regression modeling. Hierarchical multiple regression analysis was used in 58.2% of the studies, 9% of the studies used multilevel modeling, and 14.9% of the studies used structural equation modeling as an analytical technique.

Table 3 illustrates the study characteristics by fairness. Nearly 56.7% of the studies included participants whose average age was between 20 and 40 years old, 43.3% of the studies had participants whose average age was between 41 and 60 years old, and no studies included participants with an average age below 20 or at or above 61.

Regarding education, 16.4% of the studies used participants whose average education level was high school or lower, 76.1% of the studies included participants whose average education level was more than high school, and 7.5% of the studies included participants who had mixed education levels (i.e., some had high school education and some had more than high school education).

Nearly 20.9% of the studies consisted of only females, 13.4% of the studies consisted of only males, and 65.7% of the studies consisted of both females and males. In terms of income, 20.9% of the studies included participants who had an average annual income between \$25,000 and \$50,000, 23.9% of the studies had participants whose average annual income was between \$51,000 and \$75,000, 10.4% of the studies included participants who had an average annual income of \$76,000 and above, and 44.8% of the studies did not report the average income of the respondents.

A sample consisting of single mothers/fathers accounted for 0.5% of the studies used, 64.2% of the studies used a sample of married mothers, 19.4% of the studies consisted of mixed individuals, and 14.9% of the studies did not report the marital status of the respondents. Full-time working respondents made up 86.6% of the studies, 13.4% of the studies included respondents who had either full-time or part-time jobs, and no studies specifically sampled part-time respondents.

Finally, 85.1% of the studies included respondents who were working on a standard work schedule, 6% of the studies focused on respondents who had a nonstandard work schedule, and 9% of the studies included respondents who had either standard or nonstandard work schedules. Altogether, the state of work–family conflict research over

the past 36 years appears to be considerably less diverse, yet methodologically strong and theoretically grounded.

Discussion

The main focus of the current study was to determine the extent to which the voices of marginalized individuals and families are recognized in work–family conflict studies and to examine whether researchers included context and individuals’ characteristics in hypotheses/research questions included in their work–family conflict studies. The results indicated that the microsystem was examined more frequently in work–family conflict studies. According to bioecological theory, proximal processes, which are central to individuals’ development, occur in the microsystem through a reciprocal interaction of individuals with persons, objects, and symbols (Bronfenbrenner, 1995a). Therefore, the microsystem plays an important role in shaping work–family conflict experiences of working individuals, and researchers should continue testing the microsystem in future hypotheses/research questions. For instance, relationship quality between working mothers and their husbands/partners provides mothers with reciprocal interactions that continue on a regular basis and for an extended period, thereby promoting better functioning of proximal processes, which may help working mothers improve their work–family balance (Curran, McDaniel, Pollitt, & Totenhagen, 2015; McMillan, O’Driscoll, & Brady, 2004). Similarly, a quality relationship of working mothers with their supervisors in the workplace provides working mothers with reciprocal interactions that continue on a regular basis and for an extended period, which may become complex over time and stimulate the functioning of proximal processes,

thereby helping working mothers to improve their work–family balance. In short, a supervisor’s support helps working mothers to effectively manage their family responsibilities (Dawn, Ferguson, Kacmar, Grzywacz, & Whitten, 2011; Kelly et al., 2014; Swanberg, McKechnie, Ojha, & James, 2011).

The mesosystem was used in the majority of work–family conflict hypotheses/research questions, which is unremarkable because, according to bioecological theory, work–family conflict occurs in a mesosystem (Bronfenbrenner, 1995b). Therefore, the mesosystem is central to work–family conflict studies. The mesosystem is more interactive than other ecological systems and a component of work–family conflict definition. For instance, working mothers are more likely to have two microsystems (work and family) in which they have reciprocal interactions with persons, objects, and symbols that shape their work–family conflict experiences.

According to “The Ecology of Justice,” because proximal processes are central to individuals’ development and occur through a reciprocal interaction, the two proximal processes that occur at work and in the family, are more important than microsystems or contexts, both of which are more static than proximal processes. Hence the interactions of proximal processes (i.e., mesoprocesses) from work and family may play an important role in shaping individuals’ work–family conflict experiences. The dominant effect of proximal processes from either work or family may be dependent on the extent of fairness and equity involved in the reciprocal interactions, characteristics of both individuals involved in the interaction, the time since proximal processes occurred, and

available resources for individuals. It is worth mentioning that these are the assumptions or propositions of “The Ecology of Justice,” and need empirical testing in future research.

Other ecological systems, such as the exosystem, macrosystem, and chronosystem were used least in work–family conflict hypotheses/research questions. According to bioecological theory, these ecological systems are interrelated to each other and have reciprocal relationships with individuals (Bronfenbrenner, 2005a). They can affect individuals through either individual or integrated effects (Bronfenbrenner, 1994). For instance, researchers found that community support may be an important resource for working mothers needing supervision for their children, as it resulted in decreased antisocial behavior, such as substance abuse, and better academic performance (Blocklin, Crouter, & McHale, 2012). Researchers also found that neighborhood played an important role in the development of children (Fauth, Roth, & Brooks-Gun, 2007; Urban, Lewin-Bizan, & Lerner, 2009).

While it is difficult to operationalize the macrosystem, researchers can account for it by discussing their findings in relation to the macrosystem or macrocontext of society. For instance, if work–family conflict experiences of working mothers are different than those of men in work–family conflict studies, then it is important to discuss wage gaps, discrimination in the selection processes, structural hierarchies in the workplaces, and employment opportunities and benefits available for men and women regarding fairness and equity at the macrosystem level. Additionally, according to bioecological theory, the macrosystem can be operationalized by using any shared characteristics of a group of the population, such as social and economic classes (Bronfenbrenner & Ceci, 1994). For

example, individuals or families in the middle class and working class have distinctive values between them but share the same values, beliefs, and cultural practices within their group (Bronfenbrenner & Evans, 2000). Therefore, class (i.e., middle class versus working class) can be operationalized as a macrosystem to examine its effects on proximal processes and how it affects the influence of proximal processes on the outcome under consideration (Bronfenbrenner & Ceci, 1994). Finally, the chronosystem can be operationalized by studying individuals over time and examining their work–family conflict experiences in relation to the social and historical context. These ecological systems also are important to include in examining work–family conflict and thereby, need to be considered in future studies.

Nearly a third of the hypotheses/research questions used individuals' dispositional characteristics. The other demand characteristics, such as race, class, sexual orientation, and disability were used least in hypotheses/research questions (Li, Shaffer, & Bagger, 2015). Bioecological theory explains the importance of demand characteristics in that they can create hostile responses for individuals at different levels of ecological contexts (Bronfenbrenner, 1994; Bronfenbrenner, 1999). For instance, African American working mothers who belong to a low socioeconomic background face more work–family conflict challenges than White working mothers who belong to middle or working class families. According to bioecological theory, the environment may be friendly or hostile based on the demand characteristics. This illustrates that demand characteristics of working mothers may create a unique work–family conflict experience for working individuals, indicating that this group needs more attention in work–family conflict research.

Researchers should have more focus on the variables related to individual demand characteristics, such as race, class, gender, age, sexual orientation, and disability in their hypotheses/research questions to gain much deeper understanding of work–family conflict in future studies (Bronfenbrenner & Morris, 1998; Bronfenbrenner & Morris, 2006).

According to the social justice perspective, these demand characteristics are social locations of individuals and families, which play an important role in shaping their work–family conflict experience (Buettner-Schmidt, & Lobo, 2012; Perry-Jenkins et al., 2013). The social justice perspective also explains how these social locations result in social and economic disparities between individuals or groups of the population and provide privilege to one group over the other based on the conditions dictating how fairness and equity are established, maintained, and perpetuated in society (Buettner-Schmidt & Lobo, 2012). Researchers also emphasized the importance of testing these variables as predictors rather than controlling or isolating these variables from the analysis since they may interact with other variables and provide distinct views of individuals’ work–family conflict experiences (Perry-Jenkins et al., 2013).

Finally, it is important to mention that the variable of sexual orientation was not used in the hypotheses/research questions. Researchers from other fields found that employees face several challenges in the workplace due to their sexual orientation, many of which involved various forms of discrimination that we know can spillover into the home environment (Moore, 2012). This is an area in need of future study.

In terms of research technique, the results showed that the quantitative research technique was still dominant in work–family conflict studies (Delgado & Enilda, 2006). Work–family conflict is a dynamic and interactive phenomenon, which involves experiencing multiple contexts (e.g., work and family). Therefore, work–family researchers need to use more qualitative research techniques to study the work–family conflict experiences of working individuals and families, and the meaning of those experiences (Darawsheh, 2014).

Mixed methods research also may play an important role since quantitative and qualitative research techniques substantiate each other (Gallagher, Hall, Anderson, & Rosario, 2013). Having both objective experiences through tested scales and subjective experiences through a narrative may provide a complex view of work–family conflict and enable researchers to examine work–family conflicts in their contextualized and complex form (Gallagher et al., 2013).

Theory has a reciprocal relationship with empirical research (Denzin, 1970; Merton, 1957), in that scientific theory plays an important role in the creation of new knowledge, organizing multiple pieces of information, explaining complex phenomena in a systematic and logical order, and extending existing knowledge (Burr, 1973; Burr et al., 1976; Williams, 1960). Hence, use of theory is essential to advance work–family conflict literature and to better understand the work–family conflict experiences of marginalized individuals and families (Olson, 1976; Schumm, 1982; Sprenkle, 1976). Accordingly, it is encouraging that theory was either explicitly or implicitly used in most of the work–

family conflict studies as this suggests a strong level of theoretical validity in the literature.

Researchers assert the importance of studying working individuals over time to examine the temporal structure of their work-family conflict (Perry-Jenkins, Smith, Goldberg, & Logan, 2011). However, the results illustrated that cross-sectional research design has been dominant in work-family conflict studies since 1980 (Grzywacz, Tucker, Clinch, & Arcury, 2010). This is a limitation in the field in that work-family conflict experiences are dynamic and change over time and, therefore, may not be adequately examined only at one point of time. Researchers who used a daily diary research design and collected data at multiple times in a day found that mothers had significant variations in their work-family conflict experiences within a day (Lavee & Ben-Ari, 2007). The daily diary design can be useful to obtain information about day-to-day work-family conflict experiences of the working population (Lawson, Davis, McHale, Hammer, & Buxton, 2014). Therefore, both longitudinal and daily diary (i.e., intensive longitudinal) designs should be considered in future work-family conflict studies to best examine temporal structures of work-family conflict.

The need for randomized-controlled design also is apparent as this design is the gold standard research design to achieve causation since there are many confounding factors involved in studying work-family conflict studies (Foroughipour et al., 2013). Researchers used this design in previous studies and found results similar to observational studies commonly used in work-family conflict studies (Kelly et al., 2014). It is impractical to use randomized experiments in work-family conflict studies due to

lack of resources and time. However, a several randomized experiments on particular topics may be useful to help validate findings of observational studies.

Almost half of the studies used nationally representative samples (Schieman & Young, 2011) and a random sampling technique was used in some work–family conflict studies (Shreffler, Pirretti, & Drago, 2010), which is quite encouraging. Given the diversity in current workplaces, it is important to use more inclusive samples in work–family conflict studies, through which the experiences of diverse groups of the working population may be studied (Buettner-Schmidt & Lobo, 2012; Perry-Jenkins et al., 2013). However, work–family conflict studies still lack a true representation and focus on minorities given their proportion of the U.S. population. Samples should be more inclusive of diverse groups and minorities in future work–family conflict studies.

Researchers should also conduct studies explicitly on minorities (DeCampo, Rogers, & Hinrichs, 2011). The work–family conflict experiences of minorities can be unique from other groups of the working population due to different social locations, such as race, class, and immigration status, thereby creating a need for focused attention. Additionally, more complex techniques, such as stratified sampling and proportionate-to-size sampling, are needed to ensure the inclusion of under-represented and marginalized individuals or families of the working population in future work–family conflict studies (Few-Demo, 2014).

In addition, using the new standards of research validity and reliability in future work–family conflict studies (Carr, Dogan, Tirre, & Walton, 2007), may make the research process more transparent. These new standards of validity and reliability focus

on reporting the process of developing measures rather than the outcome, and emphasize culture and context (the focus of the current study for examining the extent of fairness and equity in work-family conflict studies) while developing measures (Carr et al., 2007.)

Researchers should also be more attentive to the context of the target population under consideration while developing measures or scales related to work-family conflict. For instance, a single measure/scale may not be used on diverse groups of the population without being attentive to the context and modifying measures to make them more culturally competent and informed. Consequently, the findings based on a measure that is developed and tested on one group of the working population may not be generalizable to other groups and can be misleading without attention to context.

It is quite encouraging that complex analytical techniques, such as hierarchical multiple regression, multilevel modeling, and structural equation modeling, were increasingly used in work-family conflict studies, as these techniques enhance researchers' abilities to control potential confounding factors when analyzing the unique effect of the independent variable on the dependent variable (Garr & Tuttle, 2012). These statistical techniques helped researchers test the processes (e.g., mediation or moderation) occurring between independent and dependent variables in a quantified way. Researchers can also test multiple process variables involved in the relationships of independent and dependent variables in an analysis (Byrne, 2010; Schumacker & Lomax, 2010).

These techniques, particularly multilevel modeling, help researchers account for within- and between-differences among individuals while examining the effects of

independent variables on dependent variables (Heck, Thomas, & Tabata, 2014). Such techniques help researchers bring the analysis from the individual level to multiple levels and analyze individuals nested in different ecological contexts (Heck et al., 2014). As discussed earlier, it is difficult to use randomized-controlled designs that may help researchers account for confounders and self-selection biases (Remler & Van Ryzin, 2011), but use of these statistical techniques helped researchers control some confounders and account for some design effects on the findings, thereby preventing them from creating biased estimates (Heck et al., 2014).

There was no study on the aging population, which will be important to consider in future studies given the growing numbers of older people in the U.S (Lee, 2014). Work–family conflict studies were focused on highly educated people (Minnotte, Minnotte, & Pedersen, 2013), and the less educated population was fairly under-represented (Son & Bauer, 2010). Researchers found that the less educated population also tends to consist of minorities and under-privileged populations who are more likely to work part-time and on nonstandard work schedules, and, as a result, face high levels of work–family conflict (Kalleberg, Reskin, & Hudson, 2000). Therefore, this group should be a focus in future work–family conflict research.

Work–family conflict studies covered both working men and working women, which is quite encouraging because both groups of the working population face high levels of work–family conflict (Minnotte et al., 2013). It is worth mentioning that nearly half of the studies did not report respondents' income, an important factor for providing context about respondents and helping researchers appropriately examine respondents'

work–family conflict (Chen, Powell, & Greenhaus, 2009). Therefore, future studies must consider reporting respondents' income levels.

In addition, only 1.5% of the studies explicitly included single working mothers or fathers. Given the growing numbers of single working parents in the U.S. population, it is imperative to conduct future studies explicitly on single working parents. Research showed how single working parents face work–family conflict due to lack of family and workplace support (Michel & Clark, 2013).

There was no study conducted to explicitly study part-time workers. Part-time workers are more likely belong to a lower socioeconomic status and work a nonstandard work schedule, and thereby face high levels of work–family conflict (Borbely, 2008). The nonstandard work schedule creates substantial challenges for working parents, particularly for working mothers (Kalleberg et al., 2000). Researchers found that African American single working mothers who work part-time and on a nonstandard work schedule already face challenges in the workplace and perform most of the household responsibilities (Odom, Vernon-Feagans, & Crouter, 2013). These workers also do not have the power to negotiate in the workplace due to lack of education and employment opportunities, and thereby face high levels of work–family conflict, which raises the issues of fairness and equity in the workplace (Edgell, Ammons, & Dahlin, 2012; Son & Bauer, 2010). Due to limited opportunities available for this group of the working population compared to other groups, and lack of equity in resource distribution, power, and process, this group is more susceptible to working part-time and having nonstandard work schedules. This was one of the purposes for developing and using “The Ecology of

Justice” to examine and highlight such social locations in work–family conflict studies, which may create distinctive work–family conflict experiences for the working population. Because they are more vulnerable and need more support in terms of work–family resources, this group of the working population deserves more attention (Gassman-Pines, 2011; Hendrix & Parcel, 2014). For these reasons, it is important to conduct studies explicitly of part-time workers. As work–family conflict studies were more focused on studying employees who had standard work schedules, future studies should also focus on employees who work a nonstandard work schedule.

Taken together, the ecological contexts of exosystem, macrosystem, and chronosystem were least used in the hypotheses/research questions of work–family conflict studies. Individual demand characteristics, such as race, class, sexual orientation, and disability also were the least used variables in the hypotheses/research questions. Work–family conflict research is less diverse but is theoretically and methodologically grounded. It is important for work–family researchers to ensure that their studies recognize the voices of marginalized individuals and families of the working population. This can be achieved by using and applying a conceptual framework, such as “The Ecology of Justice.”

Limitations

The current study has some limitations. It was the first time that the conceptual framework “The Ecology of Justice” was developed and used. This conceptual framework has six broader constructs; four of them were used in the current study, although they were still very broad and difficult to operationalize. Particularly, there were

no specific measures for the constructs of fairness and equity. Hence, the definitions of fairness and equity were used, though they were still much broader than desirable, and were difficult to operationalize and use as measures to assess the study characteristics of work-family conflict studies. These constructs were used to assess the study characteristics, as the partial goal of the current study was to examine the extent to which the voices of marginalized individuals and families are recognized in work-family conflict studies.

Context and the construct of individuals' characteristics were used to examine the nature of the hypotheses/research questions. These two constructs had been used in other studies, but there were no specific measures to operationalize those constructs in the context of the current study due to its unique nature and the fact that it is the first of its kind in work-family conflict literature. The definitions of these constructs were also used to examine whether researchers studied the contexts and individuals' characteristics in the hypotheses/research questions of their studies. The constructs of context and individuals' characteristics were more specific than fairness and equity. Hence, the constructs of fairness and equity were used to assess the study characteristics while the constructs of context and individuals' characteristics were used to assess the hypotheses/research question. Had specific measures of these constructs been available, researchers may have been able to provide more concrete results. Therefore, these constructs need to be developed and tested according to the new standard of reliability and validity in future studies.

The current study used three databases to search for articles, but there are other databases, such as Work and Family Commons and Literature database, that also provide research on work–family conflict. It is possible that did not include some articles related to work–family conflict which could have found by using these databases. Hence, the findings of the current study may not be generalizable and should be read with caution.

Finally, the average of some demographic variables which were used to operationalize fairness were taken from each article, such as age, education, and income. These variables were further recoded into categorical variables for descriptive analysis. The manipulation of data, which were already the average estimates about respondents, might not have provided accurate information about these study characteristics. Despite these limitations, the current study has made important contributions in work–family conflict literature to move the field of work and family studies forward in the future.

References

- Andreassi, J. K. (2011). What the person brings to the table: Personality, coping, and work-family conflict. *Journal of Family Issues, 32*, 1474-1499.
doi:10.1177/0192513X11401815
- Bailey, C. E., Pryce, J., & Walsh, F. (2002). Trends in author characteristics and diversity issues in the Journal of Marital and Family Therapy from 1990 to 2000. *Journal of Marital and Family Therapy, 28*, 479-486. doi:0.1111/j.1752-0606.2002.tb00372.x
- Banerjee, D., & Perrucci, C. C. (2012). Employee benefits and polices: Do they make a difference for work/family conflict? *Journal of Sociology & Social Welfare, 39*, 131-147.
- Bass, B. L., & Grzywacz, J. G. (2011). Job adequacy and work-family balance: Looking at jobs as a whole. *Journal of Family Issues, 32*, 317-345.
doi:10.1177/0192513X10384215
- Bianchi, S. M., & Milkie, M. A. (2010). Work and family research in the first decade of the 21st century. *Journal of Marriage and Family, 72*, 705-725.
doi:10.1111/j.1741-3737.2010.00726.x
- Blair-Loy, M. (2003). *Competing devotions: Career and family among women executives*. Cambridge, MA: Harvard University Press.
- Blocklin, M., Crouter, A. C., & McHale, S. M. (2012). Youth supervision while mothers work: A daily diary study of maternal worry. *Community, Work & Family, 15*, 233-249.

Borbely, J. M. (2008). *United States labor market in 2008: Economy in recession*.

Retrieved from

<https://www.google.com/#q=working+groups+and+recession+2008>

Bronfenbrenner, U. (1989). Ecological systems theory. In R. Vasta (Ed.), *Annals of child development* (Vol. 6, pp. 187-249). Greenwich, CT: JAI Press.

Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husen & T. N. Postlethwaite (Eds.), *International encyclopedia of education* (2nd ed., Vol. 3, pp. 1643-1647). Oxford, UK: Pergamon Press.

Bronfenbrenner, U. (1995a). The bioecological model from a life course perspective: Reflections of a participant observer. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 599-618). Washington, DC: American Psychological Association.

Bronfenbrenner, U. (1995b). Developmental ecology through space and time: A future perspective. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 599-618). Washington, DC: American Psychological Association.

Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational models. In S. L. Friedman & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 3-28). Washington, DC: American Psychological Association.

- Bronfenbrenner, U. (2005a). The bioecological theory of human development. In U. Bronfenbrenner (Ed.), *Making human beings human: Bioecological perspectives on human development* (pp. 3-15). Thousand Oaks, CA: Sage. (Original work published in 2001)
- Bronfenbrenner, U. (2005b). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage Publications.
- Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, *101*, 568-586. doi:10.1037/0033-295X.101.4.568
- Bronfenbrenner, U., & Crouter, A. C. (1982). Work and family through time and space. In S. Kamerman & C. D. Hayes (eds.), *Children in a changing world* (pp. 39-83). Washington, DC: National Academy Press.
- Bronfenbrenner, U., & Evans, G. W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development*, *9*(1), 115-125. doi:10.1111/1467-9507.00114
- Bronfenbrenner, U., Kessel, F., Kessen, W., & White, S. (1986). Toward a critical social history of developmental psychology: A propaedeutic discussion. *American Psychologist*, *41*, 1218-1230. doi:10.1037/0003-066X.41.11.1218
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Theoretical models of human development* (5th ed., pp. 993-1023). New York: Wiley.

- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Theoretical models of human development* (6th ed., pp. 793-828). New York: Wiley.
- Buettner-Schmidt, K., & Lobo, M. L. (2012). Social justice: A concept analysis. *Journal of Advanced Nursing*, 68, 948-958. doi:10.1111/j.1365-2648.2011.05856.x
- Burr, W. R. (1973). *Theory construction and the sociology of the family*. New York: John Wiley and Sons.
- Burr, W. R., Mead, D. E., & Rollins, B. C. (1973). A model for the application of research findings by the educator and counselor: Research to theory to practice. *Family Coordinator*, 22, 285-290.
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Routledge, NY: New York.
- Carlson, D. S., Grzywacz, J. G., & Kacmar, K. M. (2010). The relationship of schedule flexibility and outcomes via the work-family interface. *Journal of Managerial Psychology*, 25, 330-335. doi:10.1108/02683941011035278
- Carr, P., Dogan, E., Tirre, W., & Walton, E. (2007). Large-scale indicator assessments: What every educational policymaker should know. In Moss, P. A. (Ed.), *Evidence and Decision Making: 2007 National Society for the Study of Education (NSSE) Yearbook*, (pp. 328-347). Oxford: Blackwell.

- Chen, Z., Powell, G. N., & Greenhaus, J. H. (2009). Work-to-family conflict, positive spillover, and boundary management: a person-environment fit approach. *Journal of Vocational Behavior, 74*, 82-93. doi:10.1016/j.jvb.2008.10.009
- Coontz, S. (1992). *The way we never were: American families and the nostalgia trap*. New York: Basic Books.
- Crethar, H. C., Torres-Rivera, E., & Nash, S. (2008). In search of common threads linking multicultural, feminist, and social justice counseling paradigms. *Journal of Counseling & Development, 86*, 269-278.
- Crowley, J. E. (2013). Perceiving and responding to maternal workplace discrimination in the United States. *Women's Studies International Forum, 40*, 192-202. doi:10.1016/j.wsif.2013.08.001
- Curran, M., McDaniel, B., Pollitt, A., & Totenhagen, C. (2015). Gender, emotion work, and relationship quality: A daily diary study. *Sex Roles, 73*, 157-173. doi:10.1007/s11199-015-0495-8
- Darawsheh, W. (2014). Reflexivity in research: Promoting rigor, reliability and validity in qualitative research. *International Journal of Therapy & Rehabilitation, 21*, 560-568.
- Dawn, S. C., Ferguson, M., Kacmar, K. M., Grzywacz, J. G., & Whitten, D. (2011). Pay it forward: The positive crossover effects of supervisor work-family enrichment. *Journal of Management, 37*, 770-789. doi:10.1177/0149206310363613
- DelCampo, R. G., Rogers, K. M., & Hinrichs, A. T. (2011). The interface of work to family conflict and racioethnic identification: An analysis of Hispanic business

- professionals. *Employ Response Rights Journal*, 23, 55-71. doi:10.1007/s10672-010-9143-1
- Delgado, E. A., & Canabal, M. E. (2006). Factors associated with negative spillover from job to home among Latinos in the United States. *Journal of Family and Economic Issues*, 27(1), 92-112. doi:10.1007/s10834-005-9001-8
- Denzin, N. K. (1970). *The research act: A theoretical introduction to sociological methods*. Chicago: Aldine.
- Doherty, W. J., Boss, P. G., LaRossa, R., Schumm, W. R., & Steinmetz, S. K. (1993). Family theories and methods: A contextual approach. In P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 3-30). New York, NY: Plenum Press.
- Dollahite, D. C., Morris, S. N., & Hawkins, A. J. (1997). Questions and activities for teaching about generative fathering in University courses. In A. J., Hawkins, & D. C. Dollahite (Eds.), *Generative Fathering: Beyond deficit perspectives* (pp. 228-241). Thousand Oaks, CA: Sage.
- Drevdahl, D. (2002) Social justice or market justice? The paradoxes of public health partnerships with managed care. *Public Health Nursing*, 19, 161-169.
- Dyrbye, L. N., Sotile, W., Boone, S., West, C. P., Tan, L., Satele, D., Sloon, J., Oreskovich, M., & Shanafelt, T. (2013). A survey of U.S. physicians and their partners regarding the impact of work-home conflict. *Journal of General Internal Medicine*, 29(1), 155-61. doi:10.1007/s11606-013-2581-3

- Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980-2002). *Journal of Vocational Behavior, 66*(1), 124-197.
- Edgell, P., Ammons, S. K., & Dahlin, E. C. (2012). Making ends meet: Insufficiency and work-family coordination in the new economy. *Journal of Family Issues, 33*, 999-1026. doi:10.1177/0192513X11424261
- Fauth, R. C., Roth, J. L., & Brooks-Gun, J. (2007). Does the neighborhood context alter the link between youth's after-school time activities and developmental outcomes? A multilevel analysis. *Developmental Psychology, 43*, 760-777.
- Ferree, M. M. (1976). Working class jobs, housework, and paid work as sources of satisfaction. *Social Problems, 22*, 431-441.
- Ferree, M. M. (1990). Beyond separate spheres: Feminism and family studies. *Journal of Marriage and the Family, 52*, 866-884.
- Ferree, M. M. (2010). Filling the glass: Gender perspectives on families. *Journal of Marriage and the Family, 72*, 420-439. doi:10.1111/j.1741-3737.2010.00711.x
- Few-Demo, A. L. (2014). Intersectionality as the 'New' critical approach in feminist family studies: Evolving racial/ethnic feminisms and critical race theories. *Journal of Family Theory & Review, 6*, 169. doi:10.1111/jftr.12039
- Few-Demo, A. L., Lloyd, S. A., & Allen, K. R. (2014). It's all about power: Integrating feminist family studies and family communication. *Journal of Family Communication, 14*, 85-94. doi:10.1080/15267431.2013.864295

- Fjorback, L. O., Arendt, M., Ørnbøl, E., Fink, P., & Walach, H. (2011). Mindfulness-based stress reduction and mindfulness-based cognitive therapy - a systematic review of randomized controlled trials. *Acta Psychiatrica Scandinavica*, *124*, 102-119. doi:10.1111/j.1600-0447.2011.01704.x
- Foroughipour, M., Ghandehari, K., Khazaei, M., Ahmadi, F., Shariatinezhad, K., & Ghandehari, K. (2013). Randomized clinical trial of intravenous valproate (Orifil) and dexamethasone in patients with migraine disorder. *Iranian Journal of Medical Sciences*, *38*, 150-155.
- Friedan, B., & O' Farrell, B. (1997). *Beyond gender: The new politics of work and family*. Washington, D. C.: Woodrow Wilson Center Press.
- Gallagher, J. A., Elizabeth, L. H., Anderson, T. L., & Del Rosario, K. M. (2013). A Mixed-methods exploration of Christian working mothers' personal strivings. *Journal of Psychology & Theology*, *41*(1), 48-61.
- Garr, M., & Tuttle, R. (2012). Shift work and work to family fit: Does schedule control matter? *Journal of Family and Economy Issues*, *33*, 261-271.
doi:10.1007/s10834-012-9283-6
- Gassman-Pines, A. (2011). Low-income mothers' nighttime and weekend work: Daily association with child behavior, mother-child interactions, and mood. *Family Relations*, *60*, 15-29. doi:10.1111/j.1741-3729.2010.00630.x
- Grzywacz, J. G., Tucker, J., Clinch, C. R., & Arcury, T. (2010). Individual and job related variation in infant feeding practices among working mothers. *American Journal of Health Behavior*, *34*, 186-196.

- Harrison, A. O., & Minor, J. H. (1984). Inter-role conflict, coping strategies, and satisfaction among black working wives. In Patricia, V. (Ed.), *Work and family: Changing roles of men and women*. Mountain view, CA: Mayfield.
- Heck, R. H., Thomas, S. L., & Tabata, L. N. (2014). *Multilevel and longitudinal modeling with IBM SPSS*. New York, NY: Routledge.
- Hendrix, J. A., & Parcel, T. L. (2014). Parental nonstandard work, family processes, and delinquency during adolescence. *Journal of Family Issues*, 35, 1363-1393.
doi:10.1177/0192513X13510299
- Herr, K. (1999). Unearthing the unspeakable: When teacher research and political agendas collide. *Language Arts*, 77(1), 10-15.
- Herr, K., & Anderson, G. L. (2015). *The action research dissertation: A guide for students and faculty*. Los Angeles, LA: SAGE.
- Hill, R., & Hansen, D.A. (1960). The identification of conceptual frameworks utilized in family study. *Marriage and Family Living*, 22, 299-311.
- Hoffman, L. W. (1987). The effects on children of maternal and paternal employment. In Naomi, G. & Harriet. G. (Eds.), *Families and work*. Philadelphia, PA: Temple University Press.
- Ishii-Kuntz, M. (1994). Work and family life: Findings from international research and suggestions for future study. *Journal of Family Issues*, 15, 490-506.
- Kayapinar, U. (2015). Measuring essay assessment: Intra-rater and Inter-rater reliability. *Eurasian Journal of Educational Research*, 58, 113-135.
doi:10.14689/ejer.2014.57.2

- Kalleberg, A., Reskin, B. & Hudson, K. (2000). Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States. *American Sociological Review*, *65*, 256–278.
- Kelly, E. L., Moen, P., Oakes, J. M., Fan, W., Okechukwu, C., Davis, K. D., Hammer, L. B., Kossek, E. E., Kind, R. B., Hanson, G. C., Mierzwa, F., & Casper, L. M. (2014). Changing work and work–family conflict: Evidence from the work, family, and health network. *American Sociological Review*, *79*, 485-518.
doi:10.1177/0003122414531435
- Lawson, K. M., Davis, K. D., McHale, S. M., Hammer, L. B., & Buxton, O. M. (2014). Daily positive spillover and crossover from mothers work to youth health. *Journal of Family Psychology*, *28*, 897-907. doi:10.1037/fam0000028
- Lavee, Y., & Dollahite, D. C. (1991). The Linkage between theory and research in family science. *Journal of Marriage and Family*, *53*, 361-373. Retrieved from <http://www.jstor.org/stable/352905>
- Lavee, Y., & Ben-Ari, A. (2007). Relationship of dyadic closeness with work-related stress: A daily diary study. *Journal of Marriage and Family*, *69*, 1021-1035.
Retrieved
- Lee (2014). Macroeconomic consequences of population aging in the United States: Overview of a national academy report. *American Economic Review*, *104*, 234-239. doi:10.1257/aer.104.5.234
- Li, A., Shaffer, J., & Bagger, J. (2015). The psychological well-being of disability caregivers: Examining the roles of family strain, family-to-work conflict, and

perceived supervisor support. *Journal of Occupational Health Psychology*, 20(1), 40-49. doi:10.1037/a0037878

Llewellyn, A., Whittington, C., Stewart, G., Higgins, J. P., & Meader, N. (2015). The use of bayesian networks to assess the quality of evidence from research synthesis: Inter-rater reliability and comparison with standard grade assessment. *Plos One*, 10, 1-11. doi:10.1371/journal.pone.0123511

McAdoo, H. P. (1981). *Black families*. Beverly Hills, CA: Sage.

McMillan, L. W., O'Driscoll, M. P., & Brady, E. C. (2004). The impact of workaholism on personal relationships. *British Journal of Guidance & Counselling*, 32, 171-186. doi:10.1080/03069880410001697729

Merton, R. K. (1957). *Social theory and sociological structure*. Glencoe, IL: Free Press.

Mesmer-Magnus, J., & Viswesvaran, C. (2009). File: The role of the coworker in reducing work-family conflict: A review and directions for future research. *Pratiques Psychologiques*, 15, 213-224. doi:10.1016/j.prps.2008.09.009

Michel, J. S., & Clark, M. A. (2013). Investigating the relative importance of individual differences on the work-family interface and the moderating role of boundary preference for segmentation. *Stress Health*, 29, 324-336. doi:10.1002/smi.2474.

Mishel, L., Bernstein, J., & Schmitt, J. (1999). *The state of working American*. Ithaca, NY: Cornell University Press.

Minnotte, K. L., Minnotte, M. C., & Pedersen, D. E. (2013). Marital satisfaction among dual-earner couples: Gender ideologies and family-to-work conflict. *Family*

Relations, 62, 686-698. Retrieved from

<http://search.proquest.com/docview/1436868453?accountid=12536>

Morgeson, F. P. (2014). Introduction to the annual review of organizational psychology and organizational behavior. *TIP: The Industrial-Organizational Psychologist*, 52(1), 125-128.

Moore, M. R. (2012). Intersectionality and the study of black, sexual minority women. *Gender and Society*, 26(1), 33-39. doi:10.1177/0891243211427031

National Bureau of Economic Research (2016). *The effects of the economic crisis on American households*. Retrieved from <http://www.nber.org/bah/2010no3/w16407.html>

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict scales and family-work conflict scales. *Journal of Applied Psychology*, 81, 433-410.

Nikkhah, K., Jouybari, A. G., Mirzaei, M. M., Ghandehari, K., & Ghandehari, K. (2016). Clinical trial of subcutaneous steroid injection in patients with migraine disorder. *Iranian Journal of Medical Sciences*, 41(1), 9-12.

Odom, E.C., Vernon-Feagans, L., Crouter, A. C. (2013). Nonstandard maternal work schedule: Implication for African American children's early language outcomes. *Early Childhood Research Quarterly*, 28, 379-387.

O'Leary, A. (2007). How family leave laws left out low-income workers. *Berkeley Journal of Employment and Labor Law*, 28(1), 1-62.

- Olson, D. H. (1976). Bridging research, theory, and application: The triple threat in science. In David H. O. (Ed.), *Treating relationships*. Lake Mills, IA: Graphic Publishing.
- Pangman, V. C., & Seguire, M. (2000). Sexuality and the chronically ill older adult: A social justice issue. *Sexuality and Disability, 18*(1), 49-59.
- Perry-Jenkins, M., Newkirk, K., & Ghunney, A. K. (2013). Family work through time and space: An ecological perspective. *Journal of Family Theory & Review, 5*, 105-123. doi:10.1111/jftr.12011
- Perry-Jenkins, M., Repetti, R. L., & Crouter, A. C. M. (2000). Work and family in the 1990s. *Journal of Marriage and the Family, 62*, 981-998.
- Perry-Jenkins, M., Smith, J. Z., Goldberg, A.E., & Logan, J. (2011). Working-class jobs and new parents' mental health. *Journal of Marriage and Family, 73*, 1117-1132. doi:10.1111/j.1741-3737.2011.00871.x
- Pew Research Center (2015). *How American parents balance work and family life when both work*. Retrieved from <http://www.pewresearch.org//search/?query=work-family%20conflict>
- Prilleltensky, I. (2001). Value-based praxis in community psychology: Moving toward social justice and social action. *American Journal of Community Psychology, 29*, 747-778.
- Redman, R. W., & Clark, L. (2002) Service-learning as a model for integrating social justice in the nursing curriculum. *Journal of Nursing Education, 41*, 446-449.

- Remler, D. K., & Van Ryzin, G. G. (2011). *Research methods in practice: Strategies for description and causation*. Thousand Oaks, CA: Sage Publications.
- Reynolds, P. D. (1971). *A primer in theory construction*. Indianapolis: Bobbs-Merril.
- Schieman, S., & Young, M. C. (2011). Are communications about work outside regular working hours associated with work-to-family conflict, psychological distress and sleep problems? *Work & Stress*, 27, 244-261.
- Schumacker, R. E., & Lomax, R. G. (2010). *A beginning's guide to structural equation modeling*. New York, NY: Routledge.
- Schumm, W. R. (1982). Integrating theory, measurement and data analysis in family studies survey research. *Journal of Marriage and the Family*, 44, 983-998.
- Seedall, R. B., Holtrop, K., & Parra-Cardona, J. R. (2014). Diversity, social justice, and intersectionality trends in C/MFT: a content analysis of three family therapy journals, 2004-2011. *Journal of Marital and Family Therapy*, 40, 139-151.
doi:10.1111/jmft.12015
- Shepherd-Banigan, M., & Bell, J. F. (2014). Paid leave benefits among a national sample of working mothers with infants in the United States. *Maternal and Child Health Journal*, 18, 286-295. doi:10.1007/s10995-013-1264-3
- Shreffler, K. M., Pirretti, A. E., & Drago, R. (2010). Work-family conflict and fertility intentions: Does gender matter? *Journal of Family and Economic Issues*, 31, 228-240. doi:10.1007/s10834-010-9187-2
- Smeeding, T. (2012). *Income, wealth, and debt and the great recession*. Retrieved from <https://www.google.com/#q=household+income+reduction+after+2008>

Son, S., & Bauer, J. W. (2010). Employed rural, low-income, single mothers' family and work over time. *Journal of Family Economic Issues, 31*, 107-120.

doi:10.1007/s10834-009-9173-8

Sprenkle, D. H. (1976). The need for integration among theory, research, and practice in the family field. *Family Coordinator, 24*, 261-263.

