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Using Objective Measures To Capture Work-Family Conflict

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USING OBJECTIVE MEASURES TO CAPTURE WORK-FAMILY CONFLICT

by

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THESIS

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
LIST OF TABLES.....	v
CHAPTER 1 – INTRODUCTION.....	1
CHAPTER 2 – THEORETICAL BACKGROUND.....	5
<i>WFC Conceptualization</i>	5
<i>Influence of Personality on Subjective Self-Reports</i>	9
<i>Call for Objective Measures</i>	13
CHAPTER 3 – CURRENT STUDY AND RESEARCH QUESTIONS	19
<i>Purpose</i>	19
CHAPTER 4 – METHOD.....	21
<i>Participants</i>	21
<i>Measures</i>	23
<i>Procedure</i>	29
CHAPTER 5 – RESULTS.....	31
<i>Data Analysis</i>	33
<i>Assessing Convergent Validity</i>	35
<i>Assessing Criterion Validity</i>	36
<i>Assessing Added Predictive Power</i>	37
<i>Specific Outcomes for WIF Scale</i>	38
<i>Specific Outcomes for FIW Scale</i>	40
CHAPTER 6 – DISCUSSION.....	43
<i>Choosing “Frequency Data Only” Approach over Multiplicative Approach</i>	48

<i>Limitations</i>	49
<i>Conclusions</i>	52
<i>Future Research</i>	53
APPENDIX A – Questions Used in Focus Groups	54
APPENDIX B – Current Scales of Work-Family Conflict	55
APPENDIX C – Scales of Outcome Measures.....	57
APPENDIX D – Items Generated for Wave 2 from Focus Groups	61
APPENDIX E – Items Retained for Wave 3	64
APPENDIX F – Final Set of Items for Objective WFC Scale	67
APPENDIX G – Tables.....	70
REFERENCES	86
ABSTRACT	97

LIST OF TABLES

Table 1: Current Measures of Work-Family Conflict.....	70
Table 2: Corrected Item-Total Correlations	71
Table 3: Correlation Coefficients using the Multiplicative Approach as an Indicator of WFC	73
Table 4: Correlation Coefficients using the “Frequency Data Only” Approach as an Indicator of WFC.....	74
Table 5: Correlation Coefficients for All Variables	75
Table 6: Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Life Satisfaction.....	77
Table 7: Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Job Satisfaction.....	78
Table 8: Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Family Satisfaction.....	79
Table 9: Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Organizational Commitment.....	80
Table 10: Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Burnout.....	81
Table 11: Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Turnover Intentions.....	82
Table 12: Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Psychological Strain	83
Table 13: Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Health	84
Table 14: Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Depression	85

CHAPTER 1

INTRODUCTION

Work-family conflict (WFC) affects many working individuals. Many people serve in several roles throughout their adult life, including parent, employee, friend, and possibly student, among others. Essentially, WFC has been defined in the literature as conflict experienced when these multiple roles interact in such a way that pressures from one role (e.g., work) are mutually incompatible with pressures from another role, such as family responsibilities (Greenhaus & Beutell, 1985). This definition is, in part, based on role theory. Role theory (Katz & Kahn, 1978), one core theory in explaining WFC, suggests that life domains (e.g., work, family) involve multiple roles where demands are placed on the individual. Combined with the scarcity hypothesis, which posits individuals function with a fixed amount of resources such as time and energy, the role theory framework posits that the work and family domains can be incompatible, resulting from different norms and requirements (Burke, 1988; Evans & Bartolomé, 1984). These theories together suggest that conflict between the roles may exist when resources are limited. An individual's choice of work and familial relationships, together, define the human experience in such a unique way that individuals would like to excel in both; however, in many cases, excelling in one comes at the expense of the other.

As evident by the expanding literature, this balancing act is difficult to master, leading many to view the absolute separation of an individual's multiple roles as an outdated notion (e.g., Gronlund, 2007). Previous research has indicated that the stress generated by this conflict can impact a number of other factors in one's life, such as health (e.g., Greenhaus, Allen, & Spector, 2006), job satisfaction (e.g., Bruck, Allen, &

Spector, 2002), life satisfaction (e.g., Allen, 2001; Kossek & Ozeki, 1997), absenteeism and turnover (e.g., Boyar, Maertz, Pearson, & Keough, 2003), and job commitment (e.g., Allen, 2001). Better understanding the connection between work and family is beneficial to the employee, since members of one's family ultimately become affected by the stress produced by the conflict. From the perspective of the organization, many of these outcomes also mediate performance and organizational effectiveness, although these relationships have only been shown to be marginally effective and widely understudied to-date (Kossek & Ozeki, 1999). From the perspective of the individual, relationships between work and family can have an important effect on job and life satisfaction (Adams, King, & King, 1996).

As other authors have demonstrated in the literature, one of the first steps in identifying levels of one's WFC is to develop and utilize scales which best capture the link between the WFC construct and previously established outcomes (Carlson, Kacmar, & Williams, 2000; Frone, Russell, & Cooper, 1992; Kopelman, Greenhaus, & Connolly, 1983). Once a solid measurement tool is produced, the resulting data can be used to hone in on predictive relationships, which could potentially lead to interventions, training programs, and other solutions used to lessen the stress involved in both the work and family domains.

Although several scales currently exist (see Table 1), none of them capture any form of objective data directly from a single person. Further, many of these measures in the work-family literature have self-admitted limitations; specifically, many use cross-sectional data, require further validation and development, and seem to be replaced about as quickly as they are published (e.g., Matthews, Kath, & Barnes-Farrell, 2010).

In fact, Lambert and Kossek (2005) discuss the importance of updating the methodology used to study WFC, as the majority of research in this field is cross-sectional in nature and relies on self-reported data, which is collected largely through surveys. Furthermore, Lambert and Kossek (2005) draw attention to the origination of the current measures for collecting data in this area: “two-parent, male-headed, Caucasian American households” (p. 519). This suggests that the current, subjective measures may have become even more outdated, and that the development of measures which are objective in nature are even more crucial in understanding WFC from a number of life situations. Since many of the existing scales that have been developed to-date may not be capturing all of the available information from an individual, the research may not be reflecting a more comprehensive view of WFC. To add predictive power in explaining WFC, objective measures should be included alongside currently existing subjective measures. This will offer a more holistic view of the WFC phenomenon. In sum, a fresh perspective on the balance between work and family roles is necessary.

The purpose of this study is to 1) identify objective items which can be developed into a scale to measure WFC, 2) test the scale for relevant psychometric properties in an initial validation, and 3) determine whether these objective measures can predict pertinent, relevant outcomes at the individual level to add unique predictive ability above and beyond the subjective scales that are currently recommended.

The following chapters offer theoretical and practical arguments for the development of a more objective scale. Chapter 2 offers an overview of the existent literature on WFC, an examination of the current scales used to assess levels of WFC,

and exposure of the gap in the literature surrounding a better measurement of the WFC construct. Chapter 3 describes the purpose and design of the current study, and chapter 4 describes the methodology used to generate items, the operational definitions for each construct, and validation of the scale. Chapter 5 describes the results of the study, while Chapter 6 concludes with a discussion, including implications of the results, limitations of the current study, and ideas for future research.

CHAPTER 2

THEORETICAL BACKGROUND

To more clearly understand the concept of WFC, definitions and descriptions from many perspectives in the literature are reviewed in this chapter. First, distinctions between the definitions of WFC that currently exist are necessary to set a solid foundation for any work in scale development (Allen & Yen, 1979).

WFC Conceptualization

WFC has been described using a number of terms in the literature, with some general and others more specific. Each definition shares the commonality that an individual will experience stress when that person has limited time and energy to devote to a number of different roles. As more roles are acquired, the individual has a greater need to prioritize and, ultimately, that person has a smaller chance of meeting all expectations (Goode, 1960; Greenhaus & Beutell, 1985). Accordingly, work–family conflict revolves around the idea that increased performance in one domain (such as work) results in a fixation with that role and can result in decreased performance in another domain (such as family).

Important differentiations exist between WFC, work-family *interference*, and work-family *balance* (Byron, 2005). Interference and conflict are often used interchangeably, with the idea that both focus primarily on the dysfunctional impact on the person that results from one role conflicting – or interfering – with the other role (Westman & Etzion, 1995). Balance is another way of describing the relationship; however, the term “balance” implies fewer negative outcomes that can result from the conflict between the roles, and suggests that one *could* balance the roles with effort.

Interestingly, referring to this relationship as balance may be described as a noun (e.g., one can seek balance), a verb (e.g., to balance work and family responsibilities), or an adjective (e.g., a balanced life). Work–family balance often implies reducing time spent on work to focus on one’s family. Moreover, it is thought to be in an individual’s best interest to live a balanced life (Kofodimos, 1993). Several scholars have proposed definitions of balance that distinguish it from other similar concepts (e.g., Clark, 2000; Marks & MacDermid, 1996). One study conducted by Greenhaus, Collins, and Shaw (2003) dissects work-family balance into three components: time balance, which requires devoting equal time to work and family obligations; involvement balance, which requires devoting equal levels of psychological involvement to work and family; and satisfaction balance, which results in equal satisfaction with work and family roles. Results of this study suggest that individuals should invest substantial time in their combined work and family roles, but how this time is divided may play a role in the amount of balance the person experiences. Namely, those who spent more time with family compared to work experienced a higher quality of life than those who spent equal amounts of time in both domains. Those who spent more time at work, however, reported the lowest quality of life (Greenhaus et al., 2003). Ultimately, this study implies that “balance,” as it is traditionally defined, may not lead to the most optimal outcomes. Even though work-family balance studies yield interesting results, the definition of balance often varies by author, the measurement of balance is problematic, and the impact of work–family balance on a person’s well-being has not yet been established, making it challenging to find consistent patterns.

This distinction can become even more complex when the term “family” is substituted for a more general term, such as “life” or “non-work” (e.g., Sturges & Guest, 2004). Some authors (e.g., Fisher, Bulger, & Smith, 2009) suggest that using “family” describes a construct too narrow for the sake of seeking “balance” or eliminating “conflict,” as its use implies that life consists only of these two domains. Whether a working individual has a family unit or not, he or she may hold other important roles and responsibilities (e.g., volunteer activities) that impact his or her experiences of WFC, especially when considering the diversity in families and societal trends that currently exist (Fisher et al., 2009). The concepts to “work” and “nonwork” appear to include more of the many activities and interactions that individuals experience outside of work, such that they can be captured and accounted for.

Although this terminology is considered far more inclusive, the exploratory nature of the current study calls for definitions that are well-established in the area, at least for the purpose of an initial investigation. Therefore, the term “WFC” was the conceptualization selected for this study, as it is the most widely accepted conceptualization use to describe the pressures experienced when an individual is using a limited amount of time to meet the requirements of multiple roles. Beyond being more recognized, WFC is more specific to the challenges and stress the employee experiences, which is more likely to be viewed as holding practical value than using the term “balance.”

Within this conceptualization of WFC, researchers historically have thought of this framework as being unidirectional. Specifically, WFC was originally viewed narrowly as work interfering with family (WIF), or the degree to which participation in the work

role is made more difficult from participation in the family role (Greenhaus & Beutell, 1985). Although it is more intuitive to think about the consequences of one's work role interfering with one's family role, WFC should also include the conflict that exists when one's family role conflicts with work. Recent research has defined WFC more broadly to reflect this bi-directionality with the addition of family interfering with work (FIW), or the degree to which participation in the work role is made more difficult due to obligations related to one's family. This recent research on WFC has shown that role pressures are directional and generally produce negative effects (conflict) from one domain to the other (Ford, Heinen, & Langkamer, 2007). In WIF, pressures may spill over from work into the time typically spent with one's family. When the requirements to care for one's family begin to interfere with the person's ability to complete work responsibilities, FIW occurs. These concepts are different, yet related concepts that have been distinguished by several authors (e.g., O'Driscoll, Ilgen, & Hildreth, 1992).

WFC has also changed over time to suggest the existence of three forms: time-based, strain-based, and behavior-based, a differentiation described by Greenhaus & Beutell, 1985. Greenhaus and Beutell (1985) argue that time-based conflict occurs when the time required for one role creates problems for another role (e.g., missing a child's performance at a sporting event due to a late meeting). Strain-based conflict occurs when the strains from one role interfere with participation in another role (e.g., a bad mood lingers from work and one's family is the recipient of the displaced frustration). Finally, behavior-based conflict occurs when certain behaviors in one role are mismatched with the behavioral expectations for another role (e.g., delegating work using an authoritarian style may work in the office, but it may not work as well at home

with one's family). These forms are worth mentioning, since the behavioral, objective examples of WFC being investigated in this study may utilize any form of WFC.

With the construct defined, one can examine the current methods used to measure WFC, including some that could use improvement. There are currently a total of seventeen measures of WFC that can be found in the literature, the first published in 1978 (Pleck, Staines, & Lang). Each scale ranges in items from one (Rice, Frone, & McFarlin, 1992) to eighteen (Carlson et al., 2000). A full list of currently used measures listing author, year, and number of items is available (Table 1). As it is evident that subjective scales are frequently used, the next section is used to describe the influence of one's personality on their self-reported responses to these perceptual WFC questionnaires.

Influence of Personality on Subjective Self-Reports

Much of the work-family literature discounts the influence of personality on the conflict experienced by the individual in his/her attempt to balance multiple life roles. More recently, researchers are calling for more consideration of these dispositions when understanding how an individual experiences, interprets, and reacts to the responsibilities linked to their work and family roles (e.g., Carlson, 1999).

