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NEGATIVE AFFECTIVE RESPONSES TO WORK-FAMILY CONFLICT

By

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ABSTRACT

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The prevalent literature on work-family conflict suggests that working adult, and women in particular, experience guilt when work and family roles conflict with one another. Although guilt is often mentioned in the literature, it is rarely directly assessed. In addition, other negative emotions besides guilt may play a crucial role in working adult emotional responses to work-family conflict. Drawing on SDT Theory (Higgins, 1987), this thesis sought to more fully understand the role a variety of negative emotions (guilt, worry, anger and frustration) play in work to family and family to work conflict. Findings suggest that all four emotions are directly related to experiences of work-family conflict and that women are more prone to experiencing all these emotions. Links are also made to life satisfaction and job satisfaction. Future directions of the study of emotions and work-family conflict are proposed.

ACKNOWLEDGEMENTS

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"We're moms. We work all day, bring home the bacon, and fry it up in a pan. Oh, and while we're at it, we're raising young children, along with our spouses/partners. As any working mom knows, we often battle the big "G." Guilt creeps up on us when we least expect it. Join us in our ongoing struggle to resist the guilt and embrace the journey."

—Working Moms Against Guilt weblog motto (2008)

Parental guilt associated with work-family conflict has become an assumed part of our popular lexicon. As the above quote from the popular weblog "Working Moms Against Guilt" illustrates, the idea that parents, and moms in particular, experience guilt about balancing work and family is stated as so obvious as to be unambiguous. Yet surprisingly little empirical research has been dedicated to examining the ways adults emotionally experience work-family conflict. First, although guilt is often assumed to results from experiences of conflict, how prevalent is it really? If guilt does indeed occur, is it the only relevant emotion when studying conflict? Are women more susceptible to negative emotional effects of work-family conflict than men? Are there other variables that might contribute to individual emotional experiences of work-family conflict? All these questions have yet to be adequately answered.

The emotional component of work-family conflict is a glaring hole in the current literature. More fully understanding how work-family conflict links to emotions could prove invaluable in further research and the development of practical interventions. While research has revealed much about the antecedents and consequences of work-family conflict (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005), it has been less successful in identifying workplace or personal methods and tactics that help alleviate the negative effects. The study of the emotional reactions of individuals to work-family conflict could identify a targeted intervention point that researchers and practitioners could focus on to help mitigate the consequences of work-family conflict. The coping literature suggests that different ways of

coping may be more effective to counteract negative effects of specific emotions (Bennett, Lowe & Honey, 2003); therefore, it behooves us as researchers to identify what emotions, precisely, individuals experience in conjunction with work-family conflict.

Although several authors in the field assume an emotional component to work-family conflict (e.g. Casper, Martin, Buffardi & Erdwins, 2002; Wharton & Erickson, 1993; Williams & Alliger, 1994), few have set out to systematically understand what emotions play a part in this conflict. Much of the extant research has linked work-family conflict to personality-like trait levels of emotions, such as negative affectivity, but does not take the next step to identify specific emotional responses (e.g. Heller & Watson, 2005; Song, Foo, & Uy, 2008). In their model describing health outcomes of work-family conflict, Greenhaus and Spector (2006) noted the lack of research on this topic and pointed out that emotions are likely more proximally related to experiences of conflict than health outcomes. They suggest that the experience of emotions may have very real effects on later development of negative health outcomes. Along with other researchers in the field (Judge, Ilies & Scott, 2006; Livingston & Judge, 2008), Greenhaus and Spector (2006) call for further research linking specific state emotions to work-family conflict.

A few researchers have started on the path to understanding the discrete emotional responses to work-family conflict (Hochwarter, Perrewe, Meurs, & Kacmar, 2007; Judge, Ilies & Scott, 2006; Livingston & Judge, 2008) but they treat what emotions they examine rather idiosyncratically. In general, they focus on one specific emotion (guilt) but fail to consider other types of negative emotions that may be related to experiences of conflict. Before further research is conducted on emotional responses to work-family conflict, it is necessary to fully explicate what sorts of emotions are likely to be experienced so that researchers can fully capture the range of negative emotional reactions.

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Using Higgins (1987) self-discrepancy theory as a framework for understanding emotional responses to work-family conflict, I conducted study that examines the prevalence and relationship strength of four specific emotions in response to work-family conflict—namely guilt, worry, anger and frustration. The results of this study can have important implications for further research into emotions and work-family conflict. At a basic level, this study will help illuminate negative emotions other than guilt that might be related to work-family conflict, namely worry, anger and frustration. Different emotions may have different relationships to other outcome variables such as satisfaction and health outcomes, which could lead to more effective interventions on ways to mitigate the negative effects of work family conflict.

In order to understand these relationships, it is first necessary to fully define the constructs of interest. To do this, I will review the literature on work-family conflict, introduce self-discrepancy theory as a framework to understand emotional reactions to conflict, and explore definitions of each emotion in turn. Following that I will address the proposed moderators of the work-family conflict/emotion relationship

Work-Family Conflict

Social scientists first began turning an eye to work-family conflict about forty years ago. Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964) introduced work-family conflict as a function of role identity theory where the demands of one role are fundamentally incompatible with the demands of another role. This in turn produces stress when the demands of one role cannot be met. Kahn et al (1964) introduced this idea in the context of the many roles an individual assumes, including multiple roles at work and multiple roles at home. While they focused mainly on roles in the work domain, it is easy to extrapolate the idea that any role an individual assumes might at some point come into direct conflict with another role.

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For the next twenty years or so, the area of work-family role conflict research presented by Kahn et al (1964) was largely left unexplored. The late 1960's and 1970's saw a few articles about this role conflict, but they were mainly exploratory in nature and did not focus on specific theories or constructs (e.g. Matthews & Tiedeman, 1964) or only referenced work-family conflict indirectly (e.g. Kessler, 1979).

The late 1970s and 1980s saw an increasingly dramatic demographic shift in the nation's workforce. More and more women were entering the workforce and more and more marriages included dual-earner couples where both adults worked (Bond, Thompson, Galinsky & Prottas 2003). This increased participation in the workforce served to increase the work demands on a system where the family demands remained and needed to be met. Americans began to have more demands on their time and the roles of work and family life began to conflict with each other more and more.

The strain this conflict placed on working individuals and families was becoming increasingly obvious in the 1980s. This is when the work-family research really took flight. What had been a meager trickle of empirical articles grew to a stream, and then a raging river. That is where we stand today. A simple search on psycinfo for articles related to work-family conflict and balance returns roughly 700 articles, most of which have been published in the last ten to fifteen years. The next step in understanding work-family conflict is to look at the conceptual foundation much of this research relies upon.

Recognizing the lack of a strong theoretical base for an increasingly relevant concept, Greenhaus and Beutell (1985) wrote an article that outlined the basic theoretical structure of work-family conflict. This article has become the seminal reference to understanding the nature of work-family conflict. The basic idea of Greenhaus and Beutell's conceptualization of work-family conflict is that it has two directions, work-to-family and family-to-work, and three types, time-based, strain-based, and behavior-based, and that they are fully crossed.

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Please see Table 1 for a concise description of the directions and types of WFC.

First, work-family conflict is bi-dimensional. Experience in the work realm can impact experiences in the family realm (work interference with family, hence referred to WIF) and experiences in the family realm can impact experiences in the work realm (family interference with work, hence referred to as FIW). This distinction has been held up repeated in the literature, indicating that individuals consistently differentiate between these two directions (Byron, 2005).

Work-family conflict also consists of three types. Time-based conflict is perhaps the easiest to understand and conceptualize. Time spent in one role can physically not be spent in another role. For example, an individual would experience time-based conflict if he/she needed to attend a child's soccer game that was scheduled at the same time as an

Table 1
The Six Types of Work-Family Conflict

		WFC Direction	
		Work-Interfering-With-Family (WIF)	Family-Interfering-With-Work (FIW)
WFC Type	Time-Based	WIF-time Responsibilities from work role temporally conflict with responsibilities from family role	FIW-time Responsibilities from family role temporally conflict with responsibilities from work role
	Strain-Based	WIF-strain Stress and strain from work role makes it difficult to adequately perform in family role	FIW-strain Stress and strain from family role makes it difficult to adequately perform in work role
	Behavior-Based	WIF-behavior Behaviors that are adaptive in the work role are maladaptive in the family role	FIW-behavior Behaviors that are adaptive in the family role are maladaptive in the work role

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important work meeting. Strain-based conflict is when emotional factors such as stress and strain experienced in one role can impact experiences in another role. For example, an individual would experience strain-based conflict if pressures from work deadlines were so emotionally draining that he/she is too tired or worn out to emotionally contribute to their family at the end of the day. Behavior-based conflict is perhaps the most difficult to conceptualize and occurs when behaviors that are adaptive and appropriate in one role are incompatible with the other. For example, an individual would experience behavior-based conflict if his/her work required him/her to be inflexible and strict with coworkers but this same behavior would be detrimental if enacted within family relationships.

The dimensions (FIW and WIF) and types of conflict are fully crossed, meaning that all three types of conflict can occur in either direction of conflict. In fact, Greenhaus and Beutell would argue that a single experience could have the potential to go in either direction. For example, an individual has competing role responsibilities such that his work role dictates that he needs to stay late to finish a project but his family role dictates that he needs to leave early to watch his child's soccer game. At the point of indecision, this time-based conflict has the potential to go either way. Once the individual decides on a course of action, it can either be family interfering with work (if he decides to attend his child's soccer game) or work interfering with family (if he decides to stay late at work).

The self-defined nature of directionality in WFC is fairly straightforward in terms of time-based WFC where a clear decision must be made regarding which event the individual will actually attend. Strain-based and behavior-based conflict fit less neatly into this framework, although both have aspects of directionality self-definition. For strain-based conflict, people have to recognize that they are worn out from activities in certain domains, and this recognition and attribution could function differently between people or times. For example, if an individual is at home and feeling stressed, that individual can attribute the

stress to either something that happened at work or at home. While the individual has some control over interpreting the origination of the strain, the basic direction remains factually fixed, such that it is the stress experienced from one domain effects performance in the other.

Behavior-based conflict is even less likely to have a strong self-defined directionality aspect to it. Like strain-based conflict, the ambiguity lies in the recognition and understanding of what behaviors stem from what domain. For example, if an individual behaves in a cajoling way with a co-worker that is ineffective in that situation but is effective with her children, then she has to recognize where that behavior originates before she can ascribe conflict directionality. Namely, she has to correctly ascribe the fact that it is a family-based behavior that is conflicting with work-based role. The recognition and labeling of the conflict is the self-defined aspect of directionality. But like strain-based conflict, behavior based conflict does have a fixed element to it, such that the above mentioned conflict is clearly in the direction of family-to-work and the ambiguity only lies in the attribution.

Greenhaus and Beutell's (1985) general framework of work-family conflict has been well accepted by the research community and most current research is based, at least to some extent, on this conceptualization of conflict. In practice, much of the current research tends to look at direction (FIW or WIF) but treats the dimensions in idiosyncratic ways, often not measuring them at all (e.g. Adams, King & King, 1996; Batt & Valcour, 2003; Burley, 1995). When all three types are measured, however, they all often have unique relationships with outcomes and antecedents (e.g. Carlson, Derr & Wadsworth, 2003; Lambert, Hogan, Camp & Ventura, 2006). Reviews of the literature have reiterated the importance of measuring all directions and dimensions of conflict in order to fully capture the construct (Eby et al 2005; Ford, Heinen & Langkamer, 2007). Due to these types of findings, this paper will adopt the full model of Greenhaus and Beutell's two by three fully crossed construct. The model of WFC used in this paper will examine the two directions (WIF and FIW) and three

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dimensions (strain, time and behavior).

Outcomes of WFC and Negative Mood

In the literature, experiences of WFC have been linked to a variety of negatively valenced outcomes. The most widely researched correlates of WFC often have to do with satisfaction, such that individuals who experience higher levels of WFC also experience lower satisfaction with both job and life (Eby et al, 2004; Ford et al, 2007). The satisfaction relationships generally occur in predicted ways, such that individuals who experience more work-interfering-with-family experience lower job satisfaction and those that experience more family-interfering-with-work experience lower family satisfaction (Eby et al, 2004). A meta analysis by Byron (2005) also supported this distinction, finding that by and large work related issues such as job stress were more closely related to WIF while family related issues such as family stress were more closely related to FIW. A meta-analysis by Ford et al (2007), however, illustrates the WFC-satisfaction relationship to be more complicated. They found that there are considerable cross-domain influences, such that WIF is also related to family satisfaction and FIW is also related to job satisfaction. Although often theorized as a direct result of increased WFC, there have been few studies that have examined the satisfaction-WFC correlation in a manner that would allow causal attribution conclusions (for exceptions, see Grandey, Cordeiro and Crouter, 2005 and Huang, Hammer, Neal and Perrin, 2004 who utilized longitudinal designs).

In addition to satisfaction, other sorts of outcomes have also been examined. At a personal health level, many researchers have looked at how work-family conflict affects experiences of certain mental and physical health outcomes such as depression, hypertension and alcoholism. Generally, research has shown that increased levels of work-family conflict, in either work to family or family to work directions, correlate with higher levels of depression (Frone, Russell & Barnes, 1996; Thomas & Ganster, 1995). Some studies,

however, have found a relation between FIW conflict and depression but not WIF conflict (Frone, Russell & Cooper, 1992a; Frone, Russell & Cooper, 1997).

A physical health outcome that has been examined in relation to work-family conflict is hypertension. Thus far, only higher levels of FIW conflict have been found to be related to higher levels of hypertension (Frone, Russell, & Cooper, 1997). Higher levels of cholesterol are also related to higher levels of work-family conflict in general, but this study did not parse out family to work and work to family directionality (Thomas & Ganster, 1995).

A final health outcome that has received attention in the research literature is that of alcohol use and its relationship to work-family conflict. Both FIW and WIF have been linked to increased levels of alcohol consumption (Frone, Russell, Cooper, 1992b; Frone, Russell, & Barnes, 1996). Although the early research showed a clear positive relationship between alcohol use and work-family conflict, it was impossible to infer causality from these studies because they were done at a single point in time. Therefore the directionality could be either way, such that alcohol use leads to more work-family conflict, or more work-family conflict leads to more alcohol use. Frone, Russell and Cooper (1997) recognized this shortcoming of the previous studies and conducted a longitudinal study to more clearly comprehend causal factors in the alcohol/work-family conflict relationship. They found that higher levels of work-to-family conflict at time one led to heavier alcohol consumption at time two. Family-to-work conflict did not appear to lead to higher alcohol consumption.

Emotional outcomes of WFC have been less well studied. The research on affect and WFC that does exist tends to focus on general mood and not on specific emotions. While related, moods and emotions are distinct constructs. In his 2004 book, Eysenck sums up the differences in definitions as follows. Moods are typically defined as lasting a relatively longer duration, being less intense and not being related to a specific object. Emotions, on the other hand, are typically shorter, more intense and are related to a specific object. For

instance, one usually feels a discrete emotion, like anger, toward something in particular (e.g. "I am so angry at my boss today!") whereas moods are more diffuse and objectless (e.g. "I'm in an angry mood today.") There have been some semantic inconsistencies in the literature where researchers label their construct "emotions" even though they do not assess them as occurring as the result of a discrete event (e.g. Matjasko & Feldman, 2006). I will discuss findings in the context of the definition above rather than the inconsistent labeling authors might use within a paper.

The WFC and mood research has shown that negative mood does tend to spill over from one life domain to another (Williams and Alliger, 1994). This negative mood can also be contagious to others in close relationships. A recent study by Matjasko and Feldman (2006) found that negative moods experienced at work not only spilled over to individual's experiences at home, but also affected the spouse's moods at home.

Although the extant literature seems to suggest that negative mood has a role in WFC, little research has focused on specific negative emotional outcomes of WFC. The few studies that examine WFC in relation to specific emotions will be discussed in detail below. In order to understand the relationship between WFC and emotions, it is important to examine WFC in an emotion relevant theoretical framework. Thus, the next portion of this paper will focus on a specific self-regulation theory and its relationship with four specific negative emotions: guilt, worry, anger and frustration.

Self-Discrepancy Theory

When examining emotions and work-family conflict, one must consider the theoretical ways in which such conflict might occur. One way to understand individuals' experiences of conflict is through the lens of Self-Discrepancy Theory (SDT, Higgins, 1987). Although few researchers have explicitly linked SDT with work-family conflict (see Hochwarter et al, 2007 for an exception), it provides an illuminating way to think about the

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exact nature of conflict and how it might relate to emotional responses. Like other theories focusing on internal dissonance or self-inconsistency (e.g. Aronson, 1992; Festinger, 1957), SDT draws links to internal feelings of incongruity and subjective feelings of negative emotion. Unlike these other theories, however, SDT make specific predictions about distinct types of negative affect that result from different discrepancies. This specificity makes it ideal for studying distinct negative emotions rather than a general, broad negative affectivity that is discussed in the other theories.

Self-Discrepancy Theory was first proposed by Higgins (1987) to describe the ways individuals evaluate their actual selves in relation to two other possible selves. She proposes that people have internal representations of both an "ideal self" and an "ought self" with which the "actual self" is compared. The actual self is defined as "your representation of the attributes that someone (yourself or another) believes you actually possess." p. 320. In contrast, ideal and ought selves are comprised of qualities that the individual does not necessarily actually possess. The ideal self is defined as "your representation of the attributes that someone (yourself or another) would like you, ideally, to possess" (p. 320). Higgins goes on to elaborate that the ideal self is comprised of characteristics that are hopes, aspirations or wishes. The ought self, on the other hand, is defined as "your representation of the attributes that someone (yourself or another) believes you should or ought to possess" (p. 321). This is elaborated to include characteristics of the self that are related to a sense of duty, obligations or responsibilities.

Higgins proposes that actual/ought self-discrepancies are related to a different set of specific negative emotions than actual/ideal self discrepancies. Past research into emotional responses has tied dejection related emotions, such as depression and sadness, to the failure to obtain positive outcomes (e.g. Lazarus, 1991). In the framework of SDT, dejection related emotions should therefore be related to actual/ideal self-discrepancies because this

discrepancy represents a failure to obtain one's wishes and aspirations. On the other hand, past research has tied agitation related emotions, such as guilt and threat, to the presence of negative outcomes (Watson & Pennebaker, 1989). Because actual/ought self-discrepancies are essentially a person's failure to achieve a minimum of what they believe it is his/her "duty" to achieve, this situation represents the presence of negative outcomes. Thus, actual/ought discrepancies would be more strongly related to agitation type negative emotions.

Since its proposal in 1987, Higgin's SDT theory has been examined numerous times and general support has been found for the actual/ideal discrepancy relationship to dejection type negative emotions and the actual/ought discrepancy relationship to agitation type negative emotions (e.g. Bizman, Yinon & Krotman, 2001; Higgins, Shah & Friedman, 1997; Strauman & Higgins, 1987). Although a few researchers have found more equivocal results (Bruch, Rivet & Laurenti, 2000; Carver, Lawrence & Scheier, 1999), it seems reasonable to adopt the SDT framework when considering specific emotional responses to internal self-conflict.

In relation to work-family conflict, it is important to consider what type of self-discrepancy might be activated when an individual experiences WFC. With the changing nature of the modern workforce and an increasingly large number of dual earner families or single parent households, many WFC researchers have noted the increased role demands working adults are faced with (e.g. Grandey, Cordeiro & Crouter, 2005; Higgins, Duxbury & Lee, 1994). The traditional family structure in which one parent (usually the man) was responsible for supporting the family through external work and the other parent (usually the woman) was responsible for managing the family within the home has now become more of the exception than the rule. Both parents now find themselves in situations in which they must juggle competing demands from both work and family roles. Although the number of

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roles working adults inhabit has increased, internalized societal norms of adequate performance in these roles have been slower to change (Livingston & Judge, 1998). Thus, performance norms that could reasonably be obtained when individuals focused on one role predominantly are less easy to obtain when individuals add roles that are equally demanding. As described above, work-family conflict has been defined as instances in which meeting goals in one domain make it impossible to meet goals in the other domain, whether it be through time, strain or behavior incompatibilities (Greenhaus & Beutell, 1985).

Thus, work-family conflict can be understood in terms of failure to meet obligations an individual feels are necessary for acceptable performance in either the work or the family role. In this way, conflict more closely resembles the actual/ought self-discrepancy than the actual/ideal self-discrepancy. The failure to live up to what an individual sees as his/her duty or obligation to family or work represents the presence of negative outcomes. Following SDT, the negative emotions that should be most closely aligned with WFC are the agitation-related types.

In support of conceptualizing WFC as an actual/ought rather than an actual/ideal self-discrepancy, one can look to how WFC is traditionally measured. In a widely used scale developed but Carlson, Kacmar, and Williams (2000), the items ask responders to indicate agreement with a variety of statements. For example, in measuring time-based work-interfering-with-family, one item reads: "The time I must devote to my job keeps me from participating equally in household responsibilities and activities." The use of specific words such as "responsibilities" falls directly in line with Higgins's (1987) conceptualization of actual/ideal discrepancies such that an individual notices the failure of living up to obligations or responsibilities. The term "responsibility" occurs throughout the scale of WFC and supports the conceptualization of WFC as an actual/ought discrepancy.

For these reasons, the actual/ought discrepancy seems to describe work-family conflict well. In short, the conflict exists because individuals are feeling tension between two obligations. This is not to say, however, that actual/ideal discrepancies do not play a role in work and family satisfaction. For example, it is easy to imagine an individual who wishes that she is able to be home when children get off from school (the ideal role) and feels some dissatisfaction that her work role prevents it. This, however, is not a discrete example of conflict; it is just an illustration of how the actual role is different than the ideal role. The fact that her work schedule always prevents her from being home at the end of the school day means that neither she nor her family can realistically expect that she be home at the time. Therefore, her presence at home is not an obligation but rather a wish.

Conflict occurs when an individual is expected by himself or others to perform in one role despite interference from another role—in other words, it is a clash of obligations. That is the reason I am focusing on actual/ought instead of actual/ideal discrepancies as a means to understand the emotional responses likely to occur in WFC. I am not stating that actual/ideal discrepancies cannot occur at the intersection of work and family lives, just that such discrepancies do not qualify as conflict. The specific emotions I will focus on, therefore, are those of the actual/ought discrepancies, namely agitation based emotions.

Due to the sharp focus on the self, SDT emphasizes the more traditional self-blame related agitation-type negative emotions like guilt and worry. I propose, however, to expand the conceptualization of agitation-type negative emotions to include two more negative emotions, anger (hostility) and frustration. Typically anger and frustration have been defined as outwardly focused emotions consisting mainly of other-blame for failures or unwanted circumstances (Vansteelandt & Van Mechelen, 2006; Kuppens & Van Mechelen, 2007). This conceptualization has been challenged in the literature, however, and some research suggests that anger and frustration can and do have very real relationships to situations of

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self-blame, such as those that may arise from WFC (Kulik & Brown, 1979; Parkinson, 1999). In order to more fully understand the unique ways in which guilt, worry, anger and frustration can be related to WFC, it is necessary to take a closer look at each emotion in turn.

Because discrete emotions have been infrequently examined in relation to WFC, a portion of this study focuses on discovering whether individuals do in fact experience each of these four emotions with regard to WFC. Figure 1 lays out the general assertion that people who experience higher levels of the two directions of WFC, WIF and FIW, will also report higher instances of feeling guilt, worry, anger and frustration in the context of that conflict. Work and family importance act as moderators in the model such that individuals who place greater emphasis on these domains will experience negative emotions in relation to WFC differently. Specifically, individuals who place greater importance on family will experience more WIF negative emotions than individuals who place less importance on family in response to similar levels of WIF. A similar moderation relationship is proposed for work importance such that individuals who place greater importance on work will experience more FIW negative emotions than individuals who place less importance on work in response to similar levels of FIW. In addition, gender will moderate the experience of worry in both directions of WFC such that women will be more likely to experience this emotion than men. For the direction of FIW, gender will moderate the relationship between FIW and frustration such that women will experience it more often than men. The rationale for this model will be more fully explained below as each emotion is examined in turn.

Guilt

Of the four emotions targeted in this study, guilt has had the most direct mention in the WFC literature. Before examining those findings, however, it is necessary to define the term guilt for clarity in further discussions of the construct.