Swanberg, J. E., McKechnie, S.P., Ojha, M. U., & James, J. B. (2011). Schedule control, supervisor support and work engagement: A winning combination for workers in hourly jobs? *Journal of Vocational Behavior, 79*, 613-624.

doi:10.1016/j.jvb.2011.04.012

The Council of Economic Advisers (2014). *Nine facts about American families and work*.

Retrieved from <https://www.google.com/#q=proportion+of+single+working+mothers+in+the+U.S.>

Townsend, N. (2002). *The package deal: Marriage, work and fatherhood in men's lives*.

Philadelphia, PA: Temple University Press.

United States Bureau of Labor Statistics (2012). *The recession of 2007-2009*. Retrieved from www.bls.gov/spotlight

Urban, J. B., Lewin-Bizan, S., & Lerner, R. M. (2009). The role of neighborhood ecological assets and activity involvement in youth developmental outcomes:

Differential impacts of asset poor and asset rich neighborhoods. *Journal of Applied Developmental Psychology, 30*, 601-614.

doi:10.1016/j.appdev.2009.07.00

- Vera, E., M., & Speight, S. L. (2003). Multicultural competence, social justice, and counseling psychology: Expanding our roles. *The Counseling Psychologist, 31*, 253-272.
- Voydanoff, P. (2004). Implications of work and community resources and demands for marital quality. *Community, Work & Family, 7*, 311-325.
doi:10.1080/1366880042000295736
- Voydanoff, P. (2005a). The effects of community demands, resources, and strategies on the nature and consequences of the work-family interface: An agenda for future research. *Family Relations, 54*, 583-595.
- White, L., & Rogers, S. J. (2000). Economic circumstances and family outcomes, *Journal of Marriage and Family, 62*, 1035-1051.
- Williams, R. H. (1960). Changing status, roles, and relationships. In Clark. T. (Ed.), *Hand- book of social gerontology*. Chicago, IL: University of Chicago Press.
- Work Stress Survey (2013). *Globe newswire*. Retrieved from
<http://globenewswire.com/news-release/2013/04/09/536945/10027728/en/Workplace-Stress-on-the-Rise-With-83-of-Americans-Frazzled-by-Something-at-Work.htm>
- Ybarra, L. (1982). When wives work: The impact on the Chicano family. *Journal of Marriage and the Family, 44*, 169-178.

Table 2. 1

Percent Distribution of Hypotheses by Context and Individuals' Characteristics

<i>Variables</i>	<i>Categories</i>	<i>N</i>	<i>%</i>
Context			
Microsystem	No	80	32.7
	Yes	165	67.3
Mesosystem	No	46	18.8
	Yes	199	81.2
Exosystem	No	240	98.0
	Yes	5	2.0
Macrosystem	No	240	98.0
	Yes	5	2.0
Chronosystem	No	238	97.1
	Yes	7	2.9
Individuals' Characteristics			
Individual disposition	No	160	65.3
	Yes	85	34.7
Race	No	243	99.2
	Yes	2	0.8
Ethnicity	No	244	99.6
	Yes	1	0.4
SES/Class	No	244	99.6
	Yes	1	0.4
Gender	No	205	83.7
	Yes	40	16.3
Marital status	No	235	95.9
	Yes	10	4.1
Disability	No	244	99.6
	Yes	1	0.4
Sexual orientation	No	245	100.0

Table 2. 2

Percent Distribution of Study Characteristics by Equity

Variables	Categories	N	%
Equity			
Research technique	Qualitative	1	1.5
	Quantitative	64	95.5
	Mixed	2	3.0
Use of theory	Theory explicitly used	33	49.2
	Theory implicitly used	5	7.5
	A Theoretical	29	43.3
Research design	Cross-sectional	54	80.6
	Longitudinal	7	10.4
	Daily diary	3	4.5
	Experimental/Quasi-experimental	3	4.5
Representative sample	No	33	49.3
	Yes	34	50.7
Sampling technique	Non-random	25	37.3
	Random	42	62.7
Nature of sample	African American	5	7.5
	Mixed	9	13.4
	Mostly White and less non-White	14	20.8
	White	33	49.3
	NA	6	9.0
Analytical technique	Thematic analysis	1	1.5
	t-test/ANOVA/MANOVA	6	9.0
	Logistic regression	5	7.5
	Hierarchical multiple regression	39	58.2
	Multilevel modeling	6	9.0
	Structural equation modeling	10	14.8

Table 2.3

Percent Distribution of Study Characteristics by Fairness

Variables	Categories	N	%
Fairness			
Age	20 to 40	38	56.7
	41 to 60	29	43.3
	61 and above	0	0.0
Education	High school or Less	11	16.4
	More than high school	51	76.1
	Mixed	5	7.5
Gender	Female	14	20.9
	Male	9	13.4
	Mixed	44	65.7
Income	25 to 50	14	20.9
	51 to 75	16	23.9
	76 and above	7	10.4
	Not reported	30	44.8
Marital status	Single	1	1.5
	Married	43	64.2
	Mixed	13	19.4
	Not reported	10	14.9
Working status	Full-time	58	86.6
	Part-time	0	0.0
	Mixed	9	13.4
Work schedule	Standard work schedule	57	85.0
	Non-standard work schedule	4	6.0
	Mixed	6	9.0

Figure 2.1:

Percent Distribution of Research Designs Used in Work-Family Conflict Studies

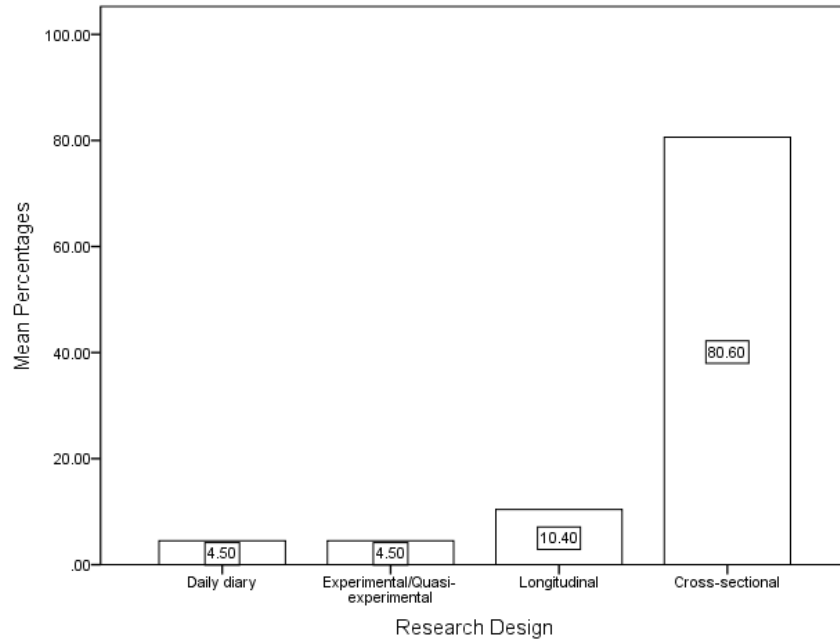


Figure 2.2:

Percent Distribution of Samples Used in Work-Family Conflict Studies

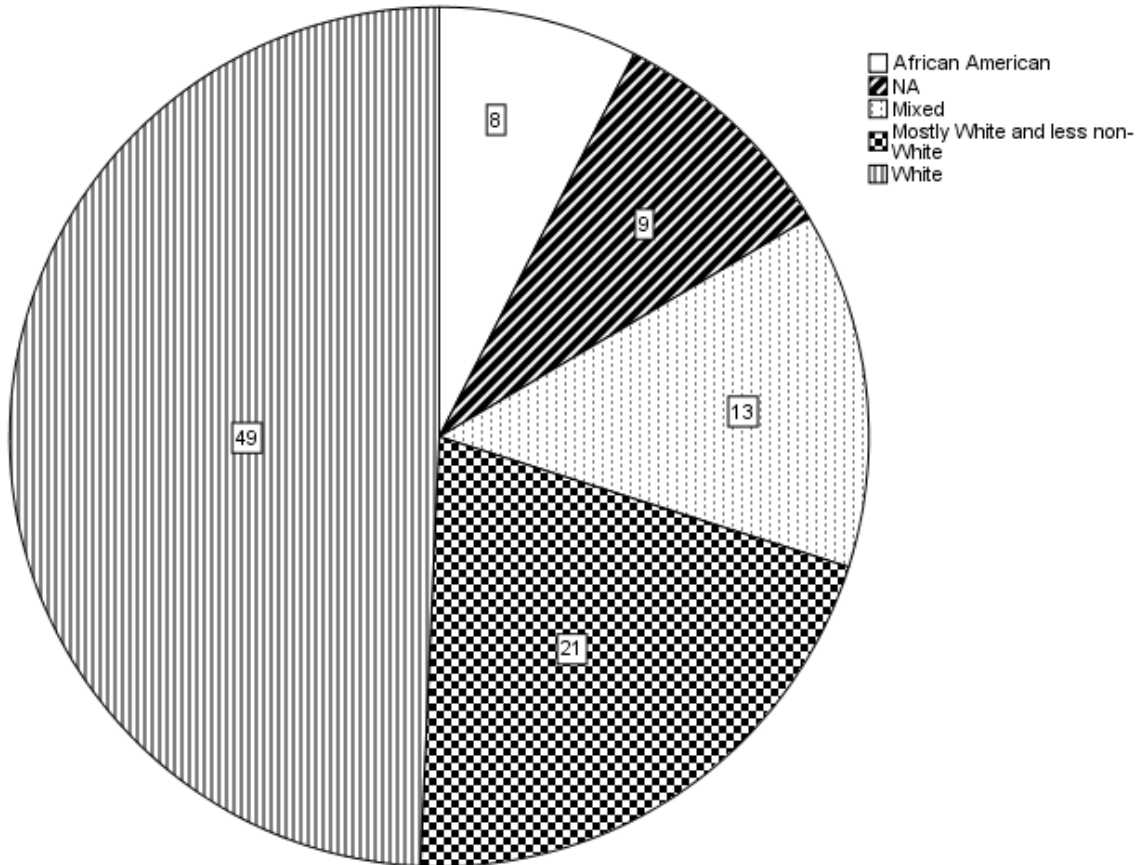


Figure 2.3:

Percent Distribution of Statistical Techniques Used in Work-Family Conflict Studies

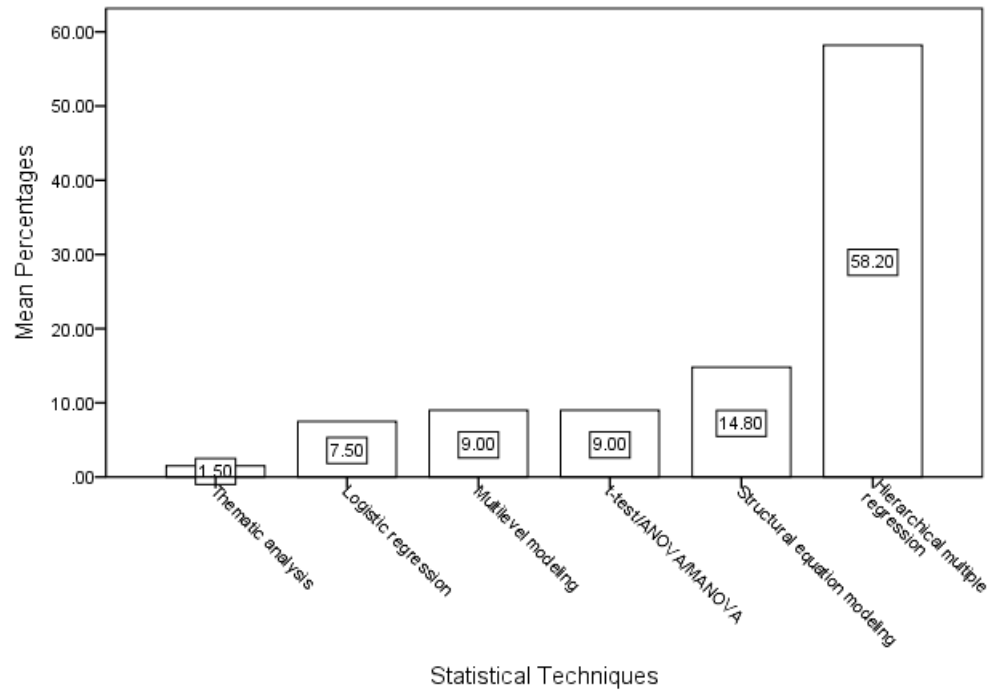


Figure 2.4:

Percent Distribution of Hypotheses/Research Questions that Examined Ecological Systems in Work-Family Conflict Studies

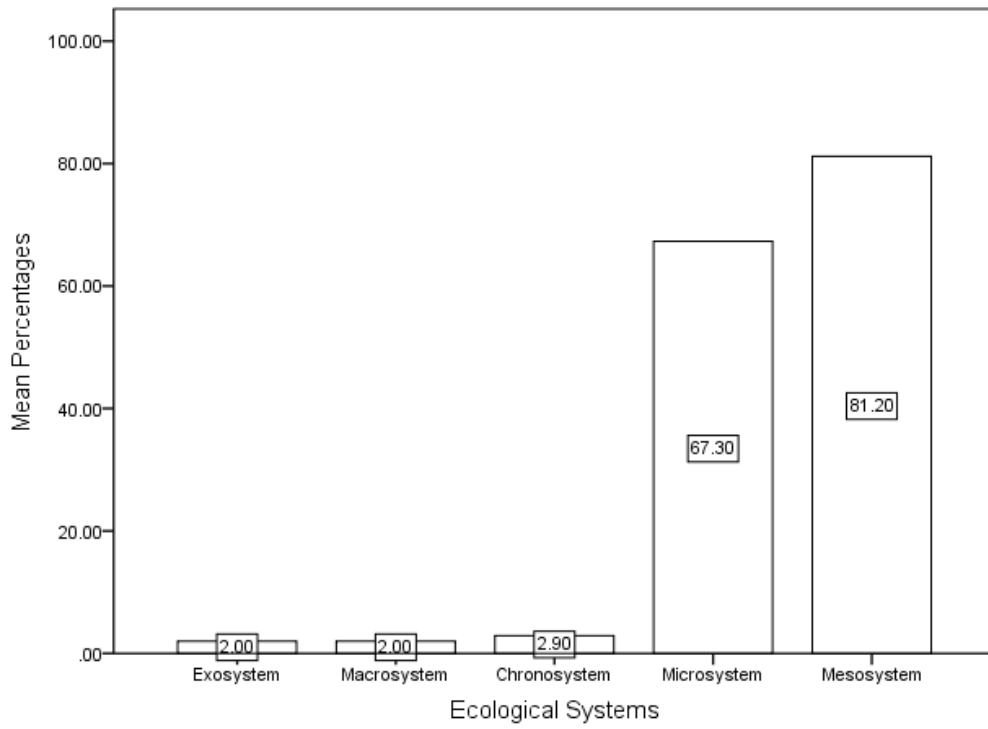
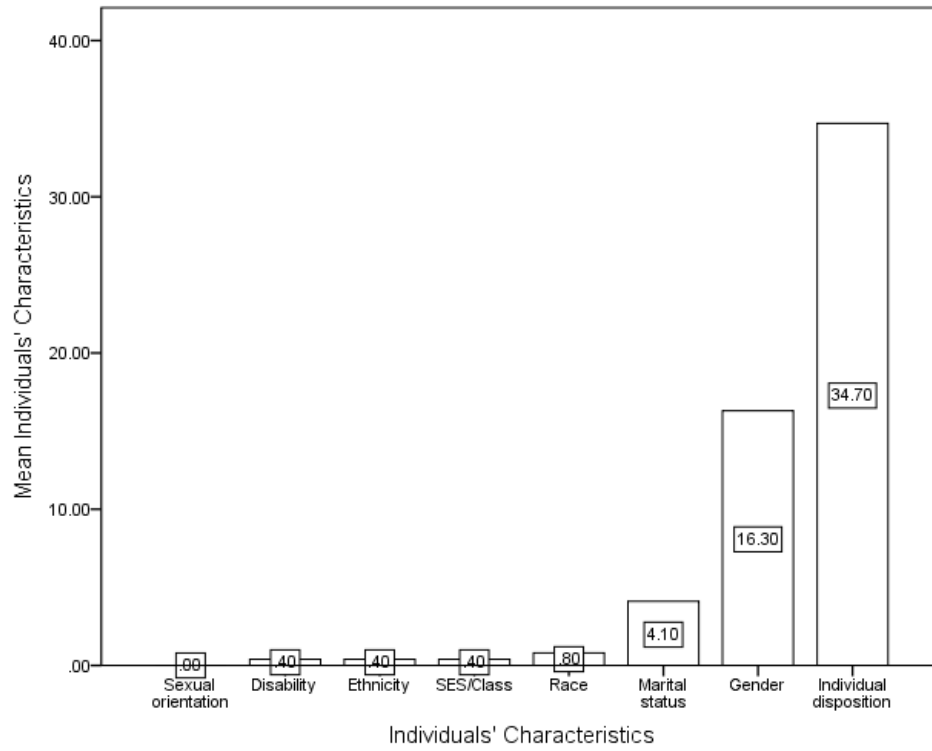


Figure 2.5:

Percent Distribution of Hypotheses/Research Questions that Examined Individuals' Characteristics in Work-Family Conflict Studies



Chapter 3

Testing Bioecological Theory While Longitudinally Examining the Work-family Balance of Working Mothers in the United States

Abstract

The current study used a bioecological framework to examine three moderated-mediating models that tested the mediating effects of the positive work-to-family spillover and family-to-work spillover in the relationships between a nonstandard work schedule and work-family balance, and between relationship quality and work-to-family balance and the moderating effects of education, family-friendly workplace policies, and race in these relationships. Longitudinal data across four time periods was used to test these theoretical models. Using path analysis, the results showed that family-to-work spillover mediated the relationship between relationship quality and work-family balance in two models, whereas the availability of family-friendly policies significantly moderated these relationships. Implications are discussed.

Keywords: Bioecological theory; path analysis; spillover effects; work-family balance

Chapter 3

Testing Bioecological Theory While Longitudinally Examining the Work–family Balance of Working Mothers in the United States

Researchers have found that 57% of full-time working parents struggle to maintain a healthy work–family balance (Pew Research Center, 2015). “Work–family balance” refers to meeting responsibilities and expectations raised by important people in both the work and family domains (Carlson, Kacmar, Grzywacz, Tepper, & Whitten, 2013). For instance, mothers often complete household chores and participate in child care. Simultaneously, they may have to achieve work goals and perform well in the workplace to meet supervisors’ expectations. Balance occurs when someone is able to meet their responsibilities adequately across both domains. Maintaining a healthy work–family balance has become challenging for both working mothers and working fathers in the current 24-hour, 7-day-a-week nature of the economy (Families and Work Institute, 2008; Haslam, Patrick, & Kirby, 2015). However, working mothers are finding it increasingly difficult to maintain a healthy work–family balance due to their additional family and child care responsibilities (Bianchi, Robinson, & Milkie, 2006), and challenges in the workplace (Lam, McHale, & Crouter, 2012). Working mothers make up 47% of the current labor force (i.e., the percentage of the U.S. population who are currently holding a job plus those who are seeking a job) in the United States (United States Department of Labor, 2013).

Working mothers experience several unique work–family challenges (Mullan & Craig, 2010). For instance, current workplaces are less supportive of working mothers

compared to working fathers (Lam et al., 2012). Often this is because employers perceive many working mothers have greater family demands, thereby leading to lower commitment in the workplace (Crowley, 2013). “Family demands” refers to the family roles and responsibilities that a person must perform through mental or physical effort (Voydanoff, 2005a). At the family level, the division of labor is still unequal between couples, and heterosexually-coupled mothers still perform most of the domestic and child care responsibilities (Mullan & Craig, 2010). Additionally, the intersections of race, gender, education, and marital status further increase work–family challenges for working mothers (Grzywacz, Tucker, Clinch, & Arcury, 2010). For example, single working mothers have less social and family support than dual-earner families; therefore, they struggle to maintain a healthy work–family balance (Son & Bauer, 2010). These mothers usually have low educational levels as well (Grzywacz, Daniel, Tucker, Walls, & Leerkers, 2011).

Moreover, researchers found that one-fifth of employed Americans work a nonstandard work schedule, which is either a rotating shift, evening hours, or overnight (Presser & Ward, 2011). “Nonstandard work schedule” refers to the extent of variation from a standard work schedule (Grzywacz et al., 2010). Working in a nonstandard work schedule increases the negative work–to–family spillover for working mothers (Garr & Tuttle, 2012). “Negative work–to–family spillover” refers to stressors at work that carry over into the family and negatively affect family life (Reptti, Wang, & Saxbe, 2009). Those mothers who work on a nonstandard work schedule often have low education levels and socioeconomic status, and are more vulnerable in terms of having alternative

job opportunities (Lam et al., 2012). They cannot negotiate in the workplace regarding schedule flexibility, income, and workplace policies (Garr & Tuttle, 2012). “Schedule flexibility” refers to workers’ ability to determine the start and stop time of their work (Carlson, Grzywacz, & Kacmar, 2010). Increasing family demands and working on a nonstandard work schedule make it quite hard for working mothers to maintain a healthy work–family balance, which negatively affects their health and well-being (Kalil, Dunifon, Crosby, & Su, 2014).

In addition, researchers found that relationship quality can create positive family–to–work spillover that helps working mothers maintain a healthy work–family balance (Curran, McDaniel, Pollitt, & Totenhagen, 2015). “Relationship quality” refers to the extent of happiness in a relationship with a spouse/partner (Curran et al., 2015), and “positive family–to–work spillover” refers to positive experiences in the family that carry over into work and positively affect the work life (Sok, Blomme, & Tromp, 2014). A quality relationship with a spouse/partner helps mothers maintain a healthy work–family balance (Curran et al., 2015). Relationship quality works as a buffer for mothers that prevents them from being overwhelmed by work responsibilities, and thereby increases their work–family balance (McMillan, O’Driscoll, & Brady, 2004).

There are some gaps in the literature that the current study intends to fulfill. First, work–family studies lack an appropriate use of the latest version of bioecological theory (Tudge, Mokrova, Hatfield, & Karnik, 2009). This also is an important finding of my recent content analysis of work–family conflict studies conducted between 1980 and 2016 (see Chapter 2). Second, the mediating role of positive work–to–family spillover

and family-to-work spillover in the examination of work-family balance is understudied (Bianchi & Milkie, 2010). Third, those studies that examined work-to-family spillover and family-to-work spillover as mediators were based on cross-sectional datasets, and thereby could not study the temporal structure of work-family balance of working mothers over time (Dawn, Ferguson, Kacmar, Grzywacz, & Whitten, 2011; Lee, Zvonkovic, & Crawford, 2014). The variables, which represent individuals' social locations, such as education and race, were either under-studied or controlled for in work-family studies instead of examining them as predictors or moderators (Perry-Jenkins, Newkirk, & Ghunney, 2013). These variables (e.g., education and race) could intersect with other predictors, such as a nonstandard work schedule and relationship quality to provide a more nuanced view of work-family balance of working mothers (Perry-Jenkins et al., 2013).

The purpose of this longitudinal study is to test three moderated-mediating models (see figure 1), grounded in bioecological theory (Bronfenbrenner & Morris, 1998), that explain work-family balance of working mothers who have children between 4 and 9 years of age. More specifically, the current study examined the direct effects of a nonstandard work schedule and relationship quality on work-family balance. It also tested the mediating effects of positive work-to-family spillover and positive family-to-work spillover on the relationships between a nonstandard work schedule and work-family balance, and between relationship quality and work-family balance. The current model also examined the moderating effects of education, family-friendly workplace policies, and race on these relationships. This model controls for age, education, and race.

Literature Review

Work–family Balance

According to bioecological theory, work and family are two separate microsystems but, since they are connected to each other, work–family balance occurs in a mesosystem (Bronfenbrenner, 1994). An empirical study that used a cross-sectional research design with a sample consisting of 588 hotel managers (288 females and 300 male) found that working mothers faced work challenges, such as organizational time expectations, intense work schedules, role conflict, and job inadequacy, which affected their work–family balance (Lawson, Davis, Crouter, & O’Neill, 2013). Another study that used a daily diary research design with a sample of 105 mostly non-White mothers and their children found that full-time working mothers faced challenges with supervision of children, which increased their worries and kept them from maintaining work–family balance (Blocklin, Crouter, & McHale, 2012). These results are similar to a study led by Wattis, Standing, and Yerkes (2013), who conducted 67 in-depth interviews with employed mothers (most whom were full-time employed) who had children between 18 months and 15 years of age. This study found that mothers reported facing high challenges regarding caring for and supervising their children due to increased work responsibilities, which limited their work–family balance.

Most of these studies used the same definition of work–family balance as used in the current study. The current study used a modified measure of work–family balance that was originally developed by Netemeyer et al. (1996), and was also used in the original study (Grzywacz, Crain, Martinson, & Quandt, 2014). The modification, a

reduction in the number of items used in the work–family balance scale, might have impacted the content validity and predictive validity of this construct (Remler & Van Ryzin, 2011). This would have had an indirect impact on the relationship of the construct of work–family balance with other variables used in the current study and on the findings of the current study (Remler & Van Ryzin, 2011).

Effect of Relationship Quality on Work–family Balance

A study conducted by Symoens and Bracke (2015), who used a cross-sectional research design and dyadic data from married and cohabiting couples, found poor relationship quality decreased work–family balance for both married and cohabiting couples (Symoens & Bracke, 2015). Another study, led by O’Brien, Ganginis Del Pino, Yoo, Cinamon, and Han (2014), used a cross-sectional research design and data from three countries (Israel, Korea, and United States) and found that lack of spousal support negatively affected the work–family balance of working women. The lack of a quality relationship with the spouse/partner created a demand in the family for working women, thereby decreasing their work–family balance (Bakker, Demerouti, & Burke, 2009; McAllister, Thornock, Hammond, Holmes, & Hill, 2012). Alternatively, a quality relationship with the spouse worked as a resource for women, which helped them maintain a healthy work–family balance (Curran et al., 2015). Good relationship quality reduced the negative work–to–family spillover and increased positive family–to–work spillover, which resulted in an increased work–family balance for working mothers (McMillan et al., 2004).

Effect of a Nonstandard Work Schedule on Work–family Balance

Researchers used a cross-sectional research design and national level data consisting of mostly White (and less non-White), individuals, and found that a nonstandard work schedule decreased work–family balance (Garr & Tuttle, 2012). Similar results were found by a study led by Gassman-Pines (2011), who used a longitudinal research design and a sample of 61 low-income non-White mothers who had preschool aged children, and found that a nonstandard work schedule made it harder for working mothers to maintain a healthy work–family balance. (Grzywacz et al., 2011). Additionally, researchers used nationally representative data consisting of mostly White (and less non-White) employed married adults who worked on a nonstandard work schedule, and found that the nonstandard work schedule created negative work–to–family and family–to–work spillover, thereby decreasing their work–family balance (Davis, Goodman, Pirretti, & Almeida, 2008).

Mediating Role of Positive Work–to–family Spillover and Family–to–work Spillover

An empirical study using a randomized-controlled research design with a sample of 500 information technology companies showed that work–to–family spillover, created by supervisors’ support and family-friendly workplace cultures, increased the work–family balance of working mothers (Kelly et al., 2014). A similar study, led by Grice, McGovern, Alexander, Ukestad, and Hellerstedt (2011), found that supervisors’ support increased mothers’ positive work–to–family spillover, which resulted in an increased work–family balance. Another study conducted by Curran et al. (2015), who used a longitudinal research design and a sample of 74 couples (mostly White), showed that

relationship quality with a partner/spouse increased positive family–to–work spillover, which improved the work–family balance of working mothers.

Moderating Role of Education, Workplace Policies, and Race

Researchers found that educated mothers were more likely to get a high-quality job and obtain schedule flexibility that would help them maintain work–family balance (Lawson et al., 2014). By contrast, less educated women were more likely to work on a nonstandard work schedule, thereby decreasing work–family balance (Grzywacz et al., 2011). Researchers also found that family-friendly policies in the workplace were one of the important workplace resources for working mothers (Wu, Rusyidi, Claiborne, & McCarthy, 2013). Employees maintained a healthy work–family balance when they received organizational support in a supportive workplace culture created by family-friendly policies (Munn, 2013). These results are similar to a study led by Banerjee and Perrucci (2012), who found that it was primarily the organizational policies that benefited employees because these effects remained supportive in the workplace when supervisor and co-worker support were controlled for (Banerjee & Perrucci, 2012). Family-friendly policies created a positive mood for employees, especially working mothers, after work, and helped them maintain a healthy work–family balance (Lawson et al., 2014).

In addition, Crowley (2013) used a sample of 25 in-depth interviews of African American working mothers, and found that working mothers faced high levels of work stress that decreased their work–family balance. Another study, conducted by Lawson, Davis, Crouter, and O’Neill (2013), used a cross-sectional research design and a sample of 588 mostly White hotel managers. Findings suggested that working mothers faced

high levels of work stress compared to working fathers due to organizational time expectations, intense work schedules, and job inadequacy, and consequently struggled to maintain a healthy work–family balance (Lawson et al., 2013). The variables of education, family-friendly policies, and race may not only directly affect work–family balance of working mothers, but may also moderate the relationship between work–family balance and other factors, such as a nonstandard work schedule, relationship quality, and positive work–to–family and family–to–work spillovers. According to bioecological theory, proximal processes may vary by individuals’ demand characteristics (e.g., race), resource characteristics (e.g., education), and the context (family-friendly workplace policies; Bronfenbrenner & Evans, 2000). This shows that the relationships of a nonstandard work schedule, relationship quality, work–to–family spillover and family–to–work spillover and work–family balance may differ based on education level, availability of family-friendly workplace policies, and race. Hence the current study has the following research question:

What is the role of positive work–family spillover in the relationships between a nonstandard work schedule and work–family balance, and between relationship quality and work–family balance, and do these relationships differ based on education level, family-friendly workplace policies, and race?

Theoretical Framework

The current study used the Process–Person–Context–Time (PPCT) model developed by Bronfenbrenner (1999). Bioecological theory was considered an appropriate theoretical framework because it theorizes individuals’ reciprocal

relationships with different interrelated ecological contexts, which ensures individuals' development (Bronfenbrenner & Evans, 2000). Working mothers have reciprocal relationships within work and family domains, which also are interrelated and may potentially affect their work–family balance. Two major propositions of the bioecological model were tested in the current study. The first proposition states: “Human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment. To be effective, the interaction must occur on a fairly regular basis over extended periods of time. Such enduring forms of interaction in the immediate environment are referred to as proximal processes” (Bronfenbrenner & Morris, 1998, p. 996).

According to a review conducted by Tudge, Mokrova, Hatfield, and Karnik, (2009), it was very rare in past studies that researchers used the latest version of bioecological theory. Those few researchers who used the latest version of bioecological theory (Bronfenbrenner & Morris, 2006), operationalized proximal processes with parent-child reciprocal interactions in the family (Adamsons, O'Brien, & Pasley, 2007; Riggins-Caspers, Cadoret, Knutson, & Langbehn, 2003). These studies were not related to work–family balance. Although work–family researchers have used the latest version of bioecological theory in their studies (Gryzwacz & Marks, 2000; Ettner & Grzywacz, 2001), the old versions of bioecological theory (Bronfenbrenner, 1979; Bronfenbrenner & Crouter, 1982) were more frequently used in work–family studies. Hence, the latest version of bioecological theory was rarely observed in work–family literature.

The current study used secondary data in which proximal processes were not explicitly measured. However, there were some measures in the current study which were used to operationalize the proximal processes in the secondary data, such as relationship quality and a nonstandard work schedule. Relationship quality is operationalized as a measure of proximal processes because it represents a reciprocal interaction between working mothers and their spouses/partners (Bronfenbrenner, 1995a). This reciprocal interaction continues on a regular basis and for an extended period (Bronfenbrenner & Evans, 2000). Mothers also may reciprocally interact with objects and symbols in the family (Bronfenbrenner, 2005a). This becomes the source of proximal processes and stimulates their functioning (Bronfenbrenner, 2005b). A high relationship quality between mothers and their spouses/partners supports the positive functioning of proximal processes. Appropriately functioning proximal processes may create positive family–to–work spillover and, because work and family are interrelated domains, may also increase positive work–to–family spillover, thereby increasing work–family balance.

A nonstandard work schedule provides a certain type of environment in which working mothers have reciprocal interactions with persons (e.g., supervisors and coworkers), objects (e.g., equipment), and symbols (e.g., organizational values and cultural symbols). The essence of working mothers in the nonstandard work environment and their reciprocal interactions in the workplace with persons, objects, and symbols may allow the functioning of proximal processes (Bronfenbrenner, 1995a). However, for proximal processes to function well, such reciprocal interactions should support the

functioning of proximal processes; otherwise, individuals' development remains constant or decreases (Bronfenbrenner, 1995b).

Researchers found that positive work–to–family spillover and family–to–work spillover help working mothers maintain a healthy work–family balance (Lawson et al., 2014). The positive spillover may also decrease the negative effects of nonstandard work schedules and increase the positive effects of relationship quality on work–family balance (Liu, Ngo, & Cheung, 2015). According to bioecological theory (Bronfenbrenner, 1994), appropriately functioning proximal processes ensure individuals' development; that is, they create positive effects in the immediate environment (the microsystem; Bronfenbrenner & Ceci, 1994). These positive effects also carry over to the other immediate environment if they are connected to each other, such as work and family (the mesosystem; Bronfenbrenner & Ceci, 1994).

There is a reason to hypothesize that positive work–to–family spillover and family–to–work spillover partially mediate the relationships between relationship quality and work–family balance, and between a nonstandard work schedule and work–family balance. Working mothers have high work–family demands and the extent of their positive experiences in work and family domains may not produce much positive work–to–family and family–to–work spillover. Therefore, the extent of positive work–to–family and family–to–work spillover effects may not entirely remove the positive effect of relationship quality and negative effect of a nonstandard work schedule on work–family balance.

The second propositions of the bioecological model tested in the current study states: “The form, power, content, and direction of the proximal processes effecting development vary systematically as a joint function of the characteristics of the developing person, of the environment in which the processes are taking place, and of the nature of the developmental outcomes under consideration” (Bronfenbrenner & Ceci, 1994, p. 572). More specifically, bioecological theory explains that proximal processes, which are central to human development, are influenced by the context, individuals’ characteristics, and the nature of the outcome under consideration (Bronfenbrenner & Evans, 2000). The context includes both immediate and remote environments (Bronfenbrenner & Ceci, 1994). Proximal processes occur in the immediate environment (microsystem), which may have more influence on the functioning of the proximal processes (Bronfenbrenner & Morris, 1998).

In addition, individuals’ characteristics are related to individuals’ resource characteristics, demand characteristics, and force characteristics (Bronfenbrenner, 1995a). “Resource characteristics” refers to individuals’ emotional, mental, material, and social resources, such as intelligence; disposition; education needed to succeed in society; past experiences; and access to housing, food, and caring parents (Bronfenbrenner, 1995b). “Demand characteristics” refers to individuals’ appearance, such as age, gender, and race (Bronfenbrenner, 2005a). “Force characteristics” refers to individuals’ motivations, consistency, and persistence in pursuing and achieving a goal (Bronfenbrenner, 2005b). In the current study, the workplace is an immediate context for working mothers. Hence, family-friendly workplace policies may influence the

functioning of proximal processes and their effects on outcomes. I also tested a demand characteristic (i.e., race) in the current theoretical model as demand characteristics create challenges for individuals in the environment and limit the functioning of proximal processes and their effect on developing outcomes (Bronfenbrenner & Morris, 2006).

The following are the three hypothesized models of the current study, all of which are grounded in bioecological theory:

Hypothesized Model 1:

Positive work-to-family spillover and family-to-work spillover will partially mediate the relationships between a nonstandard work schedule and work-family balance, and between relationship quality and work-family balance, and these relationships will differ based on education level.

Hypothesized Model 2:

Positive work-to-family spillover and family-to-work spillover will partially mediate the relationships of between a nonstandard work schedule and work-family balance, and between relationship quality with and work-family balance, and these relationships will differ based on family-friendly policies.

Hypothesized Model 3:

Positive work-to-family spillover and family-to-work spillover will partially mediate the relationships of between a nonstandard work schedule and work-family balance, and between relationship quality with and work-family balance, and these relationships will differ based on race.

Method

Sample

The current study used secondary data from an existing longitudinal study called “Working Mothers Physical Activity and Eating Habits” (Grzywacz, Crain, Martinson, & Quandt, 2013). The purpose of the original study was to examine the role of schedule control in influencing women’s physical activity and how these relationships change based on racial and educational differences. A multi-stage stratified sampling technique was used in the original study, with the sampling frame created to obtain full-time employed mothers with young children who worked in the Midwest (see procedure section below). This sampling frame was stratified based on race (African American and White) and education level (low and high). In the original study, the high educational level referred to earning an associate’s degree or higher, whereas the low educational level was defined as having trade degree or lower (Grzywacz, Crain, Martinson, & Quandt, 2013). The sample for the current study consisted of 302 working women, who had at least 1 child between 4 and 9 years of age. This group of working mothers was selected because, in caring for children in this age range, mothers deal with many transitions and changes in their life, such as child care arrangements, schooling of children, and developmental changes in their children. While experiencing all of these transitions in their lives, mothers face greater challenges in their workplace, which makes it difficult for working mothers to achieve a healthy work–family balance (Grzywacz et al., 2014).

Table 1 provides demographic characteristics of the sample. In this sample, those women who earned an associate's degree or higher (an associate's degree consists of a 2-year program that prepares students either to transfer into a bachelor's degree program or start a career) were considered to have a high level of education. Those women who obtained a trade degree or lower (trade degree refers to either secondary or post-secondary education, which explicitly provides students with vocational or technical education or skills required for a particular job) were considered to have a low level of education. These two categories were included in the original dataset because the sample was stratified based on education and race, and the original study focused on educated working mothers because they face substantial work-family challenges (Grzywacz et al., 2014). The average age of women at the time of intake was 35 years ($SD = 5.9$), and 70% were married. In the sample, 34.4% of the women were African American and 65.6% were White, with 58% holding an associate's degree or higher. All women in the sample were full-time employees, and had an average of 1.77 children ($SD = 0.68$) between 4 and 9 years old at the time of the initial intake survey. In addition, 62.6% of women had a combination of preschool-aged children and school-aged children. Household earnings ranged from \$15,000 to \$150,000. Women worked 42 hours per week on average ($SD = 7.30$). Almost 25% of women reported that they were doing a job that required a nonstandard schedule. Similarly, about 70% of the women were married (i.e., currently married or living as married) and 29% women were single (i.e., separated, divorced, or never married). The spouse/partner of each of the women worked an average of 44 hours per week ($SD = 9.90$).