One of the greatest ways in which personality can have an effect on how an individual will interpret his or her WFC is through the perception of stress. For example, individuals will experience stressors in the environment; however, the way in which the person perceives the stressors and the emotional reaction one experiences as a result (e.g., strains) can vary as a result of individual differences (Bolger & Zuckerman, 1995). Further, personality can influence how many - or what type - of events cause stress.. In

measuring WFC, the person's perception, or strain, associated with each role can have an impact on how the person reports their conflict.

Friede and Ryan (2005) examine a number of ways in which personality can influence the relationship between work and family role requirements. First, an individual's personality may cause them to self-select into different environments or take on different tasks. When these selections are more taxing, the person may perceive the management of their multiple roles as being more difficult. Second, the authors acknowledge that even under the same circumstances, a person's perception of the situation can lead them to feel conflicted, enriched, or some combination of the two. This differentiation in perceptions can increase the conflict one experiences and coping strategies may be chosen and utilized differently based on personality (Friede & Ryan, 2005).

The processes through which personality characteristics influence WFC have also been investigated as a means of evaluating the effects of coping strategies (Baltes, Zhdanova, & Clark, 2011). Results indicated that personality traits positively related to the reported use of certain behavioral coping strategies, and that the use of these behavioral strategies negatively related to the levels of experienced WFC. Specifically, emotional stability was found to have both direct and indirect effects on WFC, and negative affect was found to only have direct effects on FIW (Baltes et al., 2010). The authors concluded that different processes may underlie the influence of specific personality characteristics on WFC. The findings from this study can have implications for the effectiveness of interventions aimed at reducing work-family conflict, since individual factors have a strong influence on a person's choice of coping strategies.

Findings also support that idea that participants' personality traits influence their perceived WFC. If one's perceptions of WFC are due to individual differences, the scales currently used to collect these data may not be representing WFC as well as they could if objective measures were used in addition to the subjective measures that currently exist.

Additionally, research has investigated the effects of affectivity on perceptions of experienced stress. Specifically, differences in affectivity (i.e., negative and positive) have been examined in relationship to stress and other outcomes. The influence of negative affectivity (NA), a mood-dispositional dimension that reflects pervasive individual differences in negative emotionality and self-concept, can be strongly seen in the general areas of stress, health, and psychopathology (Watson & Clark, 1984). Furthermore, various between-subjects analyses have indicated that self-reported stress is correlated with individual differences in NA, but is largely unrelated to positive affectivity (PA; Watson, 1988). While each type of affectivity is important, the influence of negative affectivity is a stronger predictor for explaining how people perceive and report feelings of stress. This may be because the person experiencing pressure and stress may increase his or her NA level to deal with the pressures. On the other hand, it may be that high state negative affectivity causes the person to perceive and evaluate events more negatively, almost as if they were viewing current life events from a negative lens (Watson, 1988).

In summary, the affectivity literature suggests that self-report measures of stress are moderately correlated with state NA scales but are unrelated to PA (Kanner, Coyne, Schaefer, & Lazarus, 1981; Watson, Pennebaker, & Folger, 1987). Because the scales

currently used to measure WFC involve self-report, this conceptualization of WFC likely results from *perceived* or *subjective* stressors in each role, implying that the relationship between objective stressors and WFC is unclear. If, in fact, often-reported job stress-job strain relationships are inflated because of self-report measures of both stress and strain being exaggerated by NA, that questions the current state of the job stress literature, and how hypotheses might be tested moving forward (Brief, Burke, George, Robinson, & Webster, 1988). Ultimately, NA has been shown to be both a methodological nuisance and a substantive cause of stressful work events; therefore, NA should be included in studies on job stress in future research with respect to subjective measures (Brief et al., 1988). The use of objective measures in addition to the subjective measures may limit the impact of NA as an influence on WFC.

Other studies investigating the relationship between personality and health outcomes suggest that personality types and characteristics heavily influence how one reports health issues (e.g., Frese & Semmer, 1986; Parkes, 1999; Perrewé & Spector, 2002). In a study by Parkes (1999), for example, neuroticism was a significant predictor of all outcomes except injuries, and Type A scores were significant for all health outcomes except headaches. Results indicate that individuals high in neuroticism or in Type A scores (or both) were consistently more likely to report health problems than their low-scoring counterparts (Parkes, 1999). Hence, this literature acknowledges the influence of personality on health outcomes, but also emphasizes the limitation of subjective measures used in isolation.

Since individual differences can play such a large role in the perceptions of WFC experienced by a person, one should consider other opportunities to improve upon the

predictive ability using other methods. In essence, subjective measures used for the study of WFC can only provide researchers with part of the story. Objective measures are indispensable in the quest to gain a more complete understanding of the construct. Many studies within this area identify this lack of measurement as a limitation in their work (e.g., Allen et al., 2000; Friede & Ryan, 2005; Kossek, Baltes, & Matthews, 2011), and call for future investigations to address this methodological shortcoming. Yet, to the author's knowledge, it remains untouched. Allen and colleagues (2000), among others (e.g., Lambert & Kossek, 2005), have called for the addition of objective measures to be used as a way of further linking antecedents and outcomes in the literature, yet no such scale currently exists. On this basis, the focus should be drawn toward the development of objective measures that can effectively impact the way in which researchers understand, predict, and develop interventions to reduce WFC.

Call for Objective Measures

As discussed above, much of the WFC literature relies on the use of self-reports. The most efficient and appropriate way to examine this complex topic has been to ask the employee to complete a scale as part of a questionnaire. Even more common as a proxy for WFC is a directly subjective measure asking the individual how much WFC he or she experiences. Because the person is subjectively answering the question on a Likert-type scale, their own perceptions of what constitutes "conflict" may introduce unnecessary error in the measurement process.

Some studies in the work-family domain have acknowledged the need for more objective measures (e.g., Allen et al., 2000; Lambert & Kossek, 2005), employing the use of some verifiable information such as time spent in a specific role compared with

time spent in another competing role (Greenhaus et al., 2003). In one study, researchers investigating work-family balance requested respondents to report the number of hours they worked weekly as a proxy of time spent in work the work role. For comparison purposes, time spent on home and on family responsibilities was also collected. Scores were calculated by summing the number of hours in an average week respondents reported spending on household chores and on child care activities (Greenhaus et al., 2003). The authors emphasized the strength of using objective assessments of balance, but also acknowledged that it would be useful to measure balance both objectively and subjectively simultaneously. In future studies, Greenhaus et al. (2003) recommend a more comprehensive approach, using subjective measures in addition to time spent, to capture subtle aspects of balance.

Because WFC has been most frequently measured through direct self-report methods, researchers fail to distinguish between objective and subjective, or psychological role conflict (Allen et al., 2000). Greenhaus (1988) discusses the importance of the distinction between objective role conflict and experienced, or psychological, role conflict. In his recommendations for future research, he identifies how each type could result in different consequences, based on the level of importance to one's self-concept. For example, if an individual is not able to attend a family function due to an increase in work demands, that person is likely to experience WFC as it is defined by role theory. However, the person in this scenario may not experience any psychological conflict. An individual's level of psychological conflict is based on environmental pressures and the relative salience of work and family roles. Structurally, these work engagements may "conflict" with family activities; psychologically, the

person may not experience conflict subjectively if family is not particularly essential to one's self-concept (Greenhaus, 1988). In order to examine WFC more accurately, the scales used to measure it should tap into objective and psychological conflict separately (Greenhaus, 1988). Many scales currently in use confound the two operationalizations (e.g., "My work schedule often conflicts with my family life") or focus exclusively on the amount of psychological conflict experienced (Greenhaus, 1988).

Other areas of study expose considerable differences between objective and subjective measures of the same phenomena (e.g., Judge, Boudreau, & Bretz, 1994 regarding subjective versus objective career success; Spector, Jex, & Chen, 1995 regarding subjective versus objective reports of job characteristics). Research examining WFC using different methodologies can enhance ways in which this conflict differentially affects individuals. This knowledge can aid in theoretical understanding and practical utilization. Improved measurement may be just as important to furthering our understanding of WFC as theoretical advancements (Allen et al., 2000).

Developing new scales to measure objective levels of WFC can be challenging, since items within an objective scale are not necessarily related, which could result in low internal reliability (Kossek et al., 2011). This measurement perspective reflects the idea that the indicators are chosen based on the likelihood that they, together, *cause* the latent variable, rather than *are caused* by the latent variables, as is the case of reflective measures (Diamantopoulos & Winklhofer, 2001; MacCallum & Browne, 1993). One classic example of a formative relationship uses the latent variable socioeconomic status (SES), which is formed by a combination of specific indicators, namely education, income, occupation, residence (Hauser, 1971). As the levels of each variable increase,

the latent variable of SES is subsequently affected, even when the others are held constant (Diamantopoulos & Winklhofer, 2001). An objective WFC scale is likely formative in nature, as all items on the scale would predict WFC, but each may not be necessarily related to one another. Most work-family measures are reflective; meaning the latent variable "WFC" can be represented by the items on each scale (Diamantopoulos & Winklhofer, 2001). Formative measures may not be influenced by the latent constructs but may form (influence) them (Bollen & Lennox, 1991). Since objective scales are most likely formative and thus do not exhibit some of the desired characteristics tested in reflective scales (e.g., internal consistency), it will probably require those in the WFC arena to become more open-minded regarding measurement and data collection (Kosseck et al., 2011).

As an example of an objective measure, some research has indicated that time demands are related to WFC outcomes. Specifically, work role conflict and time demands were most related to WIF, while family role conflict and role ambiguity were most related to FIW (Michel, Mitchelson, Pichler, & Cullen, 2010). These results led these researchers to question whether including more objective measures - beyond time demands - may enhance the understanding of WFC as an outcome.

It is clear that there is interest in developing objective measures of WFC to use in addition to the more subjective scales that are currently used, primarily when one considers issues that stem from using one type of measure exclusively. When subjective measures are used, individuals may be concerned about social desirability when responding to these measures, and may unintentionally under- or over-report perceived WFC. Specifically, individuals may underreport conflict when work interferes

with family if the participant feels that it is socially undesirable to neglect or otherwise experience conflict when discussing familial relationships. Conversely, one may not experience conflict when family interferes with work, or consider it invasive enough to report.

Beyond social desirability, individual preference could be used to explain differences in reporting WFC. For example, boundary theory posits that individuals create and maintain boundaries around each role to simplify their environments (Ashforth, Kreiner, & Fugate, 2000; Clark, 2000). Specifically, individuals exist somewhere along the segmentation-integration continuum, where some are more likely to separate their experiences in each domain to avoid spillover, whereas others prefer to integrate their work and family and minimize the division of the two (Ashforth et al., 2000; Matthews & Barnes-Farrell, 2010). It would make sense, then, that an individual's preference on the continuum (i.e., preference for integration or segmentation) is likely to influence the way in which they experience and respond to questions on WFC. Specifically, a person who strongly prefers integration over segmentation may have a more difficult time recognizing conflict when he or she experiences it, since his or her work and family roles are harder to differentiate.

Kossek and Ozeki (1998) offer more evidence for the measurement issues of scales within this domain. They believe variation within and across measures of WFC may explain the discrepancies in results. These psychometric concerns may reflect weaker validity than actually exists. In fact, of the 25 independent studies included in a recent meta-analysis, internal consistency reliabilities ranging from .56 to .95 were found for measures that included between 2 and 22 items. Such variation in the length

of the scale used, the item content, and internal consistency could yield varying research outcomes and discrepant conclusions (Mesmer-Magnus & Viswesvaran, 2005).

Taken together, it is clear that measurement within the WFC domain has undeniable shortcomings. Although the inclusion of more objective measures may not eliminate all of the issues, the addition of such measures could certainly improve the current methodology without adding undue pressure on the participant in the data collection process. By giving the individual a frame of reference within which to examine their behaviors, feelings, and decision outcomes (e.g., pre-determined period of time), he or she may be better able to accurately report experiences of conflict the person may otherwise have failed to report when asked for subjective feelings. For this reason, objective measures in the WFC domain were evaluated and considered for use. The current study design and methodology is discussed in the following chapters.

CHAPTER 3

CURRENT STUDY AND RESEARCH QUESTIONS

Purpose

The purpose of this study is three-fold. The first purpose is to identify objective items to be developed into a scale to measure WFC, which can uniquely predict a number of outcomes above and beyond that of the subjective measures currently in place. The second is to test the scale for relevant psychometric properties in an initial validation. The third purpose is to determine whether these objective measures can predict pertinent work outcomes of interest at the individual level.

The present study utilizes qualitative data from a number of participants to determine some objective items that best reflect WFC bidirectionally (WIF and FIW). The examples of behaviors believed to influence WFC were generated by participants to create items that were commonly experienced by individuals. These items were assembled into a scale believed to better predict specific outcomes when used in conjunction with current scales that assess perceived role conflict.

To be clear, the goal in creating this WFC scale was not to replace any of the measures currently used, but rather to improve the measurement in this area by adding unique predictive ability that has not been captured given the subjective nature of the other scales. In many ways, understanding the experiences that lead an individual to heightened levels of WFC advances both the theoretical and practical application of the constructs. In identifying experiences that lead one to perceive WFC, researchers will be better equipped to predict specific outcomes resulting from the stressors induced when participating in a number of work- and family-related roles in the future;

practitioners can apply the findings to programs, interventions, and training opportunities designed to help employees minimize experienced conflict.

The proposed study methodology is presented in the next chapter.