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Figure 1: Proposed Model of the relationship between WFC and emotions, with Work importance, Family Importance and Gender as moderators.
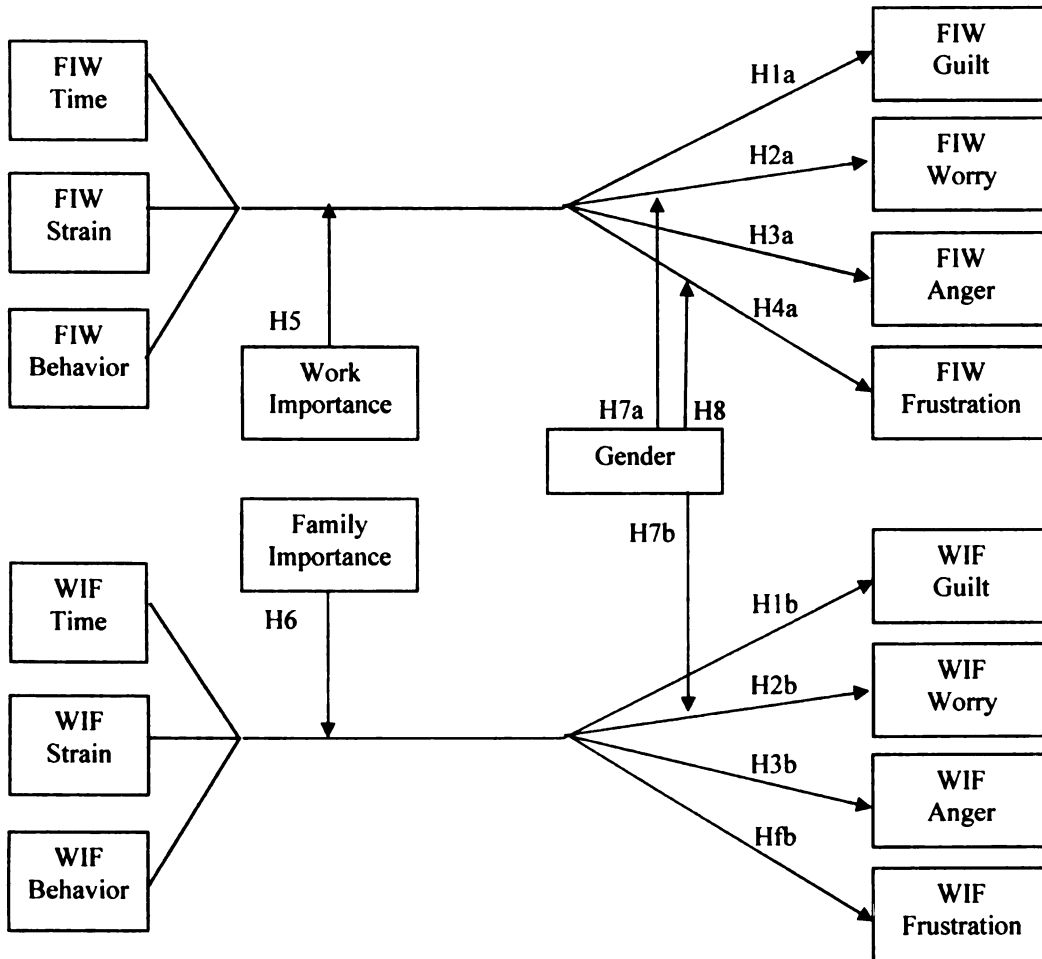
The concept of guilt has been the focus of much research, spanning psychology disciplines from cognitive to clinical to social. Definitions of guilt vary accordingly, such that social psychologists place more emphasis on relational variables of guilt (e.g. Baumeister et al, 1994) while cognitive psychologists place more emphasis on internal appraisals (e.g. Berndsed et al, 2004). In order to make sense of the diverse literature on the subject, please see Table 2 for a review of guilt definitions.

Although the definitions differ in specificity and focus, they basically agree on some general characteristics of the emotion guilt. For the purposes of this paper, guilt will be defined as *a negative, local self-evaluation that one has failed to meet one's own or someone else's moral standards.* This emotion can be felt in response to things done or not done. It is clear in this definition how guilt is theoretically closely tied to actual/ought self-discrepancies in SDT.

Although research on the direct relationship between WFC and emotions is sparse, guilt is one particular emotion that is mentioned often in the literature, although it is rarely directly measured. From the early conceptualizations of WFC, researchers have often mentioned guilt as a possible response to feelings of failure at effectively balancing work and family life (e.g. Casper, Martin, Buffardi, & Erdwins, 2002; Judge, Ilies & Scott, 2005; Livingston & Judge, 2008). Some researchers have specifically tied this to "maternal guilt", suggesting that women are particularly vulnerable to feelings of guilt when they experience WFC (Marecek and Ballou, 1981). Although guilt related WFC is often considered as gender specific, there is no empirical basis to suggest that men cannot and do not experience guilt in relation to WFC as well. Indeed, with both sexes adopting more roles in the work and family domains, it is likely that men would be likely to experience role conflict as well as women. In addition, a recent literature review and a meta-analysis suggest that men and women experience similar amounts of conflict (Eby et al 2007; Ford et al, 2007).

Table 2
Definitions of Guilt

Source	Definition
Baumeister, Stillwell & Heatherton, 1994	"By *guilt* we refer to an individual's unpleasant emotional state associated with possible objections to his or her actions, inaction, circumstances or intentions. Guilt is an aroused form of emotional distress that is distinct from fear and anger and based on the possibility that one may be in the wrong or that others may have such a perception." P. 245 (emphasis in the original) "The prototypical cause of guilt would be the infliction of harm, loss, or distress on a relationship partner." P. 245
Lewis, 1971	"In guilt, the self is not the central object of negative evaluation, but rather the *thing* done or undone is the focus. In guilt, the self is negatively evaluated in connection with something but is not itself the focus of the experience." P. 30 (emphasis in the original)
Hochwarter, Perrewe, Meurs, & Kacmar, 2007	"Work induced guilt is conceptualized as an emotional reaction arising from the interference of one's job activities on the family domain" p. 126
Higgins, 1987	"Guilt involves feeling that one has broken one's own rules concerning how one ought to conduct one's life." P. 323
Judge, Ilies & Scott, 2006	"Guilt is an inward-focused emotion in that it is directed toward oneself—in other words, a self-conscious emotion." P. 782
Berndsed, van der Pligt, Doosje, & Manstead, 2004.	"guilt... involves interpersonal appraisals, for example, the feeling of letting one's parents down." P. 57 "Guilt... seems to be an emotion in which people think about their transgressions, for example, by worrying about being rejected by others." P. 57 "Guilt is an emotional state in which one focuses on other people... Guilt might be a product of interpersonal harm." P. 57

Despite its occasional presence in the literature, the concept of guilt as an outcome of WFC is generally not well articulated. For instance, articles are more likely to discuss guilt in the context of a specific directionality of WFC, namely work interference with family (e.g. Hochwarter, Perrewe, Meurs & Kacmar, 2007). Additionally, guilt is also mostly referred to in reference to two types of WFC, the time-based and the strain-based types or as an undifferentiated aggregate of all types (e.g. Judge, Ilies & Scott, 2006; Marecek & Ballou, 1981).

There are three notable studies that explicitly address emotional responses to work-family conflict. Judge, Ilies and Scott (2006) discuss guilt as a response to stressors that occur at work or at home. Using an experience sampling methodology, they showed that both family to work conflict and work to family conflict were related to higher levels of guilt in the targeted domain. Although this study has much to recommend it in terms of its longitudinal, within person design, the methodology employed to measure emotions leaves something to be desired. Guilt was measured using the momentary version of the PANAS, which is an untargeted measure assessing current mood. The researchers then used the setting of each of these assessments as a proxy for directionality of the feeling. Respondents, however, just reported their state affect, without reference to what they felt "guilty" about. It is possible that their reference for these emotions were events that occurred beyond the setting in which they reported them. Indeed, it is not hard to imagine an individual mulling over a work interfering with family event while at work. In this case, a state measure of guilt would attribute that emotion to family interfering with work—the opposite direction than the experienced emotion. This non-referenced report of affect fails to clearly indicate the exact trigger for the experienced affect.

The second study was also undertaken by Judge. Livingston and Judge (2008) examined FIW and WIF in relation to guilt and gender role orientation. They found that guilt

was positively related to both FIW and WIF and that gender role orientation moderated this relationship such that those who adhered to more traditional gender role orientations experienced more guilt in relation to both FIW and WIF. They measured guilt in much the same ways as Judge, Ilies and Scott (2006) in that the measure was not referenced on any specific event.

The third notable study addressing guilt and WFC was conducted by Hochwarter et al (2007). They studied the relationship between work-induced guilt and the ability to manage resources and the resultant impact on job and life satisfaction. Although their measure was targeted such that it specifically referenced WFC, it only measured one direction of guilt experienced (work interfering with family). In addition, their findings proved a little startling, suggesting that individuals who experience more guilt actually had *higher* life satisfaction. These findings deserve further scrutiny in order to adequately address the seemingly counterintuitive results and to ensure such conclusions are not sample specific artifacts.

These studies suggest that guilt can be experienced in relation to both FIW and WIF. Although Hochwarter et al (2007) assumed that individuals would be more likely to experience guilt in the WIF direction (indeed, that is the only direction they measured), Livingston and Judge (2008) found that guilt was significantly related to both directions of WFC. None of the studies divided WFC into component parts of time, strain or behavior based conflict, so any unique relationships between those facets are unknown. It is likely that all facets are related to guilt, although there may be stronger relationships for some than others.

Hypothesis 1a: Individuals who experience more FIW (stress, time and behavior-based) will experience more FIW guilt.

Hypothesis 1b. Individual who experience more WIF (stress, time and behavior-based) will experience more WIF guilt.

Worry (Anxiety)

Like guilt, the study of worry and anxiety is broad and varied. Most research on anxiety is couched in clinical terms, such that too much worry is a disordered and mentally unhealthy state. Such clinically high levels of worry are termed Generalized Anxiety Disorder (GAD) and are considered a documented mental health disorder in the DSM-IV. GAD has been linked to a variety of negative outcomes such as social withdrawal, depression, alcoholism, and suicide (Yates, 2007). GAD is, in fact, considered a negative outcome in and of itself due to its negative impact on an individual's ability to function in a normal manner (Yates, 2007). Although important in the study of mental health, this extreme type of worry and anxiety will not be the focus of this paper. Instead, it is necessary to define worry as a non-disordered, discrete emotion similar to guilt, anger and frustration.

While the majority of the literature focuses on clinical levels of anxiety and tends to loosely define the "worries" that contribute to GAD, there is a subset of the literature that focuses on discrete worry as a normal, non-disordered response to situations. In its basic form, worry can be understood as a cognitive reaction of a series of negative thoughts in response to an event or situation (Borkovec, Robinson, Pruzinsky, & DePree, 1983; Sugiura, 2007). This series of thoughts is generally conceptualized as uncontrollable, although ways of coping with excessive worry have been developed in clinical research (e.g. Hunt, Wisocki & Yanko, 2003; Myers, 1998). Santanello and Gardner (2007) refine this idea of worry further, stating that worry is "triggered by the perceptions of a threat, is an effort to problem solve or discern how to cope with negative events" (p. 321). Worry also contains an element

of heightened arousal such that the individual feels "antsy" or "keyed up" (Larson, Nitschke, & Davidson, 2007).

While several definitions incorporate a negative event as a trigger for worry, it is important to note that worry can occur in the absence of a specific event. Indeed, individuals can worry about feared possibilities. Borkovec and Roemer (1995) conducted a study that examined sorts of things individuals generally worry about. They discovered that worry was used as a means to think about how to avoid future problems or feared events. While this future orientation is interesting, it does not appear to be necessary for worry, with individuals being capable of worrying about actual past events as well as hypothetical future ones. Because this paper examines worry in connection with discrete events of work-family conflict, we will focus on worry as a reaction to a specific event.

For the purposes of this paper, I propose to define worry as *a series of negative thoughts triggered in reaction to an event or situation that the individual defines as threatening and results in increased arousal.* The event or situation that triggers the negative thoughts can be internal or external.

Like guilt, Higgins' self-discrepancy theory explicitly identifies anxiety as an "agitation-type" emotion that results from actual/ought discrepancies. The research on self-discrepancy theory shows the trend that anxiety is uniquely related to actual/ought rather than actual/ideal discrepancies (Higgins, Shah & Friedman, 1997; Roney & Sorrentino, 1995; Scott & O'Hara, 1993). Following the conceptualization of WFC as an actual/ought discrepancy, it stands to reason that anxiety in the form of targeted worries would occur in response to WFC.

Although non-clinical levels of worry have not been explicitly studied in the WFC literature, GAD has been examined. Frone, Russell and Cooper (1992b) conducted a study that examined the longitudinal relationship between higher levels of WFC and clinical levels

of worry and discovered that those who experienced more WFC later exhibited more cases of GAD. Although the researchers did not specifically measure discrete worries about WFC, such findings seem to indicate that increased worry is a consequence of conflict.

Research on self-perceptions of in-role performance would back up this contention. Although worry has been infrequently addressed in the WFC literature, it is often the topic of family research. Numerous studies have examined parental worries about child emotional, social and academic progress and also over the parent's own perceived success or failure as a "good parent" (Stickler, Salter, Broughton & Alario, 1991; Measelle, Ablow, Cowan and Cowan, 1998). Because all three types of work-interfering-with-family conflict (i.e. time-, strain-, and behavior-based) could easily call into doubt the individual's perceptions of their "success" within the family role, it stands to reason that worry would result.

Although worry is not generally examined in the work context, the basic logic still stands. Just as an individual can hold concerns about his/her success as a "good parent", he/she can hold concerns about his/her success as a "good employee". In this case, it is possible that family-interference-with-work conflict could be one source of these worries about competency and concerns about possible failure within the role.

These research findings suggest that it is reasonable to suppose that worry is experienced in response to both WIF and FIW forms of conflict. Because no prior research has been conducted on worry as having a specific relationship with WFC, there is no way to tell if the specific facets of behavior, strain or time based conflict would have differential relationships with worry.

Conceptually, it is easy to see how all three types and each direction of WFC could be related to worry. For example, if an individual has to miss her child's soccer game to attend a work meeting, she might feel worried about her competencies as a mother and how her family will react to her absence. Likewise, the worry can occur in the opposite direction,

where if the individual chose to attend the soccer game instead of the meeting, she may feel worried about being an inadequate employee or being perceived as such by coworkers and supervisors. Similar arguments can be made for strain based WFC. An individual who is unable to contribute to his family in the evening after a particularly stressful day at work may worry about his inability to fulfill his responsibilities as partner and father. In the other direction, a worker who is feeling stress from family problems may worry about his competencies at work. Finally, behavior based conflict can also fit in the worry framework. When an individual engages in a behavior at home that works on the job, such as being overly stern with a young child, she may feel worried about her impact on her family or her competencies as a mother. At work, if the individual is overly cajoling with a coworker, a behavior that is functional at home, she may worry about her inability to behave appropriately or what her coworkers may think of her. Therefore, it is likely that all three facets of WFC will be positively related to worry.

Hypothesis 2a: Individuals who experience more FIW (stress, time and behavior-based) will experience more FIW worry.

Hypothesis 2b: Individuals who experience more WIF (stress, time and behavior--based) will experience more WIF worry.

Anger

The emotion literature has often defined anger as a bookend to guilt, such that guilt results from feelings of self-blame whereas anger results from feelings of other-blame (e.g. Smith & Lazarus, 1993). In line with the majority of research on anger, Smith, Haynes, Lazarus and Pope (1993) posited a model of anger in which an individual appraises an unpleasant situation as having an external locus of control such that the negative experience

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is someone else's "fault". Their model of guilt is similar, excepting that the locus of control is internal, such that negative experiences are one's own "fault". If we accept this definition, there is little theoretical basis to include a measure of anger in relation to work-family conflict. In SDT, the negative emotional responses to actual/ought self-discrepancies arise due to negative self-appraisals. Thus emotions stemming from other-appraisals would seem irrelevant.

Although the majority of theoretical research on anger continues to make the "other-blame" distinction, empirical work on anger reveals that the ways individuals experience the emotion of anger are not so cut and dried. In a study of emotional reactions to social criticism, Gilbert and Miles (2000) found that contrary to theoretical definitions of anger, "blaming self" was related to increased anger proneness and hostile attitudes but "blaming others" was not. This context may be especially relevant when considering actual/ought self-discrepancies in WFC due to the potential for feelings of self-criticism in failing to fulfill obligations.

Other studies have also found a similar trend in anger experiences in response to self-blame. Kulik and Brown (1979) found that when individuals appraised situations as other thwarting such that other people were responsible for negative outcomes, they responded in the predicted manner with other directed anger. When individuals appraised situations as self-caused thwarting such that their own actions were responsible for negative outcomes, they experienced anger as well, although this was self-directed anger. Parkinson (1999) also found a similar response, showing that people did indeed respond with anger to situations they defined as self-blaming.

These studies suggest that an external locus of control is not necessary for an experience of anger. Indeed, it would appear that individuals can experience anger in much the same situations that may inspire guilt in other people. Although not traditionally

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considered in SDT research, it would appear that anger could also be considered an agitation-type negative emotion and thus be related to actual/ought discrepancies.

When attempting to understand the exact definition of anger, the differences between theoretical development and empirical findings muddy the waters. For the purposes of this paper, anger will be considered in its self-referenced form. In order to further understand the definition of anger and how it is distinct from other negative emotions, I will now briefly turn to the appraisal literature on emotions.

As mentioned above, anger is usually conceptualized as resulting from an appraisal of "other-blame" in a negative situation, but in order to fully understand this concept, it is necessary to look at other appraisals that are relevant to the experience of anger. In a study that attempted to find specific and necessary appraisal conditions for the experience of anger, Kuppens, Van Mechelen, Smits and De Boeck (2003) looked at four situation appraisal types that contributed to feelings of anger. These appraisal types were 1) goal obstacle, where an individual feels his/her progress towards a goal is impeded, 2) other accountability, where an individual blames another for a negative situation, 3) control, where the individual believes that he/she or another person had control over a situation, and 4) unfairness, where the individual believes that the negative situation was unfair in some way. All four of these appraisal heuristics were found to be related to experiences of anger, but no single one was necessary or sufficient for experiencing anger. In addition to providing further support for the idea that appraisals of other blame are not necessary to experience anger, this study highlights other potential causes of anger that are more relevant to the study of work-family conflict. In the context of this study, the goal obstacle, control and unfairness appraisals may all be theoretically relevant when considering individual appraisal of work-family conflict situations.

Taking into account the Kuppens et al (2003) appraisal work, I will define anger as *a negative evaluation of a situation that one believes to be unfair, controllable, or goal impeding or a combination of the three.* This evaluation can be externally or internally based, although in this context it is most likely to be self-referenced. Like guilt, this emotion can be felt in response to things done or not done.

As for the treatment of anger in the WFC literature, there has been only one study that directly examines hostility (an attitudinal variation of anger) and it is described above in the section on guilt. In addition to looking at guilt, Judge, Ilies and Scott (2006) also looked at the construct of "hostility", finding both family to work conflict and work to family conflict were related to higher levels of hostility in the targeted domain. The methodological limitations mentioned above also apply to the measures of hostility, so further work is needed to clarify the precise relationship between hostility and WFC.

A few other studies exist that less explicitly examine anger or hostility in the context of work-family conflict. Studies by Haines, Marchand and Harvey (2006) and Matjasko and Feldman (2006) examine emotional crossover effects between marital partners. Both studies refer to anger or hostility as emotions that can be experienced in the work domain and then bleed over to family relationships. Although not explicitly linking anger emotions to work-family conflict, these studies show the rationale in considering anger in relation to work-family conflict.

The single WFC study on anger by Judge, Ilies and Scott (2006) suggests that people are likely to endorse feelings of anger in relation to both WIF and FIW. While they did not divide their results specifically by facet, there is little basis to presuppose that time-based, strain-based or behavior-based conflict would function differently with regard to anger. All facets are likely to be related to experiences of anger. For example, an individual who experiences a time conflict between work and family may feel angry at himself for being

unable to adequately balance work and family time responsibilities or arrange a functional schedule. An individual who experiences strain-based conflict may be angry at herself for her perceived inability to balance competing stressful demands, or she may be angry at the domain causing the stress (her family or her coworkers). For behavior-based conflict, the relationship to anger is less clear. It is conceivable that an individual could feel internalized anger at being unable to behave appropriately in specific roles, but this relationship may be less likely that the other facets. Therefore, the relationships between the types of conflict might be of different strengths such that anger is experienced more often in response to one than another type of conflict.

Hypothesis 3a: Individuals who experience more FIW (stress, time and behavior-based) will experience more FIW anger.

Hypothesis 3b: Individuals who experience more WIF (stress, time and behavior-based) will experience more WIF anger.

Frustration

Frustration, like anger, is not explicitly linked to SDT, although its theoretical connection to "agitation" type emotions is obvious. The inclusion of frustration as a discrete emotion in this study needs explanation because most theories of frustration define it as a component of anger and not a specific emotion per se (e.g. Kuppens, Van Kenworthy, Canales, Weaver & Miller, 2003; Mechelen, Smits, De Boeck, & Ceulemans, 2007). Although often theorized as a condition of anger, research has shown that frustration is neither a necessary or sufficient condition for anger, and that feelings of frustration can occur without feelings of anger (Clore & Centerbar, 2004; Roseman, Spindel & Jose, 1990). Using

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these findings, I will treat frustration as a discrete emotion that can be related to but is ultimately fundamentally different than anger.

Extant research on frustration is mostly tied to specific scenarios in which individuals are "frustrated" in the pursuit of carefully prescribed goals such that they do not receive expected or promised rewards for their behaviors (e.g. Anderson & Bushman, 2002; Kuppens & Van Mechelen, 2007). This research base has led to a relatively simple and well-received definition. As Anderson and Bushman (2002) put it "frustration can be defined as the blockage of goal attainment" (p. 37).

Similarly to anger, frustration is often defined as having an external locus of control, such that an individual is often frustrated by an external event or person (Fox & Spector, 1999). Unlike anger, frustration can conceptually more easily occur in conditions where there is no clear indication of situational control or blame. It is easy to imagine a situation in which a person becomes frustrated while learning a new computer software because he/she is failing to master the task as quickly and easily as hoped. This situation is not due to someone else's action or to a controllable circumstance. In cases such as these, it may be more reasonable to view frustration as having an internal locus of control, such that an individual can be frustrated with his/her own performance or failure to obtain a desired goal.

Due to these considerations, I propose the following definition of frustration. Frustration is defined as a *negative emotional reaction to set of events or circumstances that one believes to be blocking his/her attainment of a desired goal.* The source of goal blocking can have either an external or internal locus of control.

It is important to note that although the definition of anger includes a facet that includes goal impediment, anger and frustration are considered distinct emotions. Goal impediment and frustration does not always lead to anger and anger can exist without goal impediment (Roseman, Spindel & Jose, 1990). Although similar, it is clear that these

emotions can be experienced separately, and thus warrant attention and examination in their own rights.

In the case of SDT and work-family conflict, goals can be described as domain specific such that they are either work or family referenced. When work and family goals come into conflict, the individual experiences a "blocking" of fulfilling or reaching one of the goals. This results in a perception of self-discrepancy due to the individual's inability to fulfill a perceived obligation in one of the roles.

Although much of the frustration literature uses very specific goals in describing frustration, it is likely that in the context of work-family conflict that these goals might be more broad. For instance, an individual might hold two simultaneous goals of "being a dependable and responsible worker" and "being a caring and supportive parent". A situation in which this individual must choose whether to attend an important work meeting or watch his/her child perform in a soccer game would lead to the blocking of one of these goals. If this individual chooses to attend the meeting, the goal of "being a caring and supportive parent" might be perceived as blocked, resulting in frustration.

Most frustration research focuses on contexts of performance rather than social or relational contexts and it has never been explicitly studied in relation to either SDT or WFC. One study conducted by Kuppens and van Mechelen (2007) has looked explicitly at the relationship between frustration, anger and affiliative and achievement goals. In addition to providing further support that anger and frustration can have unique relationships to other constructs, this study showed that for women in particular frustration occurred in both affiliative and achievement contexts. This shows that people can and do experience frustration in relation to social and relational contexts, which supports the study of frustration in this paper. It also highlights a potentially important sex difference in how men and women experience frustration. Because WFC can be conceptualized as a conflict between highly

affiliative roles, especially family, these differential findings have potential to inform how and why different people may respond to WFC.

Because no research has yet looked at the role of frustration as an emotional reaction to WFC, the proposed relationship is exploratory. Within the framework of SDT, WFC is conceptualized as the failure to adequately meet felt obligations. These obligations can exist towards both work and family and can be understood as goals of desired behavior in each role. As frustration is defined as a reaction to goal impediments, it stands to reason that an individual could experience frustration in response to both WIF and FIW directions. In addition, within the context of WFC, these goals could be defined as either time based, strain based or behavior based. For example, an individual might have a goal to attend all of his child's soccer games and also a goal of performing well at a meeting scheduled at the same time as the soccer game. Regardless of which event the individual chooses, one goal will be blocked, which could result in frustration. The same can be said for strain-based conflict. An individual may have a goal to be emotionally present during evening family time, but the demands of their job may leave them so stressed out that they fail to reach this goal. This also stands for behavior-based conflict. An individual might have a goal of appropriate behavior at work, and experiences goal blockage when they realize the behavior appropriate at home is inappropriate at work. Therefore, it is likely that individuals can and would experience frustration in relation to time-, strain- and behavior-based conflict.

Hypothesis 4a: Individuals who experience more FIW (stress, time and behavior-based) will experience more FIW frustration.

Hypothesis 4b: Individuals who experience more WIF (stress, time and behavior-based) will experience more WIF frustration.

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Work and Family Importance

Experiences of negative emotions may be moderated by certain individual differences in the importance placed on work and family roles. The work-family conflict research reveals that role importance affects the extremity with which individuals experience negative outcomes. Carlson and Kacmar (2000) found that when high importance was placed on the family, antecedents from the work domain were more important in determining conflict. Likewise, they found that when high importance was placed on the work role, antecedents from the family domain were more important in determining conflict. Greenhaus, Parasuraman, Granrose, Rabinowitz and Beutell (1989) also found the importance of the work role to impact experiences of conflict for both men and women.

It is important to note that high family and high work role importance are not mutually exclusive constructs. Indeed, it is possible that both of these roles are highly valued at the same time. This dual importance can have important implications. Carlson Kacmar (2000) found that individuals that highly valued both roles had highly related job and life satisfaction variables as compared to their more stratified counterparts.