Procedure

As stated earlier, the current sample was derived from using a multi-stage stratified random sampling technique (Grzywacz et al., 2013). A list of potential participants was obtained from administrative data systems maintained by a Midwestern not-for-profit and cooperative agency that provides services regarding healthcare, medical education and research, and healthcare administration and financing. After obtaining a complete list of potential participants based on the inclusion and exclusion criteria, a sample frame was developed (Grzywacz et al., 2013). Inclusion criteria consisted of the following: women were at least 18 years old; identified as African American only or White only; currently worked a minimum of 35 hours per week; and had at least one child between 4 and 9 years of age in their households. Specific criteria was also used to exclude certain participants based on the idea that the following factors could confound the results: pregnant at the time of the baseline survey interview or had a baby in the last 12 months; did not intend to work for the same employer over the next 12 months; had a member in their household who had a developmental issue or devastating medical condition; insufficient English fluency or understanding to complete the questions related to the participants' screening; and/or were not born in the United States. A simple random sampling was used to select the participants of the current study from each stratified group.

Exactly 6,374 women were sent an invitation by mail to participate in the study or were self-referred for screening. From those invitations, 3,539 women were successfully contacted and 2,230 women were screened to determine their eligibility. Of those

women, 369 were determined eligible to participate in the study. Finally, 302 women signed an informed consent form and successfully completed the interview. Data was collected at four points of time, including the baseline survey interview and every four months thereafter. The retention rate of the study was quite high. The final sample at time 1 consisted of 302 respondents. Time 2 response rate was 96.4%, and time 3 and time 4 response rates were 93.4%. This shows that out of 302 respondents who were interviewed at time 1, almost 291 respondents were interviewed at time 2, 282 respondents were interviewed at time 3, the same number of respondents (282) were interviewed at time 4.

Measures

Work–family balance. The original measure (Boyar, Carson, Mosley, Maertz, & Pearson, 2006) was modified by Grzywacz et al. (2013) and included only three items. This scale was measured using Likert response options that ranged from 1 (*never*) to 5 (*always*), such that a higher value indicated a greater level of work–family balance, whereas a lower value indicated a smaller level of work–family balance (sample item: “Received the impression from important people in your life that you were doing a good job of balancing work and family”). There were two additional categories available, which were: “I don’t know” and “refused.” The values against these two additional categories were assigned as system missing values, which were imputed by using multiple imputation technique. Cronbach’s alpha was 0.58 for time 1, 0.63 for time 2, 0.66 for time 3, and 0.63 for time 4. The value of reliability measure during four time periods of data collection was marginally low and should be used with caution. The normality of this variable was assessed by a normal curve and estimating the values of

skewness and kurtosis, which were under 1. A similar procedure for imputing missing values and testing the normality was also carried out with other measures (Kontopantelis, White, Sperrin, & Buchan, 2017; Korkmaz, Goksuluk, & Zararsiz, 2014).

Relationship quality. The relationship quality with spouse/partner was measured using a single item. The question asked about relationship quality was: “What number best describes the degree of happiness in your relationship with your spouse or partner?” This variable was measured at time 1. The responses ranged from very unhappy, coded “1,” and perfectly happy, coded “7.” The variable of relationship quality was measured through a closed-ended question and there was no option for respondents to provide any qualitative responses or narratives about their relationship quality with their spouse/partner.

Nonstandard work schedule. The variable of a nonstandard work schedule consisted of a single item. The question asked for this variable was: “What best describes your usual work schedule on your main job?” This variable had five Likert response options: regular daytime, regular evening, regular night, rotating, and varies. A higher score indicated greater nonstandard work schedule and a lower score represented smaller nonstandard work schedule. This variable was recoded into a dichotomous variable consisting of two categories: “No” and “Yes.” The daytime was recoded into 0 representing “No” and all other categories were recoded into 1 representing “Yes.” The variable of a nonstandard standard work schedule was recoded to match it with the definition of a nonstandard work schedule. The same procedure to recode this variable was performed in the original study (Grzywacz, Crain, Martinson, & Quandt, 2013).

Work-to-family spillover. This construct was measured at four times during the study and consisted of four items (sample item: “Things you do at work help you deal with issues at home”). A new variable of work-to-family spillover was created by computing the average of these four items. Higher values indicated a greater level of work-to-family spillover, and lower values indicated a smaller level of work-to-family spillover. Each item had five Likert response options that ranged from 1 (*never*) to 5 (*always*). These scales were already established and tested in previous studies (Grzywacz & Marks, 2000). Cronbach’s alpha was 0.76 for time 1, 0.77 for time 2, 0.81 for time 3, and 0.81 for time 4.

Family-to-work spillover. This construct also was measured at four times during the study and consisted of four items (sample item: “Things you do at home help you deal with issues at work”). A new variable of family-to-work spillover was created by computing the average of these four items. Higher values indicated a greater level of family-to-work spillover, and lower values indicated a smaller level of family-to-work spillover. Each item had five Likert response options that ranged from 1 (*never*) to 5 (*always*). These scales were already established and tested in previous studies (Grzywacz & Marks, 2000). Cronbach’s alpha was 0.73 for time 1, 0.74 for time 2, 0.79 for time 3, and 0.83 for time 4.

Education. To obtain information about women’s education, the following question was asked: “What is the highest level of education you have completed?” Those women who earned an associate’s degree or higher were considered to have a high level of education and, whereas those women who obtained a trade degree or lower were

considered to have a low level of education. The higher educated women were coded “1” and the lower educated women were coded “0.” The sample of 302 working women was obtained by using a stratified random sampling and the sample was stratified based on education level and race. Hence, women included in the original study either had an associate’s degree or higher or trade degree or lower.

Family-friendly workplace policies. This construct was measured at the time of intake and consisted of thirteen items (sample item: “Is there paid time-off available in your workplace?”). A new variable was created by computing the average of these thirteen items. Higher values indicated the greater availability of family-friendly workplace policies, whereas lower values indicated smaller availability of family-friendly workplace policies. Each item had yes/no response options. The fact that the value of Cronbach’s alpha was 0.80, indicates that this scale effectively measured the construct of family-friendly workplace policies.

Marital status. To gain information about women’s current marital status, the following question was asked: “Are you married, currently living as married, separated or divorced, widowed, or never married?” This variable was recoded into a dichotomous variable consisting of two categories, such as “married” and “single”. The variable of marital status was measured at four time points. In the current study, this variable was taken from time 1.

Race. The question about women’s race included in the questionnaire was: “Do you consider yourself to be African American or White?” The current study included only White and African American women. African American women were coded ‘0’ and

White women were coded '1' in the dataset. Those women who refused to mention their race or identified themselves other than African American or White were excluded from the sample in the original study based on inclusion and exclusion criteria.

Age. Age was an open-ended question. The question about age included in the questionnaire was: "What is your age?" The variable of age was measured in number of years. This variable was measured at time 1.

Results

The three hypothesized models (see Figure 1) were tested using a path analytic technique in AMOS (Byrne, 2010). The path analysis technique was carried out to test the direct effects (Lee et al., 2014) of a nonstandard work schedule and relationship quality on work-family balance and indirect effects through work-to-family spillover and family-to-work spillover (Schumacker & Lomax, 2010). There were three separate multi-group analyses carried out: model 1 used education as the moderator, model 2 used family-friendly workplace policies, and model 3 used race. All other variables were consistent across models, including age and marital status measured at time 1, which were used as control variables while the variable of race was changed from a control variable to a moderating variable in the third multi-group analysis. It is worth mentioning that the variables concerning number of children and age of children were important variables in the context of the current study. These variables were included in the preliminary analysis but there were not associations found between the number of children and age of children with the endogenous variables. Hence, these variables were excluded from the current study to make the analysis more parsimonious.

For these models, the exogenous variables were time 1 nonstandard work schedule and relationship quality; the endogenous variables were positive work-to-family spillover, positive family-to-work spillover, and work-family balance. The work-to-family spillover and family-to-work spillover were the average of time 2 and time 3, whereas the variable of work-family balance was taken from time 4. The average of work-to-family spillover and family-to-work spillover was taken to capture both time periods and utilize maximum information from the available data to test the current model instead of leaving time 2 (which may reduce the utility of the longitudinal data by losing one time period from the data) or time 3 (which may result as a confounding factor and impact the results; Schumacker & Lomax, 2010). The work-family balance variable measured at time 1, time 2, and time 3 was controlled for in all three models to account for the autocorrelation. Use of such procedures to specify the models made the findings of the current study stronger and maximized the utilization of the longitudinal data.

For each analysis, the first model run was the unconstrained model using the maximum likelihood estimation method (Lee et al., 2014). This estimation method is appropriate because it provides the best guess of the unknown parameters of the model, which leads to the precise inference (Byrne, 2010). Initially, fully unconstrained models with all parameters, including correlations, causal paths, and error terms included, were tested (Schumacker & Lomax, 2010). After testing the initial model, the non-significant paths between exogenous and control variables were trimmed to achieve the most parsimonious model and increase sample power (Byrne, 2010). All paths, including those that were non-significant, from exogenous variables to endogenous variables, were

retained in the model to maintain theoretical consistency. The values of other fit indices also were improved after trimming the non-significant paths, which helped the researcher to achieve the best model (Byrne, 2010; Schumacker & Lomax, 2010). The endogenous variables (work-to-family spillover and family-to-work spillover) were correlated in the model because based on the theory and existing literature; these variables were conceptually correlated (Dawn et al., 2011). Those mediators were endogenous, which means they were outcomes in the model as well. Correlating the error terms, however, was essentially correlating the two variables. In essence, I was correlating the variance of the two variables (Schumacker & Lomax, 2010). The reason for controlling the correlation between positive work-to-family spillover and family-to-work spillover was to model these two variables according to the theory and the existing literature.

According to bioecological theory, proximal processes function in the immediate environment (e.g., work and family), which creates positive spillover effects for working mothers (Bronfenbrenner, 1994). Positive work-to-family spillover occurs due to mothers' positive experiences in the workplace, whereas positive family-to-work spillover happens due to mothers' positive experiences in the home. Although these two constructs are different they are associated with one another since work and family are two microsystems that connect in a mesosystem (Bronfenbrenner, 2005a). Existing studies also showed associations between positive work-to-family spillover and family-to-work spillover (Curran et al., 2015; Grice et al., 2011). Hence, it was essential to control for their correlation to examine their unique mediating effects between

relationship quality and work-family balance, and between a nonstandard work schedule and work-family balance.

To test whether the effect of relationship quality on work-family balance through family-to-work spillover is significantly different from zero, a Sobel test (Baron & Kenny, 1986; Goodman, 1960; Sobel, 1982) for the significance of mediation was used. For this purpose, I used a Sobel calculator available at (<http://www.danielsoper.com/statcalc/calculator.aspx?id=31>). The values of beta and standard error of path a (i.e., from relationship quality to family-to-work spillover) and path b (i.e., from family-to-work spillover to work-family balance) were entered into a Sobel calculator. For the test of moderation based on the grouping variables (i.e., education level, family-friendly policies, and race), a chi-square difference test developed by Kenny (2013) was used for both the overall moderation test and path-by-path moderation test. The same procedure was conducted for all three models. Comparative model testing also was conducted to assess the moderation based on grouping variables through which the chi-square change at a significant level ($p < 0.05$) between the constrained and unconstrained models was compared. The change resulted from reduction in degree of freedom (Kenny, 2013). This helped the researchers to assess if the change in the chi-square was appropriate given the reduction in the degree of freedom and significance level for the unconstrained model to be significantly different from the constrained model.

Model 1

The first multi-group analysis (see table 3) was run based on education level. Group 1 consisted of working mothers who had trade degrees or lower and group 2 contained those working mothers who had associate's degrees or higher. The unconstrained model was over-identified since the degree of freedom was 28 and the number of distinct sample moments was greater than the number of distinct parameters to be estimated. All fit indices, which are commonly used to assess whether the theoretical model fits with the data, were appropriate (GFI = .96; CFI = .94; RMSEA = .05; AIC = 136.71). The values of fit indices indicated that the current theoretical model was best fit with the data (Byrne, 2010). These indices also were considered important measures for model fit and used in previous studies (Lee et al., 2014). Particularly, the comparative fit (CFI measure is commonly used when two models are compared, which was the case in the current study that compared two models. The estimated value of CFI greater than 0.90 showed that the current hypothesized model was a good fit with the data. Probably most important in moderated model testing is the chi-square difference test, since the detection of differences across groups is more important than simple model fit. Those results are presented below.

In group 1, for the first group (i.e., trade degrees or lower), there was a significant positive relationship between relationship quality and positive family-to-work spillover ($\beta = .32, p < .001$), accounting for 12% of the variance. This was the only significant relationship in group 1 of this model. In group 2, there was a significant positive relationship between relationship quality and positive family-to-work spillover ($\beta = .26,$

$p < .001$). There also was a significant positive relationship between the positive family-to-work spillover and work-family balance ($\beta = .22, p = .02$). The two paths from relationship quality to positive family-to-work spillover and from positive family-to-work spillover to work-family balance were significant, which showed that positive family-to-work spillover might mediate the relationship between relationship quality and work-family balance (Kenny, 2008). Relationship quality explained 8.7% variance for family-to-work spillover and 13% variance for work-family balance through family-to-work spillover for working mothers who have associate degrees or higher. According to the results of Sobel's test, no significant mediation effect of family-to-work spillover was found between relationship quality and work-family balance ($t = 1.16, p = .25$).

Next, a fully constrained model was run that constrained all paths to be equal across the two groups (Schumacker & Lomax, 2010). After running these models, the values of chi-square and degree of freedom from the unconstrained $\chi^2(28, 302) = 48.71, p = .01$ and constrained $\chi^2(38, 302) = 54.78, p = .04$ models were taken and entered into a chi-square difference test developed by Kenny (2013). The results of the chi-square difference test indicated that the two education groups of working mothers were not significantly different, $\chi^2(10, 302) = 6.08, p = .81$ (see Table 4). That is, these work-family processes appear to work similarly across groups, meaning education did not moderate the overall model. To analyze whether these two groups were significantly different for any individual path in the model, a path-by-path analysis was conducted. The chi-square threshold was fixed to 95% confidence interval, which showed a value of 52.55. After constraining each path to be equal for both groups, the chi-square values

were compared with this threshold. If the chi-square value was found to be greater than 52.55 for any path, then this indicated that the groups were significantly different for that particular path. The results of path-by-path analysis showed that the groups were not significantly different for any of the paths.

Model 2

The second multi-group analysis was based on the availability of family-friendly policies in the workplace (see table 5). The first group represented those working mothers who did not have family-friendly policies available in their workplace and the second group consisted of those working mothers who had family-friendly policies available in the workplace. The model was over-identified, as the degree of freedom was 28 and the number of distinct sample moments was greater than the number of distinct parameters to be estimated. The values of fit indices were also appropriate (GFI = .96; CFI = .93; RMSEA = .05; AIC = 144.15), which showed the current theoretical model was the best fit with the data.

For the first group (those without family-friendly policies), there was a significant positive relationship between relationship quality and positive family-to-work spillover ($\beta = .27, p < .001$). No other paths were significant. The relationship quality explained 14% variance for family-to-work spillover and 15% variance for work-family balance through family-to-work spillover for the first group. In the second group (those with family-friendly policies), there was a significant positive relationship between relationship quality and work-to-family spillover ($\beta = .15, p = .04$). The relationship quality had a significant positive relationship with family-to-work spillover ($\beta = .28, p$

<.001). There also was a significant positive relationship between the positive family-to-work spillover and work-family balance ($\beta = .21, p = .04$). The two paths from relationship quality to family-to-work spillover and from family-to-work spillover to work-family balance were significant, which suggests a possible mediation effect of positive family-to-work spillover. According to the results of Sobel's test, a significant mediation effect of family-to-work spillover was found between relationship quality and work-family balance ($t = 2.29, p = .02$). The relationship quality accounted for 8% and 2.3% variances for family-to-work spillover and work-to-family spillover, whereas it explained 15% variance for work-family balance through family-to-work spillover for the second group.

To test the moderation effects based on family-friendly policies (i.e., family-friendly policies are not available versus family-friendly policies are available), the chi-square values of the unconstrained $\chi^2(28, 302) = 56.15, p = .01$ and constrained $\chi^2(38, 302) = 78.10, p < .001$ models were estimated (Kenny, 2013). The results indicated that the two groups of working mothers were significantly $\chi^2(10, 302) = 21.95, p = .02$ different from each other at the model level based on family-friendly workplace policies. After this, a path-by-path analysis was conducted (see table 6). The chi-square threshold was fixed to 95% confidence interval, which showed a value of 59.99. If the chi-square value was found to be greater than 59.99 for any path, then this indicated that the groups were significantly different for that particular path. The results illustrated that the groups were significantly different for the paths from age to family-to-work spillover $\chi^2(29, 302) = 65.45, p < .001$ and from family-to-work spillover to work-family balance $\chi^2(29,$

302) = 60.55, $p < .001$. That is, these work-family processes appear to work differently across groups, meaning family-friendly policies moderated two paths in the model. This implies that older working mothers who worked in a workplace where family-friendly policies were available experienced work-family balance differently than those older working mothers who did not have family-friendly policies available in the workplace. Additionally, the way positive family-to-work spillover increased work-family balance for those working mothers who had family-friendly policies available in the workplaces was different from those who did not have family-friendly policies available in the workplaces.

Model 3

The third multi-group analysis was based on race (see table 7). The first group represented African American mothers and the second group consisted of White mothers. The model was over-identified, as the degree of freedom was 20 and the number of distinct sample moments was greater than the number of distinct parameters to be estimated. The values of fit indices were appropriate (GFI = .98; CFI = .98; RMSEA = .03; AIC = 91.82), which showed that the theoretical model was a good fit with the data. In group 1, there was a significant positive relationship between relationship quality and positive family-to-work spillover with all other paths non-significant ($\beta = .27, p = .01$). Relationship quality accounted for 10% variance for family-to-work spillover for the first group. In group 2, there was a significant positive relationship between relationship quality and family-to-work spillover ($\beta = .32, p < .001$). There also was a significant positive relationship between family-to-work spillover and work-family balance ($\beta =$

.24, $p = .02$). The two paths from relationship quality to family-to-work spillover and from family-to-work spillover to work-family balance were significant, which suggests a possible mediation effect of family-to-work spillover between relationship quality and work-family balance. According to the results of Sobel's test, a significant mediation effect of family-to-work spillover was found between relationship quality and work-family balance among White mothers only ($t = 3.06$, $p = .002$). The relationship quality explained 13% variance for family-to-work spillover and 12% variance for work-family balance through family-to-work spillover for the second group.

For the test of moderation, the values of unconstrained $\chi^2(18, 302) = 15.82$, $p = .61$ and constrained $\chi^2(28, 302) = 22.52$, $p = .76$ models were estimated (Kenny, 2013). The results indicated that the groups of working mothers were not significantly $\chi^2(10, 302) = 6.7$, $p = .75$) different at the model level, based on race. Accordingly, a path-by-path analysis was carried out (see table 8). The chi-square threshold was fixed to 95% confidence interval, which showed a value of 19.66. If the chi-square value was found to be greater than 19.66 for any path, then this indicated that the groups were significantly different for that particular path. According to the results, the groups were not significantly different for any of the paths in the model. That is, these work-family processes appear to work similarly across groups, indicating that race did not moderate any path in the model.

Discussion

It has become difficult for working mothers to achieve a healthy work-family balance in the current diverse societies and dynamic workplaces (Bianchi & Milkie,

2010; Hoffman, 1987; Perry-Jenkins, Repetti, & Crouter, 2000). Researchers have studied work-family balance for decades, but the mediating roles of family-to-work and work-to-family spillover that potentially can improve work-family balance are understudied (Bakker et al., 2009; McAllister et al., 2012). Most studies in this area have been based on cross-sectional data, and researchers lacked the ability to directly test the temporal structure of work-family balance (Dawn et al., 2011; Lee et al., 2014). It also is important to study these relationships in a contextualized way that accounts for factors such as education, family-friendly policies, and race (Lee et al., 2014; McAllister et al., 2012). To address these gaps, the current study tested three moderated-mediating models, grounded in bioecological theory (Bronfenbrenner & Evans, 2000), to examine the mediating relationship of positive work-to-family spillover and family-to-work spillover in the relationships between a nonstandard work schedule and work-family balance, and between relationship quality and work-family balance of working mothers, as moderated by education level, family-friendly workplace policies, and race.

The overall findings indicated that relationship quality was important for all groups of working mothers across each model and helped create positive family-to-work spillover. In addition, the moderation effect was found only for the advantaged/privileged group of working mothers. In the current study, relationship quality was operationalized as a measure of proximal processes, which are central to individuals' development and should impact the outcome (i.e., work-family balance, work-to-family spillover, and family-to-work spillover; Bronfenbrenner, 1994; Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 2006). These results are consistent with theory

(Bronfenbrenner & Morris, 2006) and previous research (Fauth, Roth, & Brooks-Gun, 2007; Urban, Lewin-Bizan, & Lerner, 2009). These existing studies also showed that progressively more complex individuals' reciprocal interactions with persons and objects in the immediate environment, which continue on a regular basis and for extended periods of time, stimulate the functioning of proximal processes, which ensures individuals' development. However, most of the studies used samples of children or adolescents.

According to bioecological theory, proximal processes are the function of individuals' characteristics and the context (Bronfenbrenner, 1995a; Bronfenbrenner, 1995b), which means that proximal processes are more likely dependent on individuals' characteristics and the context (Bronfenbrenner & Morris, 1998). The current findings indicated that proximal processes tend to have an independent effect on the outcome. However, it also is important to examine the individual influence of proximal processes, which is created through a progressively more complex reciprocal relationship on the outcome under study, such as work-family balance. According to "The Ecology of Justice," in the reciprocal interaction of an individual with persons, objects, and symbols in the immediate context, the characteristics of all individuals who are actively involved in the reciprocal interaction are important, instead of the only individual who is under-studied, a fact which may influence the functioning of proximal processes. For instance, in a two-parent family, the reciprocal interactions between parents (mother and father) with the child are important to consider along with their individual influences in the interactions to better examine the functioning of proximal processes. Research has shown

that a family is a whole rather than a sum of its individual units (Schaeperkoetter, Bass, & Gordon, 2015). If one person, or unit, is affected, it affects the whole family (Karakurt & Silver, 2014). Hence, the characteristics of all individuals who are actively involved in reciprocal interactions with the developing individual under consideration can influence the functioning of proximal processes. These interactions also may vary based on different levels of fairness and equity. For instance, researchers found that, due to parents' unequal treatment among siblings and preference of one child over another, the secondary child experienced negative social and academic outcomes (Brim, 1958; Butcher & Case, 1994; Parish & Willis, 1993; Powell & Steelman, 1990). According to bioecological theory, proximal processes also are the function of the outcome under consideration (Bronfenbrenner, 1999), which means that the functioning of proximal processes depends on the nature of the outcome under consideration (Bronfenbrenner, 1994). However, it also is imperative to investigate whether proximal processes may affect the outcome under study, so that there might be either correlation or causation between proximal processes and the outcome under consideration; this is as yet unknown, and needs further empirical testing in future studies.

It is important to mention that these propositions or assumptions of “The Ecology of Justice” require empirical testing and evidence to support them in future studies. Interestingly, education level (trade degrees or lower versus associate’s degrees or higher) and race (African American versus White) were not significant moderators, although some paths in those models differed across groups in meaningful ways, unlike the consistent impact of relationship quality discussed above (Schumacker & Lomax,

2010). The presence or absence of family-friendly policies did produce a moderating model effect (Byrne, 2010). The path-by-path analysis found that these groups were significantly different based on the path that goes from family-to-work spillover to work-family balance (Kenny, 2008). Moreover, most of the paths in all three models were not significant, except one (relationship quality to family-to-work spillover), which was consistently significant in all three models and across all groups (Kenny, 2013). Another path (from family-to-work spillover to work-family balance) also was consistently significant across models, but only for the more advantaged and privileged group in each model. Below are some of the specific findings within each model.

In model 1, for those mothers who had a trade degree or lower, the path between relationship quality and positive family-to-work spillover was significant. In comparison, for those mothers who had an associate's degree or higher, the paths from relationship quality to positive family-to-work spillover and from family-to-work spillover to work-family balance were significant. However, the results of Sobel's test showed that the indirect effects of relationship quality on work-family balance through family-to-work spillover did not support mediation (Baron & Kenny, 1986; Goodman, 1960; Sobel, 1982). Further, these relationships did not differ based on the education level of working mothers. According to bioecological theory, proximal processes are central to individuals' development (Bronfenbrenner & Morris, 1998). In the current study, relationship quality is used as a proxy for proximal processes and was expected to directly increase family-to-work spillover and directly or indirectly increase work-family balance (Bronfenbrenner, 1994). Support for the related hypotheses was mixed;

some were consistent with theory and prior research while others were not (Curran et al., 2015), especially the absence of a moderating effect by education level. The results depicted that relationship quality may play an important role in the functioning of proximal processes, leading to an increase in all mothers' positive family-to-work spillover, but leading further to enhanced work-family balance only for mothers with higher levels of education. This finding suggests that a better relationship quality provides an effective source of reciprocal interactions between mothers and their spouses/partners, which stimulates the functioning of proximal processes. Better functioning of proximal processes creates positive family-to-work spillover for both groups of working mothers, but it becomes more helpful for highly educated mothers as its effects indirectly increase work-family balance through family-to-work spillover for highly educated working mothers.

Also, relationship quality did not have an independent effect on work-to-family spillover, which may be possible as I controlled for the correlation between work-to-family spillover and family-to-work spillover. This is an important finding, which illustrates that relationship quality only creates positive family-to-work spillover when the correlation between work-to-family spillover and family-to-work spillover is controlled for. Researchers found that the constructs of work-to-family spillover and family-to-work spillover are associated, and therefore one affects the other (Dawn et al., 2011; Lee et al., 2014). However, the current finding depicted that when I controlled for their association, the positive effects of proximal processes produced through relationship quality do not affect work-to-family spillover. This indicates that to create work-to-

family spillover, there may be other proximal processes that need to function in the workplace, through support from a supervisor or coworkers' (Carlson et al., 2013; Dawn et al., 2011; Grice et al., 2011; Kelly et al., 2014; Perry-Jenkins, Smith, Goldberg, & Logan, 2011; Swanberg, McKechnie, Ojha, & James, 2011). This explanation is acknowledged in "The Ecology of Justice," which discusses mesoprocesses.

Mesoprocesses connect two proximal processes that may affect individuals' work–family balance. It is worth mentioning that these propositions or assumptions of "The Ecology of Justice" need empirical testing and evidence to support them in future studies.

In addition, the nonstandard work schedule did not have any effect on either work–to–family spillover or family–to–work spillover, which is consistent with the bioecological theory, which explains that if the proximal processes do not receive an appropriate environment, their functioning may be limited or move in a negative direction (Bronfenbrenner & Morris, 1998, 2006). The lack of significant findings suggests a nonstandard work schedule may not provide an adequate source to promote the functioning of proximal processes.

In model 2, for those working mothers without family-friendly policies available, only the link between relationship quality and positive family–to–work spillover was significant. In contrast, for those working mothers who had family-friendly policies available in the workplace, family–to–work spillover mediated the relationship between relationship quality and work–family balance (Kenny, Kashy, & Bolger, 1998). These results showed that the availability of family-friendly policies promoted the mediating role of family–to–work spillover between relationship quality and work–family balance.

In other words, family-friendly policies helped working mothers to bring positive effects from work to home through work-to-family spillover, which results in increased relationship quality that creates family-to-work spillover for them (Lawson et al., 2014).

As discussed earlier, it is possible that work-family spillover was created due to an ongoing proximal process in the workplace, since relationship quality did not directly increase positive work-to-family spillover for working mothers. However, the context of family-friendly policies can create the link between relationship quality and work-family spillover, which is also consistent with bioecological theory, as proximal processes are the function of immediate and remote contexts (Bronfenbrenner, 1995a; Bronfenbrenner, 2005a; Bronfenbrenner & Morris, 2006). Researchers found that the availability of family-friendly workplace policies created a positive perception among employees about their workplace (Wu et al., 2013). Even for employees who do not avail themselves of these policies, the presence of such policies can promote a positive perception, thereby increasing employees' positive work-to-family spillover (Munn, 2013). This might be a way employers can promote organizational citizenship behaviors and increase productivity (Banerjee & Perrucci, 2012).

Researchers also found that family-friendly policies in the workplace were one of the important workplace resources for working mothers (Wu et al., 2013). Employees maintained a healthy work-family balance when they received organizational support and a supportive workplace culture, which were created by family-friendly policies (Munn, 2013). The results of the current study are similar to those by Banerjee and Perrucci (2012), who found that it was primarily the organizational policies that benefited

employees because these effects remained supportive in the workplace when supervisor and co-worker support were controlled for. Family-friendly policies created a positive mood for employees, especially working mothers, and helped them maintain a healthy work–family balance (Lawson et al., 2014). The findings indicate that the availability of family-friendly policies as context may also directly affect the outcome or magnify the functioning of proximal processes.

In model 3, the path from relationship quality to positive family–to–work spillover was significant for both African American and White working mothers, whereas the path from positive family–to–work spillover to positive work–family balance was significant only for Whites. No other paths were significant and no moderation was present for the overall model or for individual paths. Accordingly, race did not appear to statistically influence the overall work–family processes among this sample. However, family–to–work spillover mediated the relationship between relationship quality and work–family balance only for White mothers, a fact which suggests a meaningful difference (Kenny et al., 1998). For both groups of working mothers, proximal processes functioned through relationship quality and created positive family–to–work spillover, but for White working mothers, these positive family–to–work spillover effects helped working mothers to improve their work–family balance.

According to bioecological theory, proximal processes also are the function of an outcome under consideration (Bronfenbrenner & Morris, 1998). For instance, if an outcome is related to more developmental capability, then proximal processes are more likely to make a positive impact for more advantaged or privileged groups of the

population living in a more stable environment (Bronfenbrenner & Morris, 2006). Work–family balance may improve the development of working mothers and thereby contains developmental competence. Hence, the current findings indicated that proximal processes which occurred through better relationship quality helped White working mothers to improve their work–family balance by creating positive family–to–work spillover. Researchers also found that the impact of proximal processes also depended on the context and the nature of the outcome under consideration (Fauth et al., 2007; Urban et al., 2009). Research also showed that White working mothers are more advantaged than African American working mothers in terms of having higher levels of education (Crowley, 2013), being less likely to work on a nonstandard work schedule (Grzywacz et al., 2011; Grzywacz, Tucker, Clinch, & Arcury; 2010; Odom, Vernon-Feagans, & Crouter, 2013), and being more likely to work in workplaces that consider the importance of maintaining a healthy work–family balance for their employees and carry out specific programs or interventions to help employees balance their work–family life (Kelly et al., 2014). Therefore, proximal processes help White working mothers to improve their work–family balance by creating positive family–to–work spillover more so than for African American working mothers.

Limitations

There are some limitations of the current study. First, since the current study used secondary data, there were no direct assessments of proximal processes available for use. Therefore, two variables (relationship quality and nonstandard work schedule) were selected from the dataset and used as proxies to operationalize proximal processes, which

might not have resonated with the true definition and operationalization of proximal processes (Bernal, Mittag, & Qureshi, 2016). Second, the current study was based on self-reported data, which can lead to a response bias as well as other biased estimates (Remler & Van Ryzin, 2011). Third, the element of self-selection involved limited the researchers' ability to examine full causation even though longitudinal data was used in the current study (Remler & Van Ryzin, 2011). Fourth, the modified scale of work–family balance was used, which might have associated with other variables differently. Fifth, the reliability of the work–family balance scale also was marginally less than 0.7, which resulted in an increased measurement error and influenced the precision of estimates. Despite these limitations, the current study suggests important links exist between relationship quality, both types of spillover, and work–family balance. More important, it appears that family-friendly policies play a critical role in creating a context that promotes the positive influence of relationship quality on work–family balance through family–to–work spillover, whereas the absence of such organization policies do not allow the positive influences to flow through and impact work–family balance.

Future Directions

Future research should seek to improve upon the current limitations to advance the field and further our understanding of work–family dynamics and how they may vary across groups and contexts, especially policy contexts. Appropriate measures should be developed to operationalize proximal processes that may help researchers to collect data on mothers' reciprocal interactions with person, objects, and symbols in the immediate external environment. It would be important to use bioecological theory as a framework

in the development of such measures in future work–family balance studies. Data from multiple sources, dyadic data, and observational data would be useful to better understand the dynamics of proximal processes. In addition, future research should also focus on finding potential resources for working mothers in the work and family domains, which may create positive work–to–family and family–to–work spillovers for them. The use of relational data and social network analysis tools would be potentially useful to identify helpful resources for working mothers in the workplace and at home. Community-level resources should also be explored in future studies in the context of creating positive spillover effects for working mothers.

References

- Adamsons, K., O'Brien, M., & Pasley, K. (2007). An ecological approach to father involvement in biological and stepfather families. *Fathering, 5*, 129-147.
doi:10.3149/fth.0502.129
- Bakker, A., Demerouti, E., & Burke, R. (2009). Workaholism and relationship quality: A spillover-crossover perspective. *Journal of Occupational Health Psychology, 14*(1), 23-33. doi:10.1037/a0013290
- Banerjee, D., & Perrucci, C. C. (2012). Employee benefits and polices: Do they make a difference for work/family conflict? *Journal of Sociology & Social Welfare, 39*, 131-147.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Bernal, P., Mittag, N., & Qureshi, J. A. (2016). Estimating effects of school quality using multiple proxies. *Labour Economics, 39*, 1-10. doi:10.1016/j.labeco.2016.01.005
- Bianchi, S. M., & Milkie, M. A. (2010). Work and family research in the first decade of the 21st century. *Journal of Marriage and Family, 72*, 705-725.
doi:10.1111/j.1741-3737.2010.00726.x
- Bianchi, S. M., Robinson, J. P., & Milkie, M. A. (2006). *Changing rhythms of American family life*. New York, NY: Russell Sage Foundation.

- Blocklin, M., Crouter, A. C., & McHale, S. M. (2012). Youth supervision while mothers work: A daily diary study of maternal worry. *Community, Work, & Family, 15*, 233-249.
- Boyar, S. L., Carson, C. M., Mosley, D. C., Maertz, C. P., & Pearson, A. W. (2006). Assessment of the validity of Netemeyer et al.'s (1996) WFC and FWC scales. *International Journal of Conflict Management, 17*(1), 34-43.
- Brim, O. G. (1958). Family structure and sex role learning by children: A further analysis of Helen Koch's data. In Caspi, J. (Ed.), *Sibling development: Implications for mental health practitioners* (pp. 147-165). New York, NY: Springer.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments in nature and design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husen & T. N. Postlethwaite (Eds.), *International encyclopedia of education* (2nd ed., Vol. 3, pp. 1643-1647). Oxford, UK: Pergamon Press.
- Bronfenbrenner, U. (1995a). The bioecological model from a life course perspective: Reflections of a participant observer. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 599-618). Washington, DC: American Psychological Association.
- Bronfenbrenner, U. (1995b). Developmental ecology through space and time: a future perspective. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in*

context: Perspectives on the ecology of human development (pp. 599-618).

Washington, DC: American Psychological Association.

Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational models. In S. L. Friedman & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 3-28).

Washington, DC: American Psychological Association.

Bronfenbrenner, U. (2005a). The bioecological theory of human development. In U. Bronfenbrenner (Ed.), *Making human beings human: Bioecological perspectives on human development* (pp. 3-15). Thousand Oaks, CA: Sage. (Original work published in 2001).

Bronfenbrenner, U. (2005b). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage Publications.

Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, *101*, 568-586. doi:10.1037/0033-295X.101.4.568

Bronfenbrenner, U., & Crouter, A. C. (1982). Work and family through time and space. In S. Kamerman & C. D. Hayes (Eds.), *Children in a changing world* (pp. 39-83). Washington, DC: National Academy Press.

Bronfenbrenner, U., & Evans, G. W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development*, *9*(1), 115-125. doi:10.1111/1467-9507.00114

- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology, Vol. 1: Theoretical models of human development* (5th ed., pp. 993-1023). New York, NY: Wiley.
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Theoretical models of human development* (6th ed., pp. 793-828). New York, NY: Wiley.
- Butcher, K., & Case, A. (1994). The effect of sibling sex composition on women's education and earnings. *Quarterly journal of Economics*. In Caspi, J. (Ed.), *Sibling development: Implications for mental health practitioners* (pp. 147-165). New York, NY: Springer.
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. New York, NY: Routledge.
- Carlson, D. S., Grzywacz, J. G., & Kacmar, K. M. (2010). The relationship of schedule flexibility and outcomes via the work-family interface. *Journal of Managerial Psychology*, 25, 330-3355. doi:10.1108/02683941011035278
- Carlson, D. S., Kacmar, K. M., Grzywacz, J. G., Tepper, B., & Whitten, D. (2013). Work-family balance and supervisor appraised citizenship behavior: The link of positive effect. *Journal of Behavioral and Applied Management*, 14, 87-106.

- Crowley, J. E. (2013). Perceiving and responding to maternal workplace discrimination in the United States. *Women's Studies International Forum, 40*, 192-202.
doi:10.1016/j.wsif.2013.08.001
- Curran, M., McDaniel, B., Pollitt, A., & Totenhagen, C. (2015). Gender, emotion work, and relationship quality: A daily diary study. *Sex Roles, 73*, 157-173.
doi:10.1007/s11199-015-0495-8
- Davis, K. D., Goodman, W. B., Pirretti, A. E., & Almeida, D. M. (2008). Nonstandard work schedules, perceived family well-being, and daily stressors. *Journal of Marriage and Family, 70*, 991-1003.
- Dawn, S. C., Ferguson, M., Kacmar, K. M., Grzywacz, J. G., & Whitten, D. (2011). Pay it forward: The positive crossover effects of supervisor work-family enrichment. *Journal of Management, 37*, 770-789. doi:10.1177/0149206310363613
- Ettner, S. L., & Grzywacz, J. G. (2001). Workers' perceptions of how jobs affect health: An ecological perspective. *Journal of Occupational Health Psychology, 6*, 101-113.
- Families and Work Institute (2008). *National study of the changing workforce*. New York, NY: The Institute.
- Fauth, R. C., Roth, J. L., & Brooks-Gun, J. (2007). Does the neighborhood context alter the link between youth's after-school time activities and developmental outcomes? A multilevel analysis. *Developmental Psychology, 43*, 760-777.