CHAPTER 4

METHOD

Participants

Due to the developmental nature of this study, several differing groups of participants were necessary in the data collection process. Initially, 20 adults working in industry, 17 working students from a large Midwestern university, and 13 working adults drawn from a convenience sample were recruited to participate in focus groups for Wave 1 ($N = 50$). To be invited to participate in these face-to-face discussions, participants were required to meet two criteria in an online pre-screening tool: (a) the person must be working at least part-time (defined by working a minimum of 20 hours each week), and (b) must either be living with a significant other and/or children. Both of these criteria were critical, especially with respect to student participant selection, as the nature of the study requires natural experience with conflict that results from an incompatibility with one's requirements in work and family roles. Whether these criteria had been met was discussed verbally at the onset of the focus groups when the information sheet was distributed. If a participant did not meet either of the criteria, they were thanked for their time, but asked not to participate. Upon reviewing the content generated by these individuals, it seemed unlikely that additional conversations would yield meaningful enhancements to the content already collected.

For Wave 2 of data collection, the content collected in the first Wave was content-analyzed and assembled into 82 individual items representing the most commonly reported and experienced indicators of WIF (56) and FIW (26). These items, along with the two participation criteria used throughout the study and five questions

checking for carelessness (e.g., “I should answer ‘Rarely’ and ‘Unimportant’ to this item to show I am paying attention”), were uploaded into an online survey tool. A total of 190 individuals were originally surveyed during this Wave to ensure at least 150 respondents met the criteria and passed the carelessness checks. Of the original sample, 7 participants failed to heed warnings that individuals must meet the work and family requirements to receive credit, and another 21 failed to respond accurately to more than half of the carelessness questions. As a result, the data from 162 working adults that met the above criteria were pooled from an online data collection tool called Mechanical Turk (MTurk), which was used to identify how frequently each behavior occurs and how important, or critical, each behavior is in impacting the participant’s WFC.

The Wave 2 sample consisted of 57% male respondents and 30% female (13% chose not to answer), with an average age of 38 years ($SD = 10.7$ years). All of these participants lived with a significant other and/or children, and 72% of them were employed at least 35 hours per week. The remaining 28% reported working between 20 and 35 hours per week. Participants who passed the carelessness checks received a small monetary incentive in exchange for their time.

Wave 3 of data collection was used to validate the newly created scale consisting of the most commonly cited and frequently occurring objective indicators of WFC. In this Wave, 250 working adults were invited to complete questionnaires measuring outcomes that have been shown to be predicted by subjective measures of WFC, as well as the new scale. These surveys were posted online using the Mechanical Turk data collection tool, just as in Wave 2. Similarly, participants received a small monetary compensation

for their time. Although 250 individuals were originally invited to participate, through the data cleaning process, only 226 cases were ultimately retained for the analyses. This elimination process is further discussed in the data analysis subsection in the results.

The Wave 3 sample consisted of 50% male respondents and 50% female, with an average age of 33 years ($SD = 10.1$ years). All of these participants lived with a significant other and/or children, and 69% of them were employed at least 35 hours per week. The remaining 31% reported working between 20 and 35 hours per week. Participants who passed the carelessness checks received a small monetary incentive in exchange for their time.

The remaining 226 cases were used to investigate relationships among current WFC measures, the new objective measure, and nine outcome variables that have been shown to be related to WFC in previous meta-analyses, discussed in detail in the next two sections. The process used to generate content for the new scale, additional information on the two subjective measures of WFC, and the meta-analyses and subsequent selection of nine relevant outcome measures are all described in the next two sections.

Measures

The verbal questions used in the focus groups for the first Wave of data collection consisted of open-ended questions designed to capture personal examples of WIF and FIW. The questions provided the participants with an example of each type of conflict to give them an idea of the type of information being sought. Further, questions were asked using behaviors and examples that have been experienced during the past two weeks, the past month, and the past year as a point of reference to initiate

discussion. Prior to collecting the first Wave of data, a number of questions were created and used to generate ideas during the focus groups (see Appendix A).

The content generated during the focus groups (Wave 1) was then used to generate 82 total objective WFC items. These items were used during Wave 2 in a survey to determine how frequently each behavior occurs and how important each behavior is with respect to a person's WFC. Thus, Wave 2 consisted exclusively of newly generated content for the objective scale. For Wave 3, the items used in Wave 2 were reduced to only those items that were given a 2.5 or higher on a 5 point importance scale. Thus, the new objective measure used in Wave 3 consisted of 73 items, as 9 were eliminated after Wave 2. This scale was then validated using a number of measures, including subjective measures of WFC (WIF, FIW) and specific outcomes previously found to be predicted by WIF and FIW, discussed below.

Comparison WFC Scales. In addition to the items generated by in-person focus groups, two subjective scales currently used to measure WFC were administered to the participants in Wave 2. For the first scale, the construct of WFC was measured in both directions (WIF, FIW) with a total of 10 items in the entire scale (Netemeyer, Boles, & McMurrian, 1996). A sample item from the Netemeyer et al. (1996) scale is: "The demands of my work interfere with my home and family life." Coefficient alpha for WIF was .914; for FIW, $\alpha = .925$. Higher scores represent higher levels of the constructs. A second 18-item existent scale was also used to measure WFC bi-directionally (Carlson et al., 2000). A sample item from this scale is: "My work keeps me from my family activities more than I would like." Coefficient alpha reliability for WIF was .825; for FIW, $\alpha = .86$. For the purpose of this study scores were examined using the WIF and FIW

breakdown only to remain consistent with the Netemeyer and colleagues (1996) scale. Higher scores represent higher levels of the constructs. The items within each of these scales can be found in Appendix B.

A number of outcomes of WFC are also necessary in determining the predictive validity of the new measure. To determine which outcomes to include, two meta-analyses on the subject were consulted. The initial meta-analysis on WIF and related outcomes, conducted by Allen et al. (2000) reported a number of significant relationships. Specifically, Allen and others (2000) examined the relationships between WIF and six work outcomes: work satisfaction (weighted mean $r = -.24$), career satisfaction (-.04), organizational commitment (-.23), turnover intentions (.29), absenteeism (-.02), and job performance (-.12). Within the “nonwork” domain, three outcomes were meta-analytically investigated, including life satisfaction ($r = -.28$), marital satisfaction (-.23), and family satisfaction (-.17). The seven stress outcomes included general psychological strain (.29), somatic/physical symptoms (.29), depression (.32), alcohol abuse (.13), burnout (.42), work-related stress (.41), and family-related stress (.31).

A second WFC meta-analysis was conducted by Amstad, Meier, Fasel, Elfering, and Semmer in 2011 to include more recent studies that have been added in the last decade. Additionally, Amstad and colleagues’ (2011) meta-analytic results also review the literature in terms of the differing directions of WFC (i.e., WIF, FIW), rather than limiting the results to only WIF.

Amstad et al.’s (2011) work suggests the most common work-related outcomes related to WFC include work satisfaction (unweighted mean $r = -.26$), organizational

commitment (-.17), turnover intentions (.21), burnout/exhaustion (.38), absenteeism (.03), work-related performance (-.11), work-related stress (.49), career satisfaction (-.09), and organizational citizenship behaviors (-.63) as work-related outcomes. Family-related outcomes include marital satisfaction ($r = -.17$), family satisfaction (-.18), family-related performance (-.18), and family-related stress (.23). Some outcomes do not easily fall within either category, and as such, they were combined into a third category. These include life satisfaction ($r = -.31$), health outcomes (.28), psychological strain (.35), somatic/physical symptoms (.29), depression (.23), substance abuse (.08), stress (.54), and anxiety (.14).

As indicated above, some relationships between WFC and specific outcomes are stronger than others. Furthermore, several of the variables investigated in these studies used fewer than five articles in determining the mean correlations. For the purpose of the current study, only strong relationships with correlations above .15 and those relationships based on more than 5 studies were included as outcomes. Although different outcomes could be predicted differently when using subjective and objective measures, the first logical step in understanding the value of items on an objective scale is to compare these items against what has already been tested, before moving on to other predictive relationships. Additionally, only outcomes that were included in both of the previous studies were considered. Thus, the nine specific outcomes of interest include job satisfaction, organizational commitment, turnover intentions, family satisfaction, life satisfaction, psychological strain, physical health, depression, and burnout.

Job satisfaction. The job satisfaction scale is an overall measure of the degree to which an individual is satisfied with his or her job. Job satisfaction was measured using a five-item General Satisfaction Scale from the Job Diagnostic Survey (JDS; Hackman & Oldham, 1975). An example item is: "Generally speaking, I am very satisfied with this job." Items were measured on a Likert-type response scale ranging from 1 (very inaccurate) to 5 (very accurate). Two items were reverse coded. Higher scores represent higher levels of satisfaction with one's job. The Cronbach's alpha for these five items was .74.

Organizational commitment. The organizational commitment scale measures the degree to which individuals are committed to the organization. Organizational commitment was measured using Meyer and Allen's (1990) scale, with 8 items for each of the three dimensions (affective, continuance, and normative commitment). Each of the commitment constructs were measured on a 7-point scale (1 = strongly disagree to 7 = strongly agree). Because the current study does not require this level of differentiation, one overall measure of organizational commitment was used. The overall alpha for these three subscales was .79 in this study.

Turnover intentions. An employee's intention to quit his or her job was measured with a two-item scale (Boroff & Lewin, 1997). The items are: "I am seriously considering quitting this company for an alternate employer" and "During the next year, I will probably look for a new job outside this firm." Reliability for this scale was high ($\alpha = .84$). Higher scores represent higher levels of intentions to quit, as this scale is based on a Likert-type response scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Family satisfaction. A family satisfaction scale is an overall measure of the degree to which an individual is satisfied with his or her family life. Family satisfaction was measured using two items from the Kansas Family Life Satisfaction Scale by Schumm, Jurich, and Bollman (1986). Specifically, “How satisfied are you with your family life?” and “How satisfied are you with your relationship with your spouse?”. One additional item from the Kansas Parental Satisfaction Scale by James, Schumm, Kennedy, Grigsby, Shectman and Nichols (1985) was also used. Namely, “How satisfied are you with yourself as a parent?”. Thus, a total of three items were used to measure family satisfaction. Items were rated on a 5-point response scale ranging from 1 (very unsatisfied) to 5 (very satisfied).

Life satisfaction. The life satisfaction scale measures an individual’s perceptions regarding the quality of his or her life in general. The five-item scale developed by Diener, Emmons, Larsen, and Griffin (1985) was used. An item from this scale is: “I am satisfied with my life.” The Cronbach alpha estimate for this scale was .88 in this study.

Psychological strain. Psychological strain was assessed using the 12-item version of the general health questionnaire (GHQ–12; Goldberg, 1978). The GHQ–12 asks participants how they feel regarding their psychological health, using questions such as: “Have you recently been feeling unhappy and depressed?” Responses were given based on a 4-point scale ranging from 0 (more than usual) to 3 (not at all). Cronbach’s alpha for the current study was .74.

Health. Health was measured with the Short-Form Health Survey (SF-12) 12-item physical composite score (Ware, Kosinski, & Keller, 1996). The Short-Form Health Survey is an internationally used self-report assessment of subjective health. A sample

item is: “During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular activities as a result of your physical health?” Scores were reverse-coded as appropriate. Higher levels on the scale indicated more positive health. The scale creators felt internal consistency measures are not appropriate for this formative scale, so none were estimated in the original article, nor are they here.

Depression. Depression was measured by assessing depressive symptoms using the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The 20-item scale required respondents to indicate how much they had been bothered or distressed in the last week by various depressive symptoms. Four items were reverse coded. Specifically, “Most or all of the time” was scored 0 points and “Rarely or none of the time” was scored 3 points. Higher scores indicate greater the depressive symptoms. Cronbach’s alpha was .91.

Burnout. Burnout was measured with Shirom’s (1989) 14-item scale, which measures a combination of physical and cognitive exhaustion, particularly as it relates to one’s ability to perform on the job. All items were measured using a 7-point response scale ranging from 1 = never or almost never to 7 = always or almost always. Coefficient alpha was .94 in the current study.

All the scales and respective items used to measure common outcomes can be found in Appendix C.

Procedure

As noted above, three Waves of data were collected separately. In every Wave, only individuals that met the two criteria were permitted to participate (living with a

significant other and/or children, and working at least 20 hours per week). The first Wave required in-person focus groups to generate the content for the items to include in the scale. Participants were instructed to use their experiences during the last two weeks, month, and year as a point of reference when recalling behaviors and observations of WFC for the focus groups.

Wave 2 required the ratings of a new sample of working adults to react to the scale items on both frequency of occurrence and importance with respect to one's WFC. Both ratings were initially considered, as some behaviors may occur frequently but they are not deemed as important indicators of WFC (e.g., "I change into my lounge clothes when I come home from work when I have had a particularly stressful day"). Conversely, some behaviors may be rated as important, but they rarely happen (e.g., "I don't "have time" for members of my family when I have a heavy workload"). Ultimately, researchers believed behaviors that were rated higher on importance would be more likely to result in experienced WFC; thus for Wave 2, only items rated above an average of 2.5 on a 5 point importance scale were included in the Wave 3 scale validation.

Wave 3 required participants to complete the new questionnaire (offering both frequency and importance ratings), as well as two subjective scales measuring of WFC, and the nine outcome measures identified above. All responses were kept confidential. For Wave 1, student participants received course credit in exchange for their time and working adults were thanked for their participation but otherwise received no compensation. The working adults recruited for Waves 2 and 3 received a small monetary compensation for their time.