Because guilt is defined as a reaction to a perceived failure to meet moral standards, people who place more importance on certain roles may be more likely to assign moral value to those roles. This may impact their likelihood to experience guilt as a reaction to different directionalities of conflict. Worry is defined as negative thoughts triggered by an event defined as threatening. Individuals who place more importance on certain roles may feel more events are threatening to their abilities to perform competently in that role. Anger is defined as a reaction to unfair, controllable or goal impeding events, so people who place more importance in certain roles may be more likely to develop clear notions of fairness or numerous goals in these roles. This may impact their likelihood to experience anger as a reaction to different directionalities of conflict. Finally, frustration may also be moderated by

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individual differences in the importance placed on work and family roles. Depending on the importance of the role, an individual can have differing numbers of goals and these goals can be differently salient. A person who places more importance on work roles, for example, may be more likely to have a greater number of specific goals for performance and behavior at work. These goals may also be more salient for a person who places great importance on work as opposed to someone who places less importance on work. See Figure 2 for graphs of these proposed relationships.

Hypothesis 5: The relationship between FIW and all FIW emotions will be moderated by work importance, such that individuals who place greater importance on their work will be more likely to experience the negative FIW emotions

Hypothesis 6: The relationship between WIF and WIF emotions will be moderated by family importance, such that individuals who place greater importance on their family will be more likely to experience the negative WIF emotions.

Figure 2: Proposed moderation relationship of job and family importance

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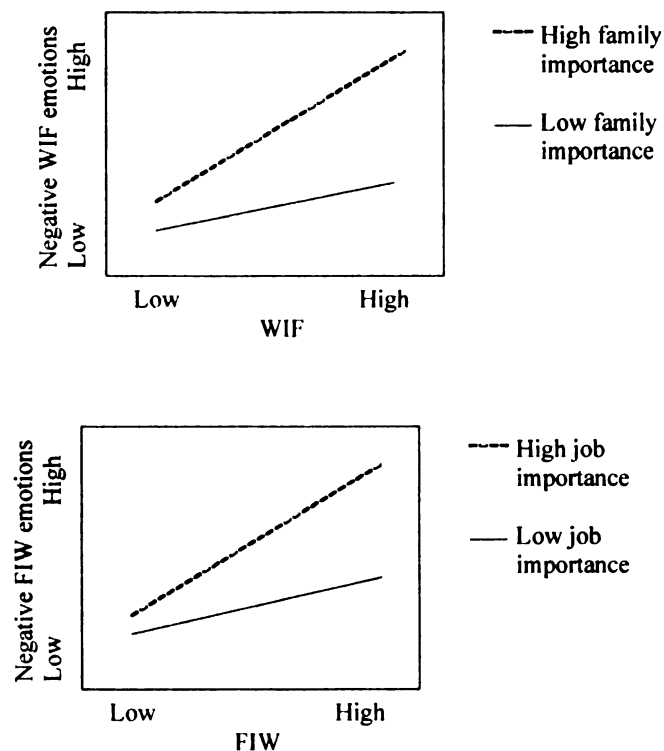
Gender Differences

The field of WFC has often been implicitly and explicitly linked to gender differences. Indeed, the entire concept of work-family conflict gained more prominence and attention as more and more women were joining the workforce and adding on the role of employee to that of family member (Bureau of Labor Statistics, 2008). Although this gender distinction is often interpreted as indicating that women experience more WFC as compared to their male colleagues, research on WFC has failed to indicate consistent and clear gender differences.

One recent meta-analysis conducted by Ford, Heinen, and Langkamer (2007) examined gender as a moderator of work-interfering-with-family and family-interfering-with-work effects and found no significant differences. Another literature review of the WFC literature conducted by Eby, Casper, Lockwood, Bordeaux and Brinley (2005) found mixed results in the literature regarding frequency of WFC as experienced by men and women. They reported that the majority of studies had found no significant differences between men and women in regard to the amount of WFC experienced. These findings indicate that that although often hypothesized, current research provides little evidence to support that women and men experience different levels of WFC.

Although men and women may not experience different amounts of WFC, one study suggests men and women may experience the work and family domains differently. Duxbury and Higgins (1991) found gender differences in work and family involvement. Specifically, they found that work involvement was a stronger predictor of WFC in women than in men and family involvement was a stronger predictor of WFC in men than in women. This finding may have some important implications for this study. Although men and women may both be involved in work and family experiences, the may be differently involved in

each domain, perhaps leading to differences in experiences of WFC. While this study explored antecedents of work and family involvement, it highlights how experiences of variables such as involvement may have differential effects on men and women and may in turn relate to WFC. It stands to reason, therefore, that men and women might display differences in how they emotionally react to different types of conflict.

The research on sex differences in emotions has a similar disconnect between what is theorized and what is revealed through empirical research. Although researchers often theorize relatively strong and enduring gender differences in different kinds of emotions, a look at the data shows that these differences are often insignificant, minor or occur in circumscribed situations (e.g. Livingston & Judge, 2008; Silvfer & Helkama, 2007). In order to more closely examine proposed gender differences in emotions, I will look at each of the emotions highlighted above in further detail.

Guilt. Theoretical gender differences arguments for emotions such as guilt and worry generally center around the idea that women experience these emotions more often than men. This standpoint is argued by asserting that women are more internalizing than men, and men are more externalizing than women (Garside & Klimes-Dougan, 2004). In this case, the emotions of guilt and anxiety can be conceptualized as internalized emotions whereas emotions such as anger and frustration can be conceptualized as externalized emotions. These differences might suggest that men and women experience these emotions with different frequencies. The empirical literature on the subject is far from conclusive, however.

Guilt is the only emotion explicitly studied in the context of WFC and gender differences. Livingston and Judge (2008) examined gender differences in experience of guilt and related it to work-interfering-with-family conflict and family-interfering-with-work conflict. They found that while gender in general was unrelated to experiences of guilt in relation to WFC, gender role was related. They defined gender role orientation as the extent
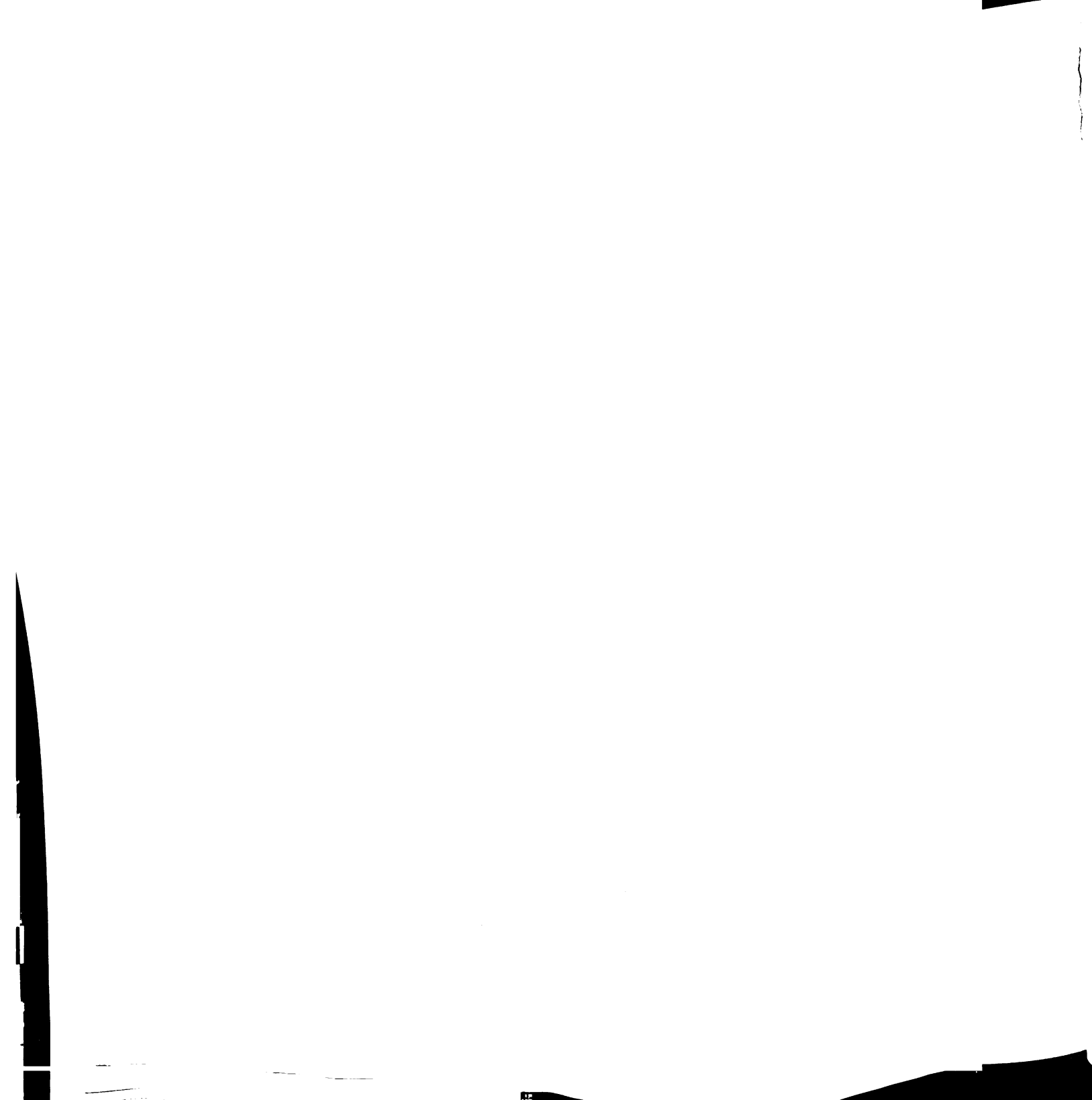
to which both men and women ascribed to traditional gender roles in which men are seen as the breadwinners and women are seen as the family caretakers. Individuals who scored lower on traditional gender role orientation viewed the roles of men and women within a family as more egalitarian. Livingston and Judge (2008) measured both egalitarian and traditional gender role orientation for both men and women and discovered that individuals who ascribed to more traditional gender role orientations experience more guilt from FIW and individuals who ascribed to more egalitarian gender role orientations experience more guilt from WIF. These findings were true of both sexes.

As for gender differences in guilt in general, the findings are muddied. Although there is some evidence that women report higher levels of moral emotions such as empathy, guilt and shame (e.g. Tangney & Dearing, 2002), Silfver and Helkama (2007) recently pointed out that these gender differences seem to be unusually dependent on the measure used to assess guilt. Specifically, the measures tend to use examples and wording that may be more salient to women and thus the measures themselves may be artificially inflating the gender differences in those emotions. Because the measure utilized in this study does not contain gendered items, I do not expect differences between men and women in experiences of guilt.

Worry. Research on worry is similarly muddied. A meta-analysis conducted by Feingold (1994) found that while women appear to score slightly higher on levels of trait anxiety, there were no gender differences in levels of social anxiety. A literature review conducted by Simonds and Whiffen (2003) revealed a more distinct difference in anxiety levels between men and women. They showed that women experience more anxiety than do men. Even considering the possible gender differences in these studies, it is important to keep in mind that in the context of the present study, I am looking at discretely triggered emotions rather than general states. These differences may not be applicable in this case.

Because there is a dearth of literature on differences in worry or anxiety in response to specific events, it is difficult to speculate what gender differences might exist. Following past research which states that women are more likely to experience higher trait-like anxiety then men, we might suppose that women would be more likely to endorse worry responses to WFC. Therefore, I hypothesize that there will be gender differences in experiences of WFC worry.

Hypothesis 7a: Gender will moderate the relationship between FIW and FIW worry such that women will be more likely to experience FIW worry then men.

Hypothesis 7b: Gender will moderate the relationship between WIF and WIF worry such that women will be more likely to experience WIF worry than men.

Anger: Anger particularly seems to be an emotion that is often associated with higher prevalence among men. This supposition is most likely due to the gender differences that appear in specific behaviors thought to be the result of anger—namely aggression. A recent meta-analysis by Archer (2004) indicated that there are significant and robust gender differences in prevalence and type of aggressive behaviors individuals engage in. A measure of anger, however, displayed no gender differences. This suggests that men and women might experience similar levels and frequencies of anger but they display it in different ways. These findings were corroborated by another meta-analysis (Campbell, 2006), which again showed no gender differences in anger.

Because this paper focuses on the experience of anger as referenced by a specific conflict event and not on resultant behaviors triggered by that anger, it would appear that gender differences are unlikely to exist in frequency or likelihood of experienced anger as a response to WFC.

Frustration: Frustration as a discrete emotion has been less frequently studied than the other emotions discussed in this paper. Therefore, there is even less information on how men and women might differ in their experiences of this emotion. The studies that exist suggest that there might be some gender differences that seem to fall along the lines of the externalizing literature (Kuppens & Van Mechelen, 2007). That is, it would appear that men might experience more frustration in response to specific events.

The study mentioned above by Kuppens and van Mechelen (2007) is one study that looks at frustration as a potentially gendered construct. They show that frustration is experienced differently by women and men, such that women experience frustration in both affiliative and achievement contexts, whereas men experience frustration primarily in achievement contexts only. This may indicate a possible gender difference in experienced frustration as a result of WFC. Although both work and family realms likely have elements of affiliative goals, it would seem more likely that family roles lack clear achievement goals whereas work likely encompasses more of these. This might suggest that women would respond with equal amounts of frustration to both WIF and FIW situations whereas men may experience more frustration in the FIW direction because the achievement goals of work might be disrupted by family demands.

Hypothesis 8: Gender will moderate the relationship between FIW and FIW frustration such that men will be more likely to experience FIW frustration than women.

Job and Life Satisfaction

Although the main goal of the research is to more fully understand the emotional landscape of WFC, the next step in research is to link the WFC related negative emotions to

important outcomes. Two outcomes that have been frequently studied in the WFC literature are those of job and life satisfaction.

Job Satisfaction:

There is quite a large literature on the importance of job satisfaction on many organizationally relevant outcomes, such as decreased performance, higher turnover intentions and less organizational commitment (Harrison, Newman, & Roth, 2006). Targeted work family conflict research has looked at these more down stream outcomes as related to conflict as well. The general finding is that those who experience more work interference with family conflict experience less commitment to the organization as manifested in higher turnover intentions, more absenteeism, and more leaving work early (Boyar, Maertz, Pearson, & Keough, 2003; Boyar, Maertz, & Pearson, 2005).

The theoretical framework for the relationship of work-family conflict to job satisfaction is as follows: if work interferes with family, this leads to a change in satisfaction with work, such that the higher the WIF conflict, the lower the work satisfaction. Grandey, Cordeiro and Crouter (2005) found that higher levels of WIF were related with lower job satisfaction. They found that WIF conflict predicted a change in work satisfaction from time one to time two in a longitudinal study. There are several other studies that also show that job satisfaction and WIF conflict are intertwined and related to each other (e.g. Greenhaus, Parasuraman, & Collins, 2001; Huang, Hammer, Neal & Perrin, 2004; Adams, King, & King, 1996).

Job satisfaction has also been linked to emotion variables. The emotional labor literature often considers job satisfaction in its studies and finds that increased surface acting is related to decreased job satisfaction (e.g. Liu, Prati, Perrewe & Ferris, 2008). Other affective variables such as mood and affectivity have also been linked to job satisfaction. Payne and Morrison (2002) examined the role of negative affectivity in job variables and
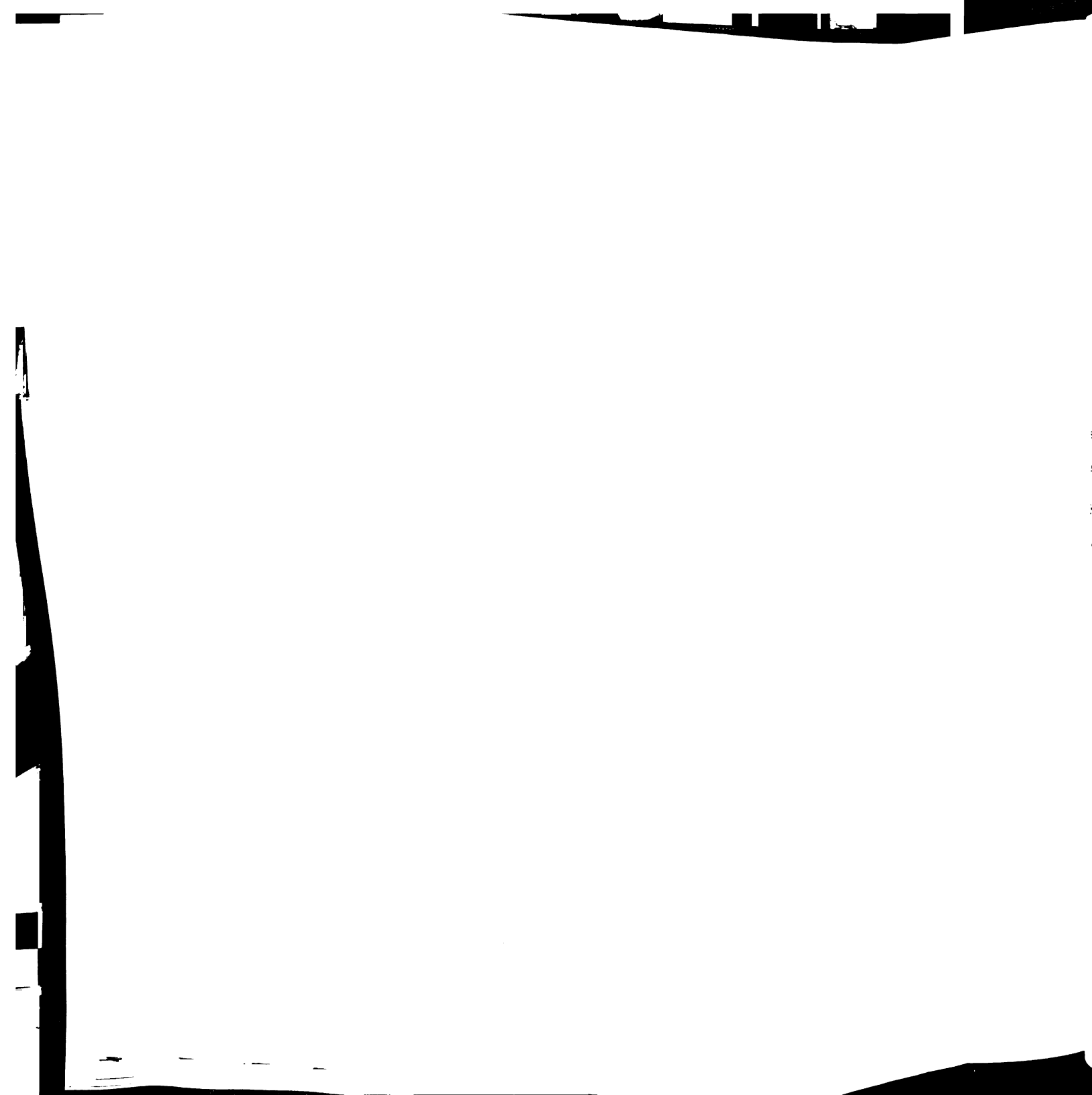
found that it is related to decreased job satisfaction and commitment. Judge and Ilies (2004) examined the effects of mood states on job satisfaction and also found a relationship between the two, although this relationship was bidirectional and decreased over time. Affective events theory (Weiss & Cropanzano, 1996) also consistently links negative emotions experienced in regard to work events to decreased job satisfaction (e.g. Grandey, Tam & Brauburger, 2002). These types of studies show that greater negatively emotionally valenced events impact an individual's satisfaction with his/her job.

Both the WFC literatures and the emotion literatures show links to job satisfaction. Therefore, a measure that assesses emotional responses to WFC is likely to be related to job satisfaction as well. WIF is considered especially important with regard to job satisfaction. Although there is research linking general negative affect to job satisfaction, no studies have yet been done to assess individual emotional links. Therefore, it is impossible to predict if one type of emotion is more likely to be linked to job satisfaction than others. Therefore, the prediction for this study is that all the negative WIF emotions will be negatively related to job satisfaction.

Hypothesis 9: Individuals who experience more WIF related negative emotions will experience decreased job satisfaction.

Life Satisfaction.

Life satisfaction has also been linked to a variety of organizationally and personally important outcomes. Individuals with decreased life satisfaction are more likely to present with physical and mental health problems, such as increased somatic complaints and increased depression (Goldberg & Harrow, 2005; Riddick, 1985). Although the association is weaker than for job satisfaction, individuals with decreased life satisfaction are also more likely to be absent or turnover from organizations (Schoenfelt & Battista, 2004).

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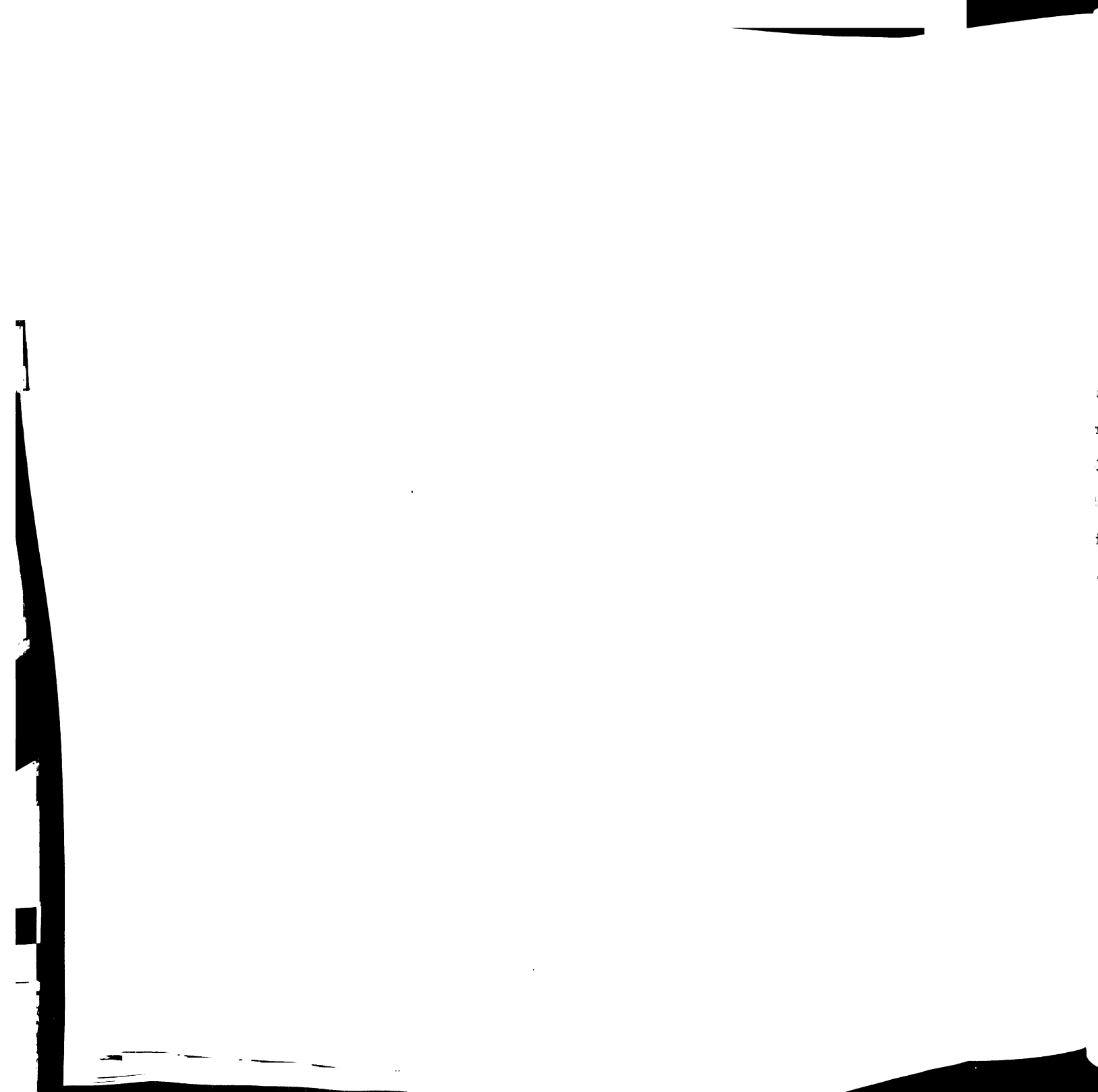
In the WFC literature, higher levels of WFC have been linked to decreased life satisfaction (Ford et al, 2007). Because life satisfaction measures generally assess satisfaction with life in general, which includes both work and family domains, both WIF and FIW have been found to relate to decreased life satisfaction. Therefore, both directions should be considered with regard to life satisfaction.

Emotional variables have also been linked to decreased life satisfaction. Negative emotional events from all realms of life, including work (e.g. Blachburn, Horowitz, Edington & Klos, 1986) and personal (Lansrey-Meyer, Gerard, & Guzell, 2005), contribute to decreased satisfaction with life. This relationship may not hold for all emotions, however. In the single study that directly examines guilt as it relates to WFC, Livingston and Judge (2008) found that individuals who experienced more guilt related to WFC also reported more life satisfaction. Livingston and Judge explain this seemingly contradictory finding through the potential regulatory power of guilt. Guilt may be felt as a means to redirect the attention of the individual at the realm of life inspiring that guilt to focus more personal attention on this realm. This may in turn regulate the individual's behavior such that he/she attempts to rectify the action that caused the guilt and thus repair the potential damage from that action. This could lead, over time, to a regulatory system that uses guilt as a cue to the individual to focus on and maintain good relationships in important areas of his/her life. Due to this finding, WFC guilt is not hypothesized to relate to life satisfaction.