- Garr, M., & Tuttle, R. (2012). Shift work and work to family fit: Does schedule control matter? *Journal of Family and Economy Issues, 33*, 261-271.
doi:10.1007/s10834-012-9283-6
- Gassman-Pines, A. (2011). Low-income mothers' nighttime and weekend work: Daily association with child behavior, mother-child interactions, and mood. *Family Relations, 60*, 15-29. doi:10.1111/j.1741-3729.2010.00630.x
- Goodman, L. A. (1960). On the exact variance of products. *Journal of the American Statistical Association, 55*, 708-713.
- Grice, M. M., McGovern, P. M., Alexander, B. H., Ukestad, L., & Hellerstedt, W. (2011). Balancing work and family after childbirth: A longitudinal analysis. *Women's Health Issues, 21*(1), 19-27. doi:10.1016/j.whi.2010.08.003
- Grzywacz, J. G. & Marks, N. F. (2000). Reconceptualizing the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology, 5*, 111-126.
- Grzywacz, J. G., Daniel, S. S., Tucker, J., Walls, J., & Leerkes, E. (2011). Nonstandard work schedules and developmentally generative parenting practices: An application of propensity score technique. *Family Relations, 60*, 45-59.
doi:10.1111/j.1741 3729.2010.00632.x
- Grzywacz, J. G., Tucker, J., Clinch, C. R., & Arcury, T. (2010). Individual and job related variation in infant feeding practices among working mothers. *American Journal of Health Behavior, 34*, 186-196.

- Grzywacz, J. G., Crain, A. L., Martinson, B. C., & Quandt, S. A. (2014). Job design and ethnic differences in working women's physical activity. *American Journal of Health Behavior, 38*(1), 63-73. doi:10.5993/AJHB.38.1.7
- Haslam, D., Patrick, P., & Kirby, J. (2015). Giving voice to working mothers: A consumer informed study to program design for working mothers. *Journal of Child & Family Studies, 24*, 2463-2473. doi:10.1007/s10826-014-0049-7
- Hoffman, L. W. (1987). The effects on children of maternal and paternal employment. In Naomi, G. & Harriet. G. (Eds.), *Families and work*. Philadelphia, PA: Temple University Press.
- Kalil, A., Dunifon, R., Crosby, D., & Su, J. H. (2014). Work hours, schedules, and insufficient sleep among mothers and their young children. *Journal of Marriage and Family, 76*, 891-904. doi:10.1111/jomf.12142
- Karakurt, G., & Silver, K. E. (2014). Therapy for childhood sexual abuse survivors using attachment and family systems theory orientations. *American Journal of Family Therapy, 42*(1), 79-91. doi:10.1080/01926187.2013.772872
- Kelly, E. L., Moen, P., Oakes, J. M., Fan, W., Okechukwu, C., Davis, K. D., Hammer, L. B., Kossek, E. E., Kind, R. B., Hanson, G. C., Mierzwa, F., & Casper, L. M. (2014). Changing work and work-family conflict: Evidence from the work, family, and health network. *American Sociological Review, 79*, 485-518. doi:10.1177/0003122414531435

- Kenny, D. A. (2008). Reflections on mediation. *Organizational Research Methods, 11*, 353-358. doi:10.1177/1094428107308978
- Kenny, D. A. (2013). Issues in the measurement of judgmental accuracy. In S. Baron-Cohen, H. Tager-Flusberg, & M. Lombardo (Eds.), *Understanding other minds* (3rd ed., pp. 104-116), Oxford, UK: Oxford University Press.
- Kenny, D. A., Kashy, D., & Bolger, N. (1998). Data analysis in social psychology. In D. Gilbert, S. Fiske, and G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 233-265).
- Kontopantelis, E., White, I. R., Sperrin, M., & Buchan, I. (2017). Outcome-sensitive multiple imputation: A simulation study. *BMC Medical Research Methodology, 171*, 1-13. doi:10.1186/s12874-016-0281-5
- Korkmaz, S., Goksuluk, D., & Zararsiz, G. (2014). MVN: An R package for assessing multivariate normality. *R Journal, 6*, 151-162.
- Lam, C. B., McHale, S. M., & Crouter, A. C. (2012). Division of household labor: Longitudinal changes and with-couple variations. *Journal of Marriage and Family, 74*, 944-952. doi:10.1111/j.1741-3737.2012.01007.x
- Lawson, K. M., Davis, K. D., Crouter, A. C., & O'Neill, J. W. (2013). Understanding work-family spillover in hotel managers. *International Journal of Hospitality Management, 33*, 273-281. doi:10.1016/j.ijhm.2012.09.003
- Lawson, K. M., Davis, K. D., McHale, S. M., Hammer, L. B., & Buxton, O. M. (2014). Daily positive spillover and crossover from mothers work to youth health. *Journal of Family Psychology, 28*, 897-907. doi:10.1037/fam0000028

- Lee, N., Zvonkovic, A. M., & Crawford, D.W. (2014). The impact of work family conflict and facilitation on women's perceptions of role balance. *Journal of Family Issues, 35*, 1252-1274. doi:10.1177/0192513X13481332
- Liu, H., Ngo, H.Y., & Cheung, F. M. (2015). Work-family enrichment and marital satisfaction among Chinese couples: A crossover-spillover perspective. *International Journal of Stress Management, 5*(1), 1-23. doi:10.1037/a0039753
- McAllister, S., Thornock, C. M., Hammond, J. R., Holmes, E. K., & Hill, E. J. (2012). The influence of couple emotional intimacy on job perceptions and work-family conflict. *Family and Consumer Sciences Research Journal, 40*, 330-347. doi:10.1111/j.1552-3934.2012.02115.x
- McMillan, L. W., O'Driscoll, M. P., & Brady, E. C. (2004). The impact of workaholism on personal relationships. *British Journal of Guidance & Counselling, 32*, 171-186. doi:10.1080/03069880410001697729
- Mullan, K., & Craig, L. (2010). Parenthood, gender and work-family time in the United States, Australia, Italy, France, and Denmark. *Journal of Marriage and Families, 72*, 1344-1361. doi:10.1111/j.1741-3737.2010.00769.x.
- Munn, S. L. (2013). Unveiling the work-life system: The balance of work-life balance on meaningful work. *Advances in Developing Human Resources, 15*, 401-417. doi:10.1177/1523422313498567
- Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict scales and family-work conflict scales. *Journal of Applied Psychology, 81*, 433-410.

- O'Brien, K. M., Ganginis Del Pino, H. V., Yoo, S., Cinamon, R. G., & Han, Y. (2014). Work, family, support, and depression: Employed mothers in Israel, Korea, and the United States. *Journal of Counseling Psychology, 3*, 461-472.
doi:10.1037/a0036339
- Odom, E.C., Vernon-Feagans, L., Crouter, A. C. (2013). Nonstandard maternal work schedule: Implication for African American children's early language outcomes. *Early Childhood Research Quarterly, 28*, 379-387.
- Parish, W., & Willis, R. (1993). Daughters, education, and family budgets: Taiwan experiences. In Caspi, J. (Ed.), *Sibling development: Implications for mental health practitioners (pp. 147-165)*. New York, NY: Springer.
- Perry-Jenkins, M., Newkirk, K., & Ghunney, A. K. (2013). Family work through time and space: An ecological perspective. *Journal of Family Theory & Review, 5*, 105-123. doi:10.1111/jftr.12011
- Perry-Jenkins, M., Repetti, R. L., & Crouter, A. C. M. (2000). Work and family in the 1990s. *Journal of Marriage and the Family, 62*, 981-998.
- Perry-Jenkins, M., Smith, J. Z., Goldberg, A.E., & Logan, J. (2011). Working-class jobs and new parents' mental health. *Journal of Marriage and Family, 73*, 1117-1132.
doi:10.1111/j.1741-3737.2011.00871.x
- Pew Research Center (2015). *How American parents balance work and family life when both work*. Retrieved from <http://www.pewresearch.org//search/?query=work-family%20conflict>

- Powell, B., & Steelman, L.C. (1990). Beyond sibship size: Sibling density, sex composition, and educational outcomes. *Social Forces*. In Caspi, J. (Ed.), *Sibling development: Implications for mental health practitioners* (pp. 147-165). New York, NY: Springer.
- Presser, H. B., & Ward, B.W. (2011). Nonstandard work schedules over the life course: A first look. *Monthly Labor Review*, 3, 3-16. Retrieved from <https://www.google.com/#q=non-standard+work+schedule+over+the+life+course>
- Remler, D. K., & Van Ryzin, G. G. (2011). *Research methods in practice: Strategies for description and causation*. Thousand Oaks, CA: Sage Publications.
- Repetti, R., Wang, S., & Saxbe, D. (2009). Bringing it all back home: How outside stressors shape families everyday lives. *Current Directions in Psychological Science*, 18, 106-111.
- Riggins-Caspers, K. M., Cadoret, R. J., Knutson, J. F., & Langbehn, D. (2003). Biology-environment interaction and evocative biology-environment correlation: Contributions of harsh discipline and parental psychopathology to problem adolescent behaviors. *Behavior Genetics*, 33, 205-220.
- Schaepkerkoetter, C. C., Bass, J. R., & Gordon, B. S. (2015). Student-athlete school selection: A family systems theory approach. *Journal of Intercollegiate Sport*, 8, 266-286.
- Schumacker, R. E., & Lomax, R. G. (2010). *A beginning's guide to structural equation modeling*. New York, NY: Routledge.

- Swanberg, J. E., McKechnie, S. P., Ojha, M. U., & James, J. B. (2011). Schedule control, supervisor support and work engagement: A winning combination for workers in hourly jobs? *Journal of Vocational Behavior, 79*, 613-624.
doi:10.1016/j.jvb.2011.04.012
- Symoens, S., & Bracke, P. (2015). Work-family conflict and mental health in newlywed and recently cohabiting couples: A couple perspective. *Health Sociology Review, 24*(1), 48-63. Retrieved from <http://search.proquest.com/docview/1687396712?accountid=12536>
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp.290-312). San Francisco: Jossey-Bass.
- Sok, J., Blomme, R., & Tromp, D. (2014). Positive and negative spillover from work to home: The role of organizational culture and supportive arrangements. *British Journal of Management, 25*, 456-472. doi:10.1111/1467-8551.12058
- Son, S., & Bauer, J.W. (2010). Employed rural, low-income, single mothers' family and work over time. *Journal of Family Economic Issues, 31*, 107-120.
doi:10.1007/s10834-009-9173-8
- Tudge, J. H., Mokrova, I., Hatfield, B. E., & Karnik, R. B. (2009). Uses and misuses of Bronfenbrenner's bioecological theory of human development. *Journal of Family Theory and Review, 1*, 198.
- United States Department of Labor (2013). *Employment characteristics of families*. Retrieved from http://www.bls.gov/opub/ted/2013/ted_20130430.htm

- Urban, J. B., Lewin-Bizan, S., & Lerner, R. M. (2009). The role of neighborhood ecological assets and activity involvement in youth developmental outcomes: Differential impacts of asset poor and asset rich neighborhoods. *Journal of Applied Developmental Psychology, 30*, 601-614.
doi:10.1016/j.appdev.2009.07.003
- Voydanoff, P. (2005). The effects of community demands, resources, and strategies on the nature and consequences of the work-family interface: An agenda for future research. *Family Relations, 54*, 583-595.
- Wattis, L., Standing, K., & Yerkes, M. A. (2013). Mothers and work-life balance: exploring the contradictions and complexities involved in work-family negotiation. *Community, Work & Family, 16*(1), 1-19.
doi:10.1080/13668803.2012.722008
- Wu, L., Rusyidi, B., Claiborne, N., & McCarthy, M. L. (2013). Relationships between work-life balance and job-related factors among child welfare workers. *Children and Youth Services Review, 35*, 1447-1454. doi:10.1016/j.childyouth.2013.05.017

Table 3.1

Descriptive Statistics of Measured Variables in the Model

Variables	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Work-family balance at time 1	302	2.00	5.00	3.75	0.55	-0.02	0.17
Work-family balance at time 2	302	1.67	5.00	3.76	0.55	-0.33	1.16
Work-family balance at time 3	302	1.00	5.00	3.73	0.58	-0.93	4.24
Work-family balance at time 4	302	2.00	5.00	3.75	0.54	-0.35	0.78
Work-to-family spillover at time 1	302	1.00	4.50	2.80	0.75	-0.03	-0.13
Work-to-family spillover at time 2	302	1.00	5.00	2.81	0.73	-0.02	0.46
Work-to-family-spillover at time 3	302	1.00	5.00	2.82	0.77	-0.22	0.11
Work-to-family spillover at time 4	302	1.00	5.00	2.81	0.80	-0.32	0.04
Family-to-work spillover at time 1	302	1.00	5.00	3.35	0.79	-0.42	0.12
Family-to-work spillover at time 2	302	1.00	5.00	3.35	0.74	-0.44	0.79
Family-to-work spillover at time 3	302	1.00	5.00	3.33	0.75	-0.45	0.82
Family-to-work spillover at time 4	302	1.00	5.00	3.25	0.76	-0.43	0.36
Relationship quality	302	2.00	7.00	5.82	0.90	-1.19	2.69
Workplace policies	302	0.00	13.00	7.73	2.83	-0.52	0.28
Age	302	24.00	49.00	35.77	5.90	0.10	-0.78

Table 3.2
Correlations of Measured Variables in the Model

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1.WFB_T1	-	.45**	.31**	.50**	.16**	.19**	.05	.16**	.17**	.16**	.13*	.20**	-.04	.11	-.04	-.07	.15**	.24**	.15**
2.WFB_T2		-	.54**	.43**	.10	.16**	.13*	.12*	.22**	.27**	.27**	.17**	-.01	.12*	-.08	-.03	.22**	-.15*	-.12*
3.WFB_T3			-	.47**	.03	.11	.22**	.13*	.22**	.28**	.43**	.15*	.08	.13*	-.03	-.05	.19**	-.11	-.07
4.WFB_T4				-	.03	-.01	.09	.18**	.21**	.15**	.24**	.27**	.02	.15*	-.14	-.04	.26**	.21**	-.10
5.WFS_T1					-	.54**	.56**	.56**	.33**	.25**	.20**	.25**	-.03	.01	.05	-.02	.03	.12*	.10
6.WFS_T2						-	.67**	.63**	.25**	.41**	.34**	.29**	-.02	.03	.16**	.06	.07	.15*	.04
7.WFS_T3							-	.62**	.23**	.32**	.45**	.29**	.05	.02	.18**	.06	.08	.16**	.07
8.WFS_T4								-	.34**	.31**	.34**	.50**	.01	-.01	.14*	.01	.06	.10	.11
9.FWS_T1									-	.58**	.55**	.54**	.01	.23*	-.06	.14*	.18**	-.07	-.03
10.FWS_T2										-	.59**	.60**	.05	.29*	.06	-.04	-.11*	-.05	-.01
11.FWS_T3											-	.52**	.04	.22*	.04	-.05	.16**	-.11	-.07
12.FWS_T4												-	.09	.26*	.06	-.07	-.14*	-.16*	-.11
13.NSW													-	-.01	-.06	.25**	-.08	-.14*	-.10
14.RQ														-	.04	-.08	-.02	.09	-.01
15.EDU															-	.09	.34**	.01	.23*
16.FFP																-	.14*	.06	.01
17.AGE																	-	.21**	.32**
18.RACE																		-	.38**
19.MS																			-

Note: * $p < .05$, ** $p < .001$; WFB = work-family balance; WFS = family-to-work spillover; FWS = family-to-work spillover; NSW = nonstandard work schedule; RQ = relationship quality; EDU = education level; FFP = family-friendly policies; MS = marital status

Table 3.3

Model 1 Path Coefficients by Education Level

Variables			Trade Degree or Lower			Associate Degree or Higher		
			<i>B</i>	<i>S.E.</i>	β	<i>B</i>	<i>S.E.</i>	β
WFS_T2T3	<--	Nonstandard work	0.08	0.20	0.04	-0.04	0.15	-0.02
WFS_T2T3	<--	Relationship quality	0.13	0.11	0.11	0.10	0.07	0.11
FWS_T2T3	<--	Relationship quality	0.53	0.14	0.32*	0.34	0.10	0.26**
FWS_T2T3	<--	Nonstandard work	0.16	0.27	0.05	0.11	0.21	0.04
FWS_T2T3	<--	Age	-0.03	0.01	-0.12*	-0.03	0.01	-0.14*
WFB_T4	<--	Relationship quality	0.03	0.06	0.05	0.07	0.04	0.13
WFB_T4	<--	Nonstandard work	-0.10	0.10	-0.09	0.07	0.09	0.06
WFB_T4	<--	WFS_T2T3	-0.05	0.07	-0.09	0.00	0.06	-0.01
WFB_T4	<--	FWS_T2T3	0.07	0.06	0.19	0.09	0.04	0.22*
WFB_T4	<--	Age	-0.02	0.01	-0.18*	-0.02	0.01	-0.2**

*Note: *p = < .05, ** p = < .001; WFS = work-to-family spillover; FWS = family-to-work spillover; WFB = work-family balance*

Table 3.4

Model 1 Path-by-Path Moderation Analysis Based on Education Level

	Variables	χ^2	<i>df</i>	χ^2 Change
WFS_T2T3	<- Nonstandard work	48.95	29	3.60
WFS_T2T3	<- Relationship quality	48.76	29	3.79
FWS_T2T3	<- Relationship quality	49.98	29	2.58
FWS_T2T3	<- Nonstandard work	48.73	29	3.82
FWS_T2T3	<- Age	48.73	29	3.82
WFB_T4	<- Relationship quality	49.05	29	3.50
WFB_T4	<- Nonstandard work	50.34	29	2.21
WFB_T4	<- WFS_T2T3	48.91	29	3.64
WFB_T4	<- FWS_T2T3	48.81	29	3.74
WFB_T4	<- Age	48.79	29	3.76

*Note: *p = < .05, ** p = < .001; WFS = work-to-family spillover; FWS = family-to-work spillover; WFB = work-family balance*

Table 3.5

Model 2 Path Coefficients by Family-Friendly Workplace Policies

Variables	FFP not Available			FFP Available		
	<i>B</i>	<i>S.E.</i>	β	<i>B</i>	<i>S.E.</i>	β
WFS_T2T3 <-- Nonstandard work	0.01	0.18	0.01	-0.03	0.18	-0.01
WFS_T2T3 <-- Relationship quality	0.08	0.10	0.07	0.15	0.08	0.15*
FWS_T2T3 <-- Relationship quality	0.42	0.13	0.27**	0.40	0.11	0.28**
FWS_T2T3 <-- Nonstandard work	0.12	0.24	0.04	0.06	0.24	0.02
FWS_T2T3 <-- Age	-0.06	0.01	0.26**	-0.01	0.01	-0.03
WFB_T4 <-- Relationship quality	0.10	0.05	0.16	0.01	0.04	0.02
WFB_T4 <-- Nonstandard work	-0.05	0.10	-0.04	0.06	0.10	0.05
WFB_T4 <-- WFS_T2T3	-0.13	0.07	-0.23	0.06	0.06	0.10
WFB_T4 <-- FWS_T2T3	0.08	0.05	0.21	0.09	0.04	0.21*
WFB_T4 <-- Age	-0.02	0.01	-0.15	-0.02	0.01	-0.24**

Note: * $p < .05$, ** $p < .001$; WFS = work-to-family spillover; FWS = family-to-work spillover; WFB = work-family balance

Table 3.6

Model 2 Path-By-Path Analysis Based on Family-Friendly Policies

	Variables	χ^2	<i>df</i>	χ^2 Change
WFS_T2T3	<- Nonstandard work	56.17	29	3.82
WFS_T2T3	<- Relationship quality	56.51	29	3.48
FWS_T2T3	<- Relationship quality	56.16	29	3.83
FWS_T2T3	<- Nonstandard work	56.18	29	3.81
FWS_T2T3	<- Age	65.45**	29	-5.46
WFB_T4	<- Relationship quality	57.88	29	2.11
WFB_T4	<- Nonstandard work	57.88	29	2.11
WFB_T4	<- WFS_T2T3	60.55**	29	-0.56
WFB_T4	<- FWS_T2T3	56.15	29	3.84
WFB_T4	<- Age	56.54	29	3.45

*Note: *p = < .05, ** p = < .001; WFS = work-to-family spillover; FWS = family-to-work spillover; WFB = work-family balance*

Table 3.7

Model 3 Path Coefficients By Race

Variables	African American			White		
	<i>B</i>	<i>S.E.</i>	β	<i>B</i>	<i>S.E.</i>	β
WFS_T2T3 <-- Nonstandard work	0.25	0.21	0.12	-0.15	0.16	-0.07
WFS_T2T3 <-- Relationship quality	0.14	0.12	0.12	0.11	0.07	0.11
FWS_T2T3 <-- Relationship quality	0.48	0.17	0.27**	0.41	0.09	0.32**
FWS_T2T3 <-- Nonstandard work	0.44	0.30	0.14	-0.15	0.20	-0.05
FWS_T2T3 <-- Age	-0.02	0.02	-0.08	-0.03	0.01	-0.14**
WFB_T4 <-- Relationship quality	0.06	0.07	0.08	0.07	0.04	0.13
WFB_T4 <-- Nonstandard work	0.05	0.12	0.04	-0.08	0.08	-0.06
WFB_T4 <-- WFS_T2T3	-0.01	0.08	-0.02	-0.02	0.06	-0.04
WFB_T4 <-- FWS_T2T3	0.03	0.05	0.07	0.10	0.04	0.24*
WFB_T4 <-- Age	-0.02	0.01	-0.25*	-0.01	0.01	-0.15*

*Note: *p = < .05, ** p = < .001; WFS = work-to-family spillover; FWS = family-to-work spillover; WFB = work-family balance*

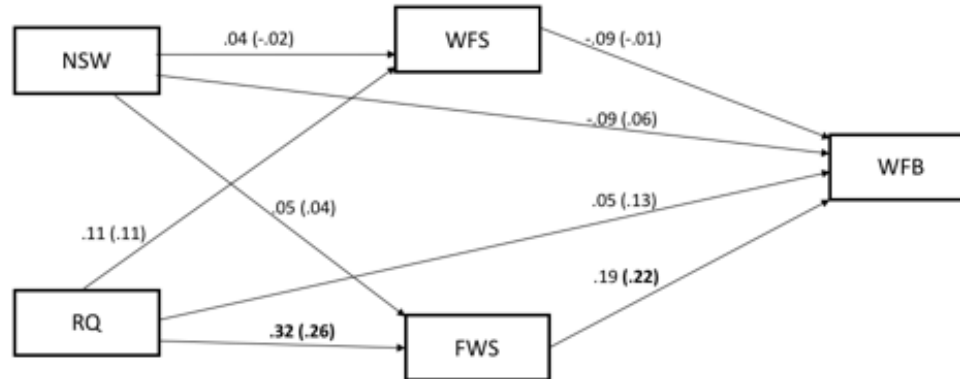
Table 3.8
 Model 3 Path-By-Path Analysis Based on Race

	Variables	χ^2	<i>df</i>	χ^2 Change
WFS_T2T3	<- Nonstandard work	18.25	19	1.41
WFS_T2T3	<- Relationship quality	15.90	19	3.77
FWS_T2T3	<- Relationship quality	15.94	19	3.72
FWS_T2T3	<- Nonstandard work	18.47	19	1.19
FWS_T2T3	<- Age	16.45	19	3.21
WFB_T4	<- Relationship quality	15.86	19	3.81
WFB_T4	<- Nonstandard work	16.54	19	3.12
WFB_T4	<- WFS_T2T3	15.83	19	3.83
WFB_T4	<- FWS_T2T3	16.91	19	2.75
WFB_T4	<- Age	16.14	19	3.52

Note: * $p < .05$, ** $p < .001$; WFS = work-to-family spillover; FWS = family-to-work spillover; WFB = work-family balance

Figure 3. 1

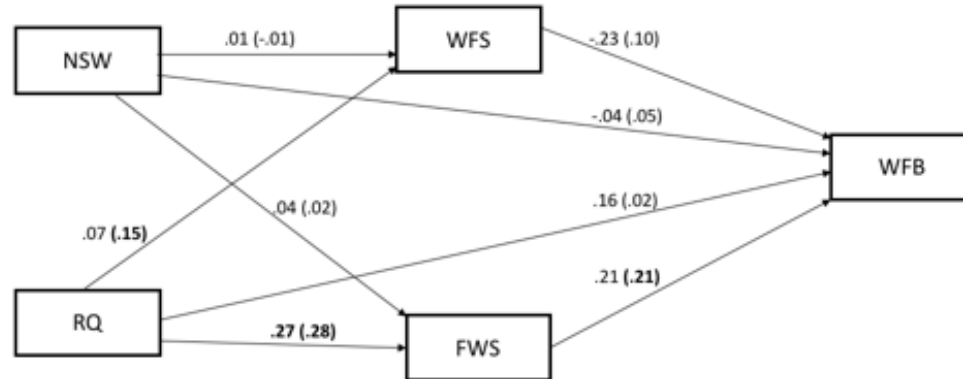
Moderated-Mediating Model Based on Education Level



Note: Significant paths are in bold. Coefficients inside parenthesis are for those with an Associate degree or higher. Coefficients outside parenthesis are for those with a trade degree or lower.

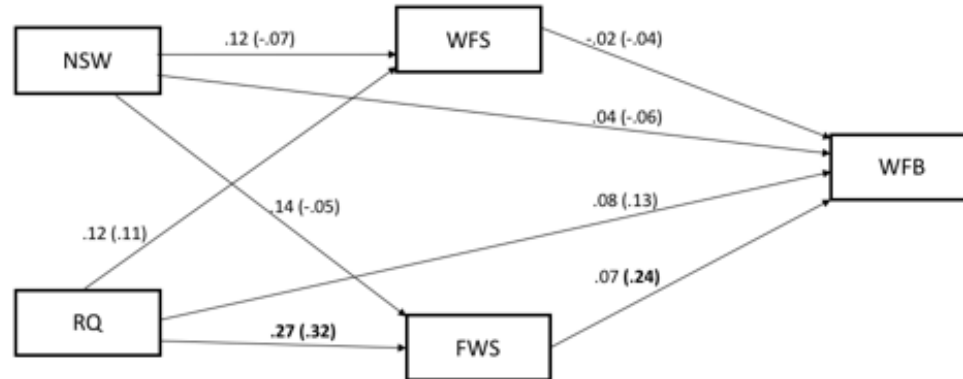
Figure 3. 2

Moderated-Mediating Model Based on Workplace Family-Friendly Policies



Note: Significant paths are in bold. Coefficients inside parenthesis are for those who have family friendly policies available in the workplace. Coefficients outside parenthesis are for those who do not have family friendly policies available in the workplace.

Figure 3. 3
 Moderated-Mediating Model Based on Race



Note: Significant paths are in bold. Coefficients inside parenthesis are for White working mothers. Coefficients outside parenthesis are for African American working mothers.

Chapter 4

A Longitudinal Examination of Work-family Conflict Among Working Mothers in the United States

Abstract

The current study attempted to find out the within- and between-person variance in work-to-family conflict and family-to-work conflict among working mothers over time. It also examined the effects of a nonstandard work schedule and relationship quality on work-to-family conflict and family-to-work conflict. Bioecological theory was used as a theoretical framework in the current longitudinal study. Results of multilevel modeling showed that there was significant within- and between-person variance in work-to-family conflict and family-to-work conflict. The linear and quadratic terms were significantly related to family-to-work conflict, whereas the quadratic term was significantly associated with work-to-family conflict. Also, there was a positive relationship between a nonstandard work schedule and work-to-family conflict, whereas relationship quality was negatively associated with family-to-work conflict.

Keywords: Bioecological theory, family-to-work conflict, multilevel modeling, work-family conflict

Chapter 4

A Longitudinal Examination of Work-family Conflict Among Working Mothers in the United States

American employees today are experiencing increased work demands coupled with increasing family responsibilities, which has led to more work-to-family and family-to-work conflict (Grzywacz, Daniel, Tucker, Walls, & Leerkers, 2011). “Work demands” refers to job responsibilities that a person must perform through mental or physical effort (Voydanoff, 2004), including intensive work schedules, lack of family-friendly workplace policies, lack of support from supervisors and coworkers, and lack of schedule flexibility (Kelly et al., 2014). “Work-to-family conflict” refers to a form of inter-role conflict that happens when the time devoted to, or strain created by, a job interferes with the individual’s ability to perform family roles or responsibilities (Voydanoff, 2005a). “Family-to-work conflict” is defined as a form of inter-role conflict that occurs when the time devoted to, or strain created by, the family interferes with performing job roles or responsibilities (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). The Council of Economic Advisers (2014) found that, in 2008, 60% of working fathers and 47% of working mothers reported work-to-family and family-to-work conflict, up from 35% and 41%, respectively, in 1977. These work-family conflicts increase work stress, particularly for working mothers, because they also perform most of the household work (Lam, McHale, & Crouter, 2012). Researchers also found that 83% of working Americans have at least one type of work stress (Work Stress Survey, 2013). The most common types of work stress for employees include: low wages (14%),

workload stress (14%), commuting (11%), dislike of the job (8%), struggle for work–family balance (7%), concern about professional advancement opportunities (6%), and fear of being fired (6%; Work Stress Survey, 2013).

There have been many changes in the workplace over the past three decades in terms of increased work hours, shift work, schedule flexibility, and employers' access to employees due to advancements in technology (e.g., email access after regular working hours; Bianchi & Milkie, 2010). Also, current workplaces are becoming more diverse in terms of employees' gender, race, and marital status (Perry-Jenkins, Newkirk, & Ghunney, 2013). These diversities are evident in the growth of women's participation in the labor force, which increased from 20.5% in 1950 (Toossi, 2002) to 47% in 2013 (United States Department of Labor, 2015). Working mothers who have children under 18 years of age make up 71.1% of working women (United States Department of Labor, 2015). These growing diversities, coupled with technological advancements, increased work–to–family and family–to–work conflict for employees, particularly for working mothers (Edgell, Ammons, & Dahlin, 2012; Goodman, Crouter, Lanza, Cox, & Vernon-Feagans, 2011).

Several work–family studies examined the effects of important factors, such as maternal employment, work stress, supervisor support, workplace environment, and family stress on work–to–family conflict (Hoffman, 1987; Perry-Jenkins, Repetti, & Crouter, 2000). Other studies examined effects of these factors on family–to–work conflict (Bianchi & Milkie, 2010; Garr & Tuttle, 2012). However, important gaps remain. First, most work–family conflict studies lacked the use of any, or of an appropriate,

theoretical grounding, such as bioecological theory (Tudge et al., 2009); thereby, they lacked a contextualized examination of work–to–family and family–to–work conflict. Second, most studies did not focus on examining within- and between-person differences among working women, which is essential given the current diverse families and dynamic workplaces (Bianchi & Milkie, 2010). Working mothers are not only different from working fathers but they are substantially different from one another due to individuals' characteristics, diverse backgrounds, and exposure to dynamic workplaces. Hence, it is important to study the within- and between-person differences in the work–to–family conflict and family–to–work conflict and account for these differences while examining the relationships between a nonstandard work schedule and work–to–family and family–to–work conflict, and between relationship quality and work–to–family and family–to–work conflict.

Similarly, work–to–family conflict and family–to–work conflict are not static phenomena, although most studies to-date have used cross-sectional designs (Perry-Jenkins, Repetti, & Crouter, 2000). They are ongoing experiences for working mothers; current work–family demands mean that mothers must face considerable challenges to their roles and responsibilities to fulfill the expectations raised by important individuals in the work and family domains. These work–family responsibilities usually become incompatible due to lack of support in work and family, thereby creating high levels of work–family conflict, levels which change over time. Therefore, it is imperative to examine the temporal structure of work–family conflict of working mothers.

To address the aforementioned gaps, the current study was framed with the Process–Person–Context–Time (PPCT) model of bioecological theory (Bronfenbrenner & Morris, 1998) by using longitudinal data from working mothers who had children between 4 and 9 years of age. It examined the within- and between-person differences among working mothers in their work–to–family conflict and family–to–work conflict over time by using multilevel modeling. The study also analyzed the effects of relationship quality and a nonstandard work schedule on work–to–family and family–to–work conflict, and how race and intensive workplace environment moderated these relationships. Using such an approach within the context of a single study allows for a stronger understanding of the nuanced complexities of working mothers’ work–family conflict experience at the nexus of the work–family interface.

Literature Review

Work–to–family Conflict

Bioecological theory explains that two ecological microsystems connect in a mesosystem, which indicates that work–to–family conflict lies in a mesosystem (Bronfenbrenner, 1994). An empirical study using a cross-sectional research design with two waves of data consisting of 2,645 and 1,486 married employees who were White, African American, Hispanic, Native American, and Asian showed that working mothers’ demand characteristics in the form of depressive symptoms increased their work–to–family conflict (Cho, Tay, Allen, & Stark, 2013). Another study using a cross-sectional research design with 168 dual-earner couples consisting of a mostly White sample found that poor relationship quality increased mothers’ work–to–family conflict (Bakker,

Demerouti, & Burke, 2009). A third study used a cross-sectional research design and a sample of 586 hotel managers consisting of mostly White individuals and found that workload, time expectations, and intensive work schedules increased work–to–family conflict for working mothers but not for working fathers (Lawson, Davis, Crouter, & O’Neill, 2013). These work conditions were worse for those employees who worked a nonstandard work schedule as suggested by Garr and Tuttle (2012). They used a cross-sectional research design and nationally representative sample and found that a nonstandard work schedule increased work–to–family conflict of working mothers.

Family–to–work Conflict

According to bioecological theory, family–to–work conflict also lies in a mesosystem (Bronfenbrenner, 1995a). An empirical study using a longitudinal research design and a sample of 380 employees consisting of mostly White individuals found that mothers’ negative perceptions of family–to–work conflict increased their family–to–work conflict (Michel & Clark, 2013). Another study using a cross-sectional research design and a nationally representative sample consisting of mostly White mothers showed that mothers who had children with special care needs faced high levels of family stress, which increased their family–to–work conflict (Stewart, 2013). These results were similar to those of a study led by Nomaguchi (2012), who found that working mothers faced greater extent of family stress due to having young children and a lack of spouse/partner support; this, in turn, increased their family–to–work conflict (Nomaguchi, 2012). Another cross-sectional study with a sample of 1,818 non-White mothers and their

children found that a nonstandard schedule resulted in fewer mother-child interactions and increased mothers' family-to-work conflict (Kalil, Dunifon, Crosby, & Su, 2014).

Relationship Quality

According to bioecological theory, the family is a microsystem for working mothers in which they have reciprocal interactions with their husband (i.e., person), objects, and symbols, which are potential sources for the functioning of proximal processes (Bronfenbrenner, 2005a). Researchers found that poor relationship quality increased family-to-work conflict for both married and cohabiting couples (Bracke & Symoens, 2015). Spousal support played an important role in helping working mothers reduce their family-to-work conflict (O'Brien, Ganginis Del Pino, Yoo, Cinamon, & Han, 2014). Those women who did not have a quality relationship with their spouse/partner faced high levels of work-to-family and family-to-work conflicts (Bakker et al., 2009; McAllister, Thornock, Hammond, Holmes, & Hill, 2012). In comparison, enhanced relationship satisfaction, love, and closeness (all indicators of relationship quality) for women decreased work-to-family and family-to-work conflicts (Curran, McDaniel, Pollitt, & Totenhagen, 2015). Relationship quality worked as a buffer for women in that it prevented them from constantly thinking about work, thereby decreasing work-family conflict (McMillan, O'Driscoll, & Brady, 2004).

Nonstandard Work Schedule

“Nonstandard work schedule” refers to the extent of variation from a standard work schedule (i.e., 9am to 5pm, Monday–Friday). A nonstandard work schedule creates a certain context (i.e., microsystem) for working mothers in which they have reciprocal

interactions with persons (supervisor and coworkers), objects (tools and equipment), and symbols (symbolic displays of organization rules, culture, and policies for nonstandard workers) on a regular basis and for an extended period, all of which can be a source for the functioning of proximal processes (Bronfenbrenner & Ceci, 1994; Grzywacz et al., 2010)). It is worth mentioning that I used relationship quality and nonstandard work schedule as proxies of proximal processes and did not measure the reciprocal relationship of working mothers with objects and symbols in the work and family domains.

Researchers found that a nonstandard work schedule created work demands for working mothers and increased their work–to–family and family–to–work conflict (Edgell et al., 2012). An empirical study using a cross-sectional research design and a nationally representative sample consisting of mostly White individuals showed that working mothers faced high levels of work–to–family and family–to–work conflict when they had to work a nonstandard schedule (Garr & Tuttle, 2012). These results were similar to a study led by Gassman-Pines (2011), who used a longitudinal research design and a sample consisting of 61 low-income non-White mothers who had preschool aged children.

Intensive Work Environment

“Intensive work environment” refers to a workplace that produces extreme psychological demands for employees, such as those requiring employees to work at a fast pace and those that require working long hours (Gassman-Pines, 2011). According to bioecological theory, proximal processes are influenced by the context (i.e., microsystem; Bronfenbrenner, 2005a). The workplace is an immediate context for working mothers

(Bronfenbrenner & Evans, 2000). If mothers work in an intensive work environment it may influence the functioning of proximal processes as well as the effect of proximal processes on work-to-family and family-to-work conflict (Bronfenbrenner, 2005b). Researchers found that if employees feel pressure due to an intensive workplace environment, it creates work-to-family conflict and family-to-work conflict for them (Wheeler, Updegraff, & Crouter, 2011). Another study found that a non-supportive workplace environment and greater work pressure increased work-to-family and family-to-conflict for employees (Goodman et al., 2011). The results are consistent with the study led by Dyrbye and colleagues (2013), who found that working longer hours in an intensive workplace increased work-to-family and family-to-work conflicts for employees.

Race

Bioecological theory asserts demand characteristics (e.g., gender, and race) can affect the functioning of proximal process (Bronfenbrenner & Ceci, 1994) because proximal processes are the function of individuals' demand characteristics (Bronfenbrenner, 2005b). Researchers found that African American working mothers are more likely to work a nonstandard work schedule, and that this was linked to high levels of work-to-family and family-to-work conflict (Grzywacz et al., 2011). These results were similar to another study conducted by Grzywacz et al. (2010), who found that both less-educated and African American mothers who worked a nonstandard work schedule reported increased work-family conflict. Similar results were found by Odom, Vernon-Feagans, and Crouter, (2013).

Research questions posed in the current study are as follows. Research question 1: Are there within- and between-person differences among working mothers in their work–to–family conflict and family–to–work conflict, and do work–to–family conflict and family–to–work conflict change over time?

Research question 2: What are the relationships between relationship quality and work–to–family conflict / family–to–work conflict, and between a nonstandard work schedule and work–to–family conflict / family–to–work conflict, and do these relationships differ based on race and intensive work environment?