CHAPTER 5

RESULTS

The results of the first Wave of data collection required information gained during the focus groups to be turned into a number of items. The content generated from Wave 1 was used to construct an all-inclusive scale of 118 items. These can be classified into 79 WIF and 39 FIW items. After further reviewing these items, the list was reduced to 82 items (56 WIF, 26 FIW; see Appendix D) by eliminating those that were redundant (e.g., “I skip meals when I am home” and “I eat less when I am home”) or more representative of similar constructs (“I am disinterested in doing activities I would normally enjoy [e.g., go to the movie theater, go shopping, meeting with friends]).

To assess construct validity of the new objective WFC scale, a number of steps were taken. First, the items generated from Wave 1 as indicators of WFC were distributed to another sample to determine the degree to which additional working individuals also find the item to reflect perceived WFC in each direction (WIF, FIW). Upon reviewing the results from Wave 2, the scale was reduced to 73 items using cut-score criteria for inclusion in Wave 3 (see Appendix E). Specifically, only those items rated at or above 2.5 (between “Of little importance” and “Moderately important” on a 5 point scale) on the importance dimension were retained for the Wave 3. No cut-score was used for the frequency data at this stage.

In Wave 3, both the importance and frequency of occurrence for each item was determined and used. As anticipated, some experiences were found to occur frequently but resulted in less perceived importance with respect to conflict (e.g., taking a call from family while at work), while others were found to occur frequently but were rated more

important for one's conflict (e.g., being asked to stay late at work). A similar pair of relationships was expected for experiences that are less frequently occurring. This variability in frequency and impact on WFC perceptions allow researchers to indicate specific behaviors that are most predictive of WFC (namely, those high in both importance and frequency).

Wave 3 was also used to determine the correlation between the new objective measures, separated into two subscales (WIF and FIW), and the subjective WFC measures, also separated into WIF and FIW categories. Using the same cut-score from Wave 2 (i.e., items must be at least a 2.5 on the 5 point importance scale) the total number of items in the final scale was 63 (see Appendix F). Since the theoretical relationship between the items and the WFC construct follows a formative model rather than a reflective model for the new objective measure, it was not necessary that all the items for each subscale (WIF, FIW) were highly correlated with one another or for the items to result in a high reliability as indicated by a Cronbach's alpha (i.e., measure of internal consistency) or high item-total correlations. However, both the alpha for the WIF scale (45 items) and the FIW scale (18 items) were high ($\alpha = .95$ and $\alpha = .91$, respectively) were quite high. This was not a necessary characteristic for scale development, but it suggests that the items generated for each domain (WIF, FIW) are quite similar to one another. This may have been the result of sample homogeneity in the item generation step. Ultimately, upon evaluating the corrected item-total correlations, it was determined that the items are not hugely redundant and thus, worthy of retention (Table 2).

Data Analysis

Multiple pieces of information were collected in Waves 2 and 3 pertaining to the new subscales for WIF and FIW. As such, it was a time-worthy exercise to explore which method of using and/or combining frequency and importance information would result in the strongest scale. For the purpose of this research, scale strength was defined as the method of using available data that resulted in the strongest pattern of bivariate relationships, when considering all of the outcome measures and subjective WFC measures. Two methods were explored.

The first was a multiplicative approach that utilized both the importance and frequency information combined into a single measure, with higher scores indicating behaviors that are believed to be most impactful on WFC. The second approach places a focus exclusively on the frequency rating once the most important items were identified. This method is more consistent with the decision made between Wave 2 and Wave 3. Thus, using this method, only items that were rated at least a 2.5 on a 5 point importance scale were retained for further evaluation. The frequency data used from these highly important items was then used. While one will note that this method only uses some of the available information to evaluate the level of WFC (namely, frequency data), it can be reasoned that the consensus on behaviors deemed most important is useful when determining which items to retain.

Conversely, how frequently each of these important behaviors is experienced was a much better indicator of WFC, as frequency ratings were found to be more variable person to person. Thus, individuals were found to agree on which behaviors were important without necessarily experiencing them similarly across all position types.

Upon evaluating the patterns within the data following each of the approaches, it was determined that using only frequency data only lead to stronger relationships between the items in the new scale and those with outcome and subjective WFC measures. Very few relationships were stronger using the multiplicative approach compared with the frequency data only approach (see Table 3 and Table 4). This is true across a number of scenarios. Specifically, when the same cases ($N = 223$) are used and all items are retained for the analyses (73 items), the correlations between each objective scale with the outcomes and the subjective scales are stronger when the frequency data only approach was used. The same pattern is found when the scale is reduced to 63 items as described on the previous page. In fact, the strongest relationships with all variables of interest can be found when only the 63 most important items are used. Following this approach, three fewer outliers were found, resulting in a better utilization of the sample. Regardless of the subjective scale used for comparison, the number of times that the correlation was stronger occurred more commonly using just the frequency data compared with the multiplicative approach for both WIF and FIW. Thus, further analyses, including data screening and outlier detection procedures, utilize only the frequency rating data after omitting those items that did not make the cut-off on the importance scale.

At the onset of the data cleaning process, 248 individuals had completed Wave 3. Four individuals were eliminated for not meeting study criteria; thus, they reported working fewer than 20 hours a week or not living with a significant other and/or children. Items measuring careless responding were then checked (e.g., “I should answer ‘Rarely’ and ‘Important’ to this item to show that I am paying attention”). Although 17

individuals failed to respond correctly to at least one of the eight carelessness items, none of these individuals failed more than three. It was decided that all cases would be retained, given that every person answered the items correctly more than 50% of the time. In addition to the carelessness checks, response times were also used to check for careless respondents. While the range of time to completion was quite large (1-84 minutes), 16 individuals completed the survey in fewer than 10 minutes. Given that the mean time to completion was 24 minutes ($SD = 12.7$) and that the time estimated to complete all 286 items in the questionnaire was 30 minutes, individuals completing the questionnaire in 10 minutes or fewer would have had to answer each item in about two seconds. Thus, upon eliminating these 16, there were 228 remaining participants.

With respect to outliers, a total of two outliers were detected and omitted from further analyses (resulting $N = 226$). Missing data was minimal, with fewer than 3.5% of data missing from each variable. The missing value analysis suggested no pattern within the missing data to consider or account for. Additional data screening analyses were conducted and no additional cases were dropped on the basis of these results.

Assessing Convergent Validity

One way to assess construct validity is to determine the convergence of the new scales (WIF and FIW) with corresponding subjective subscales. Specifically, a bivariate correlation coefficient was computed using the new objective WIF scale against the WIF subscales already in use (5 items: Netemeyer et al., 1996; 9 items: Carlson et al., 2000; see Table 5). The same was done using the new objective FIW scale with the respective 5 (Netemeyer, et al., 1996) and 9 items (Carlson, et al., 2000). Table 5 also

displays the FIW bivariate relationships, means and standard deviations for all variables.

A moderate-to-high correlation existed (e.g., those experiencing high levels of WFC based on objective items likely also perceive their subjective conflict to be high). For WIF, the bivariate relationships between the new WIF scale and each of the existent scales was correlated and found to be statistically significant (new scale correlated with Netemeyer et al., $r = .673$, $p < .001$; with Carlson et al., $r = .621$, $p < .001$). This was lower than the bivariate relationship between the two subjective WIF scales against each other ($r = .727$, $p < .001$). The FIW scale was also found to be related to previous measures (new scale correlated with Netemeyer et al., $r = .513$, $p < .001$; with Carlson et al., $r = .469$, $p < .001$; Netemeyer et al. with Carlson et al., $r = .623$, $p < .001$), suggesting that both the new scales and the existent scales are measuring the same construct. However, given that they are lower correlations than those found between the two subjective scales, it was evident that the new measure was not as highly overlapping in with other WFC measures as much as the two subjective measures correlate with one another.

Assessing Criterion Validity

The next step in evaluating this scale was to assess the criterion validity. It was determined that this new objective measure predicts a number of outcomes that have been found to have relationships to other WFC measures. The specific results for the new WIF scale and FIW scale are discussed below.

For the WIF subscale, eight of nine possible significant relationships were found. Specifically, life satisfaction, job satisfaction, family satisfaction, burnout, turnover

intentions, psychological strain, health, and depression were all significantly correlated with the new WIF items, while organizational commitment was not found to be statistically significant. Eight statistically significant relationships were also found between the outcomes and subjective measures of WIF. However, of particular relevance, four of these outcomes (burnout, turnover, psychological strain, and depression) were even more strongly correlated with the objective measure of WIF than *either* of the subjective WIF scales.

With respect to the FIW subscale, four of nine possible significant relationships were found. Specifically, burnout, psychological strain, health, and depression were all significantly correlated with the new FIW items, while life satisfaction, job satisfaction, family satisfaction, organizational commitment, and turnover intentions were not found to be statistically significant. Five statistically significant relationships were also found between the outcomes and subjective measures of FIW. Unfortunately, the objective scale yielded only one stronger relationship across the variables compared with the FIW scales: organizational commitment. Three of the bivariate correlations (burnout, turnover intentions, and depression) were stronger using the objective FIW scale compared with the Netemeyer, et al., (1996) subjective scale, but these relationships were not as strong as the three outcomes with the Carlson and colleagues (2000) subjective scale.

Assessing Added Predictive Power

It was also predicted that the addition of the new objective scale will result in additional predictive power in a number of work and nonwork outcomes (i.e., job satisfaction, organizational commitment, turnover intentions, burnout, family satisfaction,

life satisfaction, psychological strain, health, depression) above and beyond those attained using subjective measures alone. To test this, a hierarchical multiple regression analysis was conducted using a subjective WFC subscale (i.e., WIF, FIW) as a control in the first step. Because both the Netemeyer and colleagues (1996) and Carlson and colleagues (2000) scales are well-supported in the literature, the strength of bivariate relationships were checked to assess which subjective scale resulted in a stronger pattern with the outcome variables. Interestingly, the Netemeyer scale resulted in stronger relationships with the outcome variables using only the items measuring WIF, while the Carlson scale appeared to be better in predicting outcomes using its FIW items. To discover the extent of the additive predictive power in the most conservative manner possible, the Netemeyer and colleagues (1996) WIF scale was inputted in the first step to evaluate the WIF scale, while the Carlson and colleagues (2000) FIW scale was used for the assessment of the FIW scale.

Using this approach, it was determined how much additional variance could be explained when the objective scale was added in the second step, regardless of the subjective scale chosen for the first step. This test allowed the researchers to determine whether asking the participant to identify specific, objective examples of WFC can be used to add predictive ability above and beyond what can be attained when asking participants directly how much WFC they feel they experience.

Specific Outcomes for WIF Scale

To address the research question that a number of outcomes are a function of two variables (i.e., subjective and objective measures of WIF), a hierarchical multiple regression analysis was performed. Subjective WIF, as measured by the Netemeyer et

al. (1996) scale, was the first variable entered, followed by the newly created objective WIF subscale. Results of the regression analysis provided partial support in addressing the research question, as four of the outcomes were better predicted using both subjective and objective measures. Specifically, beta coefficients for the two predictors as they pertain to life satisfaction, job satisfaction, and family satisfaction can be found in Tables 6, 7, and 8, respectively. For each of these satisfaction measures, the addition of the objective scale did not significantly improve prediction (life satisfaction R^2 change = .005, $F = 1.315$, $p > .05$; job satisfaction R^2 change = .003, $F = .762$, $p > .05$; family satisfaction R^2 change = .002, $F = .423$, $p > .05$).

Interestingly, organizational commitment was not significantly predicted by either scale (subjective scale $\beta = -.087$, $t = -.969$, $p > .05$ and objective scale, $\beta = .004$, $t = .043$, $p > .05$; see Table 9). With respect to burnout, beta coefficients for the two predictors are as follows: subjective WIF scale (Netemeyer et al., 1996), $\beta = .236$, $t = 3.233$, $p < .001$ and objective WIF scale, $\beta = .405$, $t = 5.543$, $p < .001$. Addition of the objective scale significantly improved prediction (R^2 change = .090, $F = 30.725$, $p < .001$; see Table 10).

The beta coefficients for the two predictors as they predict turnover intentions are: subjective WIF scale (Netemeyer et al., 1996), $\beta = .134$, $t = 1.540$, $p < .001$ and objective WIF scale, $\beta = .171$, $t = 1.967$, $p = .05$. Addition of the objective scale significantly improved prediction (R^2 change = .016, $F = 3.870$, $p = .05$; see Table 11).

Psychological strain was also investigated. The beta coefficients for the two predictors are: subjective WIF scale (Netemeyer et al., 1996), $\beta = -.200$, $t = -2.377$, $p < .05$ and objective WIF scale, $\beta = -.207$, $t = -2.458$, $p < .05$. Addition of the objective

scale significantly improved prediction (R^2 change = .023, $F = 6.044$, $p < .05$; see Table 12). Health was predicted by subjective measures ($\beta = -.271$, $t = -2.004$, $p < .05$), but not objective measures ($\beta = -.068$, $t = -.790$, $p > .05$); thus, the addition of objective measures did not significantly improve prediction (R^2 change = .003, $F = .624$, $p > .05$; see Table 13).

Finally, depression was predicted by subjective WIF scale (Netemeyer et al., 1996), $\beta = .086$, $t = 1.107$, $p > .05$ and objective WIF scale, $\beta = .445$, $t = 5.705$, $p < .001$. Addition of the objective scale significantly improved prediction (R^2 change = .108, $F = 32.547$, $p < .001$), although the subjective scale did not significantly predict the outcome to begin with (see Table 14).

In summary, four outcomes were better predicted using the objective scale in addition to the subjective WIF scale: burnout, turnover intentions, psychological strain, and depression. By using objective measures of WIF above and beyond that of Netemeyer et al.'s (1996) measure, additional predictive power was realized.

Specific Outcomes for FIW Scale

To test the related FIW hypotheses, a hierarchical multiple regression analysis was performed. Subjective FIW, as measured by the Carlson et al. (2000) scale, was the first variable entered, followed by the newly created objective FIW subscale. Results of the regression analysis provided partial support in addressing the research question, as two of the outcomes were better predicted using both subjective and objective measures. Specifically, beta coefficients for the two predictors as they pertain to life satisfaction, job satisfaction, and family satisfaction can be found in Tables 6, 7, and 8, respectively. For each of these satisfaction measures, the addition of the objective scale

did not significantly improve prediction (life satisfaction R^2 change $< .001$, $F = .099$, $p > .05$; job satisfaction R^2 change = $.001$, $F = .187$, $p > .05$; family satisfaction R^2 change = $.011$, $F = 2.436$, $p > .05$).

Interestingly, organizational commitment was not significantly predicted by either scale (subjective scale $\beta = .050$, $t = .620$, $p > .05$ and objective scale, $\beta = -.056$, $t = -.699$, $p > .05$; see Table 9). With respect to burnout, beta coefficients for the two predictors are as follows: subjective FIW scale (Carlson et al., 2000), $\beta = .170$, $t = 2.367$, $p < .05$ and objective FIW scale, $\beta = .336$, $t = 4.689$, $p < .001$. Addition of the objective scale significantly improved prediction (R^2 change = $.078$, $F = 21.987$, $p < .001$; see Table 10). The beta coefficients for the two predictors as they predict turnover intentions are: subjective FIW scale (Carlson et al., 2000), $\beta = .011$, $t = .136$, $p > .05$ and objective FIW scale, $\beta = .134$, $t = 1.686$, $p > .05$. Addition of the objective scale did not significantly improve prediction (R^2 change = $.012$, $F = 2.841$, $p > .05$; see Table 11).

The beta coefficients for the two predictors with respect to psychological strain are: subjective FIW scale (Carlson et al., 2000), $\beta = -.213$, $t = -2.738$, $p < .01$ and objective FIW scale, $\beta = -.061$, $t = -.788$, $p > .05$. Addition of the objective scale did not significantly improve prediction (R^2 change = $.003$, $F = .621$, $p > .05$; see Table 12). Health was predicted by subjective measures ($\beta = -.157$, $t = -2.004$, $p < .05$), but not objective measures ($\beta = -.089$, $t = -1.138$, $p > .05$); thus, the addition of objective measures did not significantly improve prediction (R^2 change = $.006$, $F = 1.295$, $p > .05$; see Table 13).

Finally, depression was predicted by subjective FIW scale (Carlson, et al., 2000), $\beta = .231$, $t = 3.130$, $p < .01$ and objective FIW scale, $\beta = .281$, $t = 2.954$, $p < .01$. Addition of the objective scale significantly improved prediction (R^2 change = .033, $F = 8.726$, $p < .05$; see Table 14).

Thus, additional variance was explained using the objective FIW scale for two outcomes (i.e., burnout and depression), above and beyond that of the subjective Carlson, et al. (2000) scale. Additional information with respect to these regression analyses can be found in Tables 6 through 14 (listed in Appendix G), as each table represents the WIF and FIW scales as they pertain to each outcome measure (e.g., Table 6 displays WIF and FIW for the new and subjective scale against the outcome measure *life satisfaction*).

CHAPTER 6

DISCUSSION

The demands of work and family can be difficult to accommodate, particularly with limited resources and ever growing demands to be successful in many roles. Past research suggests that with more roles to balance, more conflict is experienced psychologically, as well as increased physical and mental health risk (e.g., O'Driscoll et al., 1992). Additional implications for increased WFC include a reduction in satisfactory job performance, poorer parental performance, more incidences of work withdrawal behaviors (e.g., tardiness, absenteeism, turnover, and low job involvement), decreased morale, and lower satisfaction with job, life, marriage, and family (Duxbury & Higgins, 1991; Frone et al., 1992; Hammer, Bauer, & Grandey, 2003; Leiter & Durup, 1996; O'Driscoll et al., 1992).

The current study confirmed a number of significant relationships between each of nine outcomes and two subjective measures of WFC already being utilized (e.g., Allen et al, 2000, Amstad et al., 2011). Within the WIF domain, only one of the nine outcomes, organizational commitment, was not significantly related to either subjective scale. This may have been a function of the industry one works in, a point which is further discussed in the limitations. Within the FIW domain, fewer significant relationships were found between the subjective measures of WFC and the nine outcome variables (5 for Netemeyer et al., 1996; 5 for Carlson et al., 2000). Because a significant relationship between WIF and organizational commitment was not found, it was not surprising that the relationship was also not significant with FIW measures. Turnover intentions are also less likely to be predicted by FIW, as one cannot get "fired"

from one's family life. The other measures that did not show significant relationships between the outcome measures and subjective scales of FIW were all measures of satisfaction (i.e., life, job, family). This may be due to personal preference: some people may be energized by instances of their family life being more salient during work hours (spillover), while others may prefer to segment the different areas of their lives and avoid overlap in either direction (Clark, 2000).

As expected, many relationships (8 of 9) were also found between each outcome and the WIF objective measure, as discussed in the criterion validity section of the results. The only exception to this finding was a weak relationship between the new WIF measure and organizational commitment. This relationship was also weak between organizational commitment and each of the subjective WIF measures. After examining the meta-analytic results discussed earlier (i.e., Allen, 2000, Amstad et al., 2011), organizational commitment had one of the lower correlations with WFC measures, so it was not surprising that similar results were found in the current study. Ultimately, these results could be largely due to the limited generalizability of the sample taken for Wave 1, which included students and a working sample. A second large group utilized in the first Wave included adults working in a single industry. Due to the lack of work diversity represented in this group, this study content may have been generated based on a narrow set of experiences that may not encompass enough WFC behaviors to result in a stronger relationship with organizational commitment.

Fewer relationships (4 of 9) were found between the outcome measures and the FIW objective measure, as discussed in the criterion validity section of the results. Specifically, the four outcomes found to be significantly related to the objective FIW

measure included burnout, psychological strain, health, and depression. Although the number of significant relationships seemed low, similar results were found between the outcome variables and each of the subjective FIW subscales. Namely, only 5 of 9 significant relationships were found between each subjective FIW scale and the outcomes of interest (i.e., Netemeyer, et al. (1996): family satisfaction, burnout, psychological strain, health, and depression; Carlson, et al. (2000): job satisfaction, burnout, psychological strain, health, and depression).

The specific outcome measures that were shown to have weaker relationships are also shown in previous literature. Specifically, Amstad and colleagues (2011) found weaker relationships between indicators of WFC and organizational commitment ($r = -.17$), family satisfaction ($-.18$), and turnover intentions ($.21$). The original meta-analytic results by Allen et al. 2000 found the following relationships with WIF to be weaker compared with the others: family satisfaction ($-.17$), organizational commitment ($-.23$), work satisfaction ($-.24$), and life satisfaction ($-.28$). Thus, while the lack of significant relationships was unexpected, the pattern suggests that this likely not a reflection on the scale, but rather due to the data collected for the study. The same could be said for both WIF and FIW results, as the number of statistically significant relationships was very similar among all three measures of WFC and the nine outcomes of interest.

Of greater value is the enhanced predictive power offered for several variables when using *both* of these scale types. Namely, explained variance can be increased when predicting burnout, turnover intentions, psychological strain, and depression by adding the new WIF scale above and beyond that of a prominent WIF scale (i.e., Netemeyer, et al., 1996). Similarly, burnout and depression are better predicted using

the objective FIW scale in conjunction with a reputable FIW scale (i.e., Carlson et al., 2000). These health-based outcomes may be easier to recognize objectively.

According to Maslach, Schaufeli, and Leiter (2001), burnout can be defined as a reaction to chronic stressors. Those experiencing burnout report feeling a depletion of mental and emotional resources leaving them feeling exhausted. This continued exposure work-related stressors and nonwork role demands takes a toll on employees who try to “have it all,” and can result in interrole conflicts, including WFC (e.g., Peeters, Montgomery, Bakker, & Schaufeli, 2005). Thus, it is of critical importance to both individuals and organizations to target and recognize potential causes of burnout to reduce its likelihood. The results of this study suggest that burnout may be predicted both through an affective or cognitive component (i.e., feelings of experienced WFC – both WIF and FIW), and a behavioral one (i.e., actions that are indicative of WFC in both directions). It is unsurprising that objective information can inform the predictability of burnout, as many of these stressors are linked with observable behaviors. That is, employees who lack boundaries between their work and family domains are likely to experience more spillover, resulting in a greater number of WFC-related behaviors identified on this new scale.

Similarly, research has found that individuals in high-stress jobs tend to have higher prevalence of mental disorders, including depression (Szeto & Dobson, 2013). Depression is defined by the National Institute of Mental Health as a common, but serious psychological illness that interferes with one’s daily life and causes pain for both the individual and those who care about him or her (“What is Depression?”, 2013). It is characterized by a combination of symptoms that interfere with a person's ability to

work, sleep, study, eat, and enjoy once-pleasurable activities. Depression is disabling and prevents a person from functioning normally, which limits his or her effectiveness in any or all roles. Thus, the likelihood that one will experience depressive symptoms increases with higher levels of WFC. Some individuals may recognize that negative consequences result from long hours, intermittent leisure time, and other interruptions, particularly on one's emotional health. However, these people may not realize the extent of the emotional damage caused when one continues to battle the pressure of competing roles.

As a result, predicting depression can be enhanced by including objective measures above and beyond that of subjective measures, both for WIF and FIW. This could be the case because predicting depression may be confounded due to the stigma attached to it as a psychological disorder. Thus, individuals may not report symptoms of depression when asked about their experienced WFC, but the behaviors and resulting feelings they report may be indicative of a greater prevalence of depression than previously thought. This is especially true if the person believes that depressive symptoms are expected when one attempts to balance work and family role pressures. Other studies have also found indirect links between family-supportive workplace practices and lower levels of depression, through perceptions of control over work and family responsibilities (Thomas & Ganstter, 1995).

Interestingly, two additional outcomes (psychological strain, turnover intentions) were better predicted using the objective scale above and beyond Netemeyer's (1996) subjective WIF scale. Psychological strain can be defined as perceived increased levels of anxiety and stress, and a number of studies have found a connection between family-

friendly work policies (designed to lower WFC) and a reduction in psychological strain (e.g., Odle-Dusseau, Herleman, Britt, Moore, Castro, & McGurk, 2013). Given that perceptions are key to the definition of this construct, it is possible that the wide range of behaviors included in the objective scale provide a far richer view of WFC than the shorter subjective scales currently in use. Finally, one's intention to turnover was predicted by the objective WIF scale above and beyond that of the subjective WIF scale. One explanation for these findings could be that completing the objective measure primes individuals to evaluate aspects of their conflicting roles more thoroughly than they otherwise would, resulting in a more accurate assessment of their WFC and, subsequently, their intentions to turnover.

Choosing "Frequency Data Only" Approach over Multiplicative Approach

Results from this study suggest that individuals can likely agree on which behaviors are important without necessarily experiencing them similarly across all positions. Less variability was evident when responding to the "importance" of an item than frequency, which supports the use of frequency as a proxy for one's level of experienced WFC. Because participants could have been employed in a range of different job types and industries, not all items pertained to each individual (e.g., if one has an office phone, it may be more acceptable to accept personal calls at work than from a personal cell phone because it may be harder to differentiate professional from personal calls). Since these differences in responding to the frequency question exist, WFC was best represented by frequency of occurrence - after reducing items to only those that are deemed important.

Similarly, in using only the frequency information (after reducing items not deemed important), the researcher was able to eliminate the least important 12 items, since an additional cut-score was used. Because this scale is more *direct* in that way, even though it doesn't draw from as many data points (which, of course, offer more variability), true relationships are likely to shine through without additional noise. This method being used for both Waves 2 and 3 could have also added to the success of employing a cut-score for importance before using frequency data, as it creates a sense of consistency throughout the study analyses.

Limitations

As with any other research, this study was not without limitations. First and foremost, although the items represented in the objective scale are more behaviorally-based, observable, and verifiable, not all of the items in the scale could be considered "objective" based on a more conservative definition. While some items easily fit this "objective" category (e.g., "I bring my laptop with me when I go on vacation"), others may be more accurately defined as subjective evaluations of objective behaviors (e.g., "I forget to pay bills on time when my workload is heavy"). Future work on this scale should assess whether this is appropriate, particularly as it becomes more necessary for objective behaviors to guide responses when predicting across people in dyads.

With respect to the participants in the study, the Wave 1 sample included a blend of working adults heavily weighted in one industry (management consulting) and university students who split their time between work and school. Given that this initial sample served as a foundation for subsequent questionnaires and, ultimately, the analysis of the results, it is possible that it was not representative enough to generalize

widely. This may have also resulted in more homogenous items for the scale than originally intended, as evidenced by high internal consistency within the WIF and FIW scales. Additionally, because jobs and industries are so diverse, some items may not apply to all individuals (e.g., an administrative assistant may not ever need to take work home for the day or may not participate in conference calls). As a result, it is particularly difficult to identify content that is general enough to represent a broad range of blue and white collar jobs across industries and levels, yet specific enough to add predictive value.