Because the other emotion variables being studied in the project have not been explicitly studied with regard to WFC, the hypothesized relationships are such that they align with the other negative emotion research in the area of life satisfaction.

> *Hypothesis 10:* Individuals who experience more WFC related worry, frustration or
>
> anger (regardless of direction) will experience decreased life satisfaction.

Methods

Sample

A sample of adult, non-student workers was solicited for their participation. Following the lead of other researchers in the work-family literature (see Casper, Eby, Bordeaux, Lockwood & Lambert, 2007 for a review of methods in work-family research), only individuals who work at least part-time and have a spouse, a child, or both were included in the study. This is due to the wording of many of the measurement items that may be less relevant in measuring work-life conflict of working adults without spouses or children. The survey was administered online and was confidential. Participant emails and names were obtained so that they could be compensated with a $10 gift certificate for their time. See Appendix A for a copy of the online consent form.

Sample procurement occurred in three waves. For the first wave, parents of children who attended a local school were solicited. A small advertisement was placed in the school newsletter that was distributed to all parents of the school. Interested parents were instructed to go to the online survey website and fill out the survey. See Appendix B for this recruitment advertisement.

For the second wave, various email list serves that were likely to target working adults with a spouse, a child or both were employed. An initial email solicitation was sent out the a list serve that is comprised by individuals at a large Midwestern university who have stated prior interest in keeping abreast of news having to do with work and family issues. A solicitation email was sent out with the survey website address and information about compensation and study participation requirements. Some participants offered to cross post this solicitation email on other list serves they belonged to, which resulted in participation from individuals beyond the original list serve. This wave of participant

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procurement was quite successful and resulted in 256 responses. See Appendix C for the recruitment email.

Upon reviewing the surveys completed to this point, it became apparent that many people either did not qualify to complete the survey (e.g. they did not work or did not have a spouse and/or a child) or they did not finish it. In addition, in order to test the hypothesized gender effects, it would be necessary to have a sample that was at least one-third men. Up to this point, participants had been a majority female.

The third wave of participant solicitation specifically targeted male participants. An additional email solicitation was sent to an alumni list serve with the specific request for male participants. This targeted solicitation proved effective and garnered an additional 115 participants. See Appendix D for this recruitment email.

Participants

A total of 385 participants were qualified to fill out the survey (e.g. they were married, parents or both and also worked at least 20 hours per week). These individuals all began the study, but due to drop out rate, usable data decreased as the survey progressed. The first complete measure assessed WFC negative emotions. Because the measure is utilized extensively in factor development and subsequent analyses, individuals who did not progress far enough to complete this measure were deleted from the data set. This resulted in a total of 347 participants. Please see Table 3 for complete demographics by survey recruitment wave.

Table 3
Descriptive Information for Demographic Variables

Demographic Variables	N	Minimum	Maximum	Mean	SD
Gender	333	0	1	.41	.49
Age	333	22	64	39.25	9.33
Education	334	1	6	4.96	1.16
Race	332	0	1	.92	.27
Work hours	334	1	4	2.64	.87
Work schedule	329	0	1	.14	.35
Marital Status	334	0	1	.07	.26
Parental Status	328	0	1	.85	.35
Children at home	333	0	5	1.45	1.09
Age of child at home	256	0	30	8.45	6.45

Notes: Gender is coded 0=women, 1=men; Education is coded 1= some high school, 2 = high school diploma, 3 = some college, 4 = college diploma, 5= some graduate school, 6=graduate degree; Race is coded 0=Not-White, 1= White; Work schedule is coded 0=day shift, 1= other shifts; Marital status is coded 0=married, 1= not married; Parental status is coded 0= has children, 1= does not have children; Age of children at home is averaged across children for individuals with multiple children at home

Measures

The measures were presented in the order they appear below.

Work-family Conflict Negative Affect: A new scale was created for this study of WFC related negative affect. Each directionality (work interference with family and family interference with work) and each type (time-based, strain-based and behavior-based) are crossed to result in six prompts. These prompts encouraged participants to think of times when work-family conflict occurred in the specific context of these directionalities and types.

Then the participant is asked to respond to a series of 8 questions that assess four specific types of negative affect: guilt, anger, frustration and worry. In order to assure a broad construct coverage, this measure was initially designed to assess WFC emotions targeted at both the self and others. Part of this was to ensure that the traditionally externally referenced emotions (anger and frustration) had adequate construct coverage. The extant literature suggested that these emotions could be and are felt in reference to the self as well as other people, but in order to be thorough, I included both reference points. Each emotion was described as either self-based (e.g. "I feel guilty for letting down myself, being unable to 'do it all'") or other-based (e.g. "I feel guilty for letting down my coworkers, supervisor or organization, being unable to 'pull my weight'"). This resulted in a total of 48 targeted questions. Responses to each item are anchored on a 5-point, Likert-type attitude scale ranging from *1 Never* to *5 Always or Almost Always*. This scale is reproduced in Appendix E. Specific scale development issues will be discussed below in the results section.

Work-Family Conflict: Work family conflict was measured with a 12 item scale developed by Carlson, Kacmar and Williams (2000). The full scale was utilized. This scale consists of three items measuring time-based work interference with family (e.g. "My work keeps me from my family activities more than I would like."), three items measuring time-based family interference with work (e.g. "I have to miss work activities due to the amount of time I must spend on family responsibilities"), three items measuring strain-based work interference with family (e.g. "When I get home from work I am often too frazzled to participate in family activities/responsibilities "), three items measuring strain-based family interference with work (e.g. "Due to stress at home I am often preoccupied with family matters at work"), three items measuring behavior-based work-interference with family (e.g. "The problem solving behaviors I use in my job are not effective in resolving problems at home"), and three items measuring behavior-based family interfering with work (e.g. "The

behaviors that work for me at home do not seem to be effective at work"). Each item is measured on a 5-point Likert-type attitude scale ranging from *1 strongly disagree* to *5 strongly agree*. Please see Appendix F for a reproduction of this measure.

Positive and Negative Affectivity: Positive and negative affectivity was measured as a control variable using the PANAS developed by Watson, Clark and Tellegan (1988). These items are measured on a 5-point attitude scale indicating the extent that a person generally feels the way described by a single emotion word. The 5-point scale ranges from *1 very slightly or not at all* to *5 extremely*. Example emotion words include "Enthusiastic", "Guilty" and "Inspired". Positive and negative affectivity was measured to examine intercorrelations between affectivity and the specific WFC negative emotions. Following advice from Spector, Zapf, Chen & Frese (2000), affectivity will not be controlled for in hypothesized regression equations. A more thorough explanation of this will be included in the hypothesis testing section. Please see Appendix G for a reproduction of the measure.

Career Importance: Career importance was measured through two subscales of the Life Roles Salience scale developed by Amatea, Cross, Clark and Bobby (1986). The two subscales that were used were the Occupation Role Reward Value subscale (ORRV), and the Occupational Role Commitment subscale (ORC). Example items include, from the Occupational Role Reward Value Subscale, "Having work/a career that is interesting and exciting to me is my most important life goal", and from the Occupational Role Commitment Subscale, "I expect to make as many sacrifices as necessary in order to advance my work/career". These items were assessed on a 5 point Likert-type scale ranging from *1 strongly disagree* to *5 strongly agree*. Please see Appendix H for a complete reproduction of this scale.

Family Importance: Family importance was measured through two subscales of the Life Roles Salience scale developed by Amatea, Cross, Clark and Bobby (1986). The Marital

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and Parental Role Reward Value Subscale (MRRV and PRRV) and the Marital and Parental Role Commitment Subscale (MRC and PRC) were utilized. The items of the Marital and Parental subscale were modified to indicate a general "family" referent as opposed to spouse or child specific items. Examples of items include, from Family Role Reward Value (FRRV) Subscale, "My life would be empty if I never had a family"; and from the Family Role Commitment (FRC) Subscale, "I expect to commit whatever time is necessary to making my family feel loved, supported and cared for". These items were assessed on a 5 point Likert-type scale ranging from *1 strongly disagree* to *5 strongly agree*. Please see Appendix I for a complete reproduction of this scale.

Although each of the family importance scales originally consisted of 5 items each, reliability analyses for the FRC scale revealed that one item was not functioning well with the other items of that scale. With the inclusion of this item, the alpha was on the low end of acceptable at .63. Removal of this item enhanced the alpha considerably, to .72. In order to maintain acceptable internal scale reliability, this item was excluded from further scale creation and analysis. Please see Appendix I for information on which item was removed.

Job Satisfaction: Job satisfaction was assessed through five questions developed by Brayfield and Rothe (1951). An example item is "I feel enthusiastic about my job." These items were assessed on a 5 point Likert-type scale ranging from *1 strongly disagree to 1 strongly agree*. Please see Appendix J for a reproduction of this scale.

Life Satisfaction: Life satisfaction was assessed through 5 items from a scale developed by Diener, Emmons, Larsen & Griffen (1985). An example item is "In most ways, my life is close to ideal". These items were assessed using a 5 point Likert-type scale ranging from *1- strongly disagree* to *5- strongly agree*. Please see Appendix K for a reproduction of this scale.

Demographics: The demographics assessed included individual characteristics, job characteristics and family characteristics. See Appendix L for a reproduction of the demographic items. The individual characteristics included gender, age, education, race and income. Gender was coded such that women were represented by "0" and men were represented by "1". Age is a continuous variable and thus did not need recoding. The education variable increased in numerical value as years of education increased, so higher numbers correspond to more education. As for the race variable, the sample was a large majority White/Non-Hispanic and there was low endorsement for particular ethnic subtypes. Due to this fact, the ethnic subgroups were collapsed and analyses were conducted using a dichotomous White/Non-white variable (White = 0, Minority/Multiethnic = 1). The income variable increases in numerical value as income level increased such that a higher number corresponds to greater income.

The job characteristics included work hours, work schedule and job type. Work hours were categorized as falling into hours worked outside the home per week (20-30 hours/week = 1; 31-40 hours/week = 2; 40-50 hours/week = 3; 50+ hours/week = 4). Because only individuals who worked at least part time were included in the survey, all participants worked outside the home for at least 20 hours per week. Work schedule assessed whether individuals worked a standard day shift, or had different work shift arrangements (e.g. night shift, afternoon shift, variable shifts). Because the majority of the sample worked a day shift, this variable was dichotomized into a day/non-day shift variable (Day shift = 0, Non-day shift = 1) for further analyses. Job type was reported qualitatively, with individuals entering their job title.

The family characteristics included marital status, parental status, number of children at home, and age of children. Marital status was assessed with four response possibilities. Because the majority of the sample was married and the other response possibilities were

infrequently endorsed, the other three categories were collapsed to create a dichotomous Married/Non-married variable (Married = 0, Non-married = 1). The age of children at home was individually reported, but these values were averaged. Number of children at home was a free response continuous variable.

Results

Sample Description.

Please see Table 3 for a description of the sample. This sample was selected for some work and family characteristics so it is not surprising that a high proportion of the sample is married or a parent. Also, the sample was selected for work status, and the majority of the sample worked over 30 hours a week, with a minimum of 20 hours of work outside the home per week. The sample was also unusually well educated, had high yearly income, and was mostly White. This suggests a sample of mostly professional, Caucasian, middle class individuals or relatively high socioeconomic status. Although his type of sample is not unusual for work-family conflict literature (see Eby et al, 2005), it limits generalizability to individuals in lower socioeconomic conditions and to non-White minority workers.

Measure Development- The WFC Emotions Scale

Self versus other reference: This measure assessed 6 types of WFC, four emotions nested within those type, and two referents (self and other), which resulted in 48 specific emotion-WFC relationships. The first step in the data analysis process was to determine if both the self and the other referents of the WFC emotion items should be retained for further analysis.

An exploratory factor analysis of all 48 items together was conducted as a first step toward considering whether to retain both types of referents. Using a maximum likelihood

estimation and Varimax rotation, a nine factor structure emerged. Please see Table 4 for the rotated factor matrix. Closer examination of the matrix revealed some trends in the data that might suggest that the self and other referenced items differ on a dimensional level. The self-referenced items are consistent in their wording such that individuals report that they experience the emotion with regard to their own perceived failures or weaknesses. The other referenced items, on the other hand, differ in how the other is referenced. For the internalizing emotions, individuals responded to each emotion with regard to feelings of "letting others down" while for the externalizing emotions individuals responded to each emotion with regard to feelings of anger or frustration *at* another person. This distinction could be important and is likely contributing to the factor structure. Because the self-referenced items have a rhetorical consistency that is not mirrored by the other referenced items, the will be retained for the bulk of the further analyses.

The distinction between self and other referenced emotions may still be important, however, and warrants further investigation. An exploratory factor analysis again using maximum likelihood estimation and Varimax rotation of just the other referenced items reveals an interesting factor structure. See Table 5 for the rotated factor matrix. For the other referenced items, it appears that all of the internalizing emotions factored on a single dimension. This suggests that individuals experience these emotions in regard to "letting others down" in similar ways. The factor structure for the externalizing emotions, however, is quite different. Although not completely free of cross loadings, the factor structure suggests that individuals tend to experience WIF externalizing emotions in similar ways and FIW externalizing emotions in similar ways. This may suggest that the target of the externalizing emotions (e.g. a coworker/boss or a family member) is important in the experience of externalizing emotions.

Table 4

Varimax Rotated Maximum Likelihood Factor Structure for All 48 WFC Negative Affect Items

	Factor								
	1	2	3	4	5	6	7	8	9
FIW time Worry Other	.69								
FIW time Guilt Other	.68								
FIW stress Worry Other	.60							.42	
FIW time Worry Self	.59				.31				
WIF time Worry Other	.58								
FIW time Guilt Self	.53				.33				
WIF time Worry Self	.53								
WIF stress Worry Self	.52					.48		.32	
WIF time Guilt Other	.51					.32			
WIF stress Worry Other	.51					.35		.37	
FIW stress Guilt Other	.51							.31	
WIF time Guilt Self	.44				.	.31			
WIF behavior Guilt Other		.79							
WIF behavior Frust Self		.77							
WIF behavior Anger Self		.77							
WIF behavior Guilt Self		.74							
WIF behavior Worry Self	.32	.74	.						
WIF behavior Worry Other	.40	.63	.						
FIW behavior Frustration Self			.82						
FIW behavior Worry Self	.36		.68						
FIW behavior Guilt Self			.66						
FIW behavior Anger Self			.66						
FIW behavior Guilt Other			.63						
FIW behavior Worry Other	.43		.62						
WIF time Anger Other				.77					
WIF stress Anger Other				.75		.33			
WIF time Frustration Other				.73					
WIF stress Frustration Other				.68		.30			

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Table 4 (continued)

	Factor								
	1	2	3	4	5	6	7	8	9
WIF behavior Anger Other		.32		.58					
WIF behavior Frustration Other		.35		.54					
FIW time Anger Self					.77				
FIW time Frust Self	.36				.71				
WIF time Anger Self					.70				
WIF time Frust Self					.65	.22			
WIF stress Guilt Self	.38					.67			
WIF stress Anger Self					.32	.64			
WIF stress Frust Self		.30				.61			
WIF stress Guilt Other	.48					.55			
FIW time Frustration Other							.87		
FIW time Anger Other							.83		
FIW behavior Anger Other			.31				.52		
FIW beh Frustration Other							.46		
FIW stress Anger Self					.30			.63	
FIW stress Frust Self								.53	.32
FIW stress Worry Self	.42	.35						.53	
FIW stress Guilt Self	.32							.48	
FIW stress Frust Other							.40		.85
FIW stress Anger Other							.44		.66

N= 347, loadings under .30 were suppressed

Table 5

Varimax Rotated Maximum Likelihood Factor Structure for 24 Other-Referenced WFC Negative Affect Items

	Factor				
	1	2	3	4	5
FIW stress Worry Other	.81				
WIF stress Worry Other	.73				
FIW time Worry Other	.70				
WIF behavior Worry Other	.69			.34	
FIW behavior Worry Other	.64				
WIF time Worry Other	.64				
FIW stress Guilt Other	.62				
FIW time Guilt Other	.61				
WIF stress Guilt Other	.60				
WIF behavior Guilt Other	.51			.42	
WIF time Guilt Other	.49				
FIW behavior Guilt Other	.48				
WIF time Anger Other		.83			
WIF time Frustration Other		.81			
WIF stress Anger Other		.70			
WIF stress Frustration Other		.63			
FIW time Frustration Other			.85		
FIW time Anger Other			.80		
FIW behavior Anger Other			.50	.35	
FIW behavior Frustration Other			.44	.32	
WIF behavior Anger Other		.33		.82	
WIF behavior Frustration Other		.30		.78	
FIW stress Anger Other			.37		.80
FIW stress Frustration Other			.37		.78

N= 347, Loading under .30 suppressed

Although the other referenced items are indeed interesting, the remainder of this paper will focus on the 24 self referenced emotions where the target is all the same (the self). Supplementary analyses will be conducted with the other-referenced scales, however, and will be briefly discussed in later sections.

Confirmatory Factor Analyses: There is a need to see if the self-referenced items conform to an a priori hypothesized factor structure. As presented by the hypothesized model, an eight factor solution should emerge, with each direction of work family conflict (WIF or FIW) and each emotion (guilt, worry, anger or frustration) loading as a distinct factor. It is possible, however, that a variety of other factors structures will be revealed.

Due to the fact that a variety of factor structures are theoretically defensible, several CFAs were conducted. These models are summarized below and fit indices are reported in Table 6. For all of the models, the factors were allowed to correlate and means were estimated for missing data.

Single Factor Model: This model tested the data against a factor structure where all of the WFC emotion items load on a single factor of "general negative WFC affect". This factor consists of all items without distinction for WFC type (time, strain, behavior) direction (FIW and WIF) or emotion type (guilt, worry, anger, frustration).

Two Factor WIF and FIW Model: This model tested the data against a factor structure where there are two main factors "WIF negative emotions" and "FIW negative emotions". These factors consist of all items that fall within that particular directionality of WFC, with no distinction for WFC dimensions or specific emotion.

Three Factor WFC Dimensions model: This model tested the data against a factor structure where there are three main factors of WFC types, "WFC Stress Emotions", "WFC Time Emotions" and "WFC Behavior Emotions". These factors consist of all items that fall

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within each particular dimensionality, with no distinction for direction of WFC or specific emotion.

Table 6
Confirmatory Factor Analyses

Model	df	Chi-Square	CFI	RMSEA
Single Factor Model	253	2894.3	.57	.17
Two Factor WIF and FIW Model	251	2550.9	.63	.16
Six Factor WFC Type and Direction Model	237	1108.0	.86	.10
Two Factor Internalizing and Externalizing Emotions	251	2627.8	.62	.16
Four Factor Emotion Model	246	2605.8	.62	.16
Three Factor WFC Type Model	252	1835.06	.74	.13
Four Factor WFC Direction and Internalizing/Externalizing Emotions Model	246	3125.24	.64	.19
Six Factor WFC Types and Internalizing/ Externalizing Emotions Model	237	1747.57	.79	.14
Eight Factor Model Two Directions of WFC with Four Emotions	224	2126.69	.68	.18

N=340

Two Factor Internalizing and Externalizing Emotions Model: This model tested the data against a factor structure where the main factors are "WFC Internalizing Emotions" and "WFC Externalizing Emotions". These are defined in line with the general emotion literature

where guilt and worry are generally considered internalizing emotions and anger and frustration are generally considered externalizing emotions. These factors consist of all items that fall within these two categories of emotions, with no distinctions for direction or type of WFC.

Four Factor Emotion Model: This model tested the data against a factor structure where there are four factors that correspond to specific emotions, "WFC Anger", "WFC Guilt", "WFC Worry" and "WFC Frustration". These factors consist of all items that fall within a particular emotion referent, with no distinction for types or directionality of WFC.

Six Factor Direction and Type WFC Model: This model tested the data against a factor structure where there are four factors that correspond to the specific directionality and type of WFC, "WIF Time Emotions", "WIF Stress Emotions", "FIW Time Emotions", "FIW Stress Emotions", "WIF Behavior Emotions", and "FIW Behavior Emotions". These factors consist of the items that fall within that directionality and type of WFC, with no distinction for specific emotions.

Four Factor WFC Direction and Internalizing/Externalizing Emotions: This model tested the data against a factor structure where factors consist of directionality of WFC and category of emotions, "WIF Internalizing Emotions", "WIF Externalizing Emotions", "FIW Internalizing Emotions", "FIW Externalizing Emotions". These factors consist of the items that fall within the WFC directionality and within the Internalizing/Externalizing categories of emotions, with no distinction for WFC types.

Six Factor WFC Types and Internalizing/Externalizing Emotions: This model tested the data against a factor structure where factors consist of type of WFC and category of emotions, "WFC Time Internalizing Emotions", "WFC Strain Externalizing Emotions", "WFC Time Internalizing Emotions", "WFC Externalizing Strain Emotions". These factors

consist of the items that fall within the WFC type and within the Internalizing/Externalizing categories of emotions, with no distinction for WFC directionality.

Eight Factor WIF and FIW Directions with Nested Four Discrete Emotions: This model tested the data against a factor structure where there are eight factors that correspond to specific emotions within each of the two direction of WFC, "WIF Anger", "WIF Guilt", "WIF Worry", "WIF Frustration", "FIW Anger", "FIW Guilt", "FIW Worry" and "FIW Frustration". This factor structure corresponds to the hypothesized structure. These factors consist of all items that fall within a particular emotion referent, with no distinction for types of WFC.

Exploratory Factor Analysis

Referring to Table 6, it is apparent that there is poor fit of the data to all of these factor structures. Although the data does not align strongly with any of the theoretical factor structures, this result is not altogether unsurprising due to the variety of factor possibilities, including direction and type of WFC, and categories and types of emotions. In addition, these items are likely correlated with each other across factors, thus creating some model fit problems. In order to more fully understand how the WFC emotion items function in relation to each other, an exploratory factor analysis was conducted. This EFA used the maximum likelihood extraction method with Varimax rotation. Missing data was excluded listwise. Please see Table 7 for this factor matrix with values under .30 suppressed.

From this EFA, a model with six factors with eigenvalues over 1 emerged. This structure explained 68.09% of the total variance. The selection of a six factor structure was also supported by a scree plot (see Figure 3), where the inflection point of the graph occurs after the sixth factor.

Figure 3: Scree Plot of Rotated Factor Matrix for the 24 Self-Referenced Emotion Items
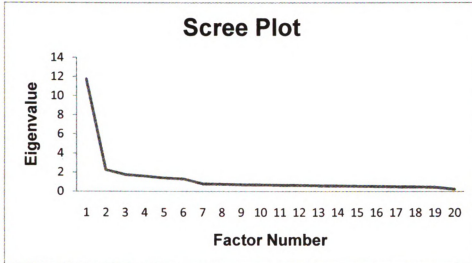
Time-based WFC and Emotions. For the time type of WFC, it appears that the emotions WFC items factor on an internal/external emotion distinction rather than on conflict direction. When individuals experience time conflict, the direction of the conflict does not seem to matter to emotional responses, with items from both WIF and FIW emotions loading together. For the time type of WFC emotions, the type of emotion seems to be more important, with the emotions worry and guilt factoring together and the emotions frustration and anger factoring together. This distinction aligns with other emotion research in which emotions are organized along "internalizing" and "externalizing" dimensions (Garside & Klimes-Dougan, 2004). For the time type of WFC emotions, it appears that the factors of

internalizing (guilt and worry) and externalizing (frustration and anger) tend to emerge. This would suggest that individuals tend to experience either internalizing emotions or externalizing emotions in response to time-based conflict.

The factors for strain- and behavior- based conflict items look different than that for time-based conflict. For both strain- and behavior-based conflict, all the emotions tend to

Table 7
Factor Structure for 24 Self-Referenced WFC Negative Affect Items

	Factor					
	1	2	3	4	5	6
WIF time Anger Self	.796		.324			
WIF time Frust Self	.775					
FIW time Frust Self	.716					.403
FIW time Anger Self	.715				.333	.361
WIF beh Anger Self		.796				
WIF beh Frust Self		.791		.302		
WIF beh Worry Self		.688		.303		
WIF beh Guilt Self		.678				
WIF stress Guilt Self			.714			
WIF stress Worry Self			.664		.305	.324
WIF stress Frust Self			.637		.301	
WIF stress Anger Self	.328		.595		.380	
WIF time Worry Self			.432			.397
FIW beh Frust Self				.862		
FIW beh Guilt Self				.679		
FIW beh Worry Self				.677		
FIW beh Anger Self				.673		
FIW stress Anger Self					.773	
FIW stress Frust Self					.638	
FIW stress Guilt Self					.557	
FIW stress Worry Self			.358		.488	.311
FIW time Guilt Self						.691
FIW time Worry Self						.433
WIF time Guilt Self			.419			.428
Variance Explained	12.5%	12.72%	12.42%	12.35%	10.33%	7.52%
N=347						

factor together with distinctions made along direction (FIW and WIF) and type (strain and behavior). This would suggest that when individuals experience the strain or behavior based type of conflict, they tend to experience a general negative affectivity, with roughly equal tendencies to experience guilt, worry, anger or frustration in response to these types of conflict.

Final Factor Structure: Although this data did not conform to a hypothesized factor structure overall, each dimension resulted in a factor structure that is defensible and coherent. For the emotion WFC items, the exploratory factor analysis resulted in 6 distinct WFC emotion scales. For the time type, direction of WFC is unimportant while type of emotion is, resulting in two scales deemed 1.) WFC time based internalizing emotions and 2.) WFC time based externalizing emotions. For the strain and behavior types, type of emotion is less important while direction of conflict is paramount. This results in four additional scales deemed 3) WIF strain all emotions, 4) WIF behavior based all emotions, 5) FIW strain based all emotions, and 6) FIW behavior based all emotions. These scales will be retained and used for the remainder of the analyses.

Modified Hypotheses

As mentioned above, the factor structure that emerged from the WFC emotion items was different from the a priori assumed structure. In light of this fact, some of the original hypotheses needed to be altered slightly to accommodate the current structure. The old and new hypotheses are summarized in Table 8. The modified model is pictured in Figure 4.

The most substantive changes occurred in the hypotheses that referenced specific emotions. Because the factor structure of the WFC emotions scale did not distinguish between specific emotions, some conceptual work was necessary to adequately change the hypotheses to fit the structure. It is now necessary to address these changes systematically.

Table 8
Original hypotheses and modified hypotheses

Original Hypotheses	Modified Hypotheses
Hypothesis 1a: Individuals who experience more FIW (stress, time and behavior-based) will experience more FIW guilt.	*Hypothesis 2b:* Individuals who experience more FIW time will experience more WFC time internalizing emotions *Hypothesis 3b:* Individuals who experience more FIW strain will experience more FIW strain based negative emotions. *Hypothesis 4b:* Individuals who experience more FIW behavior will experience more FIW behavior based negative emotions.
Hypothesis 1b. Individuals who experience more WIF (stress, time and behavior-based) will experience more WIF guilt.	*Hypothesis 1b:* Individuals who experience more WIF time will experience more WFC time internalizing emotions. *Hypothesis 3a:* Individuals who experience more WIF strain will experience more WIF strain based negative emotions *Hypothesis 4a:* Individuals who experience more WIF behavior will experience more WIF behavior based negative emotions
Hypothesis 2a: Individuals who experience more FIW (stress, time and behavior-based) will experience more FIW worry.	See H2b, H3b, H4b
Hypothesis 2b: Individuals who experience more WIF (stress, time and behavior--based) will experience more WIF worry.	See H1b, H3a, H4a
Hypothesis 3a: Individuals who experience more FIW (stress, time and behavior-based) will experience more FIW anger.	*Hypothesis 2a*: Individuals who experience more FIW time will experience more WFC externalizing emotions See H3b, H4b

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Table 8 (continued)

Original Hypotheses	Modified Hypotheses
Hypothesis 3b: Individuals who experience more WIF (stress, time and behavior-based) will experience more WIF anger.	*Hypothesis 1a:* Individuals who experience more WIF time will experience more WFC time externalizing emotions. See H3a, H4a
Hypothesis 4a: Individuals who experience more FIW (stress, time and behavior-based) will experience more FIW frustration.	See New Hypotheses 2a, 3b, 4b
Hypothesis 4b: Individual who experience more WIF (stress, time and behavior-based) will experience more WIF frustration.	See New Hypotheses 1a, 3a, 4a
Hypothesis 5: The relationship between FIW and all FIW emotions will be moderated by work importance, such that individuals who place greater importance on their work will be more likely to experience the negative FIW emotions	*Hypothesis 5a:* The relationship between FIW time and WFC time externalizing emotions will be moderated by work importance, such that individuals who place greater importance on work will be more likely to experience WFC time externalizing emotions
	Hypothesis 5b: The relationship between FIW time and WFC time internalizing emotions will be moderated by work importance, such that individuals who place greater importance on work will be more likely to experience WFC time internalizing emotions
	Hypothesis 5c: The relationship between FIW strain and FIW strain negative emotions will be moderated by work importance, such that individuals who place greater importance on their work will be more likely to experience negative FIW strain based emotions.
	Hypothesis 5d: The relationship between FIW behavior and FIW behavior negative emotions will be moderated by work importance, such that individuals who place greater importance on their work will be more likely to experience negative FIW behavior based emotions.

Table 8 (continued)	
Original Hypotheses	**Modified Hypotheses**
Hypothesis 6: The relationship between WIF and WIF emotions will be moderated by family importance, such that individuals who place greater importance on their family will be more likely to experience the negative WIF emotions.	*Hypothesis 6a:* The relationship between WIF time and WFC time externalizing emotions will be moderated by family importance, such that individuals who place greater importance on family will be more likely to experience WFC time externalizing emotions *Hypothesis 6b:* The relationship between WIF time and WFC time internalizing emotions will be moderated by family importance, such that individuals who place greater importance on family will be more likely to experience WFC time internalizing emotions *Hypothesis 6c:* The relationship between WIF strain and WIF strain negative emotions will be moderated by family importance, such that individuals who place greater importance on their family will be more likely to experience negative WIF strain based emotions. *Hypothesis 6d:* The relationship between WIF behavior and WIF behavior negative emotions will be moderated by family importance, such that individuals who place greater importance on their family will be more likely to experience negative WIF behavior based emotions.
Hypothesis 7a: Gender will moderate the relationship between FIW and FIW worry such that women will be more likely to experience FIW worry then men.	*Hypothesis 7a:* Gender will moderate the relationship between FIW time and WFC time internalizing emotions such that women will be more likely to experience WFC time internalizing emotions in relation to FIW time than men.
Hypothesis 7b: Gender will moderate the relationship between WIF and WIF worry such that women will be more likely to experience WIF worry than men.	*Hypothesis 7b:* Gender will moderate the relationship between WIF time and WFC time internalizing emotions such that women will be more likely to experience WFC time internalizing emotions in relation to WIF time than men.
Hypothesis 8: Gender will moderate the relationship between FIW and FIW frustration such that men will be more likely to experience FIW frustration than women.	*Hypothesis 8:* Gender will moderate the relationship between FIW time and WFC externalizing emotions such that men will be more likely to experience WFC externalizing emotions in relation to FIW time than women.

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Table 8 (continued	
Original Hypotheses	**Modified Hypotheses**
Hypothesis 9: Individuals who experience more WIF related negative emotions will experience decreased job satisfaction.	*Hypothesis 9a:* Individuals who experience more WFC time externalizing emotions will experience decreased job satisfaction
	Hypothesis 9b: Individuals who experience more WFC time internalizing emotions will experience decreased job satisfaction
	Hypothesis 9c: Individuals who experience more WIF strain negative emotions will experience decreased job satisfaction
	Hypothesis 9d: Individuals who experience more WIF behavior negative emotions will experience decreased job satisfaction
Hypothesis 10: Individuals who experience more WFC related worry, frustration or anger (regardless of direction) will experience decreased life satisfaction.	*Hypothesis 10a:* Individuals who experience more WFC time externalizing emotions will experience decreased life satisfaction
	Hypothesis 10b: Individuals who experience more WFC time internalizing emotions will experience decreased life satisfaction
	Hypothesis 10c: Individuals who experience more WIF strain negative emotions will experienced decreased life satisfaction
	Hypothesis 10d: Individuals who experience more FIW strain negative emotions will experienced decreased life satisfaction
	Hypothesis 10e: Individuals who experience more WIF behavior negative emotions will experienced decreased life satisfaction
	Hypothesis 10f: Individuals who experience more FIW behavior negative emotions will experienced decreased life satisfaction

Figure 4: Proposed Model of Modified Hypotheses
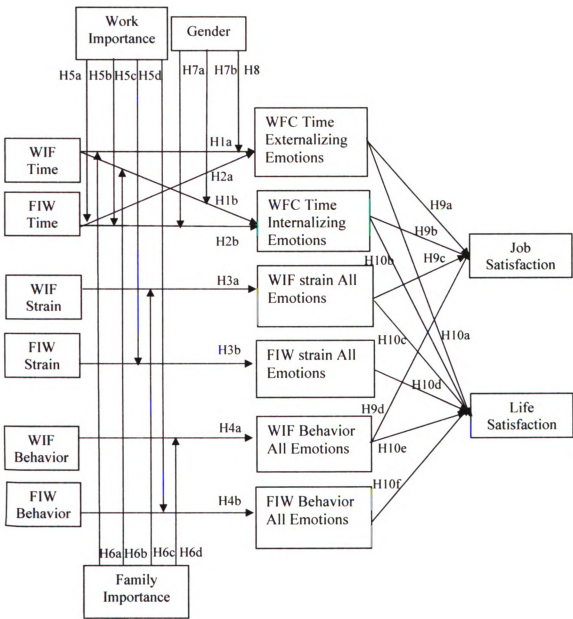
Emotion specific hypotheses and their relation to WFC: Originally, hypotheses 1-4 addressed predictions about specific emotions and their relation to WFC as distinguished by particular directions of WFC. These hypotheses were all parallel, suggesting that individuals who experience more WIF or FIW conflict will also experience more WIF or FIW negative emotions. The previously stated theoretical rationalization for these relationships at the individual emotion level can still hold when the emotions are aggregated to a general negative affect scale as is the case with WIF and FIW behavior- and strain-based conflict emotions. Because the WFC emotions scale emerged along WFC direction and type, the hypotheses have been altered to more directly assess this. For FIW and WIF strain based emotions, they are hypothesized to relate to FIW and WIF strain based conflict, respectively. For FIW and WIF behavior based emotions, they are hypothesized to related to FIW and WIF behavior based conflict, respectively.

This rationalization also holds for the WFC time emotions scales that distinguish between internalizing and externalizing emotions. As far as specific emotions are concerned, the hypotheses relevant to the specific internalizing emotions (guilt and worry) and externalizing emotions (anger and frustration) are parallel so collapsing these hypotheses across specific emotions is justified. The slight disconnect comes due to the fact that WFC time emotions are not distinguishable by direction. For this case, it becomes necessary to predict how WFC time internalizing and externalizing emotions relate to the specific directions of conflict, FIW time based and WIF time based. Because WFC time internalizing emotions and WFC time externalizing emotions include references that are both FIW and WIF, it is hypothesized that individuals who experience WIF time based conflict or FIW time based conflict will also experience more WFC time based internalizing and externalizing emotions.

Work and Family Importance: The moderation hypotheses of work and family importance originally did not distinguish between specific emotions. Therefore, there is no need to modify them for the reason of accounting for the general emotion factors revealed by the WFC emotion scale factor structure. There is a need, however, to modify them slightly to fit with the differential directionality of the time-, strain- and behavior- based types. The hypotheses can stand as is for the strain- and behavior-based constructs with the distinction of direction of WFC added.

The time type of the WFC emotions scale functions differently such that direction of WFC is collapsed within internalizing and externalizing subscales. The original hypotheses regarding work and family importance predicted differential relationships based on direction. This was that work importance would only affect emotion/conflict relationships in the FIW direction while family importance would only affect emotion/conflict relationships in the WIF direction. Because the WFC time internalizing and externalizing subscales do not distinguish direction, this creates problems in modifying this hypothesis. The internalizing and externalizing dimensions include reference to both FIW and WIF. Because of this, it is likely that the negative emotions elicited by WFC time conflict could relate to FIW and WIF conflict similarly (as is argued above). Therefore, the modified hypotheses would retain the differential hypotheses for type of conflict, but not for the emotional responses to that conflict.

Gender Moderation Hypotheses: Modifying the gender relation hypotheses pose some potential theoretical problems. The original hypothesis 7a and 7b propose that women would more likely to experience WIF and FIW related worry than men. Because worry is in no way distinguished in the strain- and behavior-based types of the WFC emotions scale, this hypothesis cannot be tested for those directions. For the WFC time emotions subscales, the emotions are divided into internalizing and externalizing. Worry falls within the

internalizing scale along with guilt. The inclusion of guilt with the worry items in the WFC time internalizing scale may alter any moderation hypotheses. Although guilt was originally not thought be a gender related moderating variable, some literature does suggest that guilt might be experienced more frequently by women than men (Marecek and Ballou, 1981) in a similar manner as worry. Because of this literature, it may be reasonable to assume that the WFC time internalizing emotions may be experienced more frequently by women than men in response to WIF time and FIW time conflict.

The second gender moderation hypothesis was the original hypothesis 8. This hypothesis made the differential hypothesis that men would experience more FIW frustration in response to FIW conflict than women. For the strain- and behavior-based, it is impossible to assess individual emotions in any way, so this moderation hypothesis cannot be tested. For the WFC time emotions subscales, the emotions are divided into internalizing and externalizing emotions with frustration falling in the externalizing subgroup along with anger. Originally, there was no differential gender hypothesis for FIW anger experiences. Some literature suggests, however, that men may experience all the externalizing type emotions more frequently than women (Garside & Klimes-Dougan, 2004). For this reason, the modified hypothesis will reflect that WFC externalizing emotions may be experienced more often by men than women in response to FIW conflict.

Job and Life Satisfaction: The job and life satisfaction original hypotheses did not differentiate between specific emotions so they can stay largely the same. The only modification accommodates the factor structure such that the types of WFC are specified.

Descriptive Statistics

Correlations: The correlations between all the variables in this study are presented in Table 9. Some of the variables are highly intercorrelated which may cause some difficulties in subsequent regression analyses. In particular, all of the WFC negative emotion scales are

significantly correlated with each other, some as high as .66. In addition, all the WFC

negative emotion scales are correlated significantly with the traditional WFC scales, though

not at such high levels as to indicate a lack of meaningful differences. Negative affect is also

highly correlated with the WFC emotion scales, and this issue will be addressed more

thoroughly in the section below. These intercorrelations may result in multicolinearity

among the variables.

In addition, the means of certain variables reveal that there may be a ceiling effect for

certain scales. The means for the job commitment and family commitment variables are

quite high (over 4 on a scale of 1 to 5) and indicate that individuals tend to report that they

are highly committed to both job and family. The mean of the job satisfaction scale is also

high (4.01 on a scale of 1 to 5). This ceiling effect may cause a restriction of range that may

make the proposed hypotheses including these variables difficult to assess.

Control Variables: All of the hypotheses were tested using hierarchical linear

regressions. For each test, the person specific characteristics of gender and age were

controlled. Both were controlled for due to the fact that they tended to correlate with the

main variables of this study, the WFC emotion scales (see Table 9 for these correlations). In

addition, gender has frequently been demonstrated to relate to both emotion variables (e.g.

Garside & Klimes-Dougan, 2004; Kuppens & Van Mechelen, 2007) and WFC variables

(Ford et al, 2007). Although not as frequently or specifically studied, age can also be an

important variable to control. Past research in WFC has shown that older workers and

younger workers may experience WFC differently (e.g. Finegold, Mohrman, & Spreitzer,

2002). The emotion literature also addresses age, with some researchers finding that older

adults are less emotionally reactive than younger adults (e.g. Kliegel, Jäger, & Phillips, 2007)

Table 9

Means, standard deviation and intercorrelations of the variable assessed in this study

Variable	N	Mean	SD	1	2	3	4	5	6
1. Gender	333	.41	.49	n/a					
2. Age	333	39.25	9.33	.07	n/a				
3. Education	334	4.96	1.16	-.02	.01	n/a			
4. Race	332	.92	.27	-.00	.02	.01	n/a		
5. Marital Stat.	334	.07	.26	.04	.08	-.08	-.09	n/a	
6. Parental Stat	328	.85	.35	-.10	.36**	.03	-.12*	.12*	n/a
7. Children hm	333	1.45	1.09	-.09	.01	-.02	-.11*	-.01	.53**
8. Age of child	256	8.45	6.45	-.05	.74**	-.17**	.11	-.08	-.08
9. Work hr	334	2.64	.87	.39**	.07	.13*	.04	-.05	-.11*
10. Work sch	329	.14	.35	.06	-.02	-.03	.03	-.01	-.04
11. WFC time ext. em	345	2.16	.92	-.11*	-.18**	-.05	.02	.04	-.08
12. WFC time int. em.	345	2.35	.80	-.24**	-.22**	-.01	.05	.06	-.02
13. WIF stress all em.	345	2.41	.89	-.14*	-.17**	-.05	.09	.00	-.11*
14. FIW stress all em.	345	2.03	.81	-.18**	-.10	-.05	-.01	.14*	-.03
15. WIF beh. all em.	345	2.05	.91	-.10	-.05	-.04	-.02	.12*	.02
16. FIW beh. all em.	343	1.76	.75	-.08	-.07	-.03	-.01	.11*	-.07
17. WIF time	340	2.98	.99	.02	.01	.06	.11*	-.16**	-.06
18. FIW time	340	2.76	.97	-.04	-.18**	.16**	-.01	-.04	.04
19. WIF stress	340	2.89	1.06	-.10	-.03	-.03	.05	-.06	-.20**
20. FIW stress	340	2.17	.93	-.06	.00	-.04	-.07	-.04	-.00
21. WIF beh	340	2.52	.78	.11	-.04	-.07	-.04	-.08	-.08
22. FIW beh	340	2.49	.81	.10	-.03	-.11*	-.05	-.04	-.10
23. Positive Affect	338	3.53	.62	.03	.10	.20**	-.03	-.01	.09
24. Negative Affect	338	1.92	.62	-.08	-.21**	-.07	.01	-.01	-.18**
25. Work Role Value	336	4.18	.60	-.05	-.11	.21**	.04	-.04	-.06
26. Work Role Comm.	336	3.07	.67	.19**	.01	.15*	.05	-.04	-.11
27. Family Role Value	335	4.60	.54	-.18**	.05	.06	.05	-.13*	.19**
28. Family Role Comm.	335	4.23	.58	-.19**	-.01	.10	.02	-.07	.21**
29. Job Sat.	335	4.01	.71	-.05	-.13	.20**	-.01	.02	.17**
30. Life Sat.	335	3.72	.77	.01	-.06	.22**	.10	-.15**	.06

* $p < .05$, ** $p < .01$; . Where applicable, scale reliabilities are reported on the diagonal

Notes: Gender is coded 0=women, 1=men; Education is coded 1= some high school, 2 = high school diploma, 3 = some college, 4 = college diploma, 5= some graduate school, 6=graduate degree; Race is coded 0=Not-White, 1= White; Work schedule is coded 0=day shift, 1= other shifts; Marital status is coded 0=married, 1= not married; Parental status is coded 0= has children, 1= does not have children; Age of children at home is averaged across children for individuals with multiple children at home

Table 9 (continued)

Variable	N	Mean	SD	7	8	9	10	11	12
1. Gender	333	.41	.49						
2. Age	333	39.25	9.33						
3. Education	334	4.96	1.16						
4. Race	332	.92	.27						
5. Marital Stat.	334	.07	.26						
6. Parental Stat	328	.85	.35						
7. Children hm	333	1.45	1.09	n/a					
8. Age of child	256	8.45	6.45	.11	n/a				
9. Work hr	334	2.64	.87	-.12	.09	n/a			
10. Work sch	329	.14	.35	.02	-.03	.04	n/a		
11. WFC time ext. em	345	2.16	.92	-.08	-.15*	-.04	.14*	(.90)	
12. WFC time int. em.	345	2.35	.80	-.00	-.10	-.07	.09	.64**	(.79)
13. WIF stress all em.	345	2.41	.89	.02	-.06	-.07	.06	.55**	.66**
14. FIW stress all em.	345	2.03	.81	-.02	-.06	-.13*	.08	.52**	.60**
15. WIF beh. all em.	345	2.05	.91	-.00	-.12	-.03	.07	.43**	.51**
16. FIW beh. all em.	343	1.76	.75	-.07	-.05	-.07	.08	.39**	.45**
17. WIF time	340	2.98	.99	-.10	.05	.26**	.05	.24**	.34**
18. FIW time	340	2.76	.97	.03	-.25**	-.08	.15**	.32**	.33**
19. WIF stress	340	2.89	1.06	-.17**	.04	.01	-.01	.31**	.42**
20. FIW stress	340	2.17	.93	-.01	-.07	.12*	.10	.26**	.30**
21. WIF beh	340	2.52	.78	-.10	-.12	.02	-.02	.16**	.15**
22. FIW beh	340	2.49	.81	-.12*	-.11	.05	.00	.17**	.14*
23. Positive Affect	338	3.53	.62	.04	.11	.14*	.05	-.15**	-.15*
24. Negative Affect	338	1.92	.62	-.11	-.22**	-.05	.08	.46**	.48**
25. Work Role Value	336	4.18	.60	-.05	-.05	.11*	.01	.08	.11*
26. Work Role Comm.	336	3.07	.67	-.18**	-.01	.25**	.04	.03	-.03
27. Family Role Value	335	4.60	.54	.14**	.11	.05	-.08	.00	.07
28. Family Role Comm.	335	4.23	.58	.23**	-.05	-.11*	-.01	-.04	.03
29. Job Sat.	335	4.01	.71	.08	.05	.12*	-.07	-.13*	-.13*
30. Life Sat.	335	3.72	.77	.07	.02	.07	.00	-.18**	-.21**

$p < .05$, **$p<.01$; . Where applicable, scale reliabilities are reported on the diagonal

Notes: Gender is coded 0=women, 1=men; Education is coded 1= some high school, 2 = high school diploma, 3 = some college, 4 = college diploma, 5= some graduate school, 6=graduate degree; Race is coded 0=Not-White, 1= White; Work schedule is coded 0=day shift, 1= other shifts; Marital status is coded 0=married, 1= not married; Parental status is coded 0= has children, 1= does not have children; Age of children at home is averaged across children for individuals with multiple children at home

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Table 9 (continued)

Variable	N	Mean	SD	13	14	15	16	17	18
1. Gender	333	.41	.49						
2. Age	333	39.25	9.33						
3. Education	334	4.96	1.16						
4. Race	332	.92	.27						
5. Marital Stat.	334	.07	.26						
6. Parental Stat	328	.85	.35						
7. Children hm	333	1.45	1.09						
8. Age of child	256	8.45	6.45						
9. Work hr	334	2.64	.87						
10. Work sch	329	.14	.35						
11. WFC time ext. em	345	2.16	.92						
12. WFC time int. em.	345	2.35	.80						
13. WIF stress all em.	345	2.41	.89	(.88)					
14. FIW stress all em.	345	2.03	.81	.67**	(.87)				
15. WIF beh. all em.	345	2.05	.91	.56**	.59**	(.91)			
16. FIW beh. all em.	343	1.76	.75	.48**	.56**	.61**	(.88)		
17. WIF time	340	2.98	.99	.30**	.17**	.18**	.16**	(.78)	
18. FIW time	340	2.76	.97	.21**	.25**	.18**	.23**	.22*	(.80)
19. WIF stress	340	2.89	1.06	.54**	.40**	.36**	.33**	.40**	.19**
20. FIW stress	340	2.17	.93	.29**	.46**	.25**	.30**	.12*	.42**
21. WIF beh	340	2.52	.78	.16**	.17**	.26**	.25**	.21**	.15**
22. FIW beh	340	2.49	.81	.19**	.18**	.23**	.31**	.19**	.18**
23. Positive Affect	338	3.53	.62	-.20**	-.16**	-.12*	-.18**	-.10	-.11
24. Negative Affect	338	1.92	.62	.57**	.47**	.41**	.36**	.15	.21**
25. Work Role Value	336	4.18	.60	.07	.08	.04	.03	.07	.08
26. Work Role Comm.	336	3.07	.67	.01	.00	-.03	.02	.10	0.09
27. Family Role Value	335	4.60	.54	-.00	-.04	.01	-.02	.15**	-.07
28. Family Role Comm.	335	4.23	.58	-.02	-.03	-.01	-.10	-.07	.03
29. Job Sat.	335	4.01	.71	-.18**	-.12*	-.12*	-.16**	-.15**	-06
30. Life Sat.	335	3.72	.77	-.22**	-.28**	-.16**	-.18**	-.12*	-.11*

* *p* < .05, ***p*<.01; . Where applicable, scale reliabilities are reported on the diagonal

Notes: Gender is coded 0=women, 1=men; Education is coded 1= some high school, 2 = high school diploma, 3 = some college, 4 = college diploma, 5= some graduate school, 6=graduate degree; Race is coded 0=Not-White, 1= White; Work schedule is coded 0=day shift, 1= other shifts; Marital status is coded 0=married, 1= not married; Parental status is coded 0= has children, 1= does not have children; Age of children at home is averaged across children for individuals with multiple children at home

Table 9 (continued)

Variable	N	Mean	SD	19	20	21	22	23	24
1. Gender	333	.41	.49						
2. Age	333	39.25	9.33						
3. Education	334	4.96	1.16						
4. Race	332	.92	.27						
5. Marital Stat.	334	.07	.26						
6. Parental Stat	328	.85	.35						
7. Children hm	333	1.45	1.09						
8. Age of child	256	8.45	6.45						
9. Work hr	334	2.64	.87						
10. Work sch	329	.14	.35						
11. WFC time ext. em	345	2.16	.92						
12. WFC time int. em.	345	2.35	.80						
13. WIF stress all em.	345	2.41	.89						
14. FIW stress all em.	345	2.03	.81						
15. WIF beh. all em.	345	2.05	.91						
16. FIW beh. all em.	343	1.76	.75						
17. WIF time	340	2.98	.99						
18. FIW time	340	2.76	.97						
19. WIF stress	340	2.89	1.06	(.88)					
20. FIW stress	340	2.17	.93	.32**	(.91)				
21. WIF beh	340	2.52	.78	.26**	.22**	(.74)			
22. FIW beh	340	2.49	.81	.26**	.24**	.76**	(.87)		
23. Positive Affect	338	3.53	.62	-.32**	-.25**	-.31**	-.37**	(.87)	
24. Negative Affect	338	1.92	.62	.46**	.37**	.27**	.26**	-.41**	(.87)
25. Work Role Value	336	4.18	.60	.01	.02	-.15**	-.15**	-.15**	-.01
26. Work Role Comm.	336	3.07	.67	.00	-.02	-.04	-.01	.33**	-.01
27. Family Role Value	335	4.60	.54	-.11*	-.19**	-.03	-.08	.22**	-.14**
28. Family Role Comm.	335	4.23	.58	-.14**	-.17**	-.10	-.18**	.22**	-.12*
29. Job Sat.	335	4.01	.71	-.27**	-.21**	-.30**	-.27**	.49**	-.40**
30. Life Sat.	335	3.72	.77	-.29**	-.41**	-.18*	-.22**	.47**	-.42**

* $p < .05$, ** $p < .01$; . Where applicable, scale reliabilities are reported on the diagonal

Notes: Gender is coded 0=women, 1=men; Education is coded 1= some high school, 2 = high school diploma, 3 = some college, 4 = college diploma, 5= some graduate school, 6=graduate degree; Race is coded 0=Not-White, 1= White; Work schedule is coded 0=day shift, 1= other shifts; Marital status is coded 0=married, 1= not married; Parental status is coded 0= has children, 1= does not have children; Age of children at home is averaged across children for individuals with multiple children at home

Table 9 (continued)

Variable	N	Mean	SD	25	26	27	28	29	30
1. Gender	333	.41	.49						
2. Age	333	39.25	9.33						
3. Education	334	4.96	1.16						
4. Race	332	.92	.27						
5. Marital Stat.	334	.07	.26						
6. Parental Stat	328	.85	.35						
7. Children hm	333	1.45	1.09						
8. Age of child	256	8.45	6.45						
9. Work hr	334	2.64	.87						
10. Work sch	329	.14	.35						
11. WFC time ext. em	345	2.16	.92						
12. WFC time int. em.	345	2.35	.80						
13. WIF stress all em.	345	2.41	.89						
14. FIW stress all em.	345	2.03	.81						
15. WIF beh. all em.	345	2.05	.91						
16. FIW beh. all em.	343	1.76	.75						
17. WIF time	340	2.98	.99						
18. FIW time	340	2.76	.97						
19. WIF stress	340	2.89	1.06						
20. FIW stress	340	2.17	.93						
21. WIF beh	340	2.52	.78						
22. FIW beh	340	2.49	.81						
23. Positive Affect	338	3.53	.62						
24. Negative Affect	338	1.92	.62						
25. Work Role Value	336	4.18	.60	(.76)					
26. Work Role Comm.	336	3.07	.67	.52**	(.76)				
27. Family Role Value	335	4.60	.54	.20**	-.07	(.80)			
28. Family Role Comm.	335	4.23	.58	.10	-.17**	.49**	(.72)		
29. Job Sat.	335	4.01	.71	.27**	.24**	.18**	.12*	(.87)	
30. Life Sat.	335	3.72	.77	.17**	.12*	.26**	.25**	.50**	(.88)

*p < .05, **p<.01; . Where applicable, scale reliabilities are reported on the diagonal

Notes: Gender is coded 0=women, 1=men; Education is coded 1= some high school, 2 = high school diploma, 3 = some college, 4 = college diploma, 5= some graduate school, 6=graduate degree; Race is coded 0=Not-White, 1= White; Work schedule is coded 0=day shift, 1= other shifts; Marital status is coded 0=married, 1= not married; Parental status is coded 0= has children, 1= does not have children; Age of children at home is averaged across children for individuals with multiple children at home

and that regulating emotions is less difficult for older adults (e.g. Scheibe & Blanchard-Fields, 2009). Controlling for gender and age allows interpretation of variance explained above and beyond these demographic variables.

Many researchers control for positive and negative affectivity in their studies of strain, satisfaction and other affective related variables. Spector et al (2000), however, argue that this method is unsound. Because negative affectivity may play a substantive role in the variables of interest. In this study, where specific negative emotions are assessed, an individual's tendency towards negative affectivity is likely to be substantively related to how they respond to these items. I would argue, along with Spector et al (2000), that controlling for negative affectivity would remove meaningful variability in the variables I am interested in and thus result in incorrect statistical tests. For that reason, neither positive nor negative affectivity will be considered as a control variable in subsequent analyses.

Hypothesis Testing

Main Effect Hypotheses: Hypotheses 1a, 1b, 2a, 2b, 3a, 3b, 4a and 4b were all parallel hypotheses and were tested in a series of hierarchical, linear regressions. Each type of WFC emotion (WFC time externalizing, WFC time internalizing, WIF strain all emotions, FIW strain all emotions, WIF behavior all emotions, and FIW behavior all emotions) was tested as the dependent variable. In order to control for potential confounding person level characteristics, the first step of these interactions includes gender and age. Step two consists of the work-family conflict variables by direction and type.

The regression for H1a and H1b is presented in Table 10. These hypotheses addressed the question of whether individuals who experience more WIF and FIW time-based conflict also experience higher frequencies of WFC time externalizing emotions. Step 2 of the regression was significant ($\Delta R^2 = .13$, $p < .01$) and both H1a and H1b were supported. The regression for H2a and H2b addressed the hypothesis that individuals who experience

more FIW or WIF time-based conflict will also experience more WFC time-based internalizing emotions. The regression for H2a and H2b is presented in Table 10. Step 2 of the regression was significant ($\Delta R^2 = .17$, $p < .01$), and FIW time and WIF time-based conflict were both significantly, positively related to WFC time-based internalizing. Thus, H1a, H1b, H2a and H2b were supported.

H3a and H3b addressed the hypothesis that individuals who experience more strain-based work-family conflict will also experience more negative emotions related to strain-based conflict. H3a is presented in Table 11. Step 2 of this regression was significant ($\Delta R^2 = .27$, $p < .01$) such that the WIF strain negative emotions scale is positively predicted by WIF strain conflict. H3b is presented in Table 12. Step 2 of this regression was significant as well ($\Delta R^2 = .20$, $p < .01$), such that FIW strain negative emotions is positively predicted by FIW strain conflict. Thus H3a and H3b were supported.

H4a and H4b addressed the hypothesis that individuals who experience more behavior-based work-family conflict will also experience more negative emotions related to behavior-based conflict. The regression for H4a is presented in Table 13. Step 2 of this regression was significant ($\Delta R^2 = .08$, $p < .01$), such that WIF behavior negative emotions is positively predicted by WIF behavior conflict. The regression for H4b is presented in Table 14. Step 2 of this regression is significant as well, such that FIW behavior negative emotions is positively predicted by FIW behavior conflict. Thus H4a and H4b were supported.

In order to test the moderated hypotheses, another series of hierarchical linear regressions were conducted. Step one is identical and step two adds in the relevant work-family conflict items. A third and fourth step were added to test the interaction variables.

Work Importance Moderations: Hypotheses 5a and 5b predicted that the relationship between FIW time and WFC time externalizing or internalizing emotions will be moderated

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Table 10
Time-Based WIF and FIW Conflict Regressed on WFC Time-Based Externalizing and Internalizing Emotions

Variables	Time Based WFC Externalizing Emotions				Time Based WFC Internalizing Emotions			
	SE	B	β	ΔR2	SE	B	β	ΔR2
Step 1				.04**				.10**
Gender	-.17	.10	-.09		-.36	.08	-.22**	
Age	-.01	.01	-.13*		-.01	.00	-.17**	
Step 2				.13**				.17**
WIF time based conflict	.18	.05	.19**		.23	.04	.29**	
FIW time based conflict	.25	.05	.26**		.19	.04	.23**	

*p < .05, **p<.01,
N= 332

Table 11
Strain-Based WIF Conflict Regressed on Strain-Based WIF Emotions with Interactions of Strain Based WIF Conflict and Family Importance

Variables	Strain Based WIF All Emotions			
	SE	B	β	ΔR2
Step 1				.04**
Gender	-.099	.087	-.06	
Age	-.02	.00	-.15**	
Step 2				.27**
WIF strain based conflict	.45	.04	.53*	
Step 3				.00
Family Role Value	.08	.09	.05	
Family Role Commitment	.02	.09	.01	
Step 4				.00
FRV X WIF strain based conflict	.00	.07	.00	
FRC X WIF strain based conflict	-.02	.08	-.01	

*p < .05, **p<.01, N=332

Table 12
Strain-Based FIW Conflict Regressed on Strain-Based FIW Emotions with Interactions of Strain Based FIW Conflict and Job Importance

Variables	Strain Based FIW All Emotions			
	SE	B	β	ΔR2
Step 1				.04**
Gender	-.25	.08	-.15**	
Age	-.01	.00	-.09	
Step 2				.20**
FIW strain based conflict	.40	.04	.45**	
Step 3				.00
Occupational Role Value	.07	.08	.05	
Occupational Role Commitment	.03	.07	.02	
Step 4				.01
ORRV X FIW strain based conflict	-.03	.09	-.02	
ORC X FIW strain based conflict	.12	.07	.10	

*p < .05, **p<.01, N=332

Table 13
Behavior-Based WIF Conflict Regressed on Behavior-Based WIF Emotions with Interactions of Behavior Based WIF Conflict and Family Importance

Variables	Behavior Based WIF All Emotions			
	SE	B	β	ΔR2
Step 1				.01
Gender	-.24	.10	-.13*	
Age	-.00	.01	-.03	
Step 2				.07**
WIF behavior based conflict	.31	.06	.27**	
Step 3				.00
Family Role Value	-.00	.11	.00	
Family Role Commitment	-.07	.10	-.05	
Step 4				.00
FRV X WIF behavior based conflict	-.10	.14	-.05	
FRC X WIF behavior based conflict	-.01	.14	-.01	

*p < .05, **p<.01, N=332

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by work importance, such that individuals who place greater importance on work will be more likely to experience WFC time externalizing or internalizing emotions. The interaction terms of FIW time conflict with the two types of work importance (Work Role Value and Work Role Commitment) were computed, resulting in 2 variables. In order to test the interaction, these variables were entered in Step 3 of the regression, with the interaction terms entered in Step 4. See Table 15 for the regression results for H5a and H5b. The interactions in Step 4 were non significant for both H5a and H5b ($\Delta R2 = .01$, $p > .05$ and $\Delta R2 = .01$, $p > .05$, respectively) Thus H5a and H5b were not supported.

Hypotheses 5c predicted that the relationship between FIW strain and FIW strain negative emotions would be moderated by work importance, such that individuals who place greater importance on work will be more likely to experience FIW strain negative emotions. Again, ORV and ORRC were entered in Step 3 and the interaction terms were computed between FIW strain and work importance and these variables were entered in Step 4. See Table 12 for this regression. The fourth step of this regression was non significant ($\Delta R2 = .01$, $p > .05$), so H5c was not supported.

Hypotheses 5d predicted that the relationship between FIW behavior and FIW behavior negative emotions would be moderated by work importance, such that individuals who place greater importance on work will be more likely to experience FIW behavior negative emotions. Again, ORV and ORRC were entered in Step 3 and the interaction terms were computed between FIW behavior and work importance and these variables were entered in Step 4. See Table 14 for this regression. The fourth step of this regression was non significant ($\Delta R2 = .01$, $p > .05$) so H5d was not supported.

Family Importance Moderations: Hypotheses 6a and 6b predicted that the relationship between WIF time and WFC time externalizing or internalizing emotions

Table 14

Behavior-Based FIW Conflict Regressed on Behavior-Based FIW Emotions with Interactions of Behavior-Based FIW Conflict and Job Importance

Variables	Behavior Based FIW All Emotions			
	SE	B	β	ΔR2
Step 1				.01
Gender	-.17	.08	-.11*	
Age	-.00	.00	-.04	
Step 2				.10**
FIW behavior based conflict	.31	.05	.33**	
Step 3				.01
Occupational Role Value	.06	.08	.05	
Occupational Role Commitment	.03	.07	.02	
Step 4				.01
ORRV X FIW behavior based conflict	.03	.09	.02	
ORC X FIW behavior based conflict	-.11	.08	-.08	

*p < .05, **p<.01, N=332

Table 15

Time-based FIW Conflict Regressed on Time Based WFC Externalizing and Internalizing Emotions with Interactions of Time-Based FIW Conflict and Job Importance

Variables	Time Based WFC Externalizing Emotions				Time Based WFC Internalizing Emotions			
	SE	B	β	ΔR2	SE	B	β	ΔR2
Step 1				.04**				.10**
Gender	-.17	.10	-.09		-.34	.08	-.21**	
Age	-.01	.01	-.11*		-.01	.00	-.15**	
Step 2				.09**				.08**
FIW time based conflict	.31	.05	.32**		.25	.04	.30**	
Step 3				.01				.00
Occupational Role Value	.01	.10	.01		.08	.08	.06	
Occupational Role Commitment	.09	.09	.06		.01	.07	.01	
Step 4				.01				.01
ORRV X FIW time based conflict	-.14	.10	-.09		-.08	.08	-.06	
ORC X FIW time based conflict	.14	.09	.10		.12	.07	.10	

*p < .05, **p<.01, N=332

will be moderated by family importance, such that individuals who place greater importance on work will be more likely to experience WFC time externalizing or internalizing emotions. The same two first steps as above were utilized, with Step 3 including the two types of the two types of family importance (Family Role Value and Family Role Commitment), and Step 4 including the interaction terms of these variables with WIF time. See Tables 16 and 17 for these regressions. The resulting R-square values were non-significant for step three in both regressions ($\Delta R2 = .01$, $p > .05$ and $\Delta R2 = .00$, $p > .05$, respectively). Thus H6a and H6b were not supported.

Hypotheses 6c predicted that the relationship between WIF strain and WIF strain negative emotions would be moderated by family importance, such that individuals who place greater importance on family will be more likely to experience WIF strain negative emotions. The same two first steps as above were utilized, with Step 3 including the two types of the two types of family importance (Family Role Value and Family Role Commitment), and Step 4 including the interaction terms of these variables with WIF strain. See Table 11 for this regression. Step 4 was not significant ($\Delta R2 = .01$, $p > .05$) so H6c was not supported.

Hypotheses 6d predicted that the relationship between WIF behavior and WIF behavior negative emotions would be moderated by family importance, such that individuals who place greater importance on family will be more likely to experience WIF behavior negative emotions. The same two first steps as above were utilized, with Step 3 including the two types of the two types of family importance (Family Role Value and Family Role Commitment), and Step 4 including the interaction terms of these variables with WIF behavior. See Table 13 for this regression. Step 4 was not significant ($\Delta R2 = .01$, $p > .05$), so H6d was not supported.

Table 16

Time-Based WIF Conflict Regressed on Time-Based WFC Externalizing Emotions with Interactions of Time-Based WIF Conflict and Family Importance

Variables	Time Based WFC Externalizing Emotions			
	SE	B	β	ΔR2
Step 1				.04**
Gender	-.20	.10	-.11*	
Age	-.02	.01	-.17**	
Step 2				.06**
WIF time based conflict	.23	.05	.25**	
Step 3				.00
Family Role Value	-.11	.11	-.06	
Family Role Commitment	-.04	.10	-.02	
Step 4				.01
FRV X WIF time	-.06	.10	-.04	
FRC X WIF time based conflict	-.08	.10	-.05	

* p < .05, **p<.01, N=332

Table 17

Time-Based WIF Conflict Regressed on Time-Based WFC Internalizing Emotions with Interactions of Time-Based WIF Conflict and Family Importance

Variables	Time Based WFC Internalizing Emotions			
	SE	B	β	ΔR2
Step 1				.10**
Gender	-.37	.08	-.23**	
Age	-.02	.00	-.21**	
Step 2				.12**
WIF time based conflict	.27	.04	.34**	
Step 3				.00
Family Role Value	-.06	.09	-.04	
Family Role Commitment	.04	.08	.03	
Step 4				.00
FRV X WIF time based conflict	-.00	.08	-.00	
FRC X WIF time based conflict	-.07	.08	-.05	

* p < .05, **p<.01

Gender Moderations: Hypotheses H7a, H7b and H8 addressed whether WFC

negative emotions were experienced differently by each gender. H7a predicted that gender

would moderate the relationship between FIW time and WFC time internalizing emotions

such that women would be more likely to experience WFC time internalizing emotions in

connection to FIW time than men. This was tested by examining the interaction between

gender and FIW time. See Table 18 for this regression. Step 1 and two were the same as

above and the interaction term of FIW time and gender was entered as step 3. Although the

main effect of gender was significant ($\beta = -.23$, $p<.01$) and suggested that women experience

more WFC time internalizing emotions than men, the interaction term was not significant

($\Delta R2 = .00$, $p>.05$), suggesting that the genders do not experience these emotions in relation

to FIW time in structurally different ways. Thus Hypothesis 7a was not supported.

H7b predicted that gender would moderate the relationship between WIF time and

WFC time internalizing emotions such that women would be more likely to experience WFC

time internalizing emotions in connection to WIF time than men. This was tested by

examining the interaction between gender and WIF time. See Table 19 for this regression.

Step 1 and two were the same as above and the interaction term of WIF time and gender was

entered as step 3. The interaction term was not significant ($\Delta R2 = .00$, $p>.05$), suggesting

that the genders do not experience these emotions in relation to WIF time in structurally

different ways. Thus Hypothesis 7b was not supported.

Table 18

Time-Based FIW Conflict Regressed on Time-Based WFC Internalizing Emotions with Interactions of Time-Based FIW Conflict and Gender

Variables	Time Based WFC Internalizing Emotions			
	SE	B	β	ΔR2
Step 1				.10**
Gender	-.35	.08	-.22**	
Age	-.01	.00	-.15**	
Step 2				.08**
FIW time based conflict	.24	.04	.30**	
Step 3				.00
FIW time based conflict X Gender	.07	.09	.04	

* $p < .05$, ** $p < .01$, N=332

Table 19

Time-Based WIF Conflict Regressed on Time-Based WFC Internalizing Emotions with Interactions of Time-Based WIF Conflict and Gender

Variables	Time Based WFC Internalizing Emotions			
	SE	B	β	ΔR2
Step 1				.10**
Gender	-.37	.07	-.23**	
Age	-.02	.00	-.21**	
Step 2				.12**
WIF time based conflict	.27	.04	.34**	
Step 3				.00
WIF time X Gender	.00	.08	.00	

* $p < .05$, ** $p < .01$, N=332

H8 predicted that gender will moderate the relationship between FIW time and WFC externalizing emotions such that men will be more likely to experience WFC externalizing emotions than women. This was tested by examining the interaction between gender and FIW time. See Table 20 for this regression. Step 1 and two were the same as above and the interaction term of FIW time and gender was entered as step 3. The main effect of gender was significant (β = -.23, $p<.01$) and suggested that women experience more WFC time externalizing emotions than men, which is contrary to the proposed hypothesized direction. The interaction term was not significant ($\Delta R2$ = .00, $p>.05$), suggesting that the genders do not experience these emotions in relation to FIW time in structurally different ways. Thus Hypothesis 8 was not supported.

Job Satisfaction. A separate regression was conducted to determine how experiencing negative WIF emotions relates to job satisfaction. See Table 21 for this regression. The first step contained the same person level characteristics as above, gender and age. The dependent variable was job satisfaction. The second step consisted of four WFC emotion scales; WFC time internalizing emotions, WFC time externalizing emotions, WIF strain based emotions, and WIF behavior based emotions. All four types were expected to relate to less job satisfaction (H9a-d). The second step of this regression was significant ($\Delta R2$ = .04, $p<.05$), but only one type of negative emotions were significantly, negatively related to job satisfaction. WIF strain based negative emotions were negatively related to job satisfaction (β = -.15, $p<.05$), supporting Hypothesis 9c. H9a, H9b and H9d were not supported.

Life Satisfaction. A separate regression was conducted to determine the relation of negative WFC emotions to life satisfaction. The first step contained the same person level

Table 20

Time-Based WIF Conflict Regressed on Time-Based WFC Internalizing Emotions with Interactions of Time-Based WIF Conflict and Gender

Variables	Time Based WFC Externalizing Emotions			
	SE	B	β	ΔR2
Step 1				.04**
Gender	-.16	.10	-.09	
Age	-.01	.01	-.11*	
Step 2				.09**
WIF time based conflict	.30	.05	.31**	
Step 3				.00
WIF time X Gender	-.01	.10	.05	

*p < .05, **p<.01, N=332

Table 21

Time-Based WFC Externalizing, Time-Based WFC Internalizing, Strain-Based WIF and Behavior Based WIF Emotions Regressed on Job Satisfaction

Variables	Job Satisfaction			
	SE	B	β	ΔR2
Step 1				.02*
Gender	-.12	.08	-.08	
Age	.01	.00	.10	
Step 2				.04*
Time Based WFC Externalizing Emotions	-.03	.06	-.04	
Time Based WFC Internalizing Emotions	.02	.08	.02	
Strain Based WIF All Emotions	-.12	.06	-.15*	
Behavior Based WIF All Emotions	.03	.05	.03	

*p < .05, **p<.01, N=332

characteristics as above, gender and age. The dependent variable was life satisfaction. The second step consisted of all six WFC emotion scales, the four tested for job satisfaction plus FIW strain and FIW behavior based negative emotions. Hypotheses 10a, 10b, 10c, 10d, 10e, and 10f addressed whether these WFC emotion scales predicted life satisfaction above the other person characteristics. See Table 22 for this regression. The second step was significant ($\Delta R2 = .09$, $p<.01$), but only one of the emotion scales was significantly related to life satisfaction. FIW strain based negative emotions was significantly, negatively related to life satisfaction ($\beta = -.22$, $p<.01$), thus supporting H10d. H10a, H10b, H10c, H10e, and H10f were not supported.

Please see Table 23 for a summary of the hypotheses along with whether or not they were empirically supported.

Exploratory analyses: The other referenced negative emotions were examined using an exploratory factor analysis of just those items. This factor analysis resulted in five factors with eigenvalues over 1 and which explained 60.09% of the variance; however, an analysis of the scree plot (see Figure 5) shows that an inflection point occurs after factor three. Further, factors four and five only contributed minor amounts to the overall variance explained (4.45% and 3.43% respectively), so another analysis was conducted in which the number of factors to be extracted was limited to three. Please see Table 24 for this three factor structure. With this constraint, the total amount of variance explained by the rotated three factor structure was 50.09 %. This three factor structure appeared justifiable and will be assumed for the remainder of these exploratory analyses.

All of the items that addressed internalizing emotions and involved feeling of having "let someone down" factored on a single dimension, regardless of direction or

Table 22
Time-Based WFC Externalizing, Time-Based WFC Internalizing, Strain-Based WIF, Strain-Based FIW, Behavior-Based WIF and Behavior-Based FIW Emotions Regressed on Job Satisfaction

Variables	Life Satisfaction			
	SE	B	β	ΔR2
Step 1				.00
Gender	-.08	.09	-.05	
Age	-.01	.01	-.11*	
Step 2				.09**
Time Based WFC Externalizing Emotions	-.02	.06	-.02	
Time Based WFC Internalizing Emotions	-.09	.08	-.10	
Strain Based WIF All Emotions	-.02	.07	-.03	
Strain Based FIW AllEmotions	-.21	.08	-.22**	
Behavior Based WIF All Emotions	.04	.06	-.05	
Behavior Based FIW All Emotions	-.04	.07	-.04	

* $p < .05$, **$p<.01$, N=332

Figure 5: Scree plot for other referenced emotions
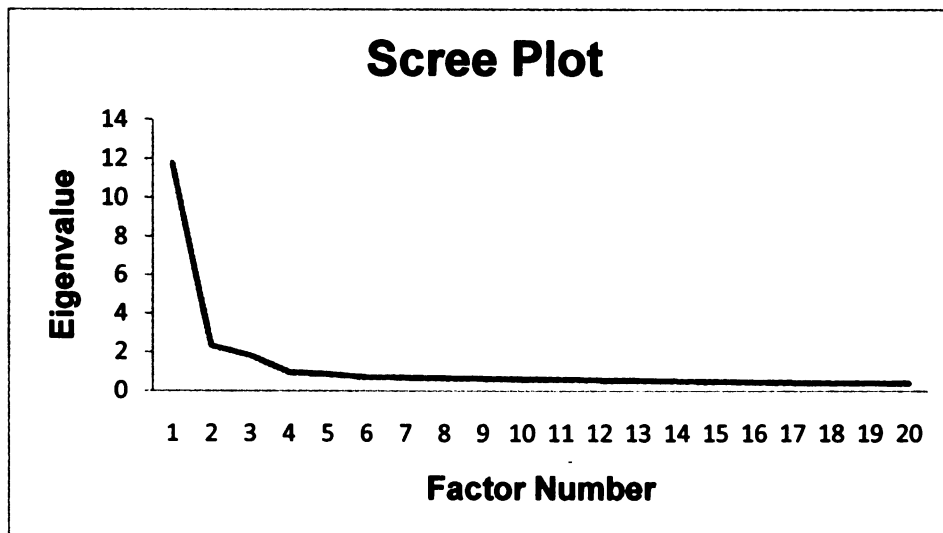
Scree Plot

type of WFC. This scale will be referred to as Other Internalizing Emotions. The items that addressed externalizing emotions, however, seemed to fall on two general factors that lined up with direction of WFC. This makes sense when considering how the items were worded. For the FIW direction of WFC, the items were worded such that individuals felt angry or frustrated with family members for interfering with work while for the WIF direction, the items were worded such that individuals felt angry or frustrated with coworkers or supervisors. Thus, these dimensions seem to account for externalizing emotions as targeted at family members or as targeted at coworkers. These scales will be referred to Other WIF Externalizing Emotions and Other FIW Externalizing Emotions.

Although a priori hypotheses were not specified for these scales, exploratory analyses were conducted. Three hierarchical linear regressions were conducted to examine the role work family conflict may play in experiences of these three types of other directed negative emotions. The results of these three regressions are reported in Table 25. For the Other Internalizing emotions, both directions of time and strain conflict are significantly related to experiencing other referenced internalizing emotions. The behavior type of conflict, however, is not related to these emotions. Because the Other Internalizing emotions scale spans directions and types of WFC it is possible that it relates to both either direction and all three types of work-family conflict.. The fact that the Other Internalizing emotions scale is related to time- and strain-based types of WFC but not behavior-based WFC suggests that individuals may experience behavior-based conflict with different patterns of internalizing emotions than they do for time- and strain-based conflict.

Table 23

Summary of new hypotheses and whether they were supported through analysis

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Hypothesis 1a: Individuals who experience more WIF time will experience more WFC time externalizing emotions.   Supported

Hypothesis 1b: Individuals who experience more WIF time will experience more WFC time internalizing emotions.   Supported

Hypothesis 2a: Individuals who experience more FIW time will experience more WFC externalizing emotions   Supported

Hypothesis 2b: Individuals who experience more FIW time will experience more WFC time internalizing emotions   Supported

Hypothesis 3a: Individuals who experience more WIF strain will experience more WIF strain based negative emotions   Supported

Hypothesis 3b: Individuals who experience more FIW strain will experience more FIW strain based negative emotions.   Supported

Hypothesis 4a: Individuals who experience more WIF behavior will experience more WIF behavior based negative emotions   Supported

Hypothesis 4b: Individuals who experience more FIW behavior will experience more FIW behavior based negative emotions.   Supported

Hypothesis 5a: The relationship between FIW time and WFC time externalizing emotions will be moderated by work importance, such that individuals who place greater importance on work will be more likely to experience WFC time externalizing emotions   Not Supported

Hypothesis 5b: The relationship between FIW time and WFC time internalizing emotions will be moderated by work importance, such that individuals who place greater importance on work will be more likely to experience WFC time internalizing emotions   Not Supported

Table 23 (continued)

Hypothesis 5c: The relationship between FIW strain and FIW strain negative emotions will be moderated by work importance, such that individuals who place greater importance on their work will be more likely to experience negative FIW strain based emotions.	Not Supported
Hypothesis 5d: The relationship between FIW behavior and FIW behavior negative emotions will be moderated by work importance, such that individuals who place greater importance on their work will be more likely to experience negative FIW behavior based emotions.	Not Supported
Hypothesis 6a: The relationship between WIF time and WFC time externalizing emotions will be moderated by family importance, such that individuals who place greater importance on family will be more likely to experience WFC time externalizing emotions	Not Supported
Hypothesis 6b: The relationship between WIF time and WFC time internalizing emotions will be moderated by family importance, such that individuals who place greater importance on family will be more likely to experience WFC time internalizing emotions	Not Supported
Hypothesis 6c: The relationship between WIF strain and WIF strain negative emotions will be moderated by family importance, such that individuals who place greater importance on their family will be more likely to experience negative WIF strain based emotions.	Not Supported
Hypothesis 6d: The relationship between WIF behavior and WIF behavior negative emotions will be moderated by family importance, such that individuals who place greater importance on their family will be more likely to experience negative WIF behavior based emotions.	Not Supported
Hypothesis 7a: Gender will moderate the relationship between FIW time and WFC time internalizing emotions such that women will be more likely to experience WFC time internalizing emotions in relation to FIW time than men.	Not Supported
Hypothesis 7b: Gender will moderate the relationship between WIF time and WFC time internalizing emotions such that women will be more likely to experience WFC time internalizing emotions in relation to WIF time than men.	Not Supported

Table 23 (continued)	
Hypothesis 8: Gender will moderate the relationship between FIW time and WFC externalizing emotions such that men will be more likely to experience WFC externalizing emotions in relation to FIW time than women.	Not Supported
Hypothesis 9a: Individuals who experience more WFC time externalizing emotions will experience decreased job satisfaction	Not Supported
Hypothesis 9b: Individuals who experience more WFC time internalizing emotions will experience decreased job satisfaction	Not Supported
Hypothesis 9c: Individuals who experience more WIF strain negative emotions will experience decreased job satisfaction	Supported
Hypothesis 9d: Individuals who experience more WIF behavior negative emotions will experience decreased job satisfaction	Not Supported
Hypothesis 10a: Individuals who experience more WFC time externalizing emotions will experience decreased life satisfaction	Not Supported
Hypothesis 10b: Individuals who experience more WFC time internalizing emotions will experience decreased life satisfaction	Not Supported
Hypothesis 10c: Individuals who experience more WIF strain negative emotions will experienced decreased life satisfaction	Not Supported
Hypothesis 10d: Individuals who experience more FIW strain negative emotions will experienced decreased life satisfaction	Supported
Hypothesis 10e: Individuals who experience more WIF behavior negative emotions will experienced decreased life satisfaction	Not Supported
Hypothesis 10f: Individuals who experience more FIW behavior negative emotions will experienced decreased life satisfaction	Not Supported

Table 24

Varimax Rotated Factor Structure for Other Referenced Items, With Factor Number Constrained to Three

	Factor		
	1	2	3
FIW stress Worry Other	.820		
WIF stress Worry Other	.741		
WIF beh Worry Other	.698		
FIW time Worry Other	.657		
FIW beh Worry Other	.643		
WIF time Worry Other	.640		
FIW stress Guilt Other	.628		.308
FIW time Guilt Other	.581		
WIF stress Guilt Other	.577		
FIW beh Guilt Other	.501		
WIF time Guilt Other	.463		
WIF time Anger Other		.823	
WIF time Frust Other		.792	
WIF stress Anger Other		.749	
WIF stress Frust Other		.677	
WIF beh Anger Other		.522	
WIF beh Frust Other		.491	
FIW time Frust Other			.811
FIW time Anger Other			.802
FIW stress Anger Other			.663
FIW stress Frust Other			.654
FIW beh Anger Other			.569
FIW beh Frust Other			.519

N=347, factor loadings under .30 suppressed

For the Other WIF Externalizing emotions, strain and behavior-based conflict is related to Other WIF Externalizing emotions, but time based WIF and all three types of FIW were not related. For Other FIW Externalizing Emotions, strain based FIW was related to FIW Externalizing Emotions but FIW time and behavior based conflict and all three types of WIF were unrelated to Other FIW Externalizing Emotions. Again, because Other WIF and FIW Externalizing emotions scales span type, but not direction of WFC, it follows that they would relate to the corresponding direction of WFC. Since all types are encompassed in the

Table 25

Time-Based WIF Conflict, Time-Based FIW Conflict, Strain-Based WIF Conflict, Strain-Based FIW Conflict, Behavior-Based WIF Conflict and Behavior-Based FIW Conflict Regressed on Other WFC Internalizing Emotion, Other FIW Externalizing Emotions and Other WIF Externalizing Emotions

Variables	Other WFC Internalizing Emotions				Other FIW Externalizing Emotions				Other WIF Externalizing Emotions			
	SE	B	β	ΔR2	SE	B	β	ΔR2	SE	B	β	ΔR2
Step 1				.06**				.00				.00
Gender	-.16	.06	-.11*		-.04	.06	-.03		.08	.07	.05	
Age	-.01	.00	-.16**		.00	.00	.00		-.00	.00	-.03	
Step 2				.30**				.21**				.19**
Time-based WIF Conflict	.09	.03	.13*		.02	.03	.04		.02	.04	.03	
Strain-based WIF Conflict	.20	.03	.31**		.06	.03	.11		.20	.04	.31**	
Behavior-based WIF Conflict	-.01	.06	-.01		-.04	.06	-.05		.19	.07	.21**	
Time-based FIW Conflict	.11	.04	.16**		.03	.03	.05		.04	.04	.05	
Strain-based FIW Conflict	.12	.04	.16**		.21	.04	.34**		.05	.05	.07	
Behavior-based FIW Conflict	.06	.06	.07		.10	.05	.14		-.06	.07	-07	

* $p < .05$, **$p < .01$, N=332

Other WIF Externalizing and Other FIW Externalizing scales, then the type distinction of conflict may not be distinguished by the Other WIF and FIW Externalizing emotions scales.

Further exploratory analyses were conducted examining the relationship of these three scales to job and life satisfaction. See Table 26 for these regressions. Only Other WIF Externalizing emotions was significantly related to job satisfaction. Both Other WFC Internalizing emotions and Other FIW Internalizing emotions were related to life satisfaction, but WIF Externalizing emotions was not.

Table 26
Other Referenced WFC Emotion Scales Regressed on Job Satisfaction and Life Satisfaction

Variables	Job Satisfaction				Life Satisfaction			
	SE	B	β	ΔR2	SE	B	β	ΔR2
Step 1				.02*				.00
Gender	-.07	.08	-.05		-.04			
Age	.01	.00	.128		-.01			
Step 2				.10**				.11**
Other WFC Internalizing Emotions	.02	.07	.02		-.18	.08	-.16*	
Other WIF Externalizing Emotions	-.34	.06	-.34**		-.02	.07	-.02	
Other FIW Externalizing Emotions	.05	.07	.04		-.30	.08	-.22**	

*p < .05, **p<.01, N=332

Discussion

This study took a closer look at how individuals experience negative emotions in relation to work-family conflict. The results supported a conceptualization of work-family conflict negative emotions that incorporates additional emotions other than the traditionally assumed guilt, namely worry, anger and frustration. Individuals seem to experience all these emotions in relation to work family conflict, and do so idiosyncratically with regard to type and direction of work-family conflict. For time-based conflict, individuals tend to experience negative emotions within internalizing or externalizing categories regardless of direction of conflict. For strain- and behavior-based conflict, people tend to experience the range of emotions and the direction of conflict (whether it is work interfering with family or family interfering with work) is more important. The frequency of experiencing these negative emotions was also positively related to the level of corresponding conflict individuals reported.

In addition to further illuminating the emotional spectrum of work family conflict, this study found that strain-based negative emotions relate to job and life satisfaction, although the other types of negative emotions did not. WIF strain-based negative emotions were significantly negatively related to job satisfaction while FIW strain based negative emotions were significantly negatively related to life satisfaction. These findings open the door for further research into what sorts of individual reactions to work-family conflict may be the most problematic to the individual. All these findings will be discussed in more detail below.

Contributions

Expanding on the emotion variables relevant to WFC. The main goal of this study was to further explore the types of emotions that individuals experience in response to work-

family conflict. Although guilt is often assumed to be an emotional response to work-family conflict, other emotions such as worry, anger and frustration can also be experienced in relation to work-family conflict situations. As a first step, this study served a descriptive role to show that individuals do indeed experience a wide variety of emotions in response to work family conflict. It is clear that guilt is not the only relevant emotion to work-family conflict and that other emotions are similarly prevalent.

Individuals did report feeling guilt in relation to work-family conflict most frequently, especially in the work interference with family direction. This is in line with many of the assumptions in the literature such that individuals experience guilt in relation to significant others in their lives, and family members tend to be more personally significant than coworkers or organizations (Baumeister et al, 1994). The assumption is that family members are the most significant others in an individual's life and so when other obligations interfere with family obligations, this sense of failure to meet obligations is accompanied by feelings of guilt.

It is also interesting to note, however, that the means for frustration and anger items were also quite high, with individuals reporting feeling frustrated and angry over both work interfering with family and family interfering with work. These types of externalizing emotions have not been studied with regard to work-family conflict before and through the descriptive value of this study it would appear that these emotions are reasonably prevalent responses to work-family conflict and should be acknowledged or addressed in future research.

At a descriptive level, the means of individual items and specific emotions paint a picture of emotional responses to work-family conflict that expand beyond the traditionally referenced guilt emotion. The contention that emotions beyond guilt are experienced in response to work family conflict is further enhanced through the factor structure that emerged

from the exploratory factor analysis. Instead of falling along hypothesized emotion lines, which would indicate that each emotion functioned differently in regard to work-family conflict, the emotions tended to factor together along WFC directions and types. This suggests that guilt is clearly not the only emotion experienced in response to WFC and that the other emotional responses to WFC are important parts of the individual experience of conflict.

This finding is important because different emotions can have different effects on the individual. Emotion researchers have noted that the regulatory functions and the subsequent actions that are related to specific emotions have different impacts on the well-being of the individual. Guilt, for instance, may serve a regulatory purpose to focus attention on important others in one's life (Baumeister, 1994). This increased focus could lead to investing more time in these relationships which in turn reaps positive returns for the individual (Zahn-Waxler, Kochanska, Krupnick, & McKnew, 1990). Therefore, individuals and organizations may not be that concerned about alleviating feelings of guilt due to the relatively smaller impact of that emotion on well-being.

Worry, on the other hand, has been more consistently linked to negative outcomes, particularly mental health problems such as depression (Yates, 2007). Anger and other externalizing emotions also have a more stable negative impact in the well-being of individuals. Experiencing frequent feelings of anger or frustration can have negative impact on mental and physical health outcomes (Player, King, Mainous & Geeney, 2007).

Because this study showed that a variety of emotions tend to relate to WFC, it highlights the possibility WFC may contribute to experiencing some of the negative outcomes associated with these emotions. There is some evidence in the literature that specific coping strategies, including emotion focused coping (Watson & Sinha, 2008) and seeking social support (Torkelson & Muhonen, 2003) can help alleviate the negative effects

of experiencing these types of emotions. From this study, individuals and organizations could begin to deal with some of the emotions that emerge from feelings of conflict through education about these coping strategies. This in turn would potentially alleviate some of the negative outcomes associated with emotions like worry, anger and frustration.

Highlighting different emotional experiences of types of conflict. In addition to supporting the idea that multiple emotions are relevant to the experience of WFC, the factor structure that resulted from the exploratory factor analysis is interesting for what it has to say about the type and direction structure of work-family conflict. The emotions factored along WFC type lines of time-, strain- and behavior-based. This lends further credence to the theoretical argument that the types of work-family conflict are indeed distinct and that it is reasonable to assert that emotional responses to these types are distinct as well. It appears through this factor structure that individuals distinguish between time-, strain- and behavior-based conflict and that they emotionally experience these events in different ways.

The most interesting aspect of the factor structure for the WFC emotion items is that direction of WFC was idiosyncratically represented with regard to type of WFC. For time-based conflict, the emotion WFC items factored along internalizing and externalizing lines such that both FIW and WIF emotions fell on the same factor. Although not initially hypothesized, this finding is logically supportable. This factor structure suggests that time based conflict, whether it is experienced from work to home or home to work, affects individuals emotionally in similar ways and that individuals have a typical way of responding to time-based conflicts. As mentioned in the introduction, part of the definition of WFC states that conflict events can essentially "go either way" (e.g. result in FIW or WIF) until a decision by the individual is made (Greenhaus & Beutell, 1985). This is especially clear for time-based conflicts. For example, if a person has a family event (e.g. child's soccer game) and a work event (e.g. conference call) scheduled at the same time, the time conflict only

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acquires direction when the person makes a choice. If the person decides to attend the soccer game, this would be considered FIW time based conflict, or WIF time based conflict if he/she chooses to attend the conference call.

Perhaps this multi-potentiality of time-based conflict makes the emotional reactions to WIF and FIW directions quite similar. In both cases there is a specific type of conflict (e.g. scheduling conflict). Individuals then emotionally respond to this scheduling conflict in typical ways regardless of direction of WFC, with some individuals feeling worried and guilty (internalizing) and some individuals feeling angry and frustrated (externalizing). These emotional distinctions may take on more of an individual difference quality with some individuals being predisposed to emotionally respond to time-based conflict in consistent ways.

Alternatively, the nature of the specific questions asked for general recollections of time-based conflict events. It may be easier for individuals to recall specific incidents of time-based conflict than strain- or behavior-based conflict because the latter two may occur in more ambiguous situations. The difference between externalizing and internalizing emotions in reaction to time-based WFC may be due to individuals recalling different specific time-based conflict episodes. Some may have recalled those that made them feel more guilty and some may have recalled those that made them feel more angry or frustrated. Further research is necessary to determine which of the above scenarios is occurring.

If individuals do tend to fall along the internalizing or externalizing types of responses to WFC, then this has some implications to their mental and physical health. Individuals who respond to situations with internalized emotions such as guilt and worry tend to experience more depression (Yates, 2007) and withdrawal from social situations (Vasa & Pine, 2006). Individuals who experience more externalizing emotions like anger and frustration, however, are more vulnerable to certain health problems such as hypertension

(Player et al, 2007) and alcoholism (Maurage, Campanella, Philppot, Pham & Joassin, 2007). Therefore, the experience of WFC negative emotions may affect some of these internalizing/externalizing emotion specific outcomes and the methods of dealing with these feelings may differ between groups or situations.

For the strain- and behavior-based types of WFC, specific types of emotions become less important but direction of WFC becomes more important in the factor structure. The emotional responses tend to hang together within WIF and FIW directions. This suggests that an individual tends to experience general negative emotion in response to strain or behavior based conflict consistently within direction. This too can be justified. The nature of strain and behavior based conflict is often less cut and dried than time-based conflict. The situations for time based conflict are clear and specific (there is an acknowledged scheduling conflict) while the situations for strain and behavior based conflict are more amorphous. While a scheduling conflict can create a simple avenue for blame for negative feelings, feeling "tired" or "stressed" from work is more difficult to apply to a single direct cause.

Because the situations in which individuals experience WIF and FIW may be more ambiguous with regard to the strain- and behavior-based types, the emotional pattern of responses may differ as well. The diffuse and idiosyncratic nature of strain and behavior based conflict may well lead to a more amorphous emotional response, with individuals indicating a general negative affectivity to these events where they might feel guilty, worried, angry or frustrated with relatively equal frequency, either simultaneously or at different times.

The factor structure that resulted from the WFC emotion items is important because it further highlights the idea that differences exist between the types of WFC and that individuals experience these types of conflicts differently. Knowing these differences can point to different steps organizations and individuals might take to help alleviate some of the

potential negative effect of these emotions. The impact of organizations on time-based versus strain- and behavior-based conflict negative emotions may be differently constrained. If an organization desires to reduce the negative emotions responses to time-based conflict, structural or benefits changes could be implemented to aid working adults in better balancing their time commitments. For instance, at an organization level required overtime commitment could be limited and flextime benefits could be implemented. Both of these changes could help reduce time-based conflict and thus time-based conflict related negative emotions.

Negative emotional reactions to strain- and behavior-based conflict may be more difficult for an organization to address however. One way to reduce strain-based conflict may be to reduce workload or time pressures, but the nature of certain jobs frequently precludes this type of job change. Past research has revealed that individuals seem to experience stronger negative outcomes from higher strain- than time-based conflict (Eby et al, 2005). This relation may be due to the idea that strain-based conflict is more difficult to effect from a structural level without doing a total job redesign. For these types of emotional reactions to conflict, organizations may be better served at attempting to help individuals cope with the resultant negative emotions rather than eliminating the conflict through job changes.

Potential to identify individuals especially at risk for negative emotional consequences of WFC. This study also contributes to the literature because it has linked the main effects of experiences of WFC related negative emotions with experiences of WFC. The support of hypotheses 1a, 1b, 2a, 2b, 3a, 3b, and 4b shows that individuals report experiencing WFC related negative emotions more frequently as they experience more WFC. While ostensibly an obvious conclusion, these findings suggest that low levels of conflict seem to have relatively little emotional consequence. If an individual only experiences WFC

occasionally, they may not experience much negative emotion in response to these infrequent conflict situations. If an individual experiences a lot of WFC, however, they also tend to experience more negative emotions to that conflict. This in turn could relate to increased risk for some of the negative effects of experiencing these emotions, such as increased depression (Yates, 2007) or increased hypertension (Player et al, 2007).

Insight into the role of gender in WFC emotions. Much of the previous literature on WFC and emotion has highlighted an assumption that women experience more WFC related negative emotions, especially guilt, than do men. When looking at simple main effects through the correlation table, this assertion is upheld, with women reporting a greater frequency of experiencing negative emotions in response to both WFC time and WFC strain types of conflict. In the hypothesis tests for H1, H2 , H3 and H4, gender also played a significant role, with women generally experiencing the emotions more frequently for all types of the negative emotions scales.

It is interesting to note that while traditional emotional theory (e.g. Garside & Klimes-Dougan, 2004) might suggest that men would respond to WFC events with more externalizing emotions than women, the data do not uphold this suggestion. Instead, it seems that women may experience more WFC time externalizing emotions than men, contradicting the assumption that emotions such as anger and frustration would occur more frequently in men. This finding suggests that in future analysis of WFC, externalizing emotions should not be disregarded, and assumed gender relations to these types of emotions may not be correct.

In addition, these findings contribute to the idea that there is value in delineating the types of WFC. Although there were gender differences for most of the emotions scales, where women experienced more negative emotions in response to conflict than men, WIF strain-based conflict showed no gender differences. This may suggest that men and women might experience WFC time- and behavior-based conflict in emotionally different ways,

although the experience of WIF-strain is less gendered This could point to differences in the ways men and women interpret time-based scheduling conflicts and behavior-based conflicts and the ways they feel emotionally about these conflicts. Strain-based conflict, however, seems to be interpreted and experienced emotionally in similar ways among the genders.

These findings further the literature on WFC in a couple of ways. First, there is an assumption in the literature that women are more bothered when work interferes with family while men are more bothered with family interferes with work (Grandey, Cordiero & Crouter, 2005). This research would suggest that women are more emotionally bothered in relation both types of WFC. Although this finding may be due to the tendency for women to undertake more family responsibilities than men (Cinamon, 2006), thus resulting in more FIW, the correlation table in this study shows no gender differences for different types of conflict. So it would appear that contrary to popular opinion, the negative emotional experience of women in response to WFC may be greater regardless of direction of conflict. This finding suggests that it might be useful for an organization to pay particular attention to the role of conflict for women in the time and behavior types. Efforts to create programs or benefits that might lessen the effect of time and behavior based conflict at work may prove more beneficial to women than men. In the family domain, individual coping skills may also be more beneficial for women to use when attempting to deal with family interference with work. In addition, this research may help couple realize that each spouse might experience WFC in different ways. This could help married couples deal with conflict situations that reduce the net amount of conflict related negative emotions experienced.

Second, unlike the other types of WFC, the domain of WIF-strain based negative emotions showed no gender differences. This suggests that stressful job situations that impact family life are just as negatively emotional for women and men. To help alleviate some of the potential negative effects of WIF strain negative emotions, organizations could

help educate workers on effective coping strategies. The utility of interventions such as these would be equally useful to men and women.

Practically, this research suggests that the ways men and women experience negative emotions in response to WFC may have interesting similarities and differences. This has implications for the WFC research literature. Meta-analyses in the field have shown that the samples of most WFC studies are mostly comprised of women (Byron, 2005; Ford et al, 2007). These studies may have lacked the statistical power to discern interesting differences between men and women in WFC contexts. Future research should be more cognizant of the role gender may play and make concerted efforts to obtain a more gender balanced sample.

Examining Other and Self-Referenced Emotions: This study looked at emotions through items that referenced both the self and other people. Although only the self-referenced items were retained for the formal hypothesis testing, exploratory analyses involving the other referenced items revealed interesting differences in the factor structures the two reference points. While the self-referenced items fell into six factors that were distinguished on type of WFC, the other referenced items more clearly fell along factors that related to internalizing or externalizing emotions. For other referenced internalizing emotions, neither direction nor type of WFC played a significant part in distinguishing that factor. For other referenced externalizing emotions, direction of WFC was important but type was less so. These differing factor structures between the different reference points of the items suggests that reference of emotion may play an important role in the experience of WFC.

It is possible that the reference point of conflict related negative emotions may impact the severity of the emotions experienced. The guilt research would suggest that individuals would feel more strongly negative about letting down a significant other than letting down oneself (Baumeister, 1994). Self-recriminating anger, however, may be more detrimental to

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the mental health and well being of the individual than other directed anger (Klonsky & Muehlenkamp, 2007; Kulik and Brown, 1979). Future studies could make an effort to more specifically compare self versus other directed emotions in relation to WFC and how these might be differentially related to health and satisfaction outcomes.

The relation of the other-referenced items to job and life satisfaction is also interesting. It would appear that feelings of "letting other people down" as referenced in the Other WFC Internalizing emotion scale, has little relation to job satisfaction but does relate to decreased life satisfaction. Feeling angry or frustrated with family members about FIW conflict is also related to decreased life satisfaction. Feeling angry or frustrated with coworkers or bosses, however, is related to decreased job satisfaction but does not relate to life satisfaction. These findings might indicate what sorts of emotions are more linked to satisfaction in different domains and may eventually help point to positive interventions that could decrease these emotions and their negative relationships with satisfaction.

Because job satisfaction is linked to a variety of organizationally relevant outcomes (e.g. turnover, absenteeism, performance), organizations may take this information and use it to help mitigate an individual's negative emotional responses to coworkers and bosses as a result of WFC. This has implications for the types of other-referenced emotions would be a priority to the organization. Only Other WIF Externalizing emotions were related to job satisfaction, so an organization may want to focus on ways of alleviating workers experiences of anger or frustration at coworkers and bosses. The other-directed internalizing emotions were not related to job satisfaction, so an organization could concern themselves less with feelings of worry or guilt.