Theoretical Framework

Bioecological theory (Bronfenbrenner & Morris, 2006) was used as a theoretical framework in the current study. The Process–Person–Context–Time (PPCT) model of bioecological theory (Bronfenbrenner & Morris, 1998), which emphasizes the importance of considering within- and between-person differences to achieve a contextualized understanding of any social phenomenon, such as work–to–family conflict and family–to–work conflict (Bronfenbrenner, 1995a). Working mothers are not only different from men in their work–family conflict experiences, but they also differ from each other based on individuals' characteristics, diverse family backgrounds, and exposure to dynamic workplaces (Bianchi & Milkie, 2010). Therefore, I hypothesized:

H1: There will be significant within- and between-person variances in mothers' work–to–family conflict over time.

H2: There will be significant within- and between-person variances in mothers' family–to–work conflict over time.

Bronfenbrenner and Morris (1998) found that human development takes place through processes of progressively more complex reciprocal interactions between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment. To be effective, the interaction must occur on a fairly regular basis over extended periods of time. Such enduring forms of interaction in the immediate environment are referred to as proximal processes (p. 996).

At the family level, working mothers have reciprocal relationships with their spouses/partners, which continue on a regular basis and for an extended period (Bronfenbrenner, 1994). Working mothers also interact with other persons, objects (e.g., cell phone, television, computer), and symbols (e.g., cultural symbols, religious symbols, or any symbols that represent romantic relationship with husbands/partners) in the family (Bronfenbrenner, 1994); hence, relationship quality becomes a proxy source of the functioning of proximal processes (Bronfenbrenner, 1995a). A high degree of relationship quality between mothers and their spouses/partners helps to stimulate the functioning of proximal processes. This helps ensure their development and potentially decreases their family–to–work conflict. Since the work and family domains are interrelated (Voydanoff, 2005b), relationship quality also may decrease family–to–work conflict (Bakker, Demerouti, Burke, 2009). Therefore, I hypothesized:

H3: An increase in relationship quality will be associated with a decrease in work–to–family conflict.

H4: An increase in relationship quality will be associated with a decrease in family–to–work conflict.

Further, a large proportion of the working population works on a nonstandard work schedule (Grzywacz et al., 2011; Grzywacz, Tucker, Clinch, & Arcury, 2010). Those employers who offer a nonstandard work schedule appoint staff members to manage employees on a nonstandard work schedule (Edgell et al., 2012). Employers also make some arrangements in the workplace to accommodate the employees who work on a nonstandard work schedule (Edgell et al., 2012). For instance, employers make sure that employees have access to food and other necessities during nonstandard work times. They also make sure that the supply of raw material goods is appropriate to smoothly run the workplace during a nonstandard work schedule. Employees also communicate with managers or supervisors to seek help from them to efficiently manage their nonstandard work schedule (Garr & Tuttle, 2012). For instance, if employees do not have transportation available to come to the workplace, employers might provide those employees with transportation accordingly. Employers and employees have reciprocal interactions such as these on a regular basis and for an extended period of time through which both try to help each other (Bronfenbrenner, 1994; Bronfenbrenner, 2005a). Hence, in a workplace with nonstandard work schedules, employers and employees affect each other, thereby creating a reciprocal interaction between them (Bronfenbrenner, 1994). These reciprocal interactions continue on a regular basis and for an extended period (Bronfenbrenner & Morris, 1998).

Mothers also interact with persons, objects, and symbols in the workplace (Bronfenbrenner & Evans, 2000). This becomes the proxy source of proximal processes in the workplace (Bronfenbrenner, 1995a). However, if reciprocal interactions in the

microsystem are not suitable or do not support the functioning of proximal processes, it may either constrain the functioning of proximal processes or change their direction (Bronfenbrenner & Morris, 1998). Consequently, proximal processes either have no effect or a negative effect on the outcome under consideration (e.g., it may increase work–to–family). Since work and family are interrelated domains (Bakker et al., 2009), a nonstandard work schedule also may affect family–to–work conflict. Therefore, I hypothesized:

H5: Working a nonstandard schedule will be associated with work–to–family conflict.

H6: Working a nonstandard schedule will be associated with family–to–work conflict.

Bronfenbrenner and Ceci (1994) stated that the form, power, content, and direction of proximal processes effecting development vary systematically as a joint function of the characteristics of the developing person, the environment in which the processes are taking place, and the nature of the developmental outcomes under consideration (p. 572). Although proximal processes are central to individuals' development (Bronfenbrenner & Ceci, 1994), they cannot function by themselves because they are the function of context and individuals' characteristics (Bronfenbrenner, 2005a). The context can be immediate (microsystem) and remote (macrosystem; Bronfenbrenner & Evans, 2000). However, proximal processes more likely occur in the immediate context, as the immediate context plays a more important role in the functioning of proximal processes. In the current study, the context is operationalized through an intensive work environment in which individuals face workloads, pressure,

and intensive work routines, all of which can influence the effects of proximal processes on work-to-family and family-to-work conflicts. Therefore, I hypothesized:

H7: An intensive work environment will moderate the relationship between a nonstandard work-schedule and work-to-family conflict.

H8: An intensive work environment will moderate the relationship between a nonstandard work-schedule and family-to-work conflict.

In addition, bioecological theory also explains that proximal processes are the function of individuals' characteristics (Bronfenbrenner, 2005b). According to the theory, individuals' characteristics are related to individuals' demand characteristics, resource characteristics, and force characteristics (Bronfenbrenner & Morris, 1998). "Demand characteristics" refers to individuals', age, gender, and race (Bronfenbrenner, 1994). "Resource characteristics" refers to individuals' emotional, mental, material, and social resources, such as, intelligence, disposition, education, past experiences, access to housing, food, and caring parents (Bronfenbrenner, 1995a). "Force characteristics" refers to individuals' motivation, consistency, and persistency in pursuing and achieving a goal (Bronfenbrenner & Evans, 2000). The researchers included only the demand characteristics (i.e., race) in the current study. Therefore, I hypothesized:

H9: Race will moderate the relationships between a nonstandard work schedule and relationship quality and work-to-family conflict.

H10: Race will moderate the relationships between a nonstandard work schedule and relationship quality and family-to-work conflict.

Similarly, time is an important element in the PPCT model (Bronfenbrenner, 1995b). The work–family experiences of working mothers can change from one specific period to another based on historical and social events and on the current lifespan of developing individuals (Bronfenbrenner & Evans, 2000). Researchers found that mothers’ work–to–family conflict and family–to–work conflict change over time (Almeida et al., 2016). Therefore, I hypothesized:

H11: Mothers’ work–to–family conflict will increase over time.

H12: Mothers’ family–to–work conflict will decrease over time.

H13: Mothers’ work–to–family conflict will increase in a nonlinear way.

H14: Mothers’ family–to–work conflict will decrease in a nonlinear way.

Method

Sample

The current study used secondary data from an existing longitudinal study (Grzywacz, Crain, Martinson, & Quandt, 2014). A multi-stage stratified random sampling technique was used in the original study. A sampling frame was created to obtain a sample of full-time working mothers with young children between 4 and 9 years of age (see procedure section below). The sampling frame was stratified according to women’s race (African American and White) and education level (low education and high education). Those women who obtained an associate’s degree or higher were considered to have a high education level, whereas those women who earned a trade degree or lower were considered to have a low education level. The sample used in the

current study consisted of all 302 working mothers who were included in the original sample (Grzywacz et al., 2014).

This group of working mothers was selected for several reasons. First, working mothers of children between 4 and 9 years of age face many transitions (e.g., children start going to school; Grzywacz et al., 2014). Second, children go through developmental changes as they enter into other microsystems (school and childcare), which can affect the functioning of proximal processes within and across microsystems (Bronfenbrenner, 1994). Finally, working mothers simultaneously face challenges in the workplace (Grzywacz et al., 2014).

Table 1 provides the demographic characteristics of the sample. Women's average age at the time of intake was 35 years ($SD = 5.9$). Among these women, 70% were married. In the sample, 65.6% women were White and 34.4% women were African American. Regarding education level, 58% earned an associate's degree or higher. These women were full-time employees, and each woman had an average of 1.77 children ($SD = 0.68$) between 4 and 9 years old at the time of the baseline survey. Similarly, 62.6% of women had preschool-aged and school-aged children. Household income ranged from \$15,000 to \$150,000. On average, these women worked 42 hours per week ($SD = 7.30$). Almost one out of four reported that working a nonstandard schedule was required. The spouse/partner of each woman worked 44 hours per week on average ($SD = 9.90$). Additionally, 29% of the women were single (separated, divorced, or never married), whereas, 70% of the women were married (currently married or living as married).

Procedure

As mentioned earlier, a multi-stage stratified random sampling technique was used to obtain the sample in the original study (Grzywacz et al., 2014). To develop a sampling frame, a complete list of potential participants was obtained from a Midwestern integrated cooperative and non-for-profit agency which maintained an administrative data system. This agency provides various services regarding healthcare, research, medical education, healthcare administration, and financing. After obtaining a complete list of potential participants according to the pre-defined exclusion and inclusion criteria, a sampling frame was developed (Grzywacz et al., 2014).

The inclusion criteria consisted of the following: women were at least 18 years old; identified as African American only or White only; currently worked a minimum of 35 hours per week; and had children between 4 and 9 years of age in their households (Grzywacz et al., 2014). Specific criteria also were used to exclude certain participants based on the idea that the following factors could confound the results: pregnant at the time of the baseline survey interview or had a baby in the last 12 months; did not intend to work for the same employer over the next 12 months; had a member in their household who had a developmental issue or devastating medical condition; insufficient English fluency or understanding to complete the questions related to the participants' screening; and/or were not born in the United States (Grzywacz et al., 2014). A simple random sampling was used to select the participants of the current study from each stratified group.

The process of recruitment for the women included in the current sample was conducted in two stages (Grzywacz et al., 2014). During the first stage, invitations were mailed to women who were identified as potentially eligible participants for the current study. During the second stage, trained staff members contacted the eligible women via telephone. Staff members made these calls on different days of the week and at various times during the day to best reach participants. To assess the eligibility of these women, interviewers carried out a brief initial interview to screen the women based on the inclusion and exclusion criteria (Grzywacz et al., 2014). Sufficient efforts were made to assign trained interviewers of a similar race to each respondent. After the screening, these interviewers again contacted the women to schedule face-to-face, paper-pencil based interviews. A reminder letter was also sent to these women (Grzywacz et al., 2014). The interviewers provided participants with an informed consent form and briefly described the purpose, objective, and outcome of the study.

An invitation for participation in the study was sent by email to exactly 6,374 women, including those who were self-referred for screening (Grzywacz et al., 2014). From the invitees, 3,539 women were successfully contacted and 2,230 women were screened to determine their eligibility to participate. Of these women, 369 were identified as eligible candidates. Finally, 302 women successfully signed an informed consent form and completed the interview. Further, data was collected at four time points including the baseline survey interview. The response rate was quite high, consisting of 96.4% at time 2 and 93.4% at time 3 and 4 respectively. The study term was a period of one year. The data collection for time 2 was conducted 4 months after the baseline survey interview,

while the data collection for time 3 and time 4 were conducted 8 and 12 months after the baseline survey interview (Grzywacz et al., 2014).

Measures

Work-to-family conflict. The work-to-family conflict scale was used at each time point and consisted of five items (sample item: “demands of work interfered with home and family life”) that were averaged, with higher scores demonstrating a greater level of conflict. Each of the items had five Likert response options that ranged from 1 (*never*) to 5 (*always*), plus “I don’t know” and “refused” options. The values against these two additional categories were assigned as system missing values, which were imputed by using multiple imputation technique (Twisk, Boer, Vente, & Heymans, 2013). The items of the work-to-family conflict scale were taken from an established scale (Netemeyer et al., 1996). Researchers described work-to-family conflict in the same way in most of the studies that focused on work-to-family conflict as defined in the current study. However, there are some other terms also used to describe work-to-family conflict, such as work-to-family interference (Grzywacz, Rao, Woods, Prieser, & Gesler, & Arcury, 2005; Lu & Kao, 2013) and work-life interference (Boamah & Laschinger, 2016). Although, researchers sometime used different terms to describe work-to-family conflict, they still used the same definition for this construct. Indicators suggest good measurement functioning (see Table 1). Cronbach’s alpha for work-to-family conflict was 0.88 at time 1, 0.87 at time 2, 0.89 at time 3, and 0.90 at time 4. The fact that the value of Cronbach’s alpha for work-to-family conflict scale for all four time periods was greater than 0.7 indicates that this scale effectively measured the construct of work-to-

family conflict. The histogram and normal curve showed that the data of work-to-family conflict variable was normally distributed. The normality of work-to-family conflict scale also was confirmed by estimating the values of skewness and kurtosis, which were under 1. Similar procedures for imputing the system missing values and assessing the normality of the variables were carried out for other variables.

Family-to-work conflict. The family-to-work conflict scale consisted of five items (sample item: “demands of family or spouse interfered with work-related activities”). A new variable of family-to-work conflict was created by computing the average of these five items. Higher score showed greater levels of conflict and lower score indicated smaller levels of conflict. Each item included in this scale had Likert response options that ranged from 1 (*never*) to 5 (*always*). The family-to-work conflict scale was measured at all four times during the study. The items of family-to-work conflict scale were taken from an established scale (Netemeyer et al., 1996). Most of the researchers used the term “family-to-work conflict” to describe the construct of family-to-work conflict. However, researchers also used the term family-to-work interference to describe the construct of family-to-work conflict (Brummelhuis, Bakker, & Euwema, 2010). The definitions used to define this construct in those studies, which focused on family-to-work conflict also were quite the same. Cronbach’s alpha was 0.82 for time 1, 0.83 for time 2, 0.89 for time 3, and 0.85 for time 4. The fact that the value of Cronbach’s alpha for family-to-work conflict scale for all four time periods is greater than 0.7 indicates that this scale effectively measured the construct of work-to-family conflict.

Relationship quality. Relationship quality was measured using a single item: “What number best describes the degree of happiness in your relationship with your spouse or partner?” Response options ranged from 1 (*very unhappy*) to 7 (*perfectly happy*). Higher scores reflected a greater degree of relationship quality.

Nonstandard work schedule. Nonstandard work schedule consisted of a single item: “What best describes your usual work schedule on your main job?” This variable had five Likert response options: regular daytime, regular evening, regular night, rotating, and varies. This variable was recoded into a dichotomous variable consisting of two categories such that regular daytime was coded as “No” and all other categories were coded as “Yes”.

Race. The question about women’s race included in the questionnaire was: “Do you consider yourself to be White or African American?” The variable of race was a dichotomous variable consisting of two categories: African American, coded “0,” and White, coded “1.”

Intensive work environment. The intensive work environment scale consisted of seven items that were averaged with higher scores demonstrating a greater level of intensive work environment (sample item: “How often does your job require you to work very fast?”). Item response options ranged from 1 (*never*) to 5 (*always*). This variable was measured at the time of intake. Reliability was adequate (see Table 1). This scale was used in previous studies and showed high validity and reliability (Grzywacz et al., 2014). The value of reliability measure (Cronbach’s alpha) was 0.74. The fact that the

value of Cronbach's alpha for intensive work environment is greater than 0.7, indicates that this scale effectively measured the construct of intensive work environment.

Age. Age was an open-ended question. The question about age included in the questionnaire was: What is your age (in years)?

Marital status. To gain information about women's current marital status, the following question was asked: "Are you married, currently living as married, separated or divorced, widowed, or never married?" This variable was recoded into a dichotomous variable consisting of two categories such that categories of married and currently living as married were coded as 1 (*Yes*) and separated or divorced, widowed, and never married were coded as 0 (*No*).

Education. To obtain information about women's education, the following question was asked: "What is the highest level of education you have completed?" Those women who earned an associate's degree or higher were considered to have a high level of education, whereas those women who obtained a trade degree or lower were considered to have a low level of education. The variable of education was a dichotomous variable consisting of two categories: trade degree or lower, coded "0," and associate's degree or higher, coded "1."

Analysis Plan

Before running the multivariate analysis, the correlations between independent and dependent variables and between independent variables were analyzed (see table 2). The data was transformed from wider form into higher order form (Grzywacz et al., 2014). The time variable was recoded to create a new variable of linear growth. The

linear growth variable was coded 0, 1, 2, and 3 for times 1, 2, 3, and 4 respectively. For quadratic growth, the linear growth variable was squared and a new variable of quadratic growth was created in the dataset. The coding of linear and quadratic terms was also changed into orthogonal coding and tested to examine any multi-collinearity between linear and quadratic terms. No significant changes were found in the results after testing linear and quadratic terms with two different coding methods. The orthogonal coding for the linear term was -3, -1, 1, 3 and the orthogonal coding for quadratic term was 1, -1, -1, 1 (Heck, Thomas, & Tabata, 2014). Multilevel modeling was used (Blocklin, Crouter, & McHale, 2012) to examine within- and between-person variations in work–to–family conflict and family–to–work conflict of working mothers (Lam et al., 2012). The mixed modeling function (Goodman et al., 2011) in SPSS was used to perform multilevel analysis (Lam et al., 2012). Both fixed effects (Lawson et al., 2013) and random effects (Grice, McGovern Alexander, Ukestad, & Hellerstedt, 2011) parameters were estimated to test the current hypotheses. Mothers were conceptualized as a grouping or level 2 variable and time was conceptualized as a level 1 variable (Grzywacz et al., 2014).

Two separate analyses each were run for work–to–family conflict and family–to–work conflict. For each analysis, the variables were modeled into five different models. In the first analysis, work–to–family conflict was analyzed as a dependent variable. The first model was a null model in which work–to–family conflict was entered as a fixed effect and a random effect parameter. The scaled covariance structure was selected for the null model. The restricted maximum likelihood (REML) was selected as a method for estimation (Heck et al., 2014). The parameter estimates, test of covariance parameters,

and covariance of random effects estimates were selected. These methods of estimation were selected as they had already been used in studies that focused on work–to–family and family–to–work conflict (Almeida et al., 2016) and these were statistically considered a better choice to run multilevel models (Heck et al., 2014).

Results

Hypotheses 1 and 2

Two separate analyses were run for each outcome variable. The first analysis was run for work–to–family conflict and the second analysis was run for family–to–work conflict. In model 1 of the first analysis (see table 3), the work–to–family conflict variable was analyzed as an outcome variable. The first model was a null model in which only work–to–family conflict (i.e., a dependent variable) was entered as a fixed effect as well as a random effect parameter. In the first model, three parameters were estimated. According to the results of the null model, the average level of work–to–family conflict was significantly different from zero ($\beta = 2.32, p < .001$) for the fixed effects estimates. For covariance parameters, there was a significant within- ($\beta = .30, p < .001$) and between-person ($\beta = .38, p < .001$) variance in the work–to–family conflict of working mothers over time. To specifically examine within- and between-person variance, the intra class correlation (ICC) was calculated by dividing the between-person variance by the total variance (within-person + between-person). The ICC showed that there was 55.75% within-person variance and 44.25% between-person variance in work–to–family conflict among working mothers over time.

In model 1 of the second analysis (see table 4), the family-to-work variable was analyzed as a dependent variable. The first model was a null model in which only family-to-work conflict (i.e., dependent variable) was entered as a fixed effect as well as a random effect parameter. In the first model, three parameters were estimated. According to the results, the average value of family-to-work conflict was significantly different ($\beta = 1.94, p < .001$) from zero as a fixed effect parameter. For random effects, there were significant within- ($\beta = 0.27, p < .001$) and between- person ($\beta = 0.17, p < .001$) variance in family-to-work conflict among working mothers over time. To specifically examine the within- and between-person variance, the ICC was calculated. The ICC showed that there was 60.72% between-person variance and 39.28% within-person variance in family-to-work conflict among working mothers.

Hypotheses 3 and 4

In the second model of the first analysis, seven parameters were estimated as four control variables were entered as fixed effect parameters in the second model. These control variables included: family-to-work conflict, age, marital status, and education. Among these control variables, only the family-to-work conflict variable had a significant positive relationship with work-to-family conflict ($\beta = .36, p < .001$). Similarly, in the second model of the second analysis, seven parameters were estimated. The control variables entered in the second model included work-to-family conflict, age, marital status, and education. Results illustrated work-to-family conflict ($\beta = .20, p < .001$), age ($\beta = .01, p < .001$) and education ($\beta = .18, p = .01$) had a significant positive

relationship with family-to-work conflict, and marital status ($\beta = -0.08, p < .207$) had a negative but non-significant relationship with family-to-work conflict.

Hypotheses 5 and 6

In the third model of the first analysis, nine parameters were estimated. The variables of nonstandard work schedule and relationship quality were entered into the third model as fixed effect parameters. Nonstandard work schedule had a significant positive relationship with work-to-family conflict ($\beta = .34, p < .001$). In the third model of the second analysis, nine parameters were estimated. The variables of nonstandard work schedule and relationship quality were entered in this model. According to the results of this model, relationship quality had a significant negative relationship with family-to-work conflict ($\beta = -.06, p < .001$).

Hypotheses 7, 8, 9, 10

In the fourth model of the first analysis, thirteen parameters were estimated. Interaction terms (nonstandard work schedule x race, nonstandard work schedule x intensive work environment, relationship quality x race, relationship quality x intensive work environment) were also tested in separate models but no interaction term was found to be significant. Intensive work environments had a significant positive relationship with work-to-family conflict ($\beta = .26, p < .001$).

In the fourth model of the second analysis, thirteen parameters were estimated. The variables of race and intensive work environment were entered. The variable of race had a significant positive relationship with the family-to-work conflict ($\beta = .29, p < .001$), while intensive work environment had a non-significant relationship with family-

to-work conflict ($\beta = .09, p = .052$). The interaction terms (nonstandard work schedule x race, nonstandard work schedule x intensive work environment, relationship quality x race, relationship quality x intensive work environment) were also entered in separate models to fully test the conceptual model, which was driven from bioecological theory, but no interaction term was found significant.

Hypotheses 11, 12, 13, 14

In the fifth model of the first analysis, fifteen parameters were estimated as both linear and quadratic terms were entered as fixed effects. The quadratic term had a significant, negative relationship with work-to-family conflict ($\beta = -.22, p = .011$). In the fifth model of the second analysis, the linear and quadratic terms were entered as fixed effect parameters and the linear term was also entered as a random effect parameter. The results of this model indicated that the linear term had a significant negative relationship with family-to-work conflict ($\beta = -.14, p < .001$) and the quadratic term had a significant positive relationship with family-to-work conflict ($\beta = .17, p = .01$). No significant relationship was found between the random intercept and slope ($\beta = -.01, p = .21$).

In the first analysis, the control variables (age, marital status, and education) were also not significant, except for family-to-work conflict. Therefore, to make the model more parsimonious, non-significant interaction terms and control variables were taken out and the final model was run without them (Byrne, 2010; Heck et al., 2014; Schumacker & Lomax, 2010). The error terms for all estimates were under 1, and the range of confidence intervals were also under 1, which demonstrates precision of the estimates. To calculate the variance accounted for in the predictors, the Pseudo R^2 was

calculated for the within- and between-person variance (Heck et al., 2014). This was calculated by subtracting the between-person variance of the current model from the between-person variance of the null model and dividing by the between-person variance of the null model. The same formula was used to calculate the within-person variance of the overall model accounted for in work-to-family conflict. The overall model accounted for 2.3% within-person variance and 42% between-person variance. Hence, the current model best predicted between-person variance.

In the second analysis, the non-significant interaction terms and the variable of intensive work environment were taken out, and the final model was run without these variables. All control variables were statistically significant, and therefore remained in the final model. To calculate the overall variance accounted for by these variables, the Pseudo R^2 was calculated. It was found that the overall model accounted for 1.1% within-person variance and 36% between-person variance in family-to-work conflict among working mothers. This indicated that the current model best predicted the between-person variance.

Discussion

The current study used bioecological theory (Bronfenbrenner & Morris, 2006) to examine work-to-family conflict and family-to-work conflict among working mothers over time. Here, the hypotheses are discussed in an integrated way. Bioecological theory emphasizes the need to consider and examine the within- and between-person differences among developing individuals to better understand any phenomenon, such as work-family conflict, so that the individuals' needs may be adequately addressed

(Bronfenbrenner, 1995a). Bioecological theory also states that each individual has his/her distinctive characteristics, and since there is a reciprocal individual-context relationship, each individual has the ability to affect his/her immediate and remote systems/contexts differently (Bronfenbrenner, 1994; Bronfenbrenner, 1995b). These ecological systems/contexts also produce different experiences for each individual based on his/her demand, resource, and force characteristics, thereby making individuals different from each other (Bronfenbrenner & Morris, 1998; Bronfenbrenner & Evans, 2000). Consistent with theory and previous research (e.g., Pratti & Zani, 2016), the first two hypotheses (H1 and H2) were supported, as results showed that there was significant within- and between-person variance in work–to–family conflict and family–to–work conflict among working mothers. These findings indicate that these working mothers are different in terms of their initial level of work–to–family conflict and family–to–work conflict, an issue which needs to be considered in work–family conflict studies to adequately examine the work–to–family and family–to–work conflict of working mothers over time (Almeida et al., 2016). For instance, it is important to understand the temporal structures of mothers’ work–family conflict experiences over time and how these changes occur in relation to the fairness of opportunities and equity in resource distribution, power, and processes. This will allow scholars to examine the work–family conflict in its contextualized form (Buettner-Schmidt & Lobo 2012; Crethar, Torres-Rivera, & Nash, 2008; Drevdahl 2002; Pangman & Seguire 2000; Redman & Clark, 2002; Vera & Speight, 2003). These variables, related to social locations such as race, class, and gender, should be included in the analysis instead of isolating and or controlling for them.

Doing so may provide a contextualized view of the difference in work–family conflict between different groups of working mothers (Bronfenbrenner & Crouter, 1982; Perry-Jenkins, Newkirk, & Ghunney, 2013). Recent content analysis of work–family conflict studies (see chapter 2) indicates that this also can be achieved by using more sophisticated research designs (e.g., longitudinal designs and daily diary designs) and advanced statistical techniques (e.g., structural equation modeling and multilevel modeling). Previous researchers also found that working mothers are different from one another regarding their levels of work–to–family and family–to–work conflict, due to having distinctive characteristics (Cho et al., 2013), belonging to diverse families (Perry-Jenkins, Smith, Goldberg, & Logan, 2011), and experiencing dynamic workplaces (Grzywacz et al., 2011). Current findings suggest that mothers’ work–to–family conflict and family–to–work conflict change over time, and are not static. However, there is continuity in mothers’ work–to–family and family–to–work conflict. Therefore, appropriate research designs and statistical techniques are essential to capture the temporal structures of mothers’ work–to–family and family–to–work conflict experiences.

According to H3, H4, H5, and H6, significant relationships between a nonstandard work schedule and work–to–family and family–to–work conflicts, and between relationship quality and work–to–family and family–to–work conflicts were hypothesized. Nonstandard work schedule and relationship quality were used as proxies to operationalize proximal processes, as they ensure the essence of individuals in the immediate context and their reciprocal interactions with persons, objects, and symbols

(Bronfenbrenner, 2005a). The results indicated that there is a significant positive relationship between a nonstandard work schedule and work–to–family conflict, which is consistent with the study led by Edgell et al. (2012). There was a significant negative relationship between relationship quality and family–to–work conflict, a finding that is consistent with the study conducted by Curran et al. (2015). According to bioecological theory, a nonstandard work schedule provides a reciprocal interaction to individuals with other persons, objects, and symbols in the workplace (Bronfenbrenner, 2005b). However, this reciprocal relationship does not help to stimulate proximal processes, but rather limits the positive functioning of proximal processes that increase work–to–family conflict for working mothers (Bronfenbrenner, 1995a). Similarly, relationship quality also provides reciprocal interactions to working mothers with their spouses/partners, objects, and symbols in their family (i.e., microsystem), which helps stimulate the positive functioning of proximal processes and decreases family–to–work conflict for working mothers (Bronfenbrenner, 1994). Researchers found that relationship quality plays an important role for working mothers in decreasing their family–to–work conflict (McMillan et al., 2004). These findings indicate that working mothers are more likely to interact with two microsystems (i.e., work and family) on a regular basis and for an extended period of time (Bronfenbrenner & Crouter, 1982; Perry-Jenkins et al., 2013). These potential sources of the functioning of proximal processes are central to individuals’ development and may help working mothers decrease their work–to–family and family–to–work conflict. However, it also is imperative to examine the time period when proximal processes occur, the extent of fairness and equity in reciprocal

interactions, available resources, and the characteristics of both individuals involved in the reciprocal interactions that may play an important role in the functioning of proximal processes. This is acknowledged in the conceptual framework (see chapter 2) called "The Ecology of Justice." It is worth mentioning that these propositions and assumptions need further empirical testing in future research.

In H7, H8, H9, and H10, it was hypothesized that intensive work environment and race would moderate the relationships between a nonstandard work schedule and work-to-family and family-to-work conflict, and between relationship quality and work-to-family and family-to-work conflict. For these hypotheses, no moderation effects were found. However, an intensive work environment had a positive direct relationship on work-to-family conflict. For instance, researchers found that an intensive work environment increases work stress for working mothers and they feel more overwhelmed, which increases their work-to-family conflict (Goodman et al., 2011). Bioecological theory states that the workplace is a microsystem for working mothers, and proximal processes that are central to individuals' development are the function of context and individuals' characteristics (Bronfenbrenner & Morris, 1998). This indicates that an intensive work environment that does not suit the positive functioning of proximal processes limits the functioning of proximal processes, thereby increasing the work-to-family conflict for working mothers (Bronfenbrenner & Evans, 2000). In the case of a nonstandard work environment, proximal processes already do not function well, so an intensive work environment in the workplace (i.e., microsystem) further limits the positive functioning of proximal processes. Together, this increases work-to-family

conflict for working mothers. There may be a several reasons race and intensive work environment did not moderate the relationship between a nonstandard work schedule and work-to-family and family-to-work conflict, and between relationship quality and work-to-family and family-to-work conflict. First, the variables of a nonstandard work schedule and relationship quality were proxies of proximal processes and they did not capture the true reciprocal relationships of working mothers with persons, objects, and symbols in the immediate context, and therefore did not receive the moderating effects of an intensive work environment and race. Second, it also is possible that the proximal processes have their own, independent effects on the outcome under consideration. Instead of being a function of individuals' characteristics, context, time, and the outcome under consideration, they also can independently affect the outcome being studied. These propositions are included in "The Ecology of Justice," which needs empirical testing in future research.

Furthermore, there was a significant direct relationship between race and family-to-work conflict, which indicates that White working mothers have higher levels of family-to-work conflict than African American working mothers. Researchers found that due to the unequal division of household labor, child care responsibilities, and more liberal gender ideology, White mothers may feel more overwhelmed, thereby increasing their family-to-work conflict (Minnotte, Minnotte, & Pedersen, 2013). Another explanation is that White mothers also lack family support due to the lack of an extended family system compared to typically more developed kin systems among African American families (Hoffman, 1987). Due to the lack of extended family support and

increasing household and child care responsibilities, White mothers may face higher levels of family-to-work conflict compared to African American working mothers. According to bioecological theory, the family is a microsystem for working mothers, which may provide an adequate environment for the functioning of proximal processes (Bronfenbrenner, 2005b). In this case, the lack of family support and the presence of high family demands do not provide an appropriate context to stimulate the functioning proximal processes (Bronfenbrenner & Ceci, 1994).

Further, H11, H12, H13, and H14, hypothesized that work-to-family conflict and family-to-work conflict change over time and that there was a presence of change in the rate of change in work-to-family conflict and family-to-work conflict of working mothers over time. The results showed that there were significant changes found in work-to-family conflict and family-to-work conflict. For instance, the work-to-family conflict increased over time, whereas the family-to-work conflict decreased with an increased rate of change. The results are consistent with the theory. According to bioecological theory (Bronfenbrenner & Morris, 1998), time is an equally important element as other constructs included in the bioecological model (i.e., Process-Person-Context-Time) of human development, which affects the functioning of proximal processes and influences individuals' development (Bronfenbrenner & Morris, 2006; Bronfenbrenner & Evans, 2000). The results also are consistent with existing research in which researchers illustrate that individuals' work-family conflict experiences follow a temporal structure, while different social events, historical events, and lifespan shape the

work–family conflict experiences of working individuals over time (Bronfenbrenner & Crouter, 1982; Kinnunen, Geurts, & Mauno, 2004; Perry-Jenkins et al., 2013).

Additionally, family–to–work conflict decreases significantly over time, which is a relatively new finding because few studies on the family–to–work conflict of working mothers have used longitudinal data (Bianchi & Milkie, 2010). One explanation may be that since these mothers have children between 4 and 9 years of age, it was difficult for them to manage childcare and schooling responsibilities along with their own work. Over time, they were able to effectively manage these responsibilities. Consequently, their family–to–work conflict began to decrease at an increasing rate. It is important to mention that the change was minimal, even though it was statistically significant. It is also possible that these mothers were receiving more support in the family through better relationship quality, which helped them stimulate the functioning of proximal processes and decrease their family–to–work conflict. At the same time, they were lacking workplace support, which limited the functioning of proximal processes and thereby increased their work–to–family conflict. However, there might be many factors that could produce support in the family and decrease support in the workplace.

According to bioecological theory (Bronfenbrenner, 1994, Bronfenbrenner, 1995a), the family is a microsystem for working mothers which can play an important role as a supportive environment to stimulate the functioning of proximal processes (Bronfenbrenner & Morris, 1998; Bronfenbrenner, 1995b). These supportive environments in the family can be in the form of relationship quality, family support, or peer support, which provide a suitable context that may promote the functioning of

proximal processes and decrease mothers' family–to–work conflict over time (Bronfenbrenner & Evans, 2000; Bronfenbrenner, 2005a). Similarly, the workplace is a microsystem for working mothers if it provides a supportive context that promotes the functioning of proximal processes and decreases their work–to–family conflict (Bronfenbrenner, 2005b; Bronfenbrenner & Morris, 2006).

Future research should focus on examining the reasons behind the decrease in family–to–work and increase in work–to–family conflict of working mothers over time. The use of either qualitative research or mixed method research techniques may be useful to better explore this phenomenon and gain a deeper understanding and more contextualized information, which may help researchers to better understand the work–family conflict experiences of working mothers in the United States. For instance, it will be useful for future qualitative research to focus on discovering several important factors at the family, work, and community levels, which work like resources for working mothers. Such qualitative research may help researchers highlight true work–family experiences of working mothers and the meaning they derive from these experiences. After gathering information about many potential contextual factors, researchers may be able to test the statistical and practical significance of these factors in relation to decreasing work–to–family and family–to–work conflicts of working mothers. Similarly, a mixed method approach may also provide the same view of this complex phenomenon.

Taken together, work–to–family conflict and family–to–work conflict are not static experiences of working mothers, but rather ongoing experiences. Mothers' experiences of their work–to–family conflict and family–to–work conflict are different

based on their individual characteristics, social locations, and social and historical contexts. Therefore, it is imperative to consider within- and between- person differences in the work–to–family conflict and family–to–work conflict of working mothers and study their experiences over time to appropriately examine the temporal structure of their work–to–family conflict and family–to–work conflict experiences.

Limitations

There are some limitations of the current study. First, there were no direct measures available in the original dataset to operationalize the proximal processes. Therefore, for the current study, proxies of proximal processes were used which may not have matched with the exact definition and operationalization of proximal processes (Bernal, Mittag, & Qureshi, 2016). Bronfenbrenner and Morris (1998) and Bronfenbrenner and Evans (2000) define proximal processes as the progressively complex reciprocal interactions of individual with persons, objects, and symbols in the immediate context that continues on a regular basis and for an extended. The variables used in the current study were based on a single item measure, which could not capture the complex construct of proximal processes and individual-context reciprocal relationship. Additionally, dyadic data would be helpful to capture the reciprocal interactions and characteristics of both individuals involved in the reciprocal interactions, but this data type was not available here. Second, the current study was based on self-reported data, which may have created a response bias and resulted in biased estimates. For instance, most of the scales consisted of items that had Likert responses; mothers responded based on their subjective judgment about their work–to–family and family–to–

work conflict. This could have created response bias and contributed to an increased measurement error (Remler & Van Ryzin, 2011). Third, the element of self-selection was involved in the current data, which limited the researchers' ability to achieve causation even though longitudinal data was used in the study. For instance, many mothers did not participate in the original study due to aforementioned reasons. These mothers may be significantly different from those who did participate. Hence, there is high likelihood that the current findings are partially the results of other characteristics, and may have produced biased estimates (Remler & Van Ryzin, 2011).

Future Directions

Future studies should focus on working mothers' interactions with their supervisors and examine how supervisors acknowledge the inter-and intra-individual differences among working mothers and accommodate them accordingly. Future studies should also examine whether family-friendly policies in the workplace would moderate the relationship between a nonstandard work schedule and work–to–family conflict / family–to–work conflict. Specific measures to operationalize proximal processes and collect appropriate data about mothers' reciprocal interactions with persons, objects, and symbols in the work and family domains would be essential to adequately use bioecological theory as a framework in work–family conflict studies. The data from multiple sources, dyadic data, or observational data would be more helpful to adequately examine mothers' reciprocal interactions in the immediate external environment. Since mothers' work–to–family conflict and family–to–work conflict experiences follow a temporal structure and there is a significant variability at within- and between-person

levels, the use of intensive longitudinal design, such as daily diary designs would better help to analyze work-to-family conflict and family-to-work conflict experiences of working mothers.

References

- Almeida, D. M., Davis, K. D., Soomi, L., Lawson, K. M., Walter, K. N., & Moen, P. (2016). Supervisor support buffers daily psychological and physiological reactivity to work-to-family conflict. *Journal of Marriage & Family*, 78(1), 165-179. doi:10.1111/jomf.12252
- Bakker, A., Demerouti, E., & Burke, R. (2009). Workaholism and relationship quality: A spillover-crossover perspective. *Journal of Occupational Health Psychology*, 14(1), 23-33. doi:10.1037/a0013290
- Bernal, P., Mittag, N., & Qureshi, J. A. (2016). Estimating effects of school quality using multiple proxies. *Labour Economics*, 39, 1-10. doi:10.1016/j.labeco.2016.01.005
- Bianchi, S. M., & Milkie, M. A. (2010). Work and family research in the first decade of the 21st century. *Journal of Marriage and Family*, 72, 705-725. doi:10.1111/j.1741-3737.2010.00726.x
- Boamah, S. A., & Laschinger, H. (2016). The influence of areas of worklife fit and work-life interference on burnout and turnover intentions among new graduate nurses. *Journal of Nursing Management*, 24, 164-174. doi:10.1111/jonm.12318
- Blocklin, M., Crouter, A. C., & McHale, S. M. (2012). Youth supervision while mothers work: A daily diary study of maternal worry. *Community, Work & Family*, 15, 233-249.
- Bracke, P., & Symoens, S. (2015). Work-family conflict and mental health in newlywed and recently cohabiting couples: a couple perspective. *Health Sociology Review*, 24(1), 48-63. doi:10.1080/14461242.2015.1007156

- Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husen & T. N. Postlethwaite (Eds.), *International encyclopedia of education* (2nd ed., pp. 1643-1647). Oxford, UK: Pergamon Press.
- Bronfenbrenner, U. (1995a). The bioecological model from a life course perspective: Reflections of a participant observer. In P. Moen, G. H. Elder, & K. Luscher (Eds.). *Examining lives in context: Perspectives on the ecology of human development* (pp. 599-618). Washington, DC: American Psychological Association.
- Bronfenbrenner, U. (1995b). Developmental ecology through space and time: a future perspective. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 599-618). Washington, DC: American Psychological Association.
- Bronfenbrenner, U. (2005a). The bioecological theory of human development. In U. Bronfenbrenner (Ed.), *Making human beings human: Bioecological perspectives on human development* (pp. 3-15). Thousand Oaks, CA: Sage.
- Bronfenbrenner, U. (2005b). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage Publications.
- Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, *101*, 568-586. doi:10.1037/0033-295X.101.4.568
- Bronfenbrenner, U., & Crouter, A. C. (1982). Work and family through time and space. In S. Kamerman & C. D. Hayes (Eds.), *Children in a changing world* (pp. 39-83). Washington, DC: National Academy Press.