Another issue of focus may have resulted from the questions used to generate discussion during the focus groups in Wave 1. Of specific interest is whether the instructions influenced the responses given by participants in a limiting way. Since all groups were asked to describe behaviors indicative of WFC as it was defined in the literature, some of the behaviors may have been more generic than was appropriate for use when two subscales were created (WIF, FIW). This may also have resulted in content that was more heavily weighted in the WIF domain. It seemed that focus group participants found it much easier to generate WIF-based items than FIW (56 vs. 26 items). Participants seemed more comfortable identifying ways in which family interfered with work, which could suggest a potential boundary issue. Specifically, for many people, the boundary for work tends to be much more defined, with a set schedule among other things, whereas “family” may be interpreted as everything else (“nonwork”) (e.g., Bakker, Demerouti, & Dollard, 2008).

Additionally, some participants may have experienced fatigue as a result of the ambiguity of the WFC construct. Specifically, WFC can be confused with other

constructs, including depression, stress, and burnout. Even though WFC was defined and described at the start of each focus group session, differing thoughts on what constitutes WFC may have resulted in differing response sets. This was evident in the strength of correlations between the objective scale content and the scales measuring these constructs. More specific definitions of each construct, highlighting the differences between each, during the first Wave may have reduced the number of items that better represented one of the outcome variables.

Another potential limitation results from the online data collection service offered by Mechanical Turk. MTurk, as it is commonly called, can be great for collecting data from working adults in a short period of time with a highly diverse sample, but timing of survey administration and time required to complete a survey could impact the types of participants in the study (e.g., posting a study at 2pm EST will likely reduce the number of Asian participants). Any time a researcher administers a survey, screening becomes more difficult due to dishonesty in reporting. This was addressed in the current study, in part using carelessness checks in Waves 2 and 3; however, it was still difficult to determine whether the participant was devoting their full attention when responding to each item. Likert scale responses, although common in the literature, may also be a limitation. For example, when an individual is asked to rate how frequently they engage in a behavior, doing so using a Likert scale can be difficult because they are estimating (e.g., do I *rarely* or *sometimes* engage in a behavior?).

Thus, with respect to the amount of time required to complete a survey, Wave 3 of the current study, which included the new objective measure, two subjective measures, and nine outcome measures, should have taken participants between 30

and 45 minutes to complete. Many participants completed the survey much more quickly than expected; as a result, fatigue may explain why some of the outcome variables were not as strongly linked to the WFC measures in this study compared with others. Future studies may look to reduce the number of outcomes measured at a time to reduce the likelihood that fatigue impacts the results.

Finally, although there is more work to be done in validating this scale, from an efficiency and practicality standpoint, reducing the amount of information required from test-takers better utilizes their time and could potentially reduce fatigue effects. As a result, researchers are ever-seeking scale improvements such as the one suggested here. Specifically, this scale advances measurement in the WFC domain by adding predictive power through the inclusion of objective items measures. These measures offer the respondent a more anchored framework and a timeframe by which the person will be better able to reflect on their experiences and more easily recognize behaviors classified as WIF or FIW. Through the examination of observable behaviors and more tangible actions, one can become more knowledgeable about WFC to potentially recognize and address it within their relationships.

Conclusions

Beyond theoretical advances that can be made in better understanding the constructs of WFC, WIF, and FIW, practical implications result from the addition of objective measures. As a result of the development of this scale, organizations could seek a more accurate means of understanding WFC to help employees funnel their energy into more productive work while they spend their time at work. By setting more salient boundaries between one's work and non-work ("family") lives, organizations are

likely to benefit. This could result in implementing more family-friendly interventions, training programs, and other opportunities.

Future Research

As a result of collecting information on the frequency one experiences each behavior and how this frequency can result in greater WFC when compared with other items, future analyses could use multiple regression to determine the degree to which each of the newly created items can predict WFC. This finding can then be validated in a second study to better understand WFC theoretically and practically.

One largely untapped area of research within the WFC domain involves *crossover*, or transmission among individuals. As discussed in Bakker et al. (2008), one of the next logical steps for researchers will be to explore the extent to which an employees' job demands may be related to their partners' home demands, WFC conflict, and work-related exhaustion. Thus, they have gone on to propose an integrative model to determine how one partner's job demands may ultimately affect the other person's well-being (Bakker et al., 2008). Thus, the new objective scale may ultimately enhance our understanding of how individuals, personal circumstances, and perceptions interact in such a way to become manifested as one's WFC when used in conjunction with a subjective scale for cross-person prediction.

The scale developed here holds promise as a useful tool for organizations interested in assessing WFC, beyond the subjective measures currently used to measure employee perceptions. Future studies could also investigate how heavily each item on this scale should be weighed in predicting WFC, which furthers its utility and theoretical usefulness.

APPENDIX A

QUESTIONS USED IN FOCUS GROUPS

1. What types of behaviors do you engage in that you feel might be representative of your work role interfering with your family role? For example, think of times where you have been late coming home from work or distracted by work once you arrived home. What were the reasons behind these situations?
2. In what specific ways do you believe your work interferes with your family time? How does your family interfere with your work time?
3. When was the last time you missed a family event or cut short time spent with family for a work-related reason? What other examples can you provide if you think back over the last month? Conversely, have you missed anything at work due to family obligations?
4. In what specific ways do your responsibilities at work distract you from your time spent away from work? In what ways do your family responsibilities distract you from your time spent at work?
5. What is the most common way in which your work might spillover into your family life? How might your family spillover into your work domain?
6. What types of behaviors do you engage in that alert your significant other that your work situation is burdening you? Is there anything behaviorally that you might do to signal that you are having a hard time meeting your family demands?
7. Similarly, what types of behaviors does your significant other engage in that signal his or her work responsibilities are interfering with his or her time away from the job? In what ways does it appear that family responsibilities are interfering with his or her work responsibilities?
8. Why do you believe your work sometimes interferes with family? Why might family demands interfere with work demands?

APPENDIX B**CURRENT SCALES OF WORK-FAMILY CONFLICT****Netemeyer, Boles, & McMurrian (1996)**

1-7 scale (1 = strongly disagree, 7 = strongly agree)

WIF

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

FIW

6. The demands of my family or spouse/partner interfere with work-related activities.
7. I have to put off doing things at work because of demands on my time at home.
8. Things I want to do at work don't get done because of the demands of my family or spouse/partner.
9. My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime.
10. Family-related strain interferes with my ability to perform job-related duties.

Carlson, Kacmar, & Williams (2000)

1-5 scale (1 = strongly disagree, 5 = strongly agree)

WIF

1. My work keeps me from my family activities more than I would like.
2. The time I must devote to my job keeps me from participating equally in household responsibilities and activities.
3. I have to miss family activities due to the amount of time I must spend on work responsibilities.
4. The time I spend on family responsibilities often interfere with my work responsibilities.
5. The time I spend with my family often causes me not to spend time in activities at work that could be helpful to my career.
6. I have to miss work activities due to the amount of time I must spend on family responsibilities.
7. When I get home from work I am often too frazzled to participate in family activities/ responsibilities.
8. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.

9. Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.

FIW

10. Due to stress at home, I am often preoccupied with family matters at work.
11. Because I am often stressed from family responsibilities, I have a hard time concentrating on my work.
12. Tension and anxiety from my family life often weakens my ability to do my job.
13. The problem-solving behaviors I use in my job are not effective in resolving problems at home.
14. Behavior that is effective and necessary for me at work would be counterproductive at home.
15. The behaviors I perform that make me effective at work do not help me to be a better parent and spouse.
16. The behaviors that work for me at home do not seem to be effective at work.
17. Behavior that is effective and necessary for me at home would be counterproductive at work.
18. The problem-solving behavior that work for me at home does not seem to be as useful at work.

APPENDIX C

SCALES OF OUTCOME MEASURES

Life Satisfaction (Diener, Emmons, Larsen, & Griffin, 1985)

(1 = strongly disagree, 7 = strongly agree)

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Job Satisfaction (JDS; Hackman & Oldham, 1975)

(1 = very inaccurate, 5 = very accurate)

1. People on this job often think of quitting. (R)
2. Most people on this job are very satisfied with the job.
3. Generally speaking, I am very satisfied with this job.
4. I frequently think of quitting this job. (R)
5. I feel a great sense of personal satisfaction when I do this job well.

Family Satisfaction (James et al, 1985; Schumm et al., 1986)

(1 = very dissatisfied, 5 = very satisfied)

1. How satisfied are you with your family life?
2. How satisfied are you with your relationship with your spouse?
3. How satisfied are you with yourself as a parent?

Burnout (Shirom, 1989)

(1 = "Never or almost never", 7 = "Always or almost always")

1. I feel tired.
2. I have no energy for going to work in the morning.
3. I feel physically drained.
4. I feel fed up.
5. I feel like my "batteries" are "dead".
6. I feel burned out.
7. My thinking process is slow.
8. I have difficulty concentrating.
9. I feel I'm not thinking clearly.
10. I feel I'm not focused in my thinking.
11. I have difficulty thinking about complex things.
12. I feel I am unable to be sensitive to the needs of coworkers and customers.
13. I feel I am not capable of investing emotionally in coworkers and customers.
14. I feel I am not capable of being sympathetic to co-workers and customers.

Organizational Commitment (Meyer & Allen, 1990)*(1 = strongly disagree to 7 = strongly agree)*

1. I would be very happy to spend the rest of my career with this organization.
2. I enjoy discussing my organization with people outside it.
3. I really feel as if this organization's problems are my own.
4. I think that I could easily become as attached to another organization as I am to this one. (R)
5. I do not feel like "part of the family" at my organization. (R)
6. I do not feel "emotionally attached" to this organization. (R)
7. This organization has a great deal of personal meaning for me.
8. I do not feel a strong sense of belonging to my organization. (R)
9. I am not afraid of what might happen if I quit my job without having another one lined up. (R)
10. It would be very hard for me to leave my organization right now, even if I wanted to.
11. Too much of my life would be disrupted if I decided I wanted to leave my organization right now.
12. It wouldn't be too costly for me to leave my organization right now. (R)
13. Right now, staying with my organization is a matter of necessity as much as desire.
14. I feel that I have too few options to consider leaving this organization.
15. One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.
16. One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice – another organization may not match the overall benefits I have here.
17. I think that people these days move from company to company too often.
18. I do not believe that a person must always be loyal to his or her organization. (R)
19. Jumping from organization to organization does not seem at all unethical to me. (R)
20. One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.
21. If I got another offer from a better job elsewhere I would not feel it was right to leave my organization.
22. I was taught to believe in the value of remaining loyal to one organization.
23. Things were better in the days when people stayed with one organization for most of their careers.
24. I do not think that wanting to be a "company man" or "company woman" is sensible anymore. (R)

Turnover Intentions (Boroff & Lewin, 1997)*(1 = strongly disagree, 5 = strongly agree)*

1. I am seriously considering quitting this firm for an alternative employer.
2. During the next year, I will probably look for a new job outside this firm.

Psychological Strain (Goldberg, 1972)*(0 = much more than usual, 3 = not at all)**Have you recently:*

1. Been able to concentrate on whatever you're doing?
2. Lost much sleep over worry? (R)
3. Felt that you are playing a useful part in things?
4. Felt capable of making decisions about things?
5. Felt constantly under strain? (R)
6. Felt you couldn't overcome your difficulties? (R)
7. Been able to enjoy your normal day-to-day activities?
8. Been able to face up to your problems?
9. Been feeling unhappy or depressed? (R)
10. Been losing confidence in yourself? (R)
11. Been thinking of yourself as a worthless person? (R)
12. Been feeling reasonably happy all things considered?

Physical Health (Ware et al., 1996)

1. In general, would you say your health is: (R)
1 = Excellent, 2 = Very good, 3 = good, 4 = fair, 5 = poor

The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much? *(1=Yes, limited a lot; 2=Yes, limited a little; 3=No, not limited at all)*

2. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf?
3. Climbing several flights of stairs

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

4. Accomplished less than you would like *(1=Yes, 2=No)*
5. Were limited in the kind of work or other activities *(1=Yes, 2=No)*

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

6. Accomplished less than you would like *(1=Yes, 2=No)*
7. Didn't do work or other activities as carefully as usual *(1=Yes, 2=No)*
8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)? *(1= Not at all, 2 = A little bit, 3 = Moderately, 4 = Quite a bit, 5 = Extremely) (R)*

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks –

9. Have you felt calm and peaceful? (*1 = All the time, 2 = most of the time, 3 = a good bit of time, 4 = some of the time, 5 = a little of the time, 6 = none of the time*) (R)
10. Did you have a lot of energy? (*1 = All the time, 2 = most of the time, 3 = a good bit of time, 4 = some of the time, 5 = a little of the time, 6 = none of the time*) (R)
11. Have you felt downhearted and blue? (*1 = All the time, 2 = most of the time, 3 = a good bit of time, 4 = some of the time, 5 = a little of the time, 6 = none of the time*) (R)
12. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with you social activities (like visiting with friends, relatives, etc.)? (*1 = All the time, 2 = most of the time, 3 = some of the time, 4 = a little bit of the time, 5 = none of the time*) (R)

Depression – (Center for Epidemiologic Studies Depression Scale [CES-D]; Radloff, 1977)

(*1 = Rarely or none of the time [<1 day], 2 = Some or a little of the time [1-2 days], 3 = Occasionally or a moderate amount of the time [3-4 days], 4 = Most or all of the time [5-7 days]*)

1. I was bothered by things that don't usually bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with the help of my family or friends.
4. I felt that I was just as good as other people. (R)
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt everything I did was an effort.
8. I felt hopeful about the future. (R)
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy. (R)
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life. (R)
17. I had crying spells.
18. I felt sad.
19. I felt that people disliked me.
20. I could not get "going."

APPENDIX D

ITEMS GENERATED FOR WAVE 2 FROM FOCUS GROUPS

WIF

1. I eat irregularly when I am home because I am stressed with work obligations.
2. I choose food that is convenient when I am home because I am stressed from work.
3. Others notice a change in my weight when I have a heavy workload.
4. I go to bed earlier than usual when my workload is heavy.
5. My sleep is more restless when my workload is heavy.
6. I look tired around my family (e.g., dark under-eye circles, lack of color in face) when work is very busy.
7. I exercise less when I have had a busy day at work.
8. I don't look my best when I arrive home if I've been busy at work.
9. I talk to my family less after I arrive home when work was overwhelming than I normally would.
10. I call my friends less after I arrive home when work was overwhelming than I normally would.
11. I follow-up with friends and family via email rather than phone when work is overwhelming.
12. I am less engaged in my family conversations than I would be if work was less demanding.
13. I talk mostly about work when I am having conversations at home with my family.
14. I am easily frustrated with others outside of work when I have had a stressful day at work.
15. I don't share personal news regularly with my friends and family when work is demanding.
16. I attend fewer social outings with my friends if my workload is heavy.
17. I use time I should spend with my family to catch up on work responsibilities.
18. I respond to work email at home when I should be spending time with my family.
19. I leave for work early when I anticipate a heavy workload.
20. I arrive home from work late when I have a lot of work to do.
21. I need time to transition from work to home when I am stressed from work.
22. I participate in additional work meetings (e.g., conference calls) while I am at home with my family.
23. I pick fights with family members when I get home if I have had a very busy day at work.
24. Work distracts me when I am spending time with my family.
25. I am less attentive to my family's needs or interests when work is demanding.
26. I don't "have time" for members of my family when I have a heavy workload.
27. I buy members of my family gifts to make up for my lack of time with them due to the heavy demands of work.
28. I complain to my family about my work more when I am overwhelmed than when I am not.
29. I speak honestly, even if what I say is hurtful, when I am stressed about work.

30. I don't notice behavioral changes in others as much when I have heavy work demands.
31. I smile less when I am stressed about work.
32. My health is compromised when my workload is heavy.
33. I am less romantic with my significant other when I have a lot to do at work.
34. I touch others less (e.g., hugs, back rubs) when I am burdened by work than when my workload is normal.
35. I take fewer walks (e.g., with others or with a pet) when my workload is heavy.
36. I plan vacations around my workload.
37. I take fewer vacations with my spouse and/or family because of the demands of work.
38. I bring my laptop for work when I go on vacation.
39. I forget about family or social plans when my workload is heavy.
40. I don't clean up the messes I make at home (e.g., vacuuming, washing dishes or laundry) when my workload is heavy.
41. I forget to pay bills on time when my workload is heavy.
42. I put off running errands (e.g., getting groceries) when my work demands are heavy.
43. My car appears messier when I have a heavy workload.
44. I am less interested in doing activities I would normally enjoy (e.g., go to the movie theater, go shopping, meeting with friends) when I have a heavy workload.
45. I neglect to make and/or attend personal appointments (e.g., doctor, dentist) when I am stressed with work.
46. I watch more television to wind down when my workload is heavy compared with a normal day.
47. I change into my lounge clothes when I come home from work when I have had a particularly stressful day.
48. I have trouble making arrangements to get my child to and from school when I have heavy work demands.
49. I actively clean my home more than usual when my workload is heavy.
50. I turn away offers from people who try to help me when I am stressed from work.
51. I threaten others over whom I have power (e.g., "Do you really want your job?") when work is particularly stressful.
52. My significant other and I delayed having children due to the increasing demands of work.
53. I drive fast coming home from work when it has been a stressful day.
54. I have to coordinate care for my pet when I stay late at work.
55. I drink alcohol when I get home more on days that have been stressful at work than those that are less stressful.
56. I carry two cell phones (one for work, one for personal calls) everywhere I go because of the expectations set by my work.

FIW

57. I have no choice but to make personal phone calls while I am work.
58. I have no choice but to send or respond to personal text messages while I am work.
59. I schedule personal appointments while I am work.

60. I am distracted at work when I am stressed about issues with my family.
61. I arrive to work late when I have a lot going on with my family.
62. I leave work early to attend personal appointments.
63. I leave work early to be with my family sooner when there are issues going on at home.
64. I am unprepared for my work day when my family life is stressful.
65. I am short-tempered with coworkers when I am battling stress from my family life.
66. I become argumentative with my spouse if one of us needs to leave work for a family-related reason (e.g., sick child, family flying in from out of town, pet appointments).
67. I discount things that would otherwise be important to me when I have a lot of family pressures.
68. If my family keeps me up at night, I am less productive the next day at work.
69. I talk less with my colleagues at work when I am preoccupied with family issues.
70. I care less about my appearance at work if my family life is stressful.
71. I take significantly longer than usual to complete routine work tasks when I am stressed from family issues compared to when I am not.
72. I make more mistakes in my work (e.g., typos, data entry errors) when I have family stress.
73. I forget or confuse deadlines for my work projects when I am distracted by my family life.
74. I have asked for a reduced number of work hours to accommodate family issues.
75. I shut my door at work when I am really concerned with issues in my family life.
76. I take longer breaks at work (e.g., take longer or more frequent walks, delay doing work by talking to others) when I am really concerned with issues in my family life.
77. My family members or friends visit me at work.
78. I visit social media site(s) during work hours.
79. I ask for help from coworkers when I am feeling stressed about my family.
80. I vent to coworkers about personal matters during work hours.
81. I smoke cigarettes more at work when I am stressed from issues at home.
82. I cry at work when I am really concerned with issues in my family life.

APPENDIX E

ITEMS RETAINED FOR WAVE 3

WIF

1. I eat irregularly when I am home because I am stressed with work obligations.
2. I choose food that is convenient when I am home because I am stressed from work.
3. Others notice a change in my weight when I have a heavy workload.
4. I go to bed earlier than usual when my workload is heavy.
5. My sleep is more restless when my workload is heavy.
6. I look tired around my family (e.g., dark under-eye circles, lack of color in face) when work is very busy.
7. I exercise less when I have had a busy day at work.
8. I don't look my best when I arrive home if I've been busy at work.
9. I talk to my family less after I arrive home when work was overwhelming than I normally would.
10. I call my friends less after I arrive home when work was overwhelming than I normally would.
11. I follow-up with friends and family via email rather than phone when work is overwhelming.
12. I am less engaged in my family conversations than I would be if work was less demanding.
13. I talk mostly about work when I am having conversations at home with my family.
14. I am easily frustrated with others outside of work when I have had a stressful day at work.
15. I don't share personal news regularly with my friends and family when work is demanding.
16. I attend fewer social outings with my friends if my workload is heavy.
17. I use time I should spend with my family to catch up on work responsibilities.
18. I respond to work email at home when I should be spending time with my family.
19. I leave for work early when I anticipate a heavy workload.
20. I arrive home from work late when I have a lot of work to do.
21. I need time to transition from work to home when I am stressed from work.
22. I participate in additional work meetings (e.g., conference calls) while I am at home with my family.
23. I pick fights with family members when I get home if I have had a very busy day at work.
24. Work distracts me when I am spending time with my family.
25. I am less attentive to my family's needs or interests when work is demanding.
26. I don't "have time" for members of my family when I have a heavy workload.
27. I buy members of my family gifts to make up for my lack of time with them due to the heavy demands of work.
28. I complain to my family about my work more when I am overwhelmed than when I am not.
29. I speak honestly, even if what I say is hurtful, when I am stressed about work.

30. I don't notice behavioral changes in others as much when I have heavy work demands.
31. I smile less when I am stressed about work.
32. My health is compromised when my workload is heavy.
33. I am less romantic with my significant other when I have a lot to do at work.
34. I touch others less (e.g., hugs, back rubs) when I am burdened by work than when my workload is normal.
35. I take fewer walks (e.g., with others or with a pet) when my workload is heavy.
36. I plan vacations around my workload.
37. I take fewer vacations with my spouse and/or family because of the demands of work.
38. I bring my laptop for work when I go on vacation.
39. I forget about family or social plans when my workload is heavy.
40. I don't clean up the messes I make at home (e.g., vacuuming, washing dishes or laundry) when my workload is heavy.
41. I forget to pay bills on time when my workload is heavy.
42. I put off running errands (e.g., getting groceries) when my work demands are heavy.
43. My car appears messier when I have a heavy workload.
44. I am less interested in doing activities I would normally enjoy (e.g., go to the movie theater, go shopping, meeting with friends) when I have a heavy workload.
45. I neglect to make and/or attend personal appointments (e.g., doctor, dentist) when I am stressed with work.
46. I watch more television to wind down when my workload is heavy compared with a normal day.
47. I change into my lounge clothes when I come home from work when I have had a particularly stressful day.
48. I have trouble making arrangements to get my child to and from school when I have heavy work demands.
49. I actively clean my home more than usual when my workload is heavy.
50. I turn away offers from people who try to help me when I am stressed from work.
51. I threaten others over whom I have power (e.g., "Do you really want your job?") when work is particularly stressful.
52. My significant other and I delayed having children due to the increasing demands of work.
53. I drive fast coming home from work when it has been a stressful day.

FIW

54. I have no choice but to make personal phone calls while I am work.
55. I have no choice but to send or respond to personal text messages while I am work.
56. I schedule personal appointments while I am work.
57. I am distracted at work when I am stressed about issues with my family.
58. I arrive to work late when I have a lot going on with my family.
59. I leave work early to attend personal appointments.
60. I leave work early to be with my family sooner when there are issues going on at home.

61. I am unprepared for my work day when my family life is stressful.
62. I am short-tempered with coworkers when I am battling stress from my family life.
63. I become argumentative with my spouse if one of us needs to leave work for a family-related reason (e.g., sick child, family flying in from out of town, pet appointments).
64. I discount things that would otherwise be important to me when I have a lot of family pressures.
65. If my family keeps me up at night, I am less productive the next day at work.
66. I talk less with my colleagues at work when I am preoccupied with family issues.
67. I care less about my appearance at work if my family life is stressful.
68. I take significantly longer than usual to complete routine work tasks when I am stressed from family issues compared to when I am not.
69. I make more mistakes in my work (e.g., typos, data entry errors) when I have family stress.
70. I forget or confuse deadlines for my work projects when I am distracted by my family life.
71. I have asked for a reduced number of work hours to accommodate family issues.
72. I shut my door at work when I am really concerned with issues in my family life.
73. I take longer breaks at work (e.g., take longer or more frequent walks, delay doing work by talking to others) when I am really concerned with issues in my family life.

APPENDIX F

FINAL SET OF ITEMS FOR OBJECTIVE WFC SCALE

WIF

1. I eat irregularly when I am home because I am stressed with work obligations.
2. I choose food that is convenient when I am home because I am stressed from work.
3. I go to bed earlier than usual when my workload is heavy.
4. My sleep is more restless when my workload is heavy.
5. I look tired around my family (e.g., dark under-eye circles, lack of color in face) when work is very busy.
6. I exercise less when I have had a busy day at work.
7. I don't look my best when I arrive home if I've been busy at work.
8. I talk to my family less after I arrive home when work was overwhelming than I normally would.
9. I call my friends less after I arrive home when work was overwhelming than I normally would.
10. I follow-up with friends and family via email rather than phone when work is overwhelming.
11. I am less engaged in my family conversations than I would be if work was less demanding.
12. I talk mostly about work when I am having conversations at home with my family.
13. I am easily frustrated with others outside of work when I have had a stressful day at work.
14. I don't share personal news regularly with my friends and family when work is demanding.
15. I attend fewer social outings with my friends if my workload is heavy.
16. I use time I should spend with my family to catch up on work responsibilities.
17. I respond to work email at home when I should be spending time with my family.
18. I leave for work early when I anticipate a heavy workload.
19. I arrive home from work late when I have a lot of work to do.
20. I need time to transition from work to home when I am stressed from work.
21. I pick fights with family members when I get home if I have had a very busy day at work.
22. Work distracts me when I am spending time with my family.
23. I am less attentive to my family's needs or interests when work is demanding.
24. I don't "have time" for members of my family when I have a heavy workload.
25. I complain to my family about my work more when I am overwhelmed than when I am not.
26. I speak honestly, even if what I say is hurtful, when I am stressed about work.
27. I don't notice behavioral changes in others as much when I have heavy work demands.
28. I smile less when I am stressed about work.
29. My health is compromised when my workload is heavy.
30. I am less romantic with my significant other when I have a lot to do at work.

31. I touch others less (e.g., hugs, back rubs) when I am burdened by work than when my workload is normal.
32. I take fewer walks (e.g., with others or with a pet) when my workload is heavy.
33. I plan vacations around my workload.
34. I take fewer vacations with my spouse and/or family because of the demands of work.
35. I bring my laptop for work when I go on vacation.
36. I forget about family or social plans when my workload is heavy.
37. I don't clean up the messes I make at home (e.g., vacuuming, washing dishes or laundry) when my workload is heavy.
38. I forget to pay bills on time when my workload is heavy.
39. I put off running errands (e.g., getting groceries) when my work demands are heavy.
40. I am less interested in doing activities I would normally enjoy (e.g., go to the movie theater, go shopping, meeting with friends) when I have a heavy workload.
41. I neglect to make and/or attend personal appointments (e.g., doctor, dentist) when I am stressed with work.
42. I watch more television to wind down when my workload is heavy compared with a normal day.
43. I have trouble making arrangements to get my child to and from school when I have heavy work demands.
44. I turn away offers from people who try to help me when I am stressed from work.
45. My significant other and I delayed having children due to the increasing demands of work.

FIW

1. I drive fast coming home from work when it has been a stressful day.
2. I have no choice but to make personal phone calls while I am work.
3. I am distracted at work when I am stressed about issues with my family.
4. I arrive to work late when I have a lot going on with my family.
5. I leave work early to attend personal appointments.
6. I leave work early to be with my family sooner when there are issues going on at home.
7. I am unprepared for my work day when my family life is stressful.
8. I am short-tempered with coworkers when I am battling stress from my family life.
9. I become argumentative with my spouse if one of us needs to leave work for a family-related reason (e.g., sick child, family flying in from out of town, pet appointments).
10. I discount things that would otherwise be important to me when I have a lot of family pressures.
11. If my family keeps me up at night, I am less productive the next day at work.
12. I talk less with my colleagues at work when I am preoccupied with family issues.
13. I care less about my appearance at work if my family life is stressful.
14. I take significantly longer than usual to complete routine work tasks when I am stressed from family issues compared to when I am not.
15. I make more mistakes in my work (e.g., typos, data entry errors) when I have family stress.

16. I forget or confuse deadlines for my work projects when I am distracted by my family life.
17. I have asked for a reduced number of work hours to accommodate family issues.
18. I take longer breaks at work (e.g., take longer or more frequent walks, delay doing work by talking to others) when I am really concerned with issues in my family life.

APPENDIX G

Table 1

Current Measures of Work-Family Conflict

Author (Year)	Number of items
Carlson, Kacmar, & Williams (2000)	18
Kopelman, Greenhaus, & Connolly (1983)	4
Burley (1989)	4
Small & Riley (1990)	15
Holohan & Gilbert (1979)	4
Burke, Weir, & Du Wors (1980)	8
Pleck, Staines, & Lang (1978)	16
Frone, Russell, & Cooper (1992a; 1992b; 1993)	4
Gutek, Searle, & Klepa (1991)	2
Thompson (1985)	8
Wiley (1987)	5
Loerch, Russell, & Rush (1989)	5
Matsui, Ohsawa, & Onglatco (1995)	5
Netemeyer, Boles, & McMurrian (1996)	10
O'Driscoll, Ilgen, & Hildreth (1992)	14
Rice, Frone, & McFarlin (1992)	1
Boyar, Carson, Mosley, Maertz, & Pearson (2006)	7

Table 2

Corrected Item-Total Correlations

WIF		FIW	
<i>Item</i>	<i>CITC</i>	<i>Item</i>	<i>CITC</i>
1	.618	1	.504
2	.593	2	.406
3	.172	3	.566
4	.596	4	.692
5	.544	5	.559
6	.456	6	.531
7	.491	7	.657
8	.625	8	.615
9	.492	9	.537
10	.347	10	.738
11	.665	11	.449
12	.502	12	.485
13	.609	13	.503
14	.657	14	.707
15	.647	15	.631
16	.619	16	.697
17	.545	17	.526
18	.499	18	.608
19	.641		
20	.574		
21	.705		
22	.741		
23	.698		
24	.468		
25	.416		
26	.449		
27	.597		
28	.656		
29	.549		
30	.607		
31	.597		
32	.346		
33	.605		
34	.486		
35	.699		
36	.438		

WIF		FIW	
<i>Item</i>	<i>CITC</i>	<i>Item</i>	<i>CITC</i>
37	.462		
38	.551		
39	.671		
40	.672		
41	.339		
42	.331		
43	.489		
44	.305		

$N = 226$. CITC stands for corrected item-total correlations. Actual item content for each scale can be found in Appendix F.

Table 3

Correlation Coefficients using the Multiplicative Approach as an Indicator of WFC

Outcome	WIF Only			FIW Only		
	Netemeyer	Carlson	Objective	Netemeyer	Carlson	Objective
Life Sat	-.274**	-.205**	-.164*	-.043	-.064	.003
Job Sat	-.316**	-.255**	-.142*	-.081	-.143*	-.044
Family Sat	-.258**	-.219**	-.085	-.175**	-.117	-.016
Org Com	-.076	-.061	-.056	.019	.033	-.021
Burnout	.517**	.488**	.457**	.279**	.339**	.329**
Turnover	.256**	.251**	.207**	.028	.083	.064
Psych Strain	-.335**	-.306**	-.297**	-.172*	-.241*	-.153*
Health	-.311**	-.257**	-.206**	-.183**	-.208**	-.136*
Depression	.389**	.351**	.407**	.261**	.365**	.287**

Note: $N = 223$. Outcome variables include life satisfaction (life sat), job satisfaction (job sat), family satisfaction (family sat), organizational commitment (org com), burnout, turnover intentions (turnover), psychological strain (psych strain), health, and depression. The objective scale includes a total of 73 items for this approach.

Table 4

Correlation Coefficients using the Frequency Data Approach as an Indicator of WFC

Outcome	WIF Only			FIW Only		
	Netemeyer	Carlson	Objective	Netemeyer	Carlson	Objective
Life Sat	-.274**	-.206**	-.239**	-.047	-.062	-.016
Job Sat	-.326**	-.260**	-.178**	-.087	-.160*	-.068
Family Sat	-.267**	-.225**	-.211**	-.187**	-.126	-.082
Org Com	-.085	-.065	-.055	.017	.019	-.027
Burnout	.509**	.495**	.564**	.291**	.355**	.328**
Turnover	.249**	.252**	.261**	.036	.085	.070
Psych Strain	-.339**	-.309**	-.341**	-.174**	-.247**	-.156*
Health	-.316**	-.258**	-.250**	-.184**	-.200**	-.145*
Depression	.386**	.350**	.503**	.265**	.352**	.297**

Note: $N = 226$. Outcome variables include life satisfaction (life sat), job satisfaction (job sat), family satisfaction (family sat), organizational commitment (org com), burnout, turnover intentions (turnover), psychological strain (psych strain), health, and depression. The objective scale includes a total of 61 items for this approach.

Table 5

Correlation Coefficients for All Variables

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Life Sat	4.46	1.27	---														
2 Job Sat	3.33	.85	.31**	---													
3 Fam Sat	4.55	.74	.39**	.21**	---												
4 Org Com	4.15	.72	.11	.56**	.03	---											
5 Burnout	3.47	1.19	-.33**	-.27**	-.30**	-.14**	---										
6 Turnover	2.65	1.27	-.24**	-.62**	-.27**	-.62**	.41**	---									
7 Strain	2.63	.38	.46**	.35**	.25**	.10	-.42**	-.22**	---								
8 Health	2.48	.26	.31**	.38**	.16*	.10	-.34**	-.24**	.33**	---							
9 Depression	1.90	.55	-.44**	-.37**	-.29**	-.11	.46**	.25**	-.59**	-.39**	---						
10 Net (WIF)	4.17	1.40	-.27**	-.33**	-.27**	-.09	.51**	.25**	-.34**	-.32**	.39**	---					
11 Carl (WIF)	2.86	.74	-.21**	-.26**	-.23**	-.07	.50**	.25**	-.31**	-.26**	.35**	.73**	---				
12 New (WIF)	2.86	.63	-.24**	-.18**	-.21**	-.06	.56**	.26**	-.34**	-.25**	.50**	.67**	.62**	---			
13 Net (FIW)	3.27	1.48	-.05	-.09	-.19**	.02	.29**	.04	-.17	-.18**	.27*	.49**	.64**	.47**	---		
14 Carl (FIW)	2.85	.82	-.06	-.16*	-.13	.02	.36**	.09	-.25**	-.21**	.35**	.47**	.60**	.52**	.62**	---	

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
15 New (FIW)	2.51	.62	-.05	-.11	-.16*	-.03	.43**	.14*	-.18**	-.18**	.35**	.44**	.51**	.69**	.58**	.55**	---

Note: *N* = 226. Outcome variables include life satisfaction (life sat), job satisfaction (job sat), family satisfaction (fam sat), organizational commitment (org com), burnout, turnover intentions (turnover), psychological strain (strain), health, and depression. Subjective measures include Netemeyer et al., 1996 (Net; WIF and FIW separated) and Carlson et al., 2000 (Carl; WIF and FIW separated). The objective measure is identified by “New”, also separated by WIF and FIW.

Table 6

Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Life Satisfaction

Variable	WIF			FIW		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Subjective WIF (Netemeyer)	-.187	.078	-.207*			
Objective WIF	-.199	.174	-.099			
Intercept = 5.809						
Subjective FIW (Carlson)				-.074	.124	-.048
Objective FIW				-.051	.164	-.025
Intercept = 4.801						
R^2 Change		.005			.000	
<i>F</i> for change in R^2		1.315			.099	

Note: $N = 226$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 7

Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Job Satisfaction

Variable	WIF			FIW		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Subjective WIF (Netemeyer)	-.228	.052	-.376***			
Objective WIF	.100	.115	.075			
Intercept = 3.988						
Subjective FIW (Carlson)				-.146	.082	-.141
Objective FIW				-.047	.108	-.034
Intercept = 3.861						
R^2 Change		.003			.001	
<i>F</i> for change in R^2		.762			.187	

Note: $N = 226$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 8

Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Family Satisfaction

Variable	WIF			FIW		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Subjective WIF (Netemeyer)	-0.120	.046	-.229**			
Objective WIF	-.066	.102	-.057			
Intercept = 5.238						
Subjective FIW (Carlson)				-.052	.071	-.057
Objective FIW				-.147	.094	-.124
Intercept = 5.064						
R^2 Change		.002			.011	
<i>F</i> for change in R^2		.432			2.436	

Note: $N = 226$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 9

Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Organizational Commitment

Variable	WIF			FIW		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Subjective WIF (Netemeyer)	-.045	.046	-.087			
Objective WIF	.004	.103	.004			
Intercept = 4.321						
Subjective FIW (Carlson)				.044	.071	.050
Objective FIW				-.065	.093	-.056
Intercept = 4.186						
R^2 Change		.000			.002	
<i>F</i> for change in R^2		.002			.489	

Note: $N = 226$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 10

Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Burnout

Variable	WIF			FIW		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Subjective WIF (Netemeyer)	.201	.062	.236**			
Objective WIF	.764	.138	.405***			
Intercept = .447						
Subjective FIW (Carlson)				.247	.105	.170*
Objective FIW				.645	.138	.336***
Intercept = 1.143						
R^2 Change		.090***			.078***	
<i>F</i> for change in R^2		30.725			21.987	

Note: $N = 226$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 11

Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Turnover Intentions

Variable	WIF			FIW		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Subjective WIF (Netemeyer)	.121	.079	.134			
Objective WIF	.344	.175	.171*			
Intercept = 1.156						
Subjective FIW (Carlson)				.017	.124	.011
Objective FIW				.275	.163	.134
Intercept = 1.143						
R^2 Change		.016*			.012	
<i>F</i> for change in R^2		3.870			2.841	

Note: $N = 226$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 12

Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Psychological Strain

Variable	WIF			FIW		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Subjective WIF (Netemeyer)	-.054	.023	-.200*			
Objective WIF	-.123	.050	-.207*			
Intercept = 3.205						
Subjective FIW (Carlson)				-.098	.036	-.213**
Objective FIW				-.037	.047	-.061
Intercept = 3.002						
R^2 Change		.023*			.003	
<i>F</i> for change in R^2		6.044			.621	

Note: $N = 226$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 13

Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Health

Variable	WIF			FIW		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Subjective WIF (Netemeyer)	-.051	.016	-.271**			
Objective WIF	-.028	.036	-.068			
Intercept = 2.774						
Subjective FIW (Carlson)				-.050	.025	-.157*
Objective FIW				-.038	.033	-.089
Intercept = 2.721						
R^2 Change		.003			.006	
<i>F</i> for change in R^2		.624			1.295	

Note: $N = 226$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 14

Hierarchical Multiple Regression of Objective and Subjective Measures of WIF and FIW on Depression

Variable	WIF			FIW		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Subjective WIF (Netemeyer)	.034	.031	.086			
Objective WIF	.388	.068	.445***			
Intercept = .648						
Subjective FIW (Carlson)				.156	.050	.231**
Objective FIW				.193	.065	.218**
Intercept = .970						
R^2 Change		.108***			.033**	
<i>F</i> for change in R^2		32.547			8.726	

Note: $N = 226$. * $p < .05$, ** $p < .01$, *** $p < .001$.

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ABSTRACT

USING OBJECTIVE MEASURES TO CAPTURE WFC

by

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Research conducted on WFC (WFC) is primarily measured using self-reported subjective scales that fail to encapsulate the entirety of the WFC construct. Many authors have acknowledged the importance of generating a complementary objective WFC scale, in an effort to enhance one's ability to predict work-related outcomes within and between individuals. The purpose of the current study was to identify objective items measuring work-interfering-with-family (and vice versa) that can more accurately predict relevant outcomes (i.e., life, family, and job satisfaction; psychological strain; turnover; burnout; health; organizational commitment; depression) when used in conjunction with currently existing subjective work-interfering-with-family (WIF) and family-interfering-with-work (FIW) measures. Through a three Wave data collection process, a new objective scale was preliminarily validated. This 45 item objective WIF scale predicts four outcomes above and beyond that of a subjective WIF scale: burnout, depression, turnover intentions, and psychological strain. The 18 item FIW scale predicts two outcomes beyond that of the subjective FIW scale: burnout and depression. The use of the new scale for cross-person prediction is further discussed.