This distinction between other and self-referenced negative emotions as responses to WFC is wide open for future research. Studies that more specifically target instances of WFC may be more able to get at these distinctions. For instance, instead of assessing a

general experience of type and direction of conflict, researchers may focus on a specific incident of conflict the participant remembers. From this specific incident, the individual could report the occurrence and extremity of different emotions felt in relation to themselves and in relation of relevant others. This may more accurately assess the different relationships between self and other-referenced negative emotions in relation to WFC. Although only exploratory in this paper, the distinction deserves to be more closely examined.

Limitations and future directions

Although this study succeeds at adding to the work-family conflict and emotion literature for the reasons listed above, there are limitations to this study.

WFC emotion measure: Although an acceptable and theoretically interesting factor structure emerged from the exploratory factor analysis, one dimension, WFC time internalizing emotion, had relatively low loadings on that factor and relatively high loadings on other factors. This might suggest that the WFC time internalizing factor may not be well enough defined or the measures used were inadequately capturing this dimension.

In addition, this measure was designed to closely adhere to the presupposed structure of work-family conflict. The wording of the questions may have contributed to the resultant factor structure in the self-reference items, especially for strain- and behavior-based conflict. This may not be a serious concern, however, because the time type of WFC emotions had a different factor structure and the other-referenced items did not fall along traditional WFC construct lines. Future researchers should be cognizant how the wording and framing of the measures they use may impact factor structure and subsequent analysis possibilities. This may require a different way of measuring WFC relevant emotions.

Finally, the measure only assessed individual recollections of general instances of work-family conflict when asked to respond about related emotions. The generality of this wording may not have been interpreted similarly across individuals. Additionally, the

generality of the wording may have made it difficult for participants to anchor their responses in a specific recollected conflict context. Future research could help mitigate this problem through prompting respondents to recall and report a specific conflict situation. This would ground the emotional response anchors in a way that was not present in this study.

Failure to find moderation hypotheses. This study failed to find the hypothesized moderated relationships. As argued in the introduction, the effects of higher levels of individual work and family importance theoretically could impact emotional experience of work-family conflict. That is, individuals who do not highly value a specific role would be less likely to respond in a negative emotional way to circumstances that disrupt that role. The failure to find anticipated moderations may be due to the fact that, overall, the sample reported placing high importance on both work and family domains. Family importance, in particular, appears to have neared a ceiling effect, with the mean value of family role value being very close to the top value of the scale. Because the means of both work and family importance variables consistently fell a considerable amount higher than the midpoint, this restriction of range variability may have made detection of potential moderators impossible.

Future research might try to select a sample based on more variability on the domains of work and family importance in order to detect hypothesized moderations. In addition, the measure for work and family importance may need to be reworked, perhaps with more focus on behaviors than vague values. This may result in greater variability and be less vulnerable to social desirability effects. Alternatively, the high endorsement of work and family importance variables may indicate that they should be omitted in future research as they do not vary substantially across people. Different measures of work and family involvement could be utilized instead to more accurately assess involvement in different domains.

Third Variable Explanations of Findings. In accordance with other research on work-family conflict, it was hypothesized that WFC negative emotions would be related to job and

life satisfaction. These relationships were supported for some but not all types and directions of conflict.

Although most of the hypothesized relationships between WFC negative emotions and job and life satisfaction were not significant, FIW and WIF strain-based negative emotions were significantly related to life and job satisfaction, respectively. Individuals who experience more FIW and WIF-strain negative emotions may also experience decreased life and job satisfaction. While intriguing, it is important not to over generalize these findings. The way the WFC emotion scales were worded solicited responses regarding frequency of experience. Individuals who have stressful home lives may therefore experience more FIW strain based negative emotions and more FIW conflict but it might not be the conflict per se that is affecting life satisfaction. Instead, the increased stress in the life domain, regardless of its spillover into the work domain, may be causing the decreased levels of life satisfaction. The same argument hold for experiences of stressful situations at work and WIF strain-based emotions.

Future research should attempt to more completely understand how WFC and WFC related emotions impact life and job satisfaction above and beyond situational concerns. This could be accomplished through gathering more information about specific home and work stressors and how they relate to the WFC strain negative emotions.

Methodological limitations. The data for this survey were collected at one point in time from a single individual. Although several of the variables preclude methods other than self-report (e.g. the emotion variables), concerns of common method variance may remain. Common method variance may not be a large concern for this study, however. First, differential relations and correlations were observed among variables. For example, only the strain based WFC negative emotion scales significantly related to job and life satisfaction. Other differential relationships were also evident, namely that the WFC negative emotion

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scales tended to be significantly related to the corresponding type and direction of WFC and be unrelated to the other types and directions of WFC. Although the WFC emotion scales and the WFC scales were related to each other, they were differently related to constructs like gender. While the WFC emotion scales were largely significantly correlated with gender, none of the WFC scales showed significant gender relationships. As discussed by Podsakoff et al (2003), this would not have occurred if individuals were just responding within a limited response structure.

Second, the factor structure of the WFC negative emotion scales was complex and varied. Had common method variance been a seriously limiting factor, a single factor may have emerged instead of the six that resulted from the EFA. This complex structure would suggest that there was enough variability in individual responses to restrict concerns of common method variance.

The threat of common method variance should be addressed more fully in future studies, however. Future studies should seek alternative methods for assessing some of the relevant variables in order to hedge against the possibility of common method variance concerns. Other studies in the literature, for example, collect spousal ratings of participant WFC in order to get a second method for assessing this variable. Also, emotion researchers often counteract the problem of common method variable through the use of experience sampling methodology in which they collect multiple assessments from the same individual over time, thus reducing the temporal aspect of common method variance.

Experience sampling methodology might also be able to address another weakness in this study. The survey method utilized required individuals to think back to experiences of WFC and report on how frequently they tended to experience specific emotions in these situations. Although framing the questions within the context of a situation is thought to aid in recall (Brown, Williams, Barker & Galambos, 2007), these retrospective reports can fall

victim to retrospective biases or simple forgetting (Reis & Gable, 2000). Experience sampling methodology could be used such that individuals would respond to a short survey each time they experienced a specific type of conflict, reporting emotions felt in situ. Future research might wish to examine the issue of WFC related negative emotions using this method.

Sample concerns: It is also important to note that the sample was mostly well educated, mostly White and mostly middle to upper-middle class. Although much of WFC focuses on the professional and semi-professional middle class (see Eby et al, 2000), the sample demographics limit generalizability of the findings. Perhaps individuals in lower income brackets experience emotions in different ways or experience different types of emotions in relation to conflict. Conflict itself is less understood for individuals of lower socioeconomic classes as well. Future research should make more targeted efforts to understand how individuals of lower socioeconomic status experience conflict and associated emotions.

Research and Practical Implications

Research implications. Despite some of the limitations mentioned above, this study provides a valuable first step in more fully understanding the emotional experience of individuals who experience work-family conflict. Although the emotional component of WFC has long been assumed, it has rarely been directly studied. Even the studies that do address emotional responses to WFC directly tend to rather narrowly focus on guilt as the only relevant emotion (e.g. Hochwarter et al, 2007). This study highlights that a variety of emotions are important to the experience of WFC, and that the directions and types of WFC affect the sorts of emotions experienced. Future research should be mindful of this expanded criterion place for WFC relevant emotions.

Future research can build upon the findings in this study to make emotion a more relevant aspect of WFC research. Specifically, future studies could utilize a more qualitative approach to determining when and how individuals experience negative emotions to work-family conflict. This measure was only capable of assessing general tendencies of emotional reaction and was not able to discern which situations might be more or less distressing. If distressing situations could be distinguished from the more minor annoying ones, this would provide a tool to create effective interventions. Managers could be made more aware of certain, especially problematic situations and work to decrease the potential for them to occur. Additionally, targeted coping interventions could be created that focus narrowly on the particularly distressing situations, thus improving efficiency and cost-effectiveness of these interventions.

In addition, this study found some intriguing differences between self- versus other-directed negative emotions. Although the analyses done with the other directed negative emotion items were exploratory and parenthetical to the main thrust of this study, the difference in factor structures between self- and other-directed emotions could provide fruitful opportunity for future research. Determining what situational variables might lead to self-blame versus other-blame for the conflict experience could provide valuable insight into how individuals experience these negative emotions.

Future studies could more closely examine these differences. For example, person level characteristics such as personality may relate to tendencies to blame the self versus blame another person. The emotion literature suggests that there might be relatively stable person level characteristics that speak toward inclinations of accepting blame and responsibility or assigning it elsewhere (Martin & Dahlen, 2005). This could impact an individual's emotional responses to WFC and how they focus or attribute the negative emotions they experience. In addition, individual coping strategies propensities could result

in individuals being more or less vulnerable to making self-blame attributions. Social support, for instance, has been shown to relate to how individuals experience work-family conflict (van Daalen, Willemsen, & Sanders, 2006). It is likely that it might impact individual emotional reactions to conflict as well.

Practical implications. This study suggests that individuals who experience more WFC also experience WFC negative emotions in response to that conflict more frequently. This may indicate that the affective life of individuals who experience more conflict might be more negative. Because increased negative affectivity is linked to a number of undesirable outcomes, such as increased somatic complaints (Van Diest et al, 2005) and increased mental health problems (Tarlow & Haaga, 1996), attempts to mitigate the negative affective responses to WFC for individuals experiencing a large of amount of conflict might be especially important.

Additionally, this study helps normalize the experience of different negative emotions with regard to WFC. Individuals seem to experience a wide variety of negative emotions in response to WFC. The popular press would suggest that guilt is the only relevant WFC related emotion, which may leave individuals experiencing anger, frustration or worry with less understanding of their own emotional responses. Through illuminating a larger emotional criterion space for WFC, this study shows individuals that experiencing emotions other than guilt in response to WFC is common. From this finding, future steps can be taken to deal with specific emotions as they arise.

Conclusions

This study looked at individuals from a wide variety of jobs and family situations and discovered that the conventional assumptions regarding emotional responses to WFC need updating. By focusing exclusively on guilt, past studies have missed the richer reality of the emotional backdrop to WFC and omitted potentially important considerations of frustration,

anger and worry. The role of gender is also further illuminated in this study. For some

aspects of WFC, such as WIF and FIW time- and behavior-based conflict, gender may impact

emotional experiences, but for other aspects of WFC, such as the strain-based type, gender is

of less importance in explaining the emotional responses to WFC. This study provides a first

step in considering these varied emotions and suggests that the direction and type of WFC

could be of utmost importance in understanding individual emotional reactions to WFC.

Appendix A: Online consent form

Work and Family Roles

Please read the information below:

We will be asking you to respond to a series of questions about your feelings about and experiences of balancing work and family roles. We are also asking you to respond to some commonly used demographic questions that will help us interpret the meaning of your responses to the questionnaire.

We expect that it will take about 20 minutes for you to complete this survey. You will receive a ten-dollar ($10) gift certificate to a common online retailer via email upon the completion of this survey

There are no foreseeable risks associated with participating in this study. Your name and information will remain confidential. Your privacy will be protected to the maximum extent allowable by law. The data will be saved for at least five years after it is collected and will only be accessible by the primary investigator and one graduate student. By writing your name below you indicate that you are free to refuse to participate in this project or any part of this project. You may refuse to participate in certain procedures or answer certain questions. Participation is completely voluntary. You may choose not to participate at all and may discontinue your participation at any time without penalty or loss of benefits.

If you have any questions or concerns about your participation in this project, you can reach

Megan Huth by phone: (517) 614-5799, fax: (517) 353-4873, email: huthmeg1@msu.edu, or regular mail: 348 Psychology Building, East Lansing, MI 48824. If you have questions or concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously if you wish - Peter Vasilenko, Ph.D. Chair of the Human Research Protection Program by phone: (517)355-2180, fax: (517)432-4503, email: irb@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

Please mark the box that says "I agree to give my consent to participate" if you agree to participate in this study. Mark "I do not want to participate" if you do not agree to participate in this study. If you agree to participate, enter your name below and you will be taken to the survey once this step is completed.

Appendix B: Study advertisement to working parents distributed in a school newsletter.

Attention working parents! Our friends at Michigan State University would like to invite you to participate in an online survey about how you balance work and family roles. If you work for pay for at least 20 hours a week you are eligible to participate in this survey. The survey should take 15 to 20 minutes and you will receive a $10.00 gift certificate to an online retailer (like Amazon.com) for your participation. All working adults in your household are eligible to participate. Please go to https://psychology.msu.edu/RyanResearch/ and enter the password "working" to access the online survey. Thank you!

Appendix C: Second wave recruitment email

I'm a graduate student here at MSU in the Industrial/Organizational Psychology program. As part of my master's thesis research, I'm seeking a population of working adults with children and/or spouses to complete an online survey about balancing work and family responsibilities and the emotions associated with this effort. Participants will be compensated with a 10 dollar gift certificate upon completion of the 15 minute online survey. The survey should take 15 to 20 minutes and you will receive a $10.00 gift certificate to an online retailer (like Amazon.com) for your participation. All working adults in your household are eligible to participate. Please go to https://psychology.msu.edu/RyanResearch/ and enter the password "working" to access the online survey. Thank you!

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Appendix D: Third wave recruitment email (men only)

Hi MSU I/O alumni,

I am currently a third year the Organizational Psychology program here at MSU and I need a little extra help in getting the participants I need for my master's thesis. I'm sure you all remember how difficult it is to find a large sample of working adults. My population of interest is even smaller, and I am asking your help in meeting the number I need for adequate power.

I need working <u>male</u> participants who also have a family (are married and/or have children) to fill out an online survey.

If you meet these criteria, I would be grateful if you could fill out the online survey yourself and then pass it on to others that qualify. If you don't meet these criteria but know someone (a coworker, spouse, relative, etc) who does, I would greatly appreciate you passing on the link to them.

It will take about 15 minutes and you will receive a $10 Amazon.com gift certificate as a thank you for your time.

The link is: https://psychology.msu.edu/RyanResearch
The access ID is: workingmen

Thanks for any help you might be able to give. If you have any questions, please email me.

Go Green!

Megan Huth

Appendix E: Work-Family Interference and Negative Affect scale (new scale)

Sometimes **time** pressures from work can result in someone being unable to meet family responsibilities. For example, the timing of work can interfere with family when a person must work late and miss a family event, such as dinner or a child's sporting event.

In thinking about times when work responsibilities interfered with **time** you normally spend with your family, please respond to the following questions about how often you generally feel these emotions. Indicate your agreement with the statements on a 1-5 scale, with 1 being never and 5 being Always or almost always.

When **time** pressures from **work** interfere with my family life, I feel:

1. Guilty for letting down myself, being unable to "do it all".

2. Guilty for letting down my family, being unable to "be there for them".

3. Angry at myself for my time management skills

4. Angry at my coworkers, supervisor or organization for interfering with my family life.

5. Frustrated with my time management skills.

6. Frustrated with my coworkers, supervisor or organization for interfering with my family life.

7. Worried that my inability to avoid time conflict means I am not a good parent, spouse, or relative.

8. Worried that my inability to avoid time conflict means others will see me as not a good parent, spouse or relative.

Sometimes **time** pressures from family can result in someone being unable to meet work responsibilities. For example, responsibilities to your family can result in unexpected absence or tardiness from work, such as when a child is sick or other family concerns keep you home.

In thinking about times when family responsibilities interfered with **time** you normally spend at work, please respond to the following questions about how often you generally feel these emotions. Indicate your agreement with the statements on a 1-5 scale, with 1 being Never and 5 being Always or almost always.

When **time** pressures from **family** interfere with my work, I feel:

1. Guilty for letting down myself, being unable to "do it all"
2. Guilty for letting down my coworkers, supervisor or organization, being unable to "pull my weight"
3. Angry at myself for my time management skills
4. Angry at my family members for interfering with my work life.
5. Frustrated with my time management skills.
6. Frustrated with my family members for interfering with my work life.
7. Worried that my inability to avoid time conflict means I am not a good employee or coworker.
8. Worried that my inability to avoid time conflict means others will see me as not a good employee or coworker.

Sometimes feelings of **stress** from work can result in someone feeling stressed or exhausted at home. For example, the stress from a work deadline can interfere with family when a

person is so stressed out from work that they are unable to emotionally or physically contribute to family members when at home.

In thinking about times when the **stress** from work responsibilities interfered with interactions with your family, please respond to the following questions about how often you generally feel these emotions. Indicate your agreement with the statements on a 1-5 scale, with 1 being Never and 5 being Always or Almost Always.

When feelings of **stress** from **work** interfere with my family life, I feel:

1. Guilty for letting down myself, being unable to cope with the work stress.

2. Guilty for letting down my family, being unable to contribute to the family.

3. Angry at myself for my stress management skills

4. Angry at my coworkers, supervisor or organization for causing me stress.

5. Frustrated with my stress management skills.

6. Frustrated with my coworkers, supervisor or organization for causing me stress.

7. Worried that my inabilities to cope with stress means I am not a good parent, spouse, or relative.

8. Worried that my inability to cope with stress means others will see me as not a good parent, spouse or relative

Sometimes feelings of **stress** from home can result in someone feeling stressed or exhausted at work. For example, the stress from family arguments or tensions can result in a person who is so stressed out from family factors that they are unable to emotionally or physically contribute to work obligations when at work.

In thinking about times when the **stress** from family responsibilities interfered with performance at your job, please respond to the following questions about how often you generally feel these emotions. Indicate your agreement with the statements on a 1-5 scale, with 1 being Never and 5 being Always or Almost Always.

When feelings of **stress** from **family** interfere with my work, I usually feel:

1. Guilty for letting down myself, being unable to cope with the family stress.

2. Guilty for letting down my coworkers or supervisors, being unable to perform at work.

3. Angry at myself for my stress management skills

4. Angry at my family members for causing me stress.

5. Frustrated with my stress management skills.

6. Frustrated with my family members for causing me stress.

7. Worried that my inability to cope with stress means I am not a good employee or coworker.

8. Worried that my inability to cope with stress means others will see me as not a good employee or coworker.

Sometimes **behaviors** that are useful and appropriate with coworkers can be problematic at home. For example, when a deadline is approaching, behaving in a demanding way may work well with coworkers, but this behavior may not work well when responding to your child(ren) and/or spouse.

In thinking about times when work **behaviors** proved to be ineffective at home, please respond to the following questions about how often you generally feel these emotions.

Indicate your agreement with the statements on a 1-5 scale, with 1 being Never and 5 being Always or Almost Always.

1. When **work behaviors** are ineffective at home, I usually feel: Guilty for letting down myself, being unable to use effective behaviors

2. Guilty for letting down my family, being unable to effectively behave with them

3. Angry at myself for my behaviors

4. Angry at my coworkers, supervisor or organization for my behaviors.

5. Frustrated with myself for my behavior.

6. Frustrated with my coworkers, supervisor or organization for my behaviors

7. Worried that using the wrong type of behavior means I am not a good parent, spouse or relative.

8. Worried that using the wrong type of behavior means others will see me as not a good parent, spouse or relative.

Sometimes **behaviors** that are useful and appropriate with family can be problematic at work. For example, being especially patient and accommodating may work well when responding to your child(ren) and/or spouse, but may not work well when dealing with coworkers or supervisors.

In thinking about times when family **behaviors** proved to be ineffective at work, please respond to the following questions about how often you generally feel these emotions. Indicate your agreement with the statements on a 1-5 scale, with 1 being Never and 5 being Always or almost always.

When **family behaviors** are ineffective at work, I usually feel:

1. Guilty for letting down myself, being unable to use effective behaviors

2. Guilty for letting down my coworkers, supervisor or organization, being unable to effectively behave with them

3. Angry at myself for my behaviors

4. Angry at my family members for my behaviors.

5. Frustrated with my behavior.

6. Frustrated with my family members for my behaviors

7. Worried that using the wrong type of behavior means I am not a good employee.

8. Worried that using the wrong types of behavior means others will see me as not a good employee or coworker.

Appendix F: Work-Family Conflict Scale (from Carlson, Kacmar and Williams, 2000)

Please indicate your agreement with the following items using the scale below.

Time Based Work Interference with Family

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.

Time Based Family Interference with Work

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.

Strain Based Work Interferences with Family

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.

Strain Based Family Interference with Work.

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 weaken my ability to do my job.

Behavior Based Work Interference with Family

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 or spouse.

Behavior-based Family Interference with Work.

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 works for me at home does not seem to be as useful at work.

Appendix G: PANAS (from Watson, Clark and Tellegen, 1988)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then, using the scale below, indicate to what extent you *generally* feel that way, that is, how you feel on average:

1. Interested

2. Disinterested

3. Excited

4. Upset

5. Strong

6. Guilty

7. Scared

8. Hostile

9. Enthusiastic

10. Proud

11. Irritable

12. Alert

13. Ashamed

14. Inspired

15. Nervous

16. Determined

17. Attentive

18. Jittery

19. Active

20. Afraid

Appendix H: Work Importance- Adapted from Life Role Salience Scale by Amatea et al, 1986

Occupations Role Reward Value Subscale

1. Having work/a career that is interesting and exciting to me is my most important life goal.

2. I expect my job/career to give more real satisfaction than anything else I do.

3. Building a name and reputation for myself through work/a career is not one of my life goals (reverse coded)

4. It is important to me that I have a job/career in which I can achieve something of importance.

5. It is important to me to feel successful in my work/career.

Occupational Role Commitment

1. I want to work, but I do not want to have a demanding career (reverse coded)

2. It is important to me to make as many sacrifices as are necessary in order to advance in my work/career.

3. I value being involved in a career and expect to devote time and effort needed to develop it.

4. It is important to me to devote a significant amount of my time to building my career and developing the skills necessary to advance in my career

5. It is important to me to devote whatever time and energy it takes to move up in my job/career field.

Appendix I: Family Importance- Adapted from Life Role Salience Scale by Amatea et al, 1986

Family Role Reward Value Subscale

1. My life would seem empty if I never had a family.

2. Although having a family requires many sacrifices, the love and enjoyment of family of one's own are worth it.

3. It is important to me to feel I am an effective family member.

4. The whole idea of having a family and caring for them is not attractive to me.

5. If I chose not to have a family, I would regret it.

Family Role Commitment

1. It is important to me to commit whatever time necessary to making my family feel loved, support and cared for.

2. Devoting a significant amount of time to being with or doing things with my family is not something I find important to do (reverse coded) **This item was excluded from further analyses due to low reliability**

3. It is important to me to be very involved in the day-to-day details of maintaining healthy family relationships

4. Really involving myself in family relationships involves costs in other areas of my life that I am unwilling to accept.

5. I expect to work hard to build good family relationships even if it means limiting my opportunities to pursue other personal goals.

Appendix J: Job Satisfaction

Job Satisfaction: **Please indicate your agreement with the following statements, as they apply generally:**

1. I feel enthusiastic about my work.

2. I feel fairly satisfied with my job.

3. Every minute of work seems like it will never end.

4. I find real enjoyment in my work.

5. I consider my job rather unpleasant.

Appendix K: Life Satisfaction

Life Satisfaction Scale: **Please indicate your agreement to the following statements, as they apply generally:**

1. In most ways my life is close to my ideal.

2. The conditions of my life are excellent.

3. I am satisfied with 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.

Appendix L: Demographics

In order to describe those who participated in this study, we would appreciate it if you would answer the following questions about yourself.

Sex: ☐ Male   ☐ Female

Age: _____

Education- Please indicate the highest level completed:

☐ Some high school

☐ Completed high school

☐ Some college

☐ Completed college

☐ Some graduate school

☐ Graduate degree

Marital status:

☐Single/never married   ☐ Divorced   ☐ Widowed   ☐Married/partnered

Race/ethnicity

☐ American Indian or Alaska Native

☐ Asian

☐ Black or African American

☐ Hispanic

☐ Native Hawaiian or other Pacific Islander

☐ White Non-Hispanic

☐ Other _____

Number of children at home _____

Age(s) of children at home (separate ages of children with commas) _____

Number of hours <u>you</u> work in paid employment per week:

☐ None

☐ 1-10

☐ 11-20

☐ 21-30

☐ 31-40

☐ 41-50

☐ More than 51

<u>Your</u> typical work schedule

☐ Day shift

☐ Afternoon shift

☐ Night shift

☐ Variable

☐ Not employed for pay

<u>Your</u> job title: _____

Household yearly income:

☐ Less than 15,000

☐ 16,000-25,000

☐ 26,000-35,000

☐ 36,000-45,000

☐ 46,000-55,000

☐ 56,000-65,000

☐ 66,000-75,000

☐ 76,000-85,000

☐ 86,000-95,000

☐ 96,000-105,000

☐ 106,000-120,000

☐ More than 120,000

Do you have a spouse/partner? ☐ Yes ☐ No

Number of hours of paid employment your spouse/partner engages in per week.

☐ None

☐ 1-10

☐ 11-20

☐ 21-30

☐ 31-40

☐ 41-50

☐ More than 50

How many hours do you spend per week on **housework,** including cooking, cleaning, laundry, picking up dry cleaning, shopping, etc, or arranging for any of these types of tasks to be done by others:

How many hours do you spend per week on **child and/or parent care,** including transportation of children and/or parents or arranging for child and/or parent care:

How many hours do you spend per week on **household maintenance,** including lawn care, gardening, household repairs and improvements, painting, remodeling, fixing appliances, fixing the car, or arranging for these types of tasks to be done by others:

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