- Bronfenbrenner, U., & Evans, G. W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development, 9*(1), 115-125. doi:10.1111/1467-9507.00114
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Theoretical models of human development* (5th ed., pp. 993-1023). New York, NY: Wiley.
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Theoretical models of human development* (6th ed., pp. 793-828). New York, NY: Wiley.
- Brummelhuis, L. T., Bakker, A. B., & Euwema, M. C. (2010). Is family-to-work interference related to co-workers' work outcomes? *Journal of Vocational Behavior, 77*, 461-469.
- Buettner-Schmidt, K., & Lobo, M. L. (2012). Social justice: A concept analysis. *Journal of Advanced Nursing 68*, 948-958. doi:10.1111/j.1365-2648.2011.05856.x
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. New York, NY: Routledge.
- Cho, E., Tay, L., Allen, T. D., & Stark, S. (2013). Identification of a dispositional tendency to experience work-family spillover. *Journal of Vocational Behavior, 82*, 188-198. doi:10.1016/j.jvb.2013.01.006

- Crethar, H. C., Torres-Rivera, E., & Nash, S. (2008). In search of common threads linking multicultural, feminist, and social justice counseling paradigms. *Journal of Counseling & Development, 86*, 269-278.
- Curran, M., McDaniel, B., Pollitt, A., & Totenhagen, C. (2015). Gender, emotion work, and relationship quality: A daily diary study. *Sex Roles, 73*, 157-167.
doi:10.1007/s11199-015-0495-8
- Drevdahl, D. (2002). Social justice or market justice? The paradoxes of public health partnerships with managed care. *Public Health Nursing, 19*, 161-169.
- Dyrbye, L. N., Sotile, W., Boone, S., West, C. P., Tan, L., Satele, D., Sloon, J., Oreskovich, M., & Shanafelt, T. (2013). A survey of U.S. physicians and their partners regarding the impact of work-home conflict. *Journal of General Internal Medicine, 29*(1), 155-61. doi:10.1007/s11606-013-2581-3
- Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980-2002). *Journal of Vocational Behavior, 66*(1), 124-197.
- Edgell, P., Ammons, S. K., & Dahlin, E. C. (2012). Making ends meet: Insufficiency and work-family coordination in the new economy. *Journal of Family Issues, 33*, 999-1026. doi:10.1177/0192513X11424261
- Garr, M., & Tuttle, R. (2012). Shift work and work to family fit: Does schedule control matter? *Journal of Family and Economy Issues, 33*, 261-271. doi:10.1007/s10834-012-9283-6

- Gassman-Pines, A. (2011). Low-income mothers' nighttime and weekend work: Daily association with child behavior, mother-child interactions, and mood. *Family Relations, 60*, 15-29. doi:10.1111/j.1741-3729.2010.00630.x
- Goodman, W. B., Crouter, A. C., Lanza, S. T., Cox, M. J., & Vernon-Feagans, L. (2011). Paternal work stress and latent profiles of father-infant parenting quality. *Journal of Marriage and Family, 73*, 588-604. doi:10.1111/j.1741-3737.2011.00826.x
- Grice, M. M., McGovern, P. M., Alexander, B. H., Ukestad, L., & Hellerstedt, W. (2011). Balancing work and family after childbirth: A longitudinal analysis. *Women's Health Issues, 21*(1), 19-27. doi:10.1016/j.whi.2010.08.003
- Grzywacz, J. G., Crain, A. L., Martinson, B. C., & Quandt, S. A. (2014). Job design and ethnic differences in working women's physical activity. *American Journal of Health Behavior, 38*, 63-73. doi:10.5993/AJHB.38.1.7.
- Grzywacz, J. G., Daniel, S. S., Tucker, J., Walls, J., & Leerkes, E. (2011). Nonstandard work schedules and developmentally generative parenting practices: An application of propensity score technique. *Family Relations, 60*, 45-59. doi:10.1111/j.1741-3729.2010.00632.x
- Grzywacz, J. G., Rao, P., Woods, C. R., Prieser, J. S., & Gesler, W. & Arcury, T. A. (2005). Child health and worker productivity: A rural examination of family interference with work. *Journal of Occupational Health Psychology, 10*, 382-392.
- Grzywacz, J. G., Tucker, J., Clinch, C. R., & Arcury, T. (2010). Individual and job related variation in infant feeding practices among working mothers. *American Journal of Health Behavior, 34*, 186-196.

- Heck, R. H., Thomas, S. L., & Tabata, L. N. (2014). *Multilevel and longitudinal modeling with IBM SPSS*. New York, NY: Routledge.
- Hoffman, L. W. (1987). The effects on children of maternal and paternal employment. In Naomi, G. & Harriet. G. (Eds.), *Families and work*. Philadelphia, PA: Temple University Press.
- Kalil, A., Dunifon, R., Crosby, D., & Su, J. H. (2014). Work hours, schedules, and insufficient sleep among mothers and their young children. *Journal of Marriage and Family*, 76, 891-904. doi:10.1111/jomf.12142
- Kelly, E. L., Moen, P., Oakes, J. M., Fan, W., Okechukwu, C., Davis, K. D., Hammer, L. B., Kossek, E. E., Kind, R. B., Hanson, G. C., Mierzwa, F., & Casper, L. M. (2014). Changing work and work-family conflict: Evidence from the work, family, and health network. *American Sociological Review*, 79, 485-518.
doi:10.1177/0003122414531435
- Kinnunen, U., Geurts, S., & Mauno, S. (2004). Work-to-family conflict and its relationship with satisfaction and well-being: A one-year longitudinal study on gender differences. *Work & Stress*, 18(1), 1-22.
- Lam, C. B., McHale, S. M., & Crouter, A. C. (2012). Division of household labor: Longitudinal changes and with-couple variations. *Journal of Marriage and Family*, 74, 944-952. doi:10.1111/i.1741-3737.2012.01007.x
- Lawson, K. M., Davis, K. D., Crouter, A. C., & O'Neill, J.W. (2013). Understanding work-family spillover in hotel managers. *International Journal of Hospitality Management*, 33, 273-281. doi:10.1016/j.ijhm.2012.09.003

- Lu, L., & Kao, S. (2013). The reciprocal relations of pressure, work/family interference, and role satisfaction: Evidence from a longitudinal study in Taiwan. *Human Resource Management, 52*, 353-373. doi:10.1002/hrm.21532
- McAllister, S., Thornock, C. M., Hammond, J. R., Holmes, E. K., & Hill, E. J. (2012). The influence of couple emotional intimacy on job perceptions and work-family conflict. *Family and Consumer Sciences Research Journal, 40*, 330-347. doi:10.1111/j.1552-3934.2012.02115.x
- McMillan, L. W., O'Driscoll, M. P., & Brady, E. C. (2004). The impact of workaholism on personal relationships. *British Journal of Guidance & Counselling, 32*, 171-186. doi:10.1080/03069880410001697729
- Michel, J. S., & Clark, M. A. (2013). Investigating the relative importance of individual differences on the work-family interface and the moderating role of boundary preference for segmentation. *Stress Health, 29*, 324-336. doi:10.1002/smi.2474
- Minnotte, K. L., Minnotte, M. C., & Pedersen, D. E. (2013). Marital satisfaction among dual-earner couples: Gender ideologies and family-to-work conflict. *Family Relations, 62*, 686-698. Retrieved from <http://search.proquest.com/docview/1436868453?accountid=12536>
- Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict scales and family-work conflict scales. *Journal of Applied Psychology, 81*, 433-410.

- Nomaguchi, K. M. (2012). Marital status, gender, and home-to-job conflict among employed parents. *Journal of Family Issues, 33*, 271-294.
doi:10.1177/0192513X11415613
- O'Brien, K. M., Ganginis, H. V., Yoo, S., Cinamon, R. G., & Han, Y. (2014). Work, family, support, and depression: Employed mothers in Israel, Korea, and the United States. *Journal of Counseling Psychology, 3*, 461-472. doi:10.1037/a0036339
- Odom, E.C., Vernon-Feagans, L., & Crouter, A. C. (2013). Nonstandard maternal work schedule: Implication for African American children's early language outcomes. *Early Childhood Research Quarterly, 28*, 379-387.
- Pangman, V. C., & Seguire, M. (2000) Sexuality and the chronically ill older adult: A social justice issue. *Sexuality and Disability, 18*(1), 49-59.
- Perry-Jenkins, M., Newkirk, K., & Ghunney, A. K. (2013). Family work through time and space: An ecological perspective. *Journal of Family Theory & Review, 5*, 105-123.
doi:10.1111/jftr.12011
- Perry-Jenkins, M., Repetti, R. L., & Crouter, A. C. M. (2000). Work and family in the 1990s. *Journal of Marriage and the Family, 62*, 981-998.
- Perry-Jenkins, M., Smith, J. Z., Goldberg, A. E., & Logan, J. (2011). Working-class jobs and new parents' mental health. *Journal of Marriage and Family, 73*, 1117-1132.
doi:10.1111/j.1741-3737.2011.00871.x
- Prati, G., & Zani, B. (2016). A moderated multilevel study of work-to-family conflict, empowerment, and turnover intentions. *Quality & Quantity, 50*, 22-79.
doi:10.1007/s11135-015-0262-5

- Redman, R. W., & Clark, L. (2002). Service-learning as a model for integrating social justice in the nursing curriculum. *Journal of Nursing Education, 41*, 446-449.
- Remler, D. K., & Van Ryzin, G. G. (2011). *Research methods in practice: Strategies for description and causation*. Thousand Oaks, CA: Sage Publications.
- Schumacker, R. E., & Lomax, R. G. (2010). *A beginning's guide to structural equation modeling*. New York, NY: Routledge.
- Stewart, L. M. (2013). Family care responsibilities and employment: Exploring the impact of type of family care work-family and family-work conflict. *Journal of Family Issues, 34*(1), 113-138. doi:10.1177/0192513X12437708
- The Council of Economic Advisers (2014). *Nine facts about American families and work*. Retrieved from <https://www.google.com/#q=proportion+of+single+working+mothers+in+the+U.S.>
- Toossi, M. (2002). Century of change: The U.S. labor force, 1950-2050. *Monthly Labor Review, 125*, 15-28. Retrieved from <http://www.bls.gov/opub/mlr/2002/05/art2full.pdf>
- Tudge, J. H., Mokrova, I., Hatfield, B. E., & Karnik, R. B. (2009). Uses and misuses of Bronfenbrenner's bioecological theory of human development. *Journal of Family Theory and Review, 1*, 198-210.
- Twisk, J., de Boer, M., de Vente, W., & Heymans, M. (2013). Original Article: Multiple imputation of missing values was not necessary before performing a longitudinal mixed-model analysis. *Journal of Clinical Epidemiology, 66*, 1022-1028. doi:10.1016/j.jclinepi.2013.03.017

- United States Department of Labor (2015). *The employment situation*. Retrieved from <http://www.bls.gov/news.release/pdf/empsit.pdf>
- Vera, E., M., & Speight, S. L. (2003). Multicultural competence, social justice, and counseling psychology: Expanding our roles. *The Counseling Psychologist, 31*, 253-272.
- Voydanoff, P. (2004). Implications of work and community resources and demands for marital quality. *Community, Work & Family, 7*, 311-325.
doi:10.1080/1366880042000295736
- Voydanoff, P. (2005a). The effects of community demands, resources, and strategies on the nature and consequences of the work-family interface: An agenda for future research. *Family Relations, 54*, 583-595.
- Voydanoff, P. (2005b). The effects of community demands, resources, and strategies on the nature and consequences of the work-family interface: An agenda for future research. *Family Relations, 54*, 583-595.
- Wheeler, L. A., Updegraff, K. A., & Crouter, A. (2011). Work and Mexican American parent-adolescent relationships: The mediating role of parent well-being. *Journal of Family Psychology, 25*(1), 107-116. doi:10.1037/a0022440
- Work Stress Survey (2013). *Globe newswire*. Retrieved from <http://globenewswire.com/news-release/2013/04/09/536945/10027728/en/Workplace-Stress-on-the-Rise-With-83-of-Americans-Frazzled-by-Something-at-Work.html>

Table 4.1

Descriptive Statistics of Measured Variables in the Model

Variables	N	Min	Max	M	SD	Skewness	Kurtosis
Work-to-family conflict at time 1	302	1	5	2.46	0.83	0.04	-0.48
Work-to-family conflict at time 2	302	1	5	2.38	0.82	0.12	-0.33
Work-to-family conflict at time 3	302	1	4.6	2.15	0.82	0.25	-0.61
Work-to-family conflict at time 4	302	1	5	2.28	0.81	0.07	-0.51
Family-to-work conflict at time 1	302	1	4	2.01	0.67	0.28	-0.53
Family-to-work conflict at time 2	302	1	3.8	1.97	0.67	0.35	-0.41
Family-to-work conflict at time 3	302	1	4.2	1.97	0.66	0.38	-0.16
Family-to-work conflict at time 4	302	1	4.2	1.8	0.65	0.54	-0.16
Age of respondent	302	24	49	35.77	5.91	0.1	-0.78
Relationship quality with spouse	302	2	7	5.81	0.9	-1.19	2.72
Intensive workplace environment	302	2	5	3.45	0.6	-0.12	-0.23

Table 4.2

Correlations of Measured Variables in the Model

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.WFC_T1	-	.62**	.51**	.59**	.46**	.39**	.33**	.31**	.07	.1*	.08	.16**	-.01	.25**	.04
2.WFC_T2		-	.54**	.65**	.33**	.52**	.42**	.37**	.10	.13*	.05	.17**	.01	.22**	.19**
3.WFC_T3			-	.55**	.37**	.42**	.45**	.54**	.20**	.05	-.01	.22**	-.02	.16**	.10
4.WFC_T4				-	.45**	.48**	.58**	.41**	.17**	.19**	.03	.16**	-.01	.19**	.16**
5.FWC_T1					-	.64**	.56**	.63**	.08	.13*	.05	.01	-.10	.19**	.16**
6.FWC_T2						-	.64**	.61**	.16**	.21**	.01	.01	-.07	.14*	.21**
7.FWC_T3							-	.64**	.25**	.25**	.03	.12*	-.10	.14*	.22**
8.FWC_T4								-	.19**	.17**	-.01	.06	-.04	.10	.21**
9.AGE									-	.35**	.32**	-.08	-.02	.02	.21**
10.EDU										-	.23**	-.06	.04	.06	.02
11.MS											-	-.09	-.01	.01	.38**
12.NSW												-	-.02	-.14*	-.13*
13.RQ													-	.04	.09
14.IWE														-	.09
15.RACE															-

Note: * $p < .05$, ** $p < .001$; WFC = work-to-family conflict; FWC = family-to-work conflict; EDU = education level; MS = marital status; NSW = nonstandard work schedule; RQ = relationship quality with spouse; IWE = intensive work environment.

Table 4.3

Factors Predicting Work-to-Family Conflict Among Working Mothers (N = 302)

	Model 1	Model 2	Model 3	Model 4	Model 5
	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)
Fixed effects					
Intercept	2.32 (.04)**	1.22 (.21)**	1.38 (.22)**	1.14 (.31)**	.71 (.28)**
Family-to-work conflict		.36 (.04)**	.33 (.05)**	.34 (.04)**	.33(.04)**
Nonstandard work schedule				.34 (.08)**	.39(.08)**
Quality relationship				.02(.04)	.01 (.04)
Race					.13 (.07)
Intensive work environment					.26(.05)**
Linear term			.07 (.05)	.07 (.05)	.07 (.05)
Quadratic term			-.22 (.09)**	-.22(.09)**	-.22(.09)**
Random effects					
Residual	0.30 (.01)**	0.31 (.02)**	.30 (.01)**	.30 (.01)**	.30 (.01)**
Intercept	0.38 (.04)**	0.25 (.03)**	.26(.03)**	.24 (.03)**	.22(.03)**

*Note: *p < .05, **p < .001; Dependent variable = work-to-family conflict*

Table 4.4

Factors Predicting Family-to-Work Conflict Among Working Mothers (N = 302)

	Model 1	Model 2	Model 3	Model 4	Model 5
	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)
Fixed effects					
Intercept	1.94 (.03)**	1.00 (.17)**	1.07 (.18)**	1.41 (.26)**	1.76 (.19)**
Work-to-family conflict		.20 (.02)**	.18 (.02)**	.18 (.02)**	.18 (.02)**
Age		.012 (.01)**	.01 (.01)**	.01 (.01)**	.01 (.01)
Education		.18 (.06)**	.18 (.06)**	.19 (.06)**	.25 (.06)**
Marital status		-.08 (.06)	-.08(.06)	-.08 (.06)	-.17 (.07)**
Nonstandard work schedule				.03 (.07)	.05 (.06)
Quality relationship				-.06 (.03)	-.08 (.03)**
Race					.31 (.06)**
Linear term			-.15 (.04)**	-.15 (.034)**	-.15 (.04)**
Quadratic term			.17(.07)**	.17 (.07)**	.17(.07)**
Random effects					
Residual	.17 (.01)**	.18 (.01)**	.17 (.01)**	.17 (.01)**	.17 (.01)**
Intercept	.27 (.03)**	.18 (.02)**	.19 (.02)**	.19 (.02)**	.17 (.02)**
UN (1,1)					.28 (.03)*
UN (2,1)					-.01 (.01)
UN (2,2)					.003 (.003)

*Note: *p < .05, **p < .001; Dependent variable = family-to-work conflict*

Figure 4.1

Variations in Work-to-Family Conflict of Working Mothers Over Time

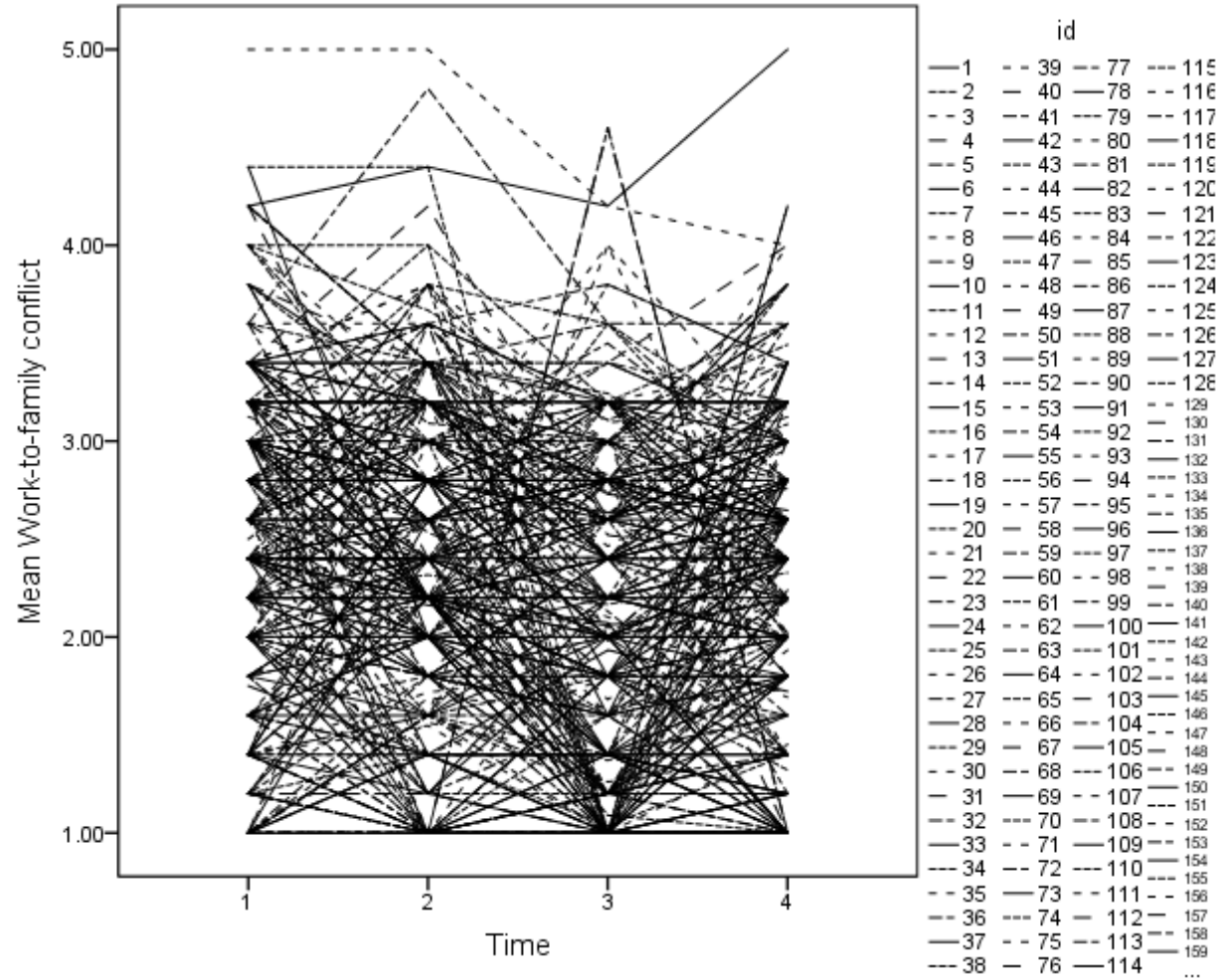


Figure 4.2

Variations in Family-to-Work Conflict of Working Mothers Over Time

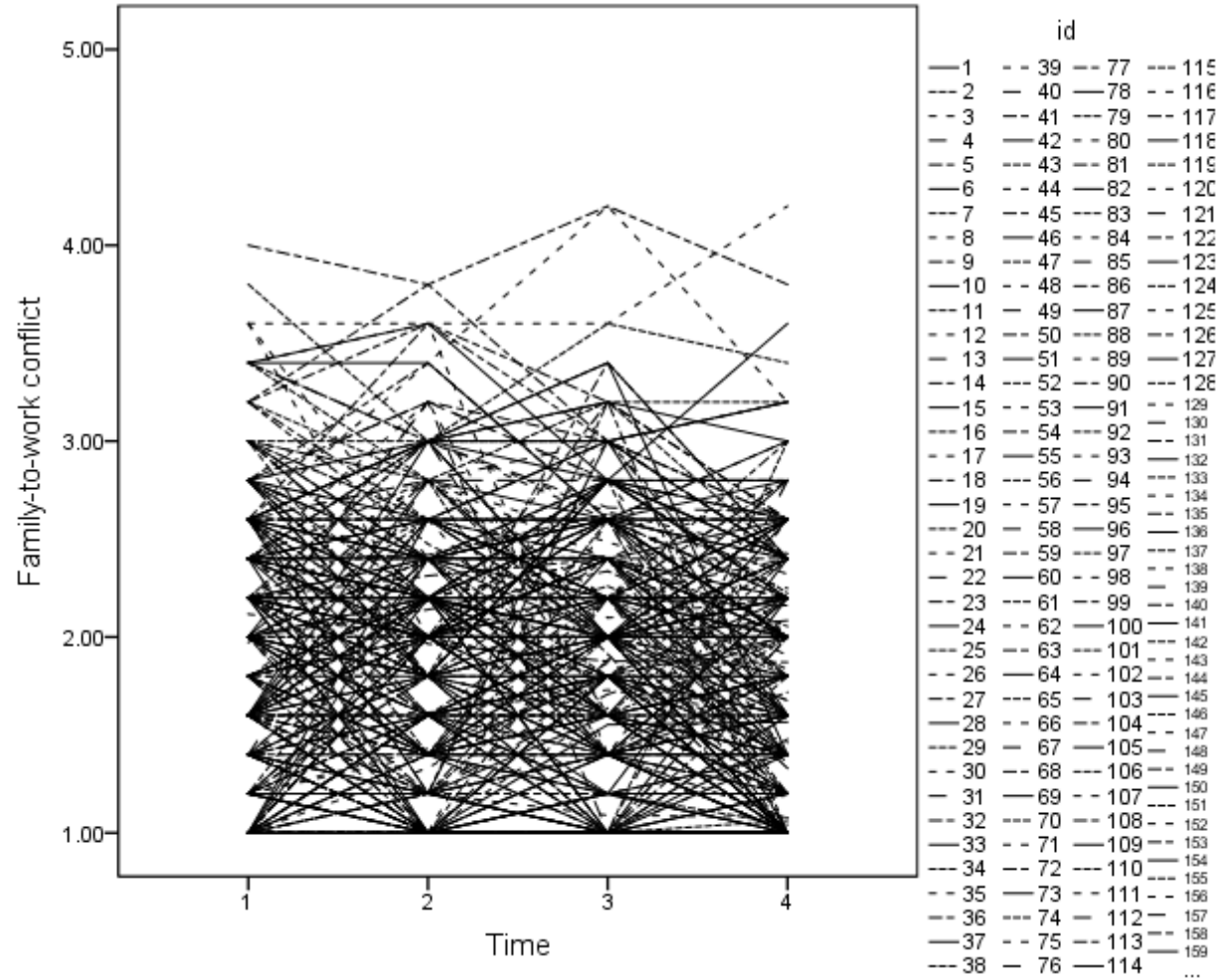


Figure 4. 3

Linear Slope of Work-to-Family Conflict

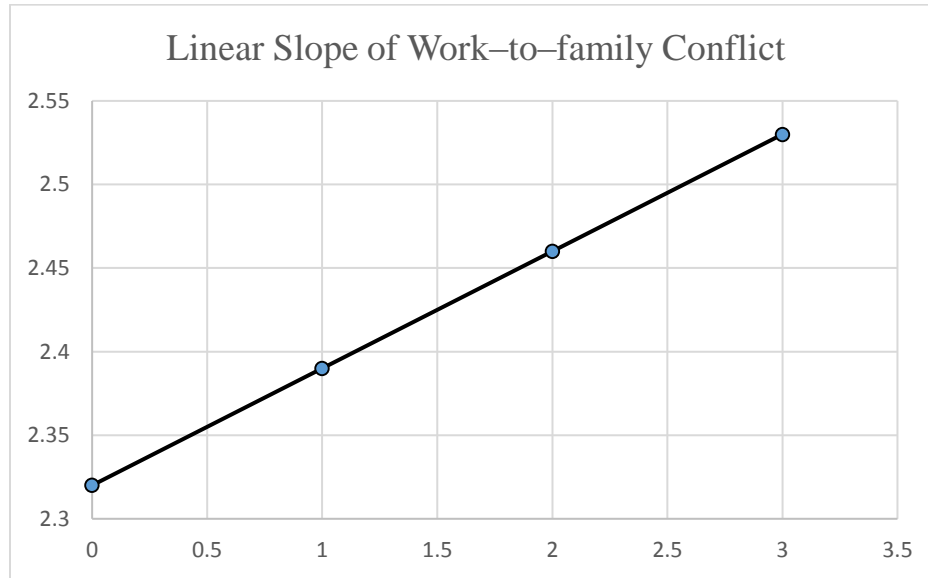


Figure 4. 4

Quadratic Slope of Work-to-Family Conflict

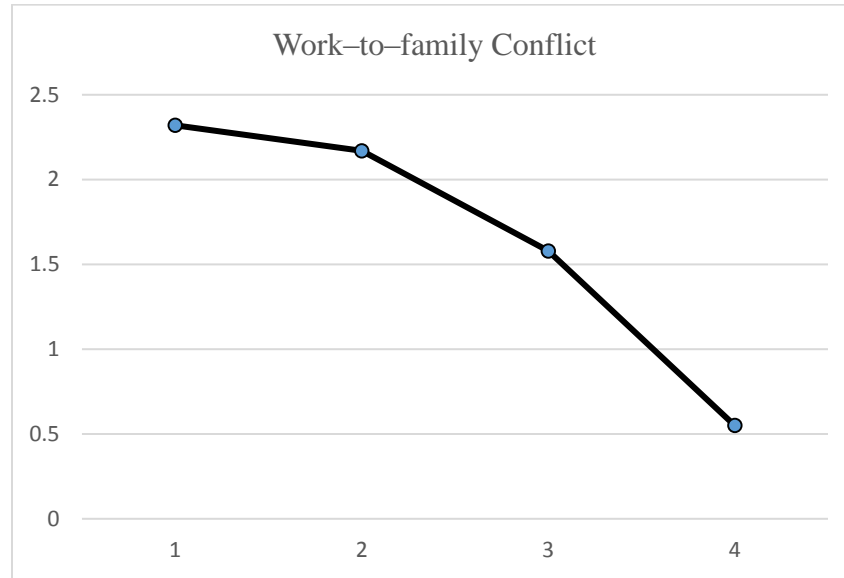


Figure 4. 5

Linear Slope of Family-to-Work Conflict

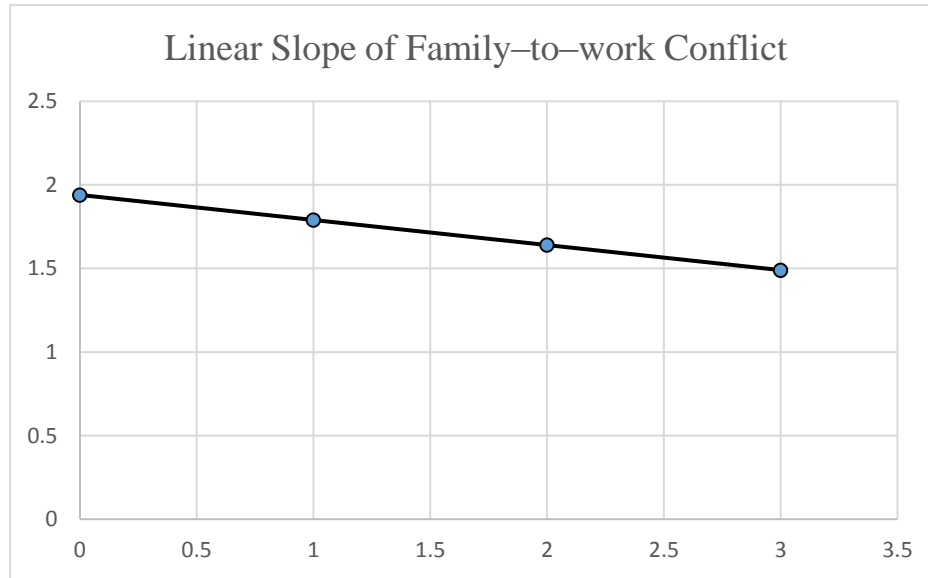


Figure 4. 6

Quadratic Slope of Family-to-Work Conflict

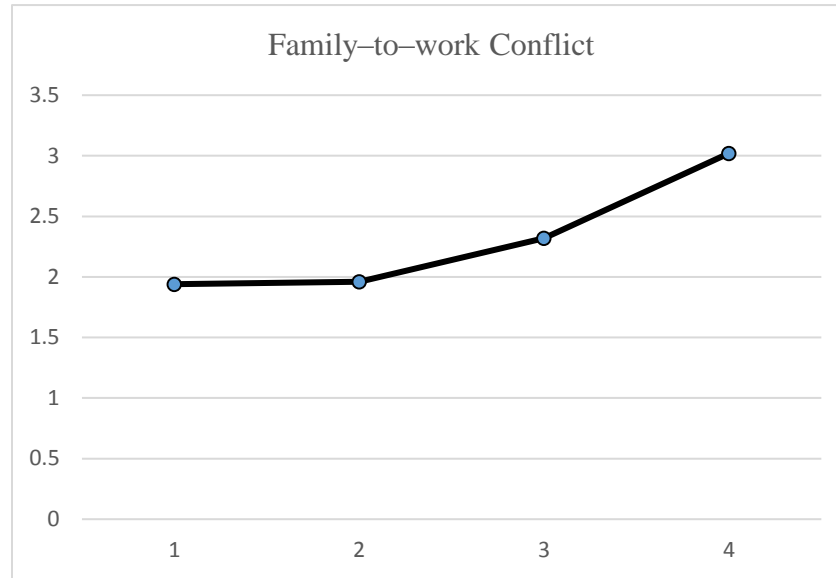
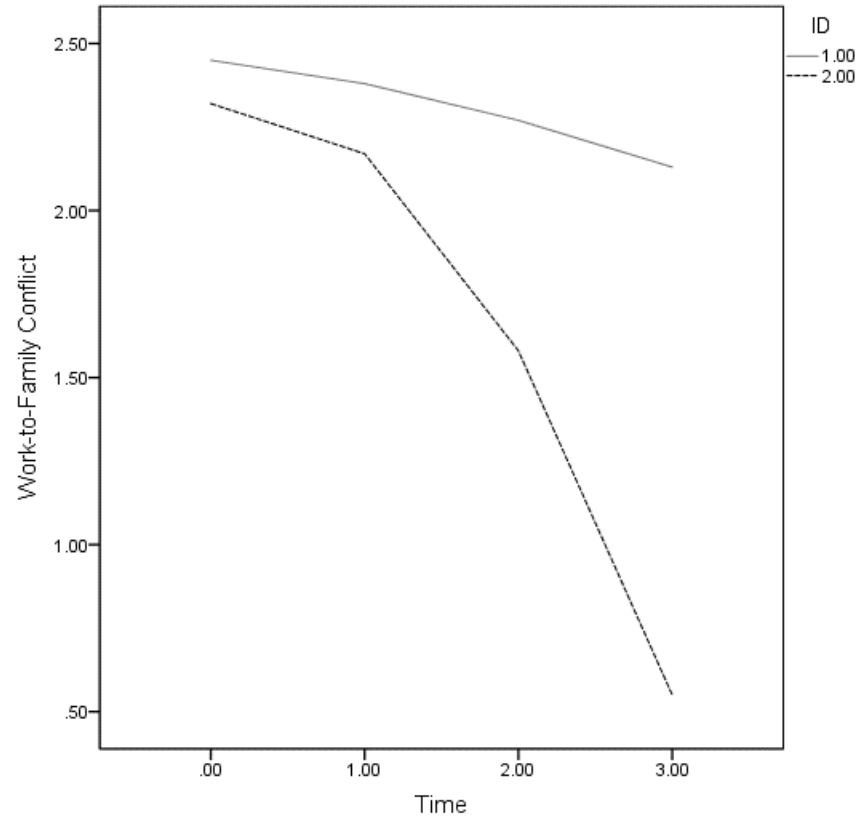


Figure 4.7

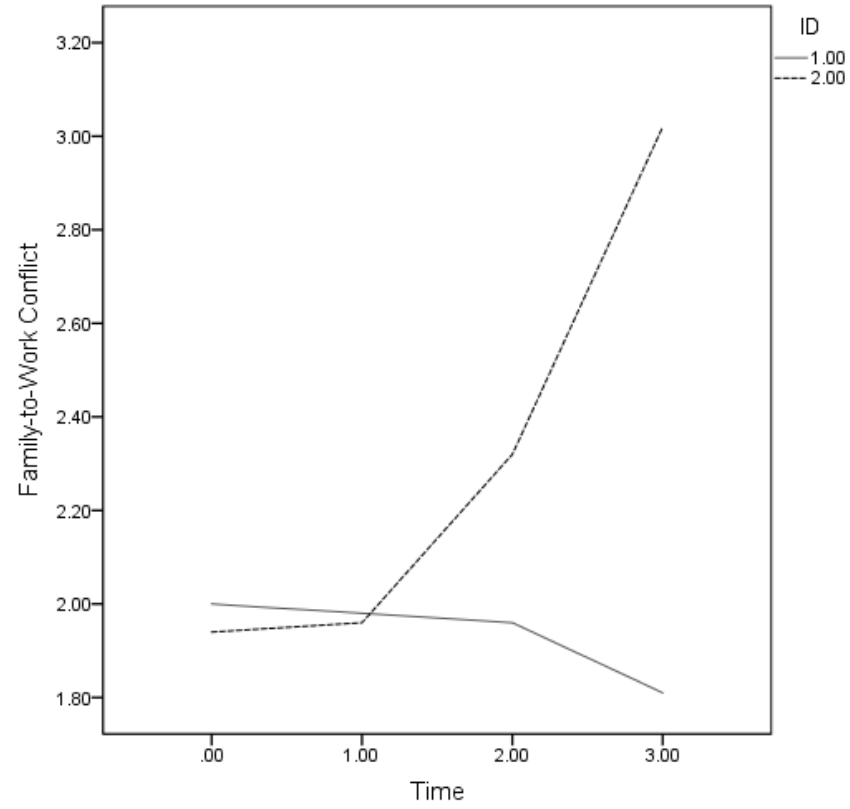
Observed and Predicted Mean Change in Work-to-Family Conflict



Note: 1 = Observed Mean; 2 = Predicted Mean

Figure 4.8

Observed and Predicted Mean Change in Family-to-Work Conflict



Note: 1 = Observed Mean; 2 = Predicted Mean

Chapter 5

Discussion

The current research consisted of three distinct studies focused on aspects of work and family. The first study used “The Ecology of Justice” conceptual framework to guide a content analysis of work–family conflict literature from 1980–2016. The results of this study indicated that researchers frequently used cross-sectional research design and hierarchical multiple regression statistical techniques, they used less diverse samples, in most studies researchers used theory, and quantitative research techniques dominated work–family conflict literature. Moreover, the microsystem and mesosystem were examined more than other ecological systems, and race, class, sexual orientation, and disability were the least studied dimensions of diversity.

The second study conducted a longitudinal examination of work–family balance of working mothers who had children between 4 and 9 years of age. The findings showed the mediating effect of positive family–to–work spillover between relationship quality and work–family balance, and that this mediating effect was moderated by the availability of family-friendly workplace policies.

In the third study, the same sample of working mothers was used to examine work–to–family conflict and family–to–work conflict over time. Results suggested significant within- and between-person differences in work–to–family and family–to–work conflict of working mothers over time. The work–to–family conflict increased over time, whereas the family–to–work conflict decreased over time. Also, nonstandard work

schedules increased work–to–family conflict, whereas relationship quality decreased family–to–work conflict of working mothers over time.

Overall, work–family studies lack an appropriate examination of the experiences of marginalized working individuals and families who have high levels of work–family conflict and who struggle to maintain a healthy work–family balance. Conceptually, work–family experiences of working individuals and families differ in relation to fairness of opportunities and equity in resource distribution, power, and process. Fairness and equity may directly shape individuals’ work–family experiences and the individual–context reciprocal relationship. The effects of individuals’ characteristics and ecological contexts on work–family experiences of working mothers may also change based on how fairness and equity are established, maintained, and perpetuated at different ecological levels.

The current study offers important theoretical contributions to work–family literature. First, an integrated conceptual framework grounded in a social justice perspective (Buettner-Schmidt & Lobo, 2012) and bioecological theory (Bronfenbrenner & Ceci, 1994), “The Ecology of Justice,” was developed and used. The content analysis conducted in the current study suggests that marginalized populations are rarely included in work–family studies; by merging bioecological theory with a social justice perspective, work–family researchers can better theorize and study marginalized individuals and families. Use of this conceptual framework not only brought the social justice perspective into work–family literature, but it also filled important gaps in bioecological theory, which is a mainstay in work–family literature. One important gap in bioecological theory

is that it neglects the role of fairness and equity in shaping individuals' development (e.g., individuals' work–family experiences). For instance, individuals' experiences can be changed directly, indirectly, or based on the conditions of how fairness of opportunities and equity in resource distribution, power, and process are established, maintained, and perpetuated in society or within each ecological context.

“The Ecology of Justice” has six constructs: proximal process, person, context, time, fairness, and equity. The conceptual framework acknowledges that proximal processes are central to individuals' development. Proximal processes occur through reciprocal interactions of an individual with persons, objects, and symbols in his/her immediate context (Bronfenbrenner, 1999). However, it also is important to examine these individual-context reciprocal relationships in relation to fairness of opportunities and equity in resource distribution, power, and process (Buettner-Schmidt & Lobo, 2012). Fairness and equity may change (e.g., mediate or moderate) an individual's reciprocal relationship with persons, objects, and symbols in his/her immediate context (i.e., microsystem) as well in as remote contexts (i.e., exosystem and macrosystem; Few-Demo, 2014; Few-Demo, Lloyd, & Allen, 2014). Consequently, the functioning of proximal processes in ecological contexts may change in relation to fairness and equity. The current study found direct effects of some proximal processes (i.e., relationship quality) on the work–family balance and work–family conflict of working mothers. The extent of functioning of proximal processes may also depend on how fairness and equity are established, maintained, and perpetuated in the individual-context reciprocal interactions, which may direct the functioning of proximal processes. For instance, a

positive relationship quality is a source for proximal processes to function well. However, it also is important to see whether the division of labor is equal between couples (Bianchi & Milkie, 2010; Lam et al., 2012; Perry-Jenkins et al., 2000), to examine gender ideology between couples (Minnotte, Minnotte, Pedersen, Mannon, & Kiger, 2010; McAllister et al., 2012; van Veldhoven & Beijer, 2012), and to understand the extent of emotional support one partner is receiving from the other partner (Curran et al., 2015; McMillan et al., 2004). This also may affect an individual's reciprocal interaction with persons, objects, and symbols in his/her immediate environment. Therefore, future research will need to focus on developing measures that more accurately operationalize proximal processes in relation to fairness and equity.

Further, according to bioecological theory, proximal processes are the function of individuals' characteristics, the context, and the nature of the outcome under consideration (Bronfenbrenner, 1994; Bronfenbrenner, 1995a). This indicates that the functioning of proximal processes (e.g., direction, power, and form) depends on individuals' characteristics, the context, and the nature of the outcome being studied (Bronfenbrenner & Ceci, 1994; Bronfenbrenner, 1995b). "Individuals' characteristics" refer to individuals' demand characteristics (i.e., disposition, age, race, and gender), resource characteristics (i.e., emotional, mental, material, and social resources such as intelligence, disposition, education needed for success in society, past experiences, access to housing, food, and caring parents), and force characteristics (i.e., motivations, consistency, and persistence in pursuing and achieving a goal; Bronfenbrenner & Evans, 2000). These explanations are acknowledged in "The Ecology of Justice" conceptual

framework. However, it also is important to examine how fairness of opportunities and equity in resource distribution, power, and process may influence individuals' demand characteristics, resource characteristics, and force characteristics and their effects on proximal processes (Bronfenbrenner & Ceci, 1994). Consequently, their influences on proximal processes may be changed based on different levels of fairness and equity (Bronfenbrenner & Crouter, 1982; Perry-Jenkins et al., 2013).

In the current study, individuals' demand characteristic (i.e., age, race) and resource characteristics (i.e., education) were tested, and significant effects of demand characteristics on work–family balance and work–family conflict were found. These demand characteristics are social locations of working mothers, which create distinctive work–family experiences (Few- Demo, 2014). However, such experiences may also be influenced by fairness of opportunities and equity in resource distribution, power, and process. Therefore, fairness and equity may change the effects of demand and resource characteristics on the work–family balance and work–family conflict of working mothers. Hence, future research might focus on developing specific measures of fairness and equity and testing the direct effects of fairness and equity on proximal processes. It might also focus on examining the indirect and moderating effects of fairness and equity in the relationship of proximal processes with the work–family balance and work–family conflict of working mothers.

Proximal processes are also the function of context, which can be immediate context (i.e., microsystem) as well as remote contexts (i.e., exosystem and macrosystem; Bronfenbrenner, 1995a). According to bioecological theory, these ecological

systems/contexts are interrelated; that means they also have reciprocal relationships between each other (Bronfenbrenner, 1995b). These explanations are acknowledged in “The Ecology of Justice” conceptual framework. However, it also is imperative to examine whether fairness of opportunities and equity in resource distribution, power, and process may affect these ecological systems (i.e., microsystem, mesosystem, exosystem, macrosystem, and chronosystem), the reciprocal relationships among these ecological systems, and their individual or joint effects on the functioning of proximal processes. In the current research, there was a significant moderating effect of immediate context (i.e., availability of family-friendly policies) found in the examination of the work-family balance of working mothers. However, the effect of this context may change depending upon how fairness and equity is established, maintained, and perpetuated in the workplace (Buettner-Schmidt & Lobo 2012; Crethar et al., 2008; Pangman & Seguire 2000; Drevdahl 2002). For example, it is worth examining whether such family-friendly policies are available mainly for white-collar employees or also for those employees who are most vulnerable and are working on a nonstandard work schedule, and how these policies affect these two groups differently. Fairness and equity can directly affect the availability of family-friendly policies and the moderating effect of family-friendly policies between proximal processes (i.e., nonstandard work schedule and relationship quality), and the nature of an outcome under consideration (i.e., work-family balance; Redman & Clark, 2002; Vera & Speight, 2003). This may vary further based on different levels or conditions of fairness and equity. Therefore, future research should focus on examining the direct effect of fairness and equity on an immediate context (e.g.,

availability of family-friendly policies and supportive family environment). It also might be worth examining how fairness and equity may change the moderating effect of availability of family-friendly policies in the relationship between proximal processes and outcome, and whether fairness and equity also moderate these relationships.

Proximal processes are also the function of the nature of the outcome under consideration (Bronfenbrenner & Morris, 1998). For instance, two distinctive phenomena, such as work–family balance or work–family conflict, may change the functioning of proximal processes (Bronfenbrenner, 2005a). This explanation is acknowledged in “The Ecology of Justice” conceptual framework. However, it also may be useful to examine how fairness of opportunities and equity in resource distribution, power, and process may affect the outcome under consideration and alter its effects (i.e., mediate or moderate) on proximal processes. The current study did not test the effect of the outcome variables (i.e., work–family balance, work–to–family conflict, and family–to–work conflict) on proximal processes. Future studies might focus on examining the effect of the outcome (i.e., work–family balance and work–family conflict) on proximal processes, and whether fairness and equity may mediate or moderate the relationship between the outcome under consideration and proximal processes.

Additionally, time is an important element in the PPCT model (Bronfenbrenner, 1995b). Time refers to social and historical contexts, and the lifespan of a developing individual (Bronfenbrenner, 2005a). For instance, the work–family experiences of working mothers can change from one specific time-period to another based on historical and social events and the current lifespan of developing individuals (Bronfenbrenner &

Evans, 2000; Bronfenbrenner, 2005b). This is acknowledged in “The Ecology of Justice” conceptual framework. However, it also may be helpful to examine how fairness of opportunities and equity in resource distribution, power, and process are established, maintained, or perpetuated between individuals or groups in different social, historical, and lifespan periods, and if this may change the effect of time (e.g., direct, mediate, or moderate) on proximal processes. The current study found the change in patterns of mothers’ work–to–family conflict and family–to–work conflict. However, the reasons behind these patterns are unknown and need further exploration. Future studies might focus on how mothers’ work–family conflict may change over time in relation to fairness of opportunities and equity in resource distribution, power, and process, and whether fairness and equity mediate or moderate the effect of time on proximal processes.

“The Ecology of Justice” also assumes that proximal processes may also function independently through reciprocal relationships between an evolving individual and persons, objects, and symbols in his/her immediate environment, and that these relationships can take either positive or negative direction, power, and form. The important element in the positive functioning of proximal processes is the extent of fairness and equity in individual–context reciprocal interactions within immediate or remote contexts. Additionally, if individuals’ reciprocal interactions with persons, objects, and symbols do not operate according to the principle of fairness and equity, but instead are more discriminatory and unequal, then proximal processes may themselves begin to function independently in a negative direction. According to bioecological theory, the direction, form, content, and power of proximal processes may be changed by

individuals' characteristics, context, and time as explained in the aforementioned discussion (Bronfenbrenner, 1995a). However, it also may be important to examine how proximal processes function through fair and equitable reciprocal interactions of individuals with persons, objects, and symbol in the immediate context, which may play an important role in the functioning of proximal processes by making them stronger or weaker. In the current study, significant independent effects of proximal processes (i.e., nonstandard work schedule and relationship quality) were observed. These effects were not mediated or moderated by individuals' characteristics (age, race, and education). It is acknowledged in "The Ecology of Justice" that proximal processes are influenced by individuals' characteristics and by context, but they may have an independent effect on individuals' development (e.g., individuals' experiences of work–family balance and work–family conflict). The important aspect is the extent of fairness and equity in reciprocal interactions, which may influence the power, form, and direction of proximal processes and the extent of their effect on individuals' development (i.e., work–family balance and work–family conflict; Bronfenbrenner & Crouter, 1982; Perry-Jenkins et al., 2013). Hence, future studies might focus on observing and measuring proximal processes over time, and on understanding how the extent of fairness and equity in the individual-context reciprocal relationship may stimulate or constrain the functioning of proximal processes.

"The Ecology of Justice" conceptual framework assumes that the reciprocal interactions of individuals with persons, objects, and symbols in their immediate context (i.e., microsystem) can be either positive or negative. If these interactions are positive,

then they may aid the positive functioning of proximal processes, which may increase individuals' development. If these interactions in the immediate context are negative, then they may constrain the functioning of proximal processes, which limits individuals' development. For example, working individuals are more likely to have two microsystems (i.e., work and family) and proximal processes may potentially function in each microsystem since working individuals have reciprocal interactions in both microsystems. Two proximal processes connect or exist in a “mesoprocesses” and may shape individuals' development. If one proximal process contains positive interactions and functions in favor of individuals' development, but the other proximal process contains negative interactions and functions against individuals' development, then whether the resulting mesoprocesses will have a positive or a negative effect on working mothers' work–family experiences may depend on many factors. These factors include: 1) the duration since the proximal processes occurred; 2) the extent of positivity (e.g., emotional support from spouse/partner) or negativity (e.g., discriminatory behavior of supervisor or coworkers) involved in the reciprocal interactions; 3) the availability of potential resources within immediate (e.g., work or family) and remote contexts; 4) individuals' perceived importance of each microsystem (e.g., is family more important than work for individuals and vice versa); and 5) the characteristics of two or more individuals involved in the reciprocal interactions (not only the characteristics of a developing individual who is under-studied, but also the characteristics of other individual(s) who are involved in the reciprocal interactions with the developing individual).

The current study used two measures (nonstandard work schedule and relationship quality) to operationalize proximal processes. In one instance, proximal processes (relationship quality) significantly increased work–family balance of working mothers. In the other instance, proximal processes (nonstandard work schedule) either had no effect on the outcome (work–family balance) or increased the negative outcome (work–family conflict). Both measures were operationalized for proximal processes since individuals have reciprocal interactions with persons, objects, and symbols in both domains (work and family). However, one showed positive effects of proximal processes and the other illustrated negative or no effects of proximal processes. This is because individuals' interactions with persons, objects, and symbols were positive in one domain (relationship quality), which stimulated the functioning of proximal processes. Yet, individuals' reciprocal interactions were negative in the other domain (nonstandard work schedule), which not only hindered the positive functioning of proximal processes, but also changed the direction of proximal processes from positive to negative and increased the negative outcome (work–family conflict) for working mothers. Therefore, future research might focus on measuring proximal processes in different domains simultaneously, examining their relationships, and evaluating which effects (positive or negative) of proximal processes remain stronger in affecting work–family experiences of working mothers. Future research might also focus on examining how these positive or negative effects may be moderated by the extent of positivity or negativity in the immediate environment, the resources available in the immediate and remote contexts, individuals' perceived importance for each domain (work and family), and the

characteristics of two or more individuals involved in the reciprocal interactions in immediate contexts where proximal processes take place.

It is important to mention that these are the assumptions and propositions of the current conceptual framework (i.e., “The Ecology of Justice”). To make it more scientific so that future researchers will be able to use it to frame their empirical studies, the framework must continue to be refined and developed through further empirical testing. The constructs—in particular, those of proximal processes, fairness and equity—included in the framework are still too broad and are difficult to operationalize. Therefore, specific measures also will need to be developed to test many of these propositions. Further, future research will need to focus more on diverse groups to improve the framework’s validity and reliability (Carr et al., 2007; Kayapinar, 2015).

The current study brings our attention to how under-privileged working individuals and families are under-represented in mainstream work–family research. First, the results of the content analysis indicated that the variables of race, class, sexual orientation, and disability were the least studied variables in work–family conflict studies, and that samples included in these studies were already less diverse in general. This is problematic given that such variables likely play an important role in shaping work–family experiences of individuals and families (Few-Demo, 2014; Few-Demo et al., 2014; Leslie, 1995). According to bioecological theory, these are demand characteristics, which may create hostile responses at different layers of ecological systems and limit the functioning of proximal processes (Bronfenbrenner, 1994). Those individuals and families who possess such characteristics already face challenges from

the environment, and thereby need more attention in work–family research. For instance, African American single working mothers often may experience some types of discrimination while simultaneously facing additional challenges in the workplace, making it difficult to maintain a healthy work–family balance (Lam et al., 2012). Therefore, this group within the working population needs more attention in work–family research (Perry-Jenkins et al., 2013).

Single working mothers are more vulnerable than dual-earner working mothers due to lack of family support (Staples & Mirande, 1980). Further, the intersection of race and marital status creates more challenges (Hoffman, 1987). Researchers found that African American, single working mothers are more likely to work a nonstandard work schedule and that this is related to decreased indicators of well-being (Cook, 2012; Odom et al., 2013). Therefore, the intersection of race, gender, and marital status magnifies work–family challenges for working mothers (Bronfenbrenner & Crouter, 1982; Perry-Jenkins et al., 2013). Given socioeconomic disparities, working mothers who have low socioeconomic backgrounds are vulnerable to working in low paid, part-time, and nonstandard jobs (Grzywacz et al., 2011). These groups often have few job options, which limits their ability to work in places that might have family-friendly workplace policies (Davis et al., 2008).

Researchers also found that working individuals experience discrimination and stigmatization due to their sexual orientation (Minnotte et al., 2010). The likelihood of getting a job is much lower for this group (e.g., gay or lesbian; Cook & Minnotte, 2008), since the environment creates challenges for them. According to bioecological theory,

sexual orientation is a demand characteristic, which creates a hostile response from the environment for those individuals who have this characteristic (Bronfenbrenner, 2005a). Hence, they may be deprived of participating in society fully and gaining equal benefits due to unfair and unequal societal structures (Minnotte et al., 2010). Working individuals with disabilities also face difficulties in work and family domains due to their dispositional characteristics (e.g., psychological or physical disability; Li et al., 2015).

These findings indicate that the intersections of race, class, gender, marital status, sexual orientation, and disability shape distinct and unpleasant experiences for working individuals or families in society, and that established societal structures help create, maintain, and perpetuate these experiences (Few-Demo, 2014; Few-Demo et al., 2014; Perry-Jenkins et al., 2013). Given these challenges for working individuals or families, past work–family conflict research lacks thorough examination of these important variables, and has not included individuals or families who belong to such social locations.

Results of the current study also suggest that positive family–to–work spillover mediated the relationship between relationship quality and work–family balance for highly educated White mothers who have family-friendly policies available in the workplace. This indicates that the effects of family–to–work spillover are helping those mothers who already have better work–family balance experiences than their counterparts (Davis et al., 2008). Two studies showed the mediating role of work–to–family spillover and family–to–work spillover (Dawn et al., 2011; Lee, Zvonkovic, & Crawford, 2014); however, these studies were based on cross-sectional datasets and thus lacked an

appropriate examination of the temporal structure of work–family balance. In contrast, the current study was based on longitudinal data, which indicated that family–to–work spillover helps highly educated White mothers to maintain a healthy work–family balance over time. Hence, the current study found that underprivileged individuals and families are under-represented in work–family literature and positive effects of family–to–work spillover are helping better-advantaged working mothers. Consequently, the lack of representation in work–family literature and fewer positive effects of family–to–work spillover may widen the disparities in terms of maintaining a healthy work–family balance among these groups of working mothers (Chien et al., 2010). It is important to mention that many underprivileged working mothers are struggling to maintain a healthy work–family balance, yet they are rarely included in work–family conflict research, as described above (Few-Demo, 2014; Few-Demo et al., 2014).

Similarly, the results suggest that working mothers differ in their levels of work–to–family conflict and family–to–work conflict given significant within- and between-person differences. This finding also is evident in to the aforementioned discussion about how mothers face distinct work–family experiences due to their individual demand characteristics (Bronfenbrenner, 2005b), social location (Few-Demo, 2014), and unfair societal structures (Grose & Grabe, 2014; Haq, 2000; Naiz, 2003). Researchers have found that mothers who already belong to the under-privileged group of the working population (e.g., African American single working mothers; Son & Bauer, 2010) often work on a nonstandard work schedule (Davis et al., 2008). Researchers have also found that due to lack of emotional and financial support from spouses/partners, single working

mothers face high levels of family–to–work conflict (Son & Bauer, 2010). Therefore, it is important to consider their individual differences and accommodate them accordingly. For instance, African American working mothers are more likely to work on a nonstandard work schedule and may lack spouse/partner support (Odom et al., 2013). Most of the time they do not know their upcoming work schedule. Some also cannot afford expensive private childcare. Employers should provide a fixed schedule to these employees so that they can arrange for childcare and household chores. Employers also should provide a childcare facility to such employees so that they do not have to worry about their young children. It was found in the current study that a nonstandard work schedule increased work–to–family conflict, and relationship quality increased family–to–work conflict.

Even though underprivileged groups of the working population face work–family challenges, they often are not included in mainstream research (Few-Demo, 2014; Few-Demo et al., 2014). “The Ecology of Justice” discusses how fairness of opportunities and equity in resource distribution, power, and processes can influence the functioning of proximal processes, as well as how the relationships of individuals’ characteristics, contexts, and time influence the functioning of proximal processes (Bronfenbrenner, 1994; Bronfenbrenner & Evans, 2000). Many women are not receiving appropriate support in the work and family domains, according to the principles of equity. This indicates that their work–family demands might be higher than their resources, suggesting they need new resources to help balance their work–family demands and achieve a healthy work–family balance. Therefore, it is imperative that researchers

examine individuals' work–family experiences in relation to fairness and equity to gain better insight into the work–family experiences of under-privileged individuals and families in the working population. An adequate understanding of the work–family experiences of marginalized individuals or families may help researchers highlight their immediate needs. It may also be useful for practitioners to address those needs through different programs and interventions.

In conclusion, the work–family experiences of working individuals and families differ in relation to fairness of opportunities and equity in resource distribution, power, and process. Fairness and equity can directly shape individuals' work–family experiences, the individuals' reciprocal relationship with persons, objects, and symbols in the immediate context, and the influences of individuals' characteristics and ecological contexts on work–family experiences of working individuals. These effects may vary depending upon how fairness and equity are established, maintained, and perpetuated. The overall take away of the current research is that underprivileged working mothers face high levels of work–family conflict and struggle to maintain a healthy work–family balance, yet they remain under-represented in work–family literature in the United States.

Implications and Future Directions

The results of the current study have several important implications. First, researchers should ensure that the examination of work–family experiences of working individuals or families is informed by social justice. Second, marginalized individuals or families should be equally represented in future mainstream research through inclusive

and representative samples, with some studies focused solely on understanding work–family dynamics among the marginalized and historically underrepresented groups.

Third, employers should make family-friendly policies and available for employees in the workplace, and through regular monitoring, government agencies should hold employers accountable for creating and maintaining such policies, especially in those workplaces that offer a nonstandard work schedule. These policies may include fixing the daily schedule for those employees who work on a nonstandard work schedule and providing these employees with choices regarding flexible schedules, which may help buffer the negative effects of a nonstandard work schedule on work–family balance.

Fourth, employers should introduce work–family integration programs in which working individuals and their families should receive appropriate training to effectively handle work–family challenges such that healthy work–family balance is more likely achieved. For small-scale business corporations, it may be useful to conduct family days on a regular basis, at which time families of employees would be invited to the workplace or to some other venue. During family day, fun activities could be offered along with training on how to handle work–family challenges and maintain a healthy work–family balance. Such employers can also help employees create more resources at family and community levels. This could increase positive family–to–work spillover for employees, and, consequently, result in an increased work–to–family spillover.

Fifth, employers should consider individual differences among working mothers and accommodate them accordingly. For instance, single mothers lack the spouse/partner support that dual-earner working mothers have (Son & Bauer, 2010; Tisdale & Pitt-

Catsuphes, 2012). Employers may provide single mothers with a childcare facility in the workplace to accommodate their needs. Employers should develop a formal system of support for diverse individuals, such as gays and lesbians, who already are marginalized, stigmatized, and face discriminatory behaviors in the workplace (Cook & Minnotte, 2008; Leslie, 1995). Employers should mobilize employees in the workplace to respect and value diversity and hold employees accountable for any discriminatory action against diverse individuals. Employers may create an organizational environment and culture which respects and values diversity and inclusion.

Finally, government and non-government agencies should carry out programs at the community level to create community support for single working mothers. These programs may include work–family integration, through which working mothers and their families receive training about creating resources at work, family, and community levels. Awareness sessions in employees' communities should be conducted, to which community people, friends, and peers of these employees should be invited and motivated to create social support for each other, particularly for these employees and their families, in order to help them maintain a healthy work–family balance.

References

- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol.2). New York: Academic Press.
- Adamsons, K., O'Brien, M., & Pasley, K. (2007). An ecological approach to father involvement in biological and stepfather families. *Fathering, 5*, 129-147.
doi:10.3149/fth.0502.129
- Almeida, D. M., Davis, K. D., Soomi, L., Lawson, K. M., Walter, K. N., & Moen, P. (2016). Supervisor support buffers daily psychological and physiological reactivity to work–to–family conflict. *Journal of Marriage & Family, 78*(1), 165-179.
doi:10.1111/jomf.12252
- Andreassi, J. K. (2011). What the person brings to the table: Personality, coping, and work–family conflict. *Journal of Family Issues, 32*, 1474-1499.
doi:10.1177/0192513X11401815
- Bailey, C. E., Pryce, J., & Walsh, F. (2002). Trends in author characteristics and diversity issues in the Journal of Marital and Family Therapy from 1990 to 2000. *Journal of Marital and Family Therapy, 28*, 479–486. doi: 10.1111/j.1752-0606.2002.tb00372.x
- Bakker, A., Demerouti, E., & Burke, R. (2009). Workaholism and relationship quality: A spillover-crossover perspective. *Journal of Occupational Health Psychology, 14*(1), 23-33. doi:10.1037/a0013290

- Banerjee, D., & Perrucci, C. C. (2012). Employee benefits and polices: Do they make a difference for work/family conflict? *Journal of Sociology & Social Welfare, 39*, 131-147.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Bass, B. L., & Grzywacz, J. G. (2011). Job adequacy and work-family balance: Looking at jobs as a whole. *Journal of Family Issues, 32*, 317-345.
doi:10.1177/0192513X10384215
- Bear, J. B., & Glick, P. (2016). Gendered rewards: Breadwinner versus caregiver status affects workplace rewards for men and women. *Academy of Management Annual Meeting Proceedings, 354-358*. doi:10.5465/AMBPP.2016.182
- Bernal, P., Mittag, N., & Qureshi, J. A. (2016). Estimating effects of school quality using multiple proxies. *Labour Economics, 39*, 1-10. doi:10.1016/j.labeco.2016.01.005
- Bianchi, S. M., & Milkie, M. A. (2010). Work and family research in the first decade of the 21st century. *Journal of Marriage and Family, 72*, 705-725.
doi:10.1111/j.1741-3737.2010.00726.x
- Bianchi, S. M., Robinson, J. P., & Milkie, M. A. (2006). *Changing rhythms of American family life*. New York, NY: Russell Sage Foundation.
- Blair-Loy, M. (2003). *Competing devotions: Career and family among women executives*. Cambridge, MA: Harvard University Press.

- Blocklin, M., Crouter, A. C., & McHale, S. M. (2012). Youth supervision while mothers work: A daily diary study of maternal worry. *Community, Work & Family, 15*, 233-249.
- Boamah, S. A., & Laschinger, H. (2016). The influence of areas of worklife fit and work-life interference on burnout and turnover intentions among new graduate nurses. *Journal of Nursing Management, 24*, E164-E174.
doi:10.1111/jonm.12318
- Borbely, J. M. (2008). *United States labor market in 2008: Economy in recession*. Retrieved from <https://www.google.com/#q=working+groups+and+recession+2008>
- Boyar, S. L., Carson, C. M., Mosley, D. C., Maertz, C. P., & Pearson, A. W. (2006). Assessment of the validity of Netemeyer et al.'s (1996) WFC and FWC scales. *International Journal of Conflict Management, 17*(1), 34-43.
- Bracke, P., & Symoens, S. (2015). Work-family conflict and mental health in newlywed and recently cohabiting couples: a couple perspective. *Health Sociology Review, 24*(1), 48-63. doi:10.1080/14461242.2015.1007156
- Brim, O. G. (1958). Family structure and sex role learning by children: A further analysis of Helen Koch's data. In Caspi, J. (Ed.), *Sibling development: Implications for mental health practitioners (pp. 147-165)*. New York, NY: Springer.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology, 22*, 723-742.
doi:10.1037/0012-1649.22.6.723

- Bronfenbrenner, U. (1989). *Ecological systems theory*. In R. Vasta (Ed.), *Annals of child development: Six theories of child development- Revised formulations and current issues*, 187–249. London: JAI Press.
- Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husen & T. N. Postlethwaite (Eds.), *International encyclopedia of education* (2nd ed., Vol. 3, pp. 1643 – 1647). Oxford, UK: Pergamon Press.
- Bronfenbrenner, U. (1995a). The bioecological model from a life course perspective: Reflections of a participant observer. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 599–618). Washington, DC: American Psychological Association.
- Bronfenbrenner, U. (1995b). Developmental ecology through space and time: A future perspective. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 599–618). Washington, DC: American Psychological Association.
- Bronfenbrenner, U. (1995b). Developmental ecology through space and time: a future perspective. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 599–618). Washington, DC: American Psychological Association.
- Bronfenbrenner, U. (1995b). Developmental ecology through space and time: a future perspective. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in*

context: Perspectives on the ecology of human development (pp. 599–618).

Washington, DC: American Psychological Association.

Bronfenbrenner, U. (1995b). Developmental ecology through space and time: a future perspective. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 599–618).

Washington, DC: American Psychological Association.

Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational models. In S. L. Friedman & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 3 – 28).

Washington, DC: American Psychological Association.

Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational models. In S. L. Friedman & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 3 – 28).

Washington, DC: American Psychological Association.

Bronfenbrenner, U. (2005a). The bioecological theory of human development. In U. Bronfenbrenner (Ed.), *Making human beings human: Bioecological perspectives on human development* (pp. 3 – 15). Thousand Oaks, CA: Sage. (Original work published in 2001)

Bronfenbrenner, U. (2005b). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage Publications.

- Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, *101*, 568-586. doi:10.1037/0033-295X.101.4.568
- Bronfenbrenner, U. & Crouter, A. C. (1982). Work and family through time and space. In S. Kamerman & C. D. Hayes (Eds.), *Children in a changing world* (pp. 39-83). Washington, DC: National Academy Press.
- Bronfenbrenner, U., & Evans, G. W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development*, *9*(1), 115-125. doi:10.1111/1467-9507.00114
- Bronfenbrenner, U., Kessel, F., Kessen, W., & White, S. (1986). Toward a critical social history of developmental psychology: A propaedeutic discussion. *American Psychologist*, *41*, 1218-1230. doi:10.1037/0003-066X.41.11.1218
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Theoretical models of human development* (5th ed., pp. 993 – 1023). New York: Wiley.
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Theoretical models of human development* (6th ed., pp. 793 – 828). New York: Wiley.
- Brummelhuis, L. T., Bakker, A. B., & Euwema, M. C. (2010). Is family-to-work interference related to co-workers' work outcomes? *Journal of Vocational Behavior*, *77*, 461-469.

- Buettner-Schmidt, K., & Lobo, M. L. (2012). Social justice: a concept analysis. *Journal of Advanced Nursing* 68, 948–958. doi:10.1111/j.1365-2648.2011.05856.x
- Burr, W. R. (1973). *Theory construction and the sociology of the family*. New York: John Wiley and Sons.
- Burr, W. R., Mead, D. E., & Rollins, B. C. (1973). A model for the application of research findings by the educator and counselor: Research to theory to practice. *Family Coordinator*, 22, 285-290.
- Bustamante-Gavino, M. I., & Rattani, S., Khan, K. (2011). Women's empowerment in Pakistan- definitions and enable and disabling factors: A secondary data analysis. *Journal of Transcultural Nursing*, 22, 174-181.
doi:10.1177/1043659610395762
- Butcher, K., & Case, A. (1994). The effect of sibling sex composition on women's education and earnings. *Quarterly journal of Economics*. In Caspi, J. (Ed.), *Sibling development: Implications for mental health practitioners (pp. 147-165)*. New York, NY: Springer.
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Routledge, NY: New York.
- Carlson, D. S., Grzywacz, J. G., Ferguson, M., Hunter, E. M., Clinch, C. R., & Arcury, T. A. (2011). Health and turnover of working mothers after childbirth via the work-family interface: An analysis across time. *Journal of Applied Psychology*, 96, 1045-1054. doi:10.1037/a0023964

- Carlson, D. S., Grzywacz, J. G., & Kacmar, K. M. (2010). The relationship of schedule flexibility and outcomes via the work-family interface. *Journal of Managerial Psychology, 25*, 330-3355. doi:10.1108/02683941011035278
- Carlson, D. S., Kacmar, K. M., Grzywacz, J. G., Tepper, B., & Whitten, D. (2013). Work-family balance and supervisor appraised citizenship behavior: The link of positive effect. *Journal of Behavioral and Applied Management, 14*, 87-106.
- Carr, P., Dogan, E., Tirre, W., & Walton, E. (2007). Large- scale indicator assessments: What every educational policymaker should know. In Moss, P. A. (Ed.), *Evidence and Decision Making: 2007 National Society for the Study of Education (NSSE) Yearbook*, (pp. 328-347). Oxford: Blackwell.
- Chang, Y. E. (2013). The relation between mothers' attitudes toward maternal employment and social competence of 36-month-olds: The roles of maternal psychological well-being and sensitivity. *Journal of Child and Family Studies, 22*, 987-999. doi.10.1007/s10826-012-9660-7
- Chen, Z., Powell, G. N., & Greenhaus, J. H. (2009). Work-to-family conflict, positive spillover, and boundary management: a person-environment fit approach. *Journal of Vocational Behavior, 74*, 82-93. doi:10.1016/j.jvb.2008.10.009
- Chesley, N. (2005). Blurring boundaries? linking technology use, spillover, individual distress, and family satisfaction. *Journal of Marriage and Family, 67*(5), 1237-1248.
- Retrieved from <http://search.proquest.com/docview/219764948?accountid=12536>

- Cho, E., Tay, L., Allen, T. D., & Stark, S. (2013). Identification of a dispositional tendency to experience work-family spillover. *Journal of Vocational Behavior, 82*, 188-198. doi:10.1016/j.jvb.2013.01.006
- Cook, K. E. (2012). Social support in single parents' transition from well-fare to work: Analysis of qualitative findings. *International Journal of Social Welfare, 21*, 338-350. doi:10.1111/j.1468-2397.2011.00844.x
- Coontz, S. (1992). *The way we never were: American families and the nostalgia trap*. New York: Basic Books.
- Crethar, H. C., Torres-Rivera, E., & Nash, S. (2008). In search of common threads linking multicultural, feminist, and social justice counseling paradigms. *Journal of Counseling & Development, 86*, 269-278.
- Crowley, J. E. (2013). Perceiving and responding to maternal workplace discrimination in the United States. *Women's Studies International Forum, 40*, 192-202. doi:10.1016/j.wsif.2013.08.001
- Curran, M., McDaniel, B., Pollitt, A., & Totenhagen, C. (2015). Gender, emotion work, and relationship quality: A daily diary study. *Sex Roles, 73*, 157-173. doi:10.1007/s11199-015-0495-8
- Darawsheh, W. (2014). Reflexivity in research: Promoting rigor, reliability and validity in qualitative research. *International Journal of Therapy & Rehabilitation, 21*, 560-568.

- Davis, K. D., Goodman, W. B., Pirretti, A. E., & Almeida, D. M. (2008). Nonstandard work schedules, perceived family well-being, and daily stressors. *Journal of Marriage and Family, 70*, 991-1003.
- Dawn, S. C., Ferguson, M., Kacmar, K. M., Grzywacz, J. G., & Whitten, D. (2011). Pay it forward: The positive crossover effects of supervisor work-family enrichment. *Journal of Management, 37*, 770-789. doi:10.1177/0149206310363613
- DelCampo, R. G., Rogers, K. M., & Hinrichs, A. T. (2011). The interface of work to family conflict and racioethnic identification: An analysis of Hispanic business professionals. *Employ Response Rights Journal, 23*, 55-71. doi:10.1007/s10672-010-9143-1
- Delgado, E. A., & Canabal, M. E. (2006). Factors associated with negative spillover from job to home among Latinos in the United States. *Journal of Family and Economic Issues, 27*(1), 92-112. doi:10.1007/s10834-005-9001-8
- Denzin, N. K. (1970). *The research act: A theoretical introduction to sociological methods*. Chicago: Aldine.
- Derigne, L., & Porterfield, S. (2010). Employment change and the role of the medical home for married and single-mother families with children with special health care needs. *Social Science & Medicine, 70*, 631-641.
doi:10.1016/j.socscimed.2009.10.054
- Doherty, W. J., Boss, P. G., LaRossa, R., Schumm, W. R., & Steinmetz, S. K. (1993). Family theories and methods: A contextual approach. In P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), *Sourcebook of*

family theories and methods: A contextual approach (pp. 3-30). New York, NY: Plenum Press.

Dollahite, D. C., Morris, S. N., & Hawkins, A. J. (1997). Questions and activities for teaching about generative fathering in University courses. In A. J., Hawkins, & D. C. Dollahite (Eds.), *Generative Fathering: Beyond deficit perspectives* (pp. 228-241). Thousand oaks, CA: Sage.

Drevdahl, D. (2002) Social justice or market justice? The paradoxes of public health partnerships with managed care. *Public Health Nursing, 19*, 161-169.

Dyrbye, L. N., Sotile, W., Boone, S., West, C. P., Tan, L., Satele, D., Sloon, J., Oreskovich, M., & Shanafelt, T. (2013). A survey of U.S. physicians and their partners regarding the impact of work-home conflict. *Journal of General Internal Medicine, 29*(1), 155-61. doi:10.1007/s11606-013-2581-3

Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980-2002). *Journal of Vocational Behavior, 66*(1), 124-197.

Edgell, P., Ammons, S. K., & Dahlin, E. C. (2012). Making ends meet: Insufficiency and work-family coordination in the new economy. *Journal of Family Issues, 33*, 999-1026. doi:10.1177/0192513X11424261

Ettner, S. L., & Grzywacz, J. G. (2001). Workers' perceptions of how jobs affect health: An ecological perspective. *Journal of Occupational Health Psychology, 6*, 101-113.

- Families and Work Institute (2008). *National study of the changing workforce*. New York, NY: The Institute.
- Fauth, R. C., Roth, J. L., & Brooks-Gun, J. (2007). Does the neighborhood context alter the link between youth's after-school time activities and developmental outcomes? A multilevel analysis. *Developmental Psychology, 43*, 760-777.
- Feinberg, M. E., McHale, S. M., Crouter, A. C., & Cumsille, P. (2003). Sibling differentiation: Sibling and parent relationship trajectories in adolescence. *Child Development, 74*, 1261-1274.
- Fernandez, R. M., & Campero, S. (2017). Gender sorting and the glass ceiling in high-tech firms. *ILR Review, 70*(1), 73-104. doi:10.1177/0019793916668875
- Fernbach, P. M., & Erb, C. D. (2013). A quantitative causal model theory of conditional reasoning. *Journal of Experimental Psychology, 39*, 1327-1343.
- Ferree, M. M. (1976). Working class jobs, housework, and paid work as sources of satisfaction. *Social Problems, 22*, 431-441.
- Ferree, M. M. (1990). Beyond separate spheres: Feminism and family studies. *Journal of Marriage and the Family, 52*, 866-884.
- Ferree, M. M. (2010). Filling the glass: Gender perspectives on families. *Journal of Marriage and the Family, 72*, 420-439. doi:10.1111/j.1741-3737.2010.00711.x
- Few-Demo, A. L. (2014). Intersectionality as the 'New' critical approach in feminist family studies: Evolving racial/ethnic feminisms and critical race theories. *Journal of Family Theory & Review, 6*, 169. doi:10.1111/jftr.12039

- Few-Demo, A. L., Lloyd, S. A., & Allen, K. R. (2014). It's all about power: Integrating feminist family studies and family communication. *Journal of Family Communication, 14*, 85-94. doi:10.1080/15267431.2013.864295
- Fjorback, L. O., Arendt, M., Ørnbøl, E., Fink, P., & Walach, H. (2011). Mindfulness-based stress reduction and mindfulness-based cognitive therapy - a systematic review of randomized controlled trials. *Acta Psychiatrica Scandinavica, 124*, 102-119. doi:10.1111/j.1600-0447.2011.01704.x
- Folger, R., & Martin, C. (1986). Relative deprivation and referent cognitions: Distributive and procedural justice effects. *Journal of Experimental Social Psychology, 22*, 531-546.
- Foroughipour, M., Ghandehari, K., Khazaei, M., Ahmadi, F., Shariatinezhad, K., & Ghandehari, K. (2013). Randomized clinical trial of intravenous valproate (Orifil) and dexamethasone in patients with migraine disorder. *Iranian Journal of Medical Sciences, 38*, 150-155.
- Friedan, B., & O' Farrell, B. (1997). *Beyond gender: The new politics of work and family*. Washington, D. C: Woodrow Wilson Center Press.
- Frone, M. (2003). Work-family balance. In J. Quick & L. Tetrick (Eds), *Handbook of occupational health psychology*, (pp. 143-162). Washington, DC: American Psychological Association.
- Gallagher, J. A., Elizabeth, L. H., Anderson, T. L., & Del Rosario, K. M. (2013). A Mixed-methods exploration of Christian working mothers' personal strivings. *Journal of Psychology & Theology, 41*(1), 48-61.

- Garr, M., & Tuttle, R. (2012). Shift work and work to family fit: Does schedule control matter? *Journal of Family and Economy Issues*, *33*, 261-271.
doi:10.1007/s10834-012-9283-6
- Garr, M., & Tuttle, R. (2012). Shift work and work to family fit: Does schedule control matter? *Journal of Family and Economy Issues*, *33*, 261-271.
doi:10.1007/s10834-012-9283-6
- Gassman-Pines, A. (2011). Low-income mothers' nighttime and weekend work: Daily association with child behavior, mother-child interactions, and mood. *Family Relations*, *60*, 15-29. doi:10.1111/j.1741-3729.2010.00630.x
- Gilligan, C. (1993). *In a different voice psychological theory and women's development*. Cambridge: Harvard University Press.
- Glass, J. L., & Finley, A. (2002). Coverage and effectiveness of family-responsive workplace policies. *Human Resource Management Review*, *12*, 313-337.
- Goldberg, A. E., Smith, J. Z., & Perry-Jenkins, M. (2012). The division of labor in lesbian, gay, and heterosexual new adoptive parents. *Journal of Marriage and Family*, *74*, 812-828. doi:10.1111/J.1741-3737.2012.00992.x
- Goodman, L. A. (1960). On the exact variance of products. *Journal of the American Statistical Association*, *55*, 708-713.
- Goodman, W. B., Crouter, A. C., Lanza, S. T., Cox, M. J., & Vernon-Feagans, L. (2011). Paternal work stress and latent profiles of father-infant parenting quality. *Journal of Marriage and Family*, *73*, 588-604. doi:10.1111/j.1741-3737.2011.00826.x

- Greenhaus, J. H., & G. N. Powell (2006). When work and family are allies: A theory of work-family enrichment, *Academy of Management Review*, *31*, 72-92.
- Grice, M. M., McGovern, P. M., Alexander, B. H., Ukestad, L., & Hellerstedt, W. (2011). Balancing work and family after childbirth: A longitudinal analysis. *Women's Health Issues*, *21*(1), 19-27. doi:10.1016/j.whi.2010.08.003
- Grose, R. G., & Grabe, S. (2014). The explanatory role of relationship power and control in domestic violence against women in Nicaragua: A feminist psychology analysis. *Violence Against Women*, *20*, 972-993. doi:10.1177/1077801214546231
- Grzywacz, J. G., & Carlson, D. S. (2007). Conceptualizing work-family balance: Implications for practice and future research. *Advances in Human Resource Development*, *9*, 455-471.
- Grzywacz, J. G., Crain, A. L., Martinson, B. C., & Quandt, S. A. (2014). Job design and ethnic differences in working women's physical activity. *American Journal of Health Behavior*, *38*(1), 63-73. doi:10.5993/AJHB.38.1.7
- Grzywacz, J. G., Daniel, S. S., Tucker, J., Walis, J., & Leerkes, E. (2011). Nonstandard work schedules and developmentally generative parenting practices: An application of propensity score technique. *Family Relations*, *60*, 45-59. doi:10.1111/j.1741 3729.2010.00632.x
- Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, *5*, 111-126.

- Grzywacz, J. G., Rao, P., Woods, C. R., Prieser, J. S., Gesler, W., & Arcury, T. A. (2005). Child health and worker productivity: A rural examination of family interference with work. *Journal of Occupational Health Psychology, 10*, 382-392.
- Grzywacz, J. G., Tucker, J., Clinch, C. R., & Arcury, T. (2010). Individual and job related variation in infant feeding practices among working mothers. *American Journal of Health Behavior, 34*, 186-196.
- Harrison, A. O., & Minor, J. H. (1984). Inter-role conflict, coping strategies, and satisfaction among black working wives. In Patricia, V. (Ed.), *Work and family: Changing roles of men and women*. Mountain view, CA: Mayfield.
- Haslam, D., Patrick, P., & Kirby, J. (2015). Giving voice to working mothers: A consumer informed study to program design for working mothers. *Journal of Child & Family Studies, 24*, 2463-2473. doi:10.1007/s10826-014-0049-7
- Heaton, J. (1998). Secondary analysis of qualitative data. *Social Research Update, 22*. Retrieved from <http://sru.soc.surrey.ac.uk/SRU22.html>
- Heck, R. H., Thomas, S. L., & Tabata, L. N. (2014). *Multilevel and longitudinal modeling with IBM SPSS*. New York, NY: Routledge.
- Helmrich, B. (2015). Work-life balance gets harder for working mothers. Business news daily. Retrieved from <http://www.businessnewsdaily.com/8193-working-moms-stress.html>
- Hendrix, J. A., & Parcel, T. L. (2014). Parental nonstandard work, family processes, and delinquency during adolescence. *Journal of Family Issues, 35*, 1363-1393. doi:10.1177/0192513X13510299

- Herr, K. (1999). Unearthing the unspeakable: When teacher research and political agendas collide. *Language Arts*, 77(1), 10-15.
- Herr, K., & Anderson, G. L. (2015). *The action research dissertation: A guide for students and faculty*. Los Angeles, LA: SAGE.
- Hill, R., & Donald A. H. (1960). The identification of conceptual frameworks utilized in family study. *Marriage and Family Living*, 22, 299-311. Retrieved from <http://www.jstor.org/stable/347242>
- Hoffman, L. W. (1987). The effects on children of maternal and paternal employment. In Naomi, G. & Harriet, G. (Eds.), *Families and work*. Philadelphia, PA: Temple University Press.
- Hosteler, A. J., Desrochers, S., Kopko, K., & Moen, P. (2012). Marital and family satisfaction as a function of work-family demands and community resources: Individual-and couple level analysis. *Journal of Family Issues*, 33, 316-340. doi:10.1177/0192513X11413877
- Ishii-Kntz, M. (1994). Work and family life: Findings from international research and suggestions for future study. *Journal of Family Issues*, 15, 490-506.
- Jones, B. D. (2012). Women, work, and motherhood in American history. In J. D. Bernie (Ed), *Women who opt out: The debate over working mothers and work-family balance* (pp. 3-25). New York, NY: University Press.
- Juhn, C., & Potter, S. (2006). Changes in labor force participation in the United States. *Journal of Economic Perspectives*, 3, 27-46. Retrieved from

<https://www.google.com/#q=changes+in+labor+force+participation+in+the+united+state>

- Kalil, A., Dunifon, R., Crosby, D., & Su, J. H. (2014). Work hours, schedules, and insufficient sleep among mothers and their young children. *Journal of Marriage and Family, 76*, 891-904. doi:10.1111/jomf.12142
- Kalleberg, A., Reskin, B., & Hudson, K (2000). Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States. *American Sociological Review, 65*, 256-78.
- Karakurt, G., & Silver, K. E. (2014). Therapy for childhood sexual abuse survivors using attachment and family systems theory orientations. *American Journal of Family Therapy, 42*(1), 79-91. doi:10.1080/01926187.2013.772872
- Kayapinar, U. (2015). Measuring essay assessment: Intra-rater and Inter-rater reliability. *Eurasian Journal of Educational Research, 58*, 113-135. doi:10.14689/ejer.2014.57.2
- Keene, J. R., & Reynolds, J. R. (2005). The job costs of family demands: Gender differences in negative family-to-work spillover. *Journal of Family Issues, 26*, 275-299. doi:10.1177/0192513X04270219
- Kelly, E. L., Moen, P., Oakes, J. M., Fan, W., Okechukwu, C., Davis, K. D., Hammer, L. B., Kossek, E. E., Kind, R. B., Hanson, G. C., Mierzwa, F., & Casper, L. M. (2014). Changing work and work-family conflict: Evidence from the work, family, and health network. *American Sociological Review, 79*, 485-518. doi:10.1177/0003122414531435

- Kenny, D. A. (2008). Reflections on mediation. *Organizational Research Methods, 11*, 353-358. doi:10.1177/1094428107308978
- Kenny, D. A. (2013). Issues in the measurement of judgmental accuracy. In S. Baron-Cohen, H. Tager-Flusberg, & M. Lombardo (Eds.), *Understanding other minds* (3rd ed.; pp. 104-116), Oxford, UK: Oxford University Press.
- Kenny, D. A., Kashy, D., & Bolger, N. (1998). Data analysis in social psychology. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 233-265).
- Kinnunen, U., Geurts, S., & Mauno, S. (2004). Work-to-family conflict and its relationship with satisfaction and well-being: a one-year longitudinal study on gender differences. *Work & Stress, 18*(1), 1-22.
- Kontopantelis, E., White, I. R., Sperrin, M., & Buchan, I. (2017). Outcome-sensitive multiple imputation: A simulation study. *BMC Medical Research Methodology, 171*, 1-13. doi:10.1186/s12874-016-0281-5
- Korkmaz, S., Goksuluk, D., & Zararsiz, G. (2014). MVN: An R package for assessing multivariate normality. *R Journal, 6*, 151-162.
- Kotila, L. E., Schoppe-Sullivan, S. J., & Dush, C. M. K. (2013). Time parenting activities in dual-earner families at the transition to parenthood. *Family relations, 62*, 795-807. doi:10.1111/fare.12037
- Kuchinke, K. P., Cornachione, E. B., Oh, S.Y., & Kang, H. (2012). All work and no play? The meaning of work and work stress of mid-level manager in the United

- States, Brazil, and Korea. *Human Resource Development International*, *13*, 393-408. doi:10.1080/13678868.2010.501961
- Kushmir, T., & Gopnik, A. (2005). Young children infer causal strength from probabilities and interactions. *Psychological Science*, *16*, 678-683.
- Lam, C. B., McHale, S. M., & Crouter, A. C. (2012). Division of household labor: Longitudinal changes and with-couple variations. *Journal of Marriage and Family*, *74*, 944-952. doi:10.1111/i.1741-3737.2012.01007.x
- Lavee, Y., & Ben-Ari, A. (2007). Relationship of dyadic closeness with work-related stress: A daily diary study. *Journal of Marriage and Family*, *69*, 1021-1035.
Retrieved
- Lavee, Y., & Dollahite, D. C. (1991). The Linkage between theory and research in family science. *Journal of Marriage and Family*, *53*, 361-373. Retrieved from <http://www.jstor.org/stable/352905>
- Lawson, K. M., Davis, K. D., Crouter, A. C., & O'Neill, J. W. (2013). Understanding work-family spillover in hotel managers. *International Journal of Hospitality Management*, *33*, 273-281. doi:10.1016/j.ijhm.2012.09.003
- Lawson, K. M., Davis, K. D., McHale, S. M., Hammer, L. B., & Buxton, O. M. (2014). Daily positive spillover and crossover from mothers work to youth health. *Journal of Family Psychology*, *28*, 897-907. doi:10.1037/fam0000028
- Lee (2014). Macroeconomic consequences of population aging in the United States: Overview of a national academy report. *American Economic Review*, *104*, 234-239. doi:10.1257/aer.104.5.234

- Lee, N., Zvonkovic, A. M., & Crawford, D. W. (2014). The impact of work family conflict and facilitation on women's perceptions of role balance. *Journal of Family Issues, 35*, 1252-1274. doi:10.1177/0192513X13481332
- Leventhal, G. S., Karuza, J., & Fry, W. R. (1980). Beyond fairness: A theory of allocation preferences. In G. Mikula (Ed.), *Justice and social interaction* (pp. 167-218). New York, NY: Springer-Verlag.
- Levit, N., & Verchick, R. M. (2006). *Feminist legal theory: A primer*. New York, NY: NYU Press.
- Li, A., Shaffer, J., & Bagger, J. (2015). The psychological well-being of disability caregivers: Examining the roles of family strain, family-to-work conflict, and perceived supervisor support. *Journal of Occupational Health Psychology, 20*(1), 40-49. doi:10.1037/a0037878
- Li, Y., Miao, L., Zhao, X., & Lehto, X. (2013). When family rooms become guest lounges: Work-family balance of B & B innkeepers. *International Journal of Hospitality Management, 34*, 138-149. doi:10.1016/j.ijhm.2013.03.002
- Liu, H., Ngo, H.Y., & Cheung, F. M. (2015). Work-family enrichment and marital satisfaction among Chinese couples: A crossover-spillover perspective. *International Journal of Stress Management, 5*(1), 1-23. doi:10.1037/a0039753
- Llewellyn, A., Whittington, C., Stewart, G., Higgins, J. P., & Meader, N. (2015). The use of bayesian networks to assess the quality of evidence from research synthesis: Inter-rater reliability and comparison with standard grade assessment. *Plos One, 10*, 1-11. doi:10.1371/journal.pone.0123511

- Lombardi, C. M., & Coley, R. L. (2013). Low-income mothers' employment experiences: Prospective links with young children's development. *Family Relations, 62*, 514-528. doi:10.1111/fare.12018
- Lu, L., & Kao, S. (2013). The reciprocal relations of pressure, work/family interference, and role satisfaction: Evidence from a longitudinal study in Taiwan. *Human Resource Management, 52*, 353-373. doi:10.1002/hrm.21532
- Lyness, K. S., & Judiesch, M. K. (2014). Gender egalitarianism and work-life balance for managers: Multisource perspectives in 36 countries. *Applied Psychology: An International Review, 63*(1), 96-129. doi:10.1111/apps.12011McAdoo
- Lyons, K. S., & Sayer, A. G. (2005). Longitudinal dyad models in family research. *Journal of Marriage and Family, 67*, 1048-1060.
- Marcel, L., Michael T., F., Claire Edey, G., Nicolas, G., & Anne, H. (2009). Negative and positive spillover between work and home: Relationship to perceived stress and job satisfaction. *Journal of Managerial Psychology, 5*, 438-449.
doi:10.1108/02683940910959762
- McAdoo, H. P. (1981). *Black families*. Beverly hills, CA: Sage.
- McAllister, S., Thornock, C. M., Hammond, J. R., Holmes, E. K., & Hill, E. J. (2012). The influence of couple emotional intimacy on job perceptions and work-family conflict. *Family and Consumer Sciences Research Journal, 40*, 330-347.
doi:10.1111/j.1552-3934.2012.02115.x

- McIntosh, P. (1998). White privilege: Unpacking the invisible knapsack. In M. McGoldrick (Ed.), *Re-visioning family therapy: Race, culture, and gender in clinical practice* (147–152.) New York, NY: Guilford Press.
- McMillan, L. W., O'Driscoll, M. P., & Brady, E. C. (2004). The impact of workaholism on personal relationships. *British Journal of Guidance & Counselling, 32*, 171-186. doi:10.1080/03069880410001697729
- Merton, R. K. (1957). *Social theory and sociological structure*. Glencoe, IL: Free Press.
- Mesmer-Magnus, J., & Viswesvaran, C. (2009). File: The role of the coworker in reducing work–family conflict: A review and directions for future research. *Pratiques Psychologiques, 15*, 213-224. doi:10.1016/j.prps.2008.09.009
- Michel, J. S., & Clark, M. A. (2013). Investigating the relative importance of individual differences on the work–family interface and the moderating role of boundary preference for segmentation. *Stress Health, 29*, 324-336. doi:10.1002/smi.2474.
- Minnotte, K. L., Minnotte, M. C., & Pedersen, D. E. (2013). Marital satisfaction among dual-earner couples: Gender ideologies and family-to-work conflict. *Family Relations, 62*, 686-698. Retrieved from <http://search.proquest.com/docview/1436868453?accountid=12536>
- Mishel, L., Bernstein, J., & Schmitt, J. (1999). *The state of working American*. Ithaca, NY: Cornell University Press.
- Moore, M. R. (2012). Intersectionality and the study of black, sexual minority women. *Gender and Society, 26*(1), 33-39. doi:10.1177/0891243211427031

- Moorman, R. H. (1991). Relationship between organizational justice and organizational citizenship behaviors: Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology, 76*, 845-855.
- Morgan, W. B., & King, E. B. (2012). The association between work-family guilt and pro-and anti-social work behavior. *Journal of Social Issues, 68*, 684-703.
- Morgeson, F. P. (2014). Introduction to the annual review of organizational psychology and organizational behavior. TIP: *The Industrial-Organizational Psychologist, 52*(1), 125-128.
- Mullan, K., & Craig, L. (2010). Parenthood, gender and work-family time in the United States, Australia, Italy, France, and Denmark. *Journal of Marriage and Families, 72*, 1344-1361. doi:10.1111/j.1741-3737.2010.00769.x.
- Munn, S. L. (2013). Unveiling the work-life system: The balance of work-life balance on meaningful work. *Advances in Developing Human Resources, 15*, 401-417. doi:10.1177/1523422313498567
- National Bureau of Economic Research (2016). *The effects of the economic crisis on American households*. Retrieved from <http://www.nber.org/bah/2010no3/w16407.html>
- Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict scales and family-work conflict scales. *Journal of Applied Psychology, 81*, 433-410.

- Nikkhah, K., Jouybari, A. G., Mirzaei, M. M., Ghandehari, K., & Ghandehari, K. (2016). Clinical trial of subcutaneous steroid injection in patients with migraine disorder. *Iranian Journal of Medical Sciences, 41*(1), 9-12.
- Nomaguchi, K. M. (2012). Marital status, gender, and home-to-job conflict among employed parents. *Journal of Family Issues, 33*, 271-294.
doi:10.1177/0192513X11415613
- O'Brien, K. M., Ganginis Del Pino, H. V., Yoo, S., Cinamon, R. G., & Han, Y. (2014). Work, family, support, and depression: Employed mothers in Israel, Korea, and the United States. *Journal of Counseling Psychology, 3*, 461-472.
doi:10.1037/a0036339
- O'Neill, J. W., & Davis, K. (2011). Work stress and well-being in the hotel industry. *International Journal of Hospitality Management, 30*, 385-390.
doi:10.1016/j.ijhm.2010.07.007
- Odom, E. C., Vernon-Feagans, L., & Crouter, A. C. (2013). Nonstandard maternal work schedule: Implication for African American children's early language outcomes. *Early Childhood Research Quarterly, 28*, 379-387.
- O'Leary, A. (2007). How family leave laws left out low-income workers. *Berkeley Journal of Employment and Labor Law, 28*(1), 1-62.
- Olson, D. H. (1976). Bridging research, theory, and application: The triple threat in science. In David H. O. (Ed.), *Treating relationships*. Lake Mills, IA: Graphic Publishing.

- Pangman, V. C., & Seguire, M. (2000) Sexuality and the chronically ill older adult: A social justice issue. *Sexuality and Disability, 18*(1), 49-59.
- Parish, W., & Willis, R. (1993). Daughters, education, and family budgets: Taiwan experiences. In Caspi, J. (Ed.), *Sibling development: Implications for mental health practitioners* (pp. 147-165). New York, NY: Springer.
- Perry-Jenkins, M., Goldberg, A. E., Pierce, C. P., & Sayer, A. G. (2007). Shift work, role overload, and the transition to parenthood. *Journal of Marriage and Family, 69*, 123-138.
- Perry-Jenkins, M., Newkirk, K., & Ghunney, A. K. (2013). Family work through time and space: An ecological perspective. *Journal of Family Theory & Review, 5*, 105-123. doi:10.1111/jftr.12011
- Perry-Jenkins, M., Repetti, R. L., & Crouter, A. C. M. (2000). Work and family in the 1990s. *Journal of Marriage and the Family, 62*, 981-998.
- Perry-Jenkins, M., Smith, J. Z., Goldberg, A. E., & Logan, J. (2011). Working-class jobs and new parents' mental health. *Journal of Marriage and Family, 73*, 1117-1132. doi:10.1111/j.1741-3737.2011.00871.x
- Pew Research Center (2015). *How American parents balance work and family life when both work*. Retrieved from <http://www.pewresearch.org//search/?query=work-family%20conflict>
- Powell, B., & Steelman, L.C. (1990). Beyond sibship size: Sibling density, sex composition, and educational outcomes. In Caspi, J. (Ed.), *Sibling development:*

- Implications for mental health practitioners (pp. 147-165)*. New York, NY: Springer.
- Prati, G., & Zani, B. (2016). A moderated multilevel study of work-to-family conflict, empowerment, and turnover intentions. *Quality & Quantity, 50*, 2279-2292. doi:10.1007/s11135-015-0262-5
- Presser, H. B., & Ward, B.W. (2011). Nonstandard work schedules over the life course: A first look. *Monthly Labor Review, 3*, 3-16. Retrieved from <https://www.google.com/#q=non-standard+work+schedule+over+the+life+course>
- Prilleltensky, I. (2001). Value-based praxis in community psychology: Moving toward social justice and social action. *American Journal of Community Psychology, 29*, 747-778.
- Rawat, R. S. (2014). Patriarchal beliefs, women's empowerment, and general well-being. *Vikalpa: The Journal for Decision Makers, 39*, 43-55.
- Redman, R. W., & Clark, L. (2002). Service-learning as a model for integrating social justice in the nursing curriculum. *Journal of Nursing Education, 41*, 446-449.
- Remler, D. K., & Van Ryzin, G. G. (2011). *Research methods in practice: Strategies for description and causation*. Thousand Oaks, CA: Sage Publications.
- Repetti, R., Wang, S., & Saxbe, D. (2009). Bringing it all back home: How outside stressors shape families everyday lives. *Current Directions in Psychological Science, 18*, 106-111.
- Reynolds, P. D. (1971). *A primer in theory construction*. Indianapolis: Bobbs-Merril.

- Riggins-Caspers, K. M., Cadoret, R. J., Knutson, J. F., & Langbehn, D. (2003). Biology-environment interaction and evocative biology-environment correlation: Contributions of harsh discipline and parental psychopathology to problem adolescent behaviors. *Behavior Genetics, 33*, 205-220.
- Rupert, P. A., Stevanovic, A., & Hunley, H. A. (2009). Work-family conflict and burnout among practicing psychologists. *Professional Psychology: Research and Practice, 40*(1), 54-61.
- Schaeperkoetter, C. C., Bass, J. R., & Gordon, B. S. (2015). Student-athlete school selection: A family systems theory approach. *Journal of Intercollegiate Sport, 8*, 266-286.
- Schieman, S., & Young, M. C. (2011). Are communications about work outside regular working hours associated with work-to-family conflict, psychological distress and sleep problems? *Work & Stress, 27*, 244-261.
- Schneider, B. (2006). In the moment: The benefits of the experience sampling methods. In M. Pitt-Catsouphes, E. E. Kossek, & S. Sweet (Eds.). *The work and family handbook: Multi-disciplinary perspectives and approaches* (pp. 469-488). Mahwah, NJ: Erlbaum.
- Schumacker, R. E., & Lomax, R. G. (2010). *A beginning's guide to structural equation modeling*. New York, NY: Routledge.
- Schumm, W. R. (1982). Integrating theory, measurement and data analysis in family studies survey research. *Journal of Marriage and the Family, 44*, 983-998.

- Seedall, R. B., Holtrop, K., & Parra-Cardona, J. R. (2014). Diversity, social justice, and intersectionality trends in C/MFT: a content analysis of three family therapy journals, 2004-2011. *Journal of Marital and Family Therapy*, *40*, 139-151. doi:10.1111/jmft.12015
- Shepherd-Banigan, M., & Bell, J. F. (2014). Paid leave benefits among a national sample of working mothers with infants in the United States. *Maternal and Child Health Journal*, *18*, 286-295. doi:10.1007/s10995-013-1264-3
- Shreffler, K. M., Pirretti, A. E., & Drago, R. (2010). Work-family conflict and fertility intentions: Does gender matter? *Journal of Family and Economic Issues*, *31*, 228-240. doi:10.1007/s10834-010-9187-2
- Smeeding, T. (2012). *Income, wealth, and debt and the great recession*. Retrieved from <https://www.google.com/#q=household+income+reduction+after+2008>
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp. 290-312). San Francisco: Jossey-Bass.
- Sojo, V. E., Wood, R. E., & Genat, A. E. (2016). Harmful workplace experiences and women's occupational well-being. *Psychology of Women Quarterly*, *40*(1), 10-40. doi:10.1177/0361684315599346
- Sok, J., Blomme, R., & Tromp, D. (2014). Positive and negative spillover from work to home: The role of organizational culture and supportive arrangements. *British Journal of Management*, *25*, 456-472. doi:10.1111/1467-8551.12058

- Son, S., & Bauer, J. W. (2010). Employed rural, low-income, single mothers' family and work over time. *Journal of Family Economic Issues, 31*, 107-120.
doi:10.1007/s10834-009-9173-8
- Sprenkle, D. H. (1976). The need for integration among theory, research, and practice in the family field. *Family Coordinator, 24*, 261-263.
- Staples, R., & Mirande, A. (1980). Racial and cultural variations among American families. *Journal of Marriage and the Family, 42*, 887-904.
- Stewart, L. M. (2013). Family care responsibilities and employment: Exploring the impact of type of family care work-family and family-work conflict. *Journal of Family Issues, 34*(1), 113-138. doi:10.1177/0192513X12437708
- Swanberg, J. E., McKechnie, S. P., Ojha, M. U., & James, J. B. (2011). Schedule control, supervisor support and work engagement: A winning combination for workers in hourly jobs? *Journal of Vocational Behavior, 79*, 613-624.
doi:10.1016/j.jvb.2011.04.012
- Symoens, S., & Bracke, P. (2015). Work-family conflict and mental health in newlywed and recently cohabiting couples: A couple perspective. *Health Sociology Review, 24*(1), 48-63. Retrieved from <http://search.proquest.com/docview/1687396712?accountid=12536>
- The Council of Economic Advisers (2014). *Nine facts about American families and work*. Retrieved from <https://www.google.com/#q=proportion+of+single+working+mothers+in+the+U.S.>

- Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Erlbaum.
- Thomas, E., & Magilvy, J. K. (2011). Qualitative rigor or research validity in qualitative research. *Journal for Specialists in Pediatric Nursing, 16*, 151-155.
doi:10.1111/j.1744-6155.2011.00283.x
- Tisdale, S., & Pitt-Catsuphes, M. (2012). Linking social environments with the well-being of adolescents in dual-earner and single working parent families. *Youth & Society, 44*(1), 118-140. doi:10.1177/0044118X10396640
- Toossi, M. (2002). Century of change: The U.S. labor force, 1950-2050. *Monthly Labor Review, 125*, 15-28. Retrieved from <http://www.bls.gov/opub/mlr/2002/05/art2full.pdf>
- Townsend, N. (2002). *The package deal: Marriage, work and fatherhood in men's lives*. Philadelphia, PA: Temple University Press.
- Tudge, J. H., Mokrova, I., Hatfield, B. E., & Karnik, R. B. (2009). Uses and misuses of Bronfenbrenner's bioecological theory of human development. *Journal of Family Theory and Review, 1*, 198.
- Twisk, J., Boer, M., Vente, W., & Heymans, M. (2013). Original article: Multiple imputation of missing values was not necessary before performing a longitudinal mixed-model analysis. *Journal of Clinical Epidemiology, 66*, 1022-1028.
doi:10.1016/j.jclinepi.2013.03.017
- United States Bureau of Labor Statistics (2012). *The recession of 2007-2009*. Retrieved from www.bls.gov/spotlight

- United States Bureau of Labor Statistics (2016). *Employment status of the civilian population by sex and age*. Retrieved from <https://www.bls.gov/>
- United States Department of Commerce (2010). *American Community Survey*. Washington, D.C. Profile America facts for features.
- United States Department of Commerce (2013). *American's families and living arrangements*. Washington, D.C. Profile America facts for features.
- United States Department of Labor (2013). *Employment characteristics of families*. Retrieved from http://www.bls.gov/opub/ted/2013/ted_20130430.htm
- United States Department of Labor (2015). *The employment situation*. Retrieved from <http://www.bls.gov/news.release/pdf/empisit.pdf>
- Urban, J. B., Lewin-Bizan, S., & Lerner, R. M. (2009). The role of neighborhood ecological assets and activity involvement in youth developmental outcomes: Differential impacts of asset poor and asset rich neighborhoods. *Journal of Applied Developmental Psychology, 30*, 601-614.
doi:10.1016/j.appdev.2009.07.00
- VanBurkleo, S. F. (2001). *Belonging to the world: Women's rights and American constitutional culture*. New York, NY: Oxford University Press.
- Vera, E., M., & Speight, S. L. (2003). Multicultural competence, social justice, and counseling psychology: Expanding our roles. *The Counseling Psychologist, 31*, 253-272.

Voydanoff, P. (2004). Implications of work and community resources and demands for marital quality. *Community, Work & Family*, 7, 311-325.

doi:10.1080/1366880042000295736

Voydanoff, P. (2005a). The effects of community demands, resources, and strategies on the nature and consequences of the work-family interface: An agenda for future research. *Family Relations*, 54, 583-595.

Voydanoff, P. (2005b). Toward a conceptualization of perceived work-family fit and balance: A demands and resources approach. *Journal of Marriage and Family*, 67, 822-836.

Wattis, L., Standing, K., & Yerkes, M. A. (2013). Mothers and work-life balance: exploring the contradictions and complexities involved in work-family negotiation. *Community, Work & Family*, 16(1), 1-19.

doi:10.1080/13668803.2012.722008

Wheeler, L. A., Updegraff, K. A., & Crouter, A. (2011). Work and Mexican American parent-adolescent relationships: The mediating role of parent well-being. *Journal of Family Psychology*, 25(1), 107-116. doi:10.1037/a0022440

White, J. M., & Klein, D. M. (2008). *Family Theories*. Los Angeles, LA: SAGE

White, L., & Rogers, S. J. (2000). Economic circumstances and family outcomes, *Journal of Marriage and Family*, 62, 1035-1051.

Williams, R. H. (1960). Changing status, roles, and relationships. In Clark. T. (Ed.), *Hand- book of social gerontology*. Chicago, IL: University of Chicago Press.

- Work Stress Survey (2013). *Globe newswire*. Retrieved from <http://globenewswire.com/news-release/2013/04/09/536945/10027728/en/Workplace-Stress-on-the-Rise-With-83-of-Americans-Frazzled-by-Something-at-Work.html>
- Wu, L., Rusyidi, B., Claiborne, N., & McCarthy, M. L. (2013). Relationships between work-life balance and job-related factors among child welfare workers. *Children and Youth Services Review*, 35, 1447-1454. doi:10.1016/j.childyouth.2013.05.017
- Ybarra, L. (1982). When wives work: The impact on the Chicano family. *Journal of Marriage and the Family*, 44, 169-178.
- Zhao, X. R., & Mattila, A. S. (2013). Examining the spillover effect of frontline employees' work-family conflict on their affective work attitudes and customer satisfaction. *International Journal of Hospitality Management*, 33, 310-315. doi:10.1016/j.ijhm.2012.10.001
- Zhu, Y., & Li, D. (2015). Negative spillover impact of perceptions of organizational politics on work-family conflict in China. *Social Behavior and Personality*, 43, 705-714. Retrieved from <http://search.proquest.com/docview/1721707529?accountid=12536>

Appendix A

General Data Preparation

Secondary data of 302 working mothers was used in the current study. This data was also used in previous studies (Grzywacz, Crain, Martinson, & Quandt, 2014; Grzywacz, Crain, & Quandt, under-review). The total number of variables included in the data file was 1330. A detailed codebook was produced with the data file. An extensive review of the survey questionnaires and codebook was carried out. A couple of questions were slightly different between Wave 1 and the other three waves. For instance, during the first wave of data collection, the question about marital status was: “What is your current marital status?”, while in the other three waves of data collection, an additional question was asked before this question about marital status: “Has your marital status changed?” Similarly, questions about working status were included in Waves 1, 2, and 3 to see the changes over time. The variables about marital relationship, schedule, control, schedule flexibility, and family friendly workplace environment were asked during the baseline survey because women who were intended to work at the same organization for at least next 12 months were included in the study. Since the data was very complex, the study variables (work–family conflict, work–family enrichment, work–family balance, individuals’ characteristics, supervisor’s support, marital quality, number of children, age, race, marital status, income, and education) were identified in the data file and matched with the codebook. The scales of work–to–family conflict, family–to–work conflict, work–to–family enrichment, family–to–work enrichment, and work–to–family balance consisted of different items. For instance, work–to–family conflict and work–to–

family enrichment scales each consisted of five items. The work-to-family enrichment and family-to-work enrichment each consisted of four items. The work-family balance scale consisted of three items. The items for each scale were matched and verified with the codebook.

The data was already cleaned and had undergone preliminary analysis. However, preliminary analysis was again carried out and different steps (frequency distributions, reliability, normality curve, boxplot, and scatterplots) were taken to verify that the data was clean and appropriate for the analysis. After cleaning the data, the total score of each scale (work-to-family conflict, family-to-work conflict, work-to-family enrichment, family-to-work enrichment, and work-to-family balance) was calculated using the SPSS compute function. Since the study specifically addressed the research question related to sub-constructs of work-family conflict (work-to-family conflict and family-to-work conflict) and work-family enrichment (work-to-family enrichment and family-to-work enrichment), these scales were kept separate to analyze their distinctive effects on work-family balance.

Demographic variables were labeled in the dataset to reveal important demographic characteristics of the respondents. For instance, the variable of race was coded 0 and 1 in the dataset but it was not labeled. These codes were matched with the codebook where 0 was coded for African American women and 1 was coded for White women. Therefore, this variable was labeled in SPSS using a value label function. There were two variables for respondents' current age. One variable was a scale variable and the other variable was a categorical variable consisting of three categories coded 1, 2, and

3. The categorical variable was labeled such that 1 was labeled for 24-29 years, 2 was labeled for 30 to 39 years, and 3 was labeled for 40 to 49 years. The categorical variable was used to display the demographic characteristics of the respondents and the scale variable of age was used to estimate the descriptive analysis and the correlations with other scale variables included in this study. Likewise, the variable of education was coded 0 and 1 but not labeled in the data file. Therefore, 0 was labeled “low education” and 1 was labeled “high education”. The variable of marital status was a categorical variable consisting of five categories, which were also not labeled. Therefore, the codebook was consulted to label this variable with 1 for currently married, 2 for living as married, 3 for divorced or separated, 4 for widowed, and 5 for never married. This variable was further categorized into two categories for the purpose of analysis because the frequencies for divorced or separated, widowed, and never married were not sufficient. Therefore, the categories of currently married and living as married were coded 1 and the categories of divorced or separated, widowed, and never married were coded 2.

Moreover, the data was initially in lower order form such that each time period was separately entered in the data file. Because it was longitudinal data it was converted into higher order form to make it appropriate for analysis (Heck, Thomas, & Tabata, 2013). Each variable was labeled according to the respective time period. For instance, because work–family conflict was measured in four time periods, this variable was labeled as T1, T2, T3, and T4 for each wave of data collection, respectively. The ‘restructure’ function in the ‘data’ menu was used to convert the data from the wider

form to the higher order form. To verify that the restructuring of data from the wider form into the higher order form was successfully carried out, the frequency distributions and descriptive statistics of the demographic variables were analyzed and matched with the original data in the wider form and with the original study (Grzywacz, Crain, Martinson, & Quandt, 2014). Each case in the data view was displayed four times with respect to their time period.

Appendix B

Chapter 3: Preliminary Analysis

To clean the data, numerous steps were carried out. The selected variables were brought into a separate SPSS file from the original dataset. These variables were matched with the codebook to verify their labels and codes. After this, the frequency distribution of each variable was analyzed to examine any missing or not applicable values and the percent distribution of the categories or responses for each variable. Next, descriptive analysis of scale variables was conducted, in which different estimates such as range, mean, standard deviation, kurtosis, and skewness were estimated. After this, correlation analysis was carried out, in which a correlation matrix of scale variables was drawn. Education was the only variable in dichotomous form in the correlations analysis.

Data Collection Procedure

The process of recruitment was carried out in two stages. During the first stage of the recruitment process, invitations were sent by mail to those women who were identified as potentially eligible participants for the current study. During the second stage, women who were sent an invitation by mail were also contacted via telephone by trained staff members. These phone calls were made on different days of the week and at different times during the day to best reach participants. During the telephone calls, the women were screened to assess eligibility based on the inclusion and exclusion criteria. A trained interviewer of a similar race was assigned to each woman. These interviewers contacted the women to schedule face-to-face paper-pencil based interviews. A reminder letter was also sent. A baseline survey interview was conducted with these women in the

beginning of the project. The data was collected at four points in time, including the baseline, with a four-month interval between each. At the time of the interview, each respondent was given an informed consent form and the interviewer briefly explained the purpose, objective, and outcomes of the study to each woman.

Appendix C

Chapter 4: Preliminary Analysis

The work-family conflict scales consisted of two different five-item scales, one for work-to-family conflict and one for family-to-work conflict. The total score of these two scales was separately computed using the compute function in SPSS software. The total scores for the scales of skill discretion and physical/emotional well-being were in the same way. Because skill discretion and physical/emotional well-being were two separate constructs, they were treated separately in the current study. The variable of marital quality consisted of only one item that was measured through a Likert scale with a range of 1 to 7, where 1 represented very unhappy and 7 represented perfectly happy. The number of preschool and school-age children were two different variables, which were added together to obtain a total of preschool and school-age children between 4 and 9 years of age. A frequency table consisting of the variables age, education, race, and marital status was obtained that revealed the demographic differences among the respondents. A descriptive analysis was carried out for scale variables such as work-to-family conflict, physical/emotional well-being, skill discretion, marital quality, number of preschool and school-age children, and age of the women. A correlation matrix was also obtained to see the correlations among scale variables. Women's education was a dichotomous variable and was also included in the correlation analysis.

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