January 2012

An Investigation of Negative Appraisals Due to Negative Mood and How They Affect Satisfaction and Job Performance

Cristina Keiko Hudson
University of South Florida, ckawamot@mail.usf.edu

An Investigation of Negative Appraisals Due to Negative Mood and How They Affect Satisfaction and Job Performance

By

Cristina K. Hudson

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
Department of Psychology
College of Arts and Sciences
University of South Florida

Major Professor: Edward L. Levine, PhD.
Committee Members: Tammy D. Allen, PhD.
Jennifer K. Bosson, Ph.D.

Date of Approval:
September 7, 2012

Keywords: Nonwork Stressors, Emotions, Work Events, Spillover,
Affective Events Theory

DEDICATION

This thesis is dedicated to all those who have supported me throughout my life and education. Without each and every one of you, this accomplishment would not have been possible. To my friends and mentors—thank you for your patience, encouragement and insights. To my parents and brother—your examples and emphasis on knowledge and education have instilled a thirst for continued learning (and ultimately led to my pursuit of this doctoral program). Your love and support are what have helped me to thrive in it. To my amazing and loving husband—you have always been there to listen and motivate me through frustrating times and to share in my happiness through even the smallest of successes. Knowing you are always behind me gives me strength to face new challenges head-on. I am extremely lucky and thankful to have you.

ACKNOWLEDGEMENTS

Thank you to my major professor, Dr. Edward L. Levine, and the members of my committee for their guidance and assistance throughout this project. Special thanks also to Dr. Gabriella Harmon and the members of Human Resources Organizational Development at the University of South Florida for their aid and advice with data collection.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Ample research has investigated the relationship between non-work and work domains finding consistent links between stressors in one and strains in the other. Additionally, there exist explanatory models of these associations such as psychological/physical sickness and related absences and loss or fear of losing personal resources. The current investigation combined variables from the spillover model and Affective Events Theory to test a new model with negative mood at its core. It hypothesized marital and financial stressors lead to negative mood at home which spills over into the work domain resulting in relatively more negative appraisals of work events. Negative mood at work is a likely outcome, which in turn causes subsequent decreases in organizational citizenship behavior (OCB) and job satisfaction and increases in counterproductive work behavior (CWB). Finally, the model proposed social support as a moderator buffering against the detriments of negative mood from home. Although structural equation modeling found the proposed model to be incorrect and to suffer from a large degree of misfit, examination of individual parameter estimates warranted the testing of two alternative models. Model 3 presented the best fit and most variance accounted for by omitting OCB and using direct paths from social support to all work variables (rather than the proposed moderating effect) and direct carryover of mood at home to mood at work. The majority of the paths tested in the model reasonably explained the data, although some variance remained unaccounted for. Results of model

testing were also supported by significant correlations in the predicted direction between stressors and mood at home; mood at home and appraisals of work events; appraisals of work events and mood at work; and mood at work with job satisfaction and CWB. These results draw attention to the important role played by the individual's mood in the interplay between the work and non-work domains.

INTRODUCTION

Factors in the workplace that can have either positive or negative effects on employee productivity have been extensively studied. Although this topic remains vital to company survival, there is also growing interest in aspects of the employees' lives outside the workplace that can affect employees on the job. These are referred to as nonwork related stressors. Most of the current research on nonwork related stressors tends to assume that the pressures of working and maintaining a family are in conflict and that this conflict is harmful to both roles. Although bivariate relationships have been found between nonwork stressors and work outcomes, little research has described how and why these correlations arise. The few attempts at explanations implicate inadequate amounts of cognitive resources, health related absence, and substance use, but extant research has not definitively established which of these is responsible for the outcomes observed. The need for empirically supported understanding is extremely important for employers and employees who wish to enhance positive relationships and/or buffer against harmful ones. This study attempted to address this need.

The study reported here focused on variables derived from Spillover Theory (Edwards & Rothbard, 2000) and Affective Events Theory (Weiss & Cropanzano, 1996) to investigate how negative mood created by stressors outside the work environment (marital and financial) enters the work domain causing more negative appraisals of work events and features than would otherwise be expected. It was suggested that the

cognitive and affective outcomes of these negative evaluations (e.g., worsened mood, frustration and psychological withdrawal) are presumed to be among the primary causes of changes in work outcomes due to nonwork stressors found by previous correlational studies. This rationale was captured in a model linking the proposed antecedents to a set of key outcomes. In addition, social support was included in this model as a potential moderator buffering against the effects of negative mood. The model is more fully elaborated in the following sections, and was empirically tested in the current study. (Of course causality could not be conclusively demonstrated in this study due to the reliance on survey methodology).

The presentation to follow first discusses nonwork stressors including marital and financial difficulties. Then, a model is proposed wherein Spillover Theory and Affective Events Theory contribute variables linking nonwork stressors and key work outcomes through negative mood. Finally, social support as a moderator is added to potentially strengthen the model's predictive and explanatory value.

Stress and Stressors

Use of the term "stress" is widespread in everyday life which may in part have contributed to its being a highly researched area of psychology. Different models of stress have been proposed including but not limited to those defining it simply as a stimulus (e.g., Elliot & Eisdorfer, 1982) or a response (e.g., Cannon, 1932 and Selye, 1950), a perception of imbalance between environmental demands and individual coping abilities (e.g., McGrath, 1970 and Lazarus, 1966), or as a threat to personal resources (e.g., Hobföll, 1989; all as cited in Hobföll, 1989 and Zautra, 2003). A growing body of researchers has reached some agreement, that *stress*, however, does not describe one

single event but rather a process whereby an individual's appraisals of a stressor lead to various types of strains (Spector, 2006).

Just as there are multiple models of stress, there are also various ways to measure stress and its components. One of the most common ways to quantify stress is with a global measure of one's overall self-rated stress such as the *Perceived Stress Scale* (PSS, Cohen, Kamarck & Mermelstein, 1983). These measures are popular since they can be used in a variety of contexts (Lavoie & Douglas, 2012). Because they are global measures, however, they cannot describe a specific set of stressful events or experiences. An alternate method, utilized especially when studying major life events, is the checklist approach. Here the individual is simply asked if an event occurred. Often times, the events are categorized and given weights based on the category (frequently severity) to which they belong. This type of measurement produces more of an objective measure of an individual's experienced stress due to particular events or experiences. Checklists, however, are often faulted for "poor accuracy in terms of across-respondent agreement about the same event...[and] variability within particular event categories" (Brown, 1989, p. 12). To account for this interaction between the environment and personal characteristics, some checklists take it a step further by asking participants to also rate the personal importance of each event (e.g., Holmes & Rahe, 1967). Even this technique, however, is criticized for failing to account for the chronic nature of some types of stressors as described above (Cohen, et al, 1983). For instance, a checklist may ask if the individual has experienced financial instability. Both a respondent who had one short term issue with finances and another who constantly struggles would indicate that financial instability had occurred. Additionally, to both, this would quite possibly be an

event of high importance. The outcomes for these two individuals would probably be very different, though.

Regardless of the type of model, however, many stress researchers have come to accept standard definitions of two important parts of the stress process—*stressor* and *strain. Strains* are simply considered the result of exposure to various stressors. They can be exhibited as detrimental behaviors such as excessive drinking or unhealthy eating, psychological effects including negative affectivity or burnout, or physiological changes such as illness or muscle tension (Hobföll, 1989; Honkonen, et al., Keenen & Newton, 1985; Motowidlo, Packard, & Manning, 1986; Spector, 2006; Spector & Jex, 1998).

A second aspect of the stress process that has gained some consensus is *stressor*. The popular meaning of stressor is attributed to the work of Elliot and Eisdorfer (1982, as cited in Hobföll, 1989). This definition suggests a stressor is a stimulus that "usually leads to emotional upset, psychological distress, or physical impairment or deterioration" (p. 514). Additionally, these authors categorized stressors into four types. First, are *acute, time-limited* stressors which tend to be single events occurring only once (e.g., a case of food poisoning). The second category includes *stressor sequences.* These are larger events that are more of a process encompassing multiple stressful events such as divorce. The third type is those which are *chronic, intermittent* stressors. Although they include individual events, these events continue to occur over a period of time. For instance, undergraduate students typically have exams multiple times throughout a single semester. The last group of stressors is classified as *chronic*. These differ from the *chronic, intermittent* in that they are continuous with little or no periods of rest (e.g., terminal illness) (Hobföll, 1989).

As previously mentioned, many of the stress models involve an individual's perception of the event as stressful. Although, it is arguable that Elliot and Eisdorfer's definition of a stressor may allow certain stressors to not always be perceived as such by all individuals, their definition at least provides a set of defining boundaries inside which lists of *common* stressors can be created. These are seen as events or experiences which most would describe as a stressor with fewer exceptions as indicated by perception models (Hobföll, 1989).

Stressors have been studied in both the work and nonwork domains, and numerous exemplars can be found in both domains. Some typical nonwork related stressors include marital discord, financial instability, parenting problems, and caretaking difficulties. The first two were selected for further study because of research indicating their impact on work related and health outcomes. Previous research regarding these stressors and related strains is reviewed in the following sections.

Marital Stress

Research on marital stressors has studied aspects of marriage (i.e., interaction, conflict, instability, etc.), and found important links with outcomes such as job satisfaction and health (Heller & Watson, 2005; Rogers & May, 2003). For instance, a study by Rogers and May (2003) indicated that increased dissonance in one's marriage (e.g., arguments, disparaging comments/criticism, etc.) correlated strongly and negatively with job satisfaction (see also Mills, Grasmick, Morgan & Wenk, 1992). Furthermore, marital unhappiness has been shown to correlate with lowered role performance and increased withdrawal tendencies (Rogers & May, 2003).

Other studies regarding the effects of marriage on psychological health have found it to be related to major depressive disorder and depressive symptoms (Whisman & Uebelacker, 2009). For instance, in some studies' findings suggest married women tend to be less depressed and report fewer health issues than their single counterparts (Brome, Dew, Parkinson & Schulberg, 1988; Waldron, Weiss, & Hughes, 1998). However, when they do encounter stressors in their marriages, the resulting strains tend to be rather severe with regard to their mental health (Brome, et al., 1988; Kandel, Davies & Raveis, 1985; Mills, et al., 1992; Zautra, 2003).

In relation to physical health, marital stressors such as conflict, divorce, and separation have been strongly linked with negative health symptoms such as headaches and stomachaches (Brome, et al., 1988; Mills, et al., 1992) as well as more severe ailments such as coronary heart disease (Smith, Uchino, Berg & Florsheim, 2012). Additionally, these negative effects on health can cause employees to be absent from work more often which in turn relates to decreases in job performance.

Financial Stress

Typically, financial stressors are perceptions of the inadequate state of one's own financial circumstance including the sufficiency of income, amount of debt, savings and investments, and current financial situation (Kim & Garman, 2003 and 2004). This term (financial stress) also takes into account the fact that one's income may not adequately represent the actual funds available to the individual. This discrepancy could be due to factors such as reckless spending/budgeting, large number of dependents, poor management of inheritances, trust funds, and the like.

Similarly to marital stressors, studies of financial stressors have demonstrated significant relationships with various types of physical as well as psychological problems inside and outside of the work setting (Kim & Garman, 2003; Zautra, 2003) such as health and related behaviors (Near, Rice, & Hunt, 1978; Siahpush, Yong, Borland, Reid & Hammond, 2009; Waldron, et al., 1998), absenteeism (Kim & Garman, 2003 and 2004), organizational commitment (Kim & Garman, 2003), and theft (Garman, Leech, & Grable, 1996). Financial stressors have also been linked to declines in perceived employee well-being as well as performance and productivity (Garman, et al., 1996; Kim & Garman, 2004; Michie, 2002). More general, increases in financial stress has been related to greater amounts of psychological distress including depressed mood and anxiety disorders (Horowitz, Damato, Duff, & Solon, 2005; Stallman, 2010).

Overall it is clear that strain arising from marital and financial difficulties is correlated consistently and negatively with key work outcomes. However, in order to develop strategies to help buffer against these negative effects it is necessary to thoroughly understand how and why the relationships arise. Since this study looked for the mechanism by which these two stressors are related to work outcomes, the key interest was on one of the more proximal outcome of both stressors, negative mood or affect, rather than the overall relationships with the end result (negative effects on work related outcomes). This led to the first hypothesis and creation of the model involving negative mood as a mediator which will be described in the next section.

Hypothesis 1: a) Marital stressors and b) financial stressors will be positively correlated with negative mood at home.

Linking Stress and Work Outcomes via Variables from Spillover and Affective Events Theory

Generally, research linking stressors with work outcomes tends to imply a few main paths. For instance, some research has found a direct link between stressors and health which results in higher amounts of sickness related absences. Logically, if an employee is sick, his or her capacity to complete work tasks will be impaired (Kim & Garman, 2003). Another avenue that has been implied in the literature posits that an individual's physical and psychological resources are finite. Thus, if an employee must dedicate energy to dealing with a problem at home, he or she will not have sufficient resources available to properly handle his or her work (Garman, Leech, & Grable, 1996). Third, previous research suggests that excess levels of strain can lead to drug and alcohol abuse which in turn can increase absences, and/or impair capacity to perform and thereby decrease productivity (Garman, et al., 1996).

Although these seem to be viable paths, there may be other factors contributing to the link between stressors and work outcomes. Affect and cognition are potentially helpful in explaining the link. Specifically, negative mood has already been indicated as a potential mediator connecting work experiences and family-related outcomes (Barling & Macewen, 1992). Few studies, however, have explained exactly *why* negative mood assumes this role. Thus, this investigation tested an alternative model linking non-work stressors and work outcomes using elements of Spillover and Affective Events Theory (AET) to help account for the link. First, a brief review of the literature surrounding mood and emotions research follows.

Research on Mood in the Workplace

Starting with Simon's *bounded rationality* and Mumby and Putnam's *bounded emotionality* (Mumby & Putnam, 1992; see also Ashkanasy, Härtel, and Zerbe, 2000), research has confirmed the view that employees often behave irrationally. The irrationality is attributed partly to the impact of affect, including emotions, moods and temperament. Many organizational researchers suggest the "emotional dimension is an inseparable part of organizational life" (Ashkanasy, et al, 2000, p. 4) deserving of a much greater degree of attention than it has previously been given. The current study followed this direction by focusing on the potential mediating effects of mood in the relationship between the work and non-work domains.

Most emotions theorists have come to some agreement that a key dimension of affect is valence, positive and negative, though some (e.g., Watson, Clark & Tellegen, 1988) treat these as separate dimensions (PA and NA, respectively). Following Watson and colleagues (1988), the experience of either dimension is not mutually exclusive. Additionally, each of these can be investigated as either an affective state or affective trait. The former refers to a more fleeting or short-term experience of either PA or NA, whereas the latter refers to much more stable dispositional characteristics related to personality (Watson, et al., 1988; Zautra, 2003).

Generally, high PA is exemplified by positive feelings and activity levels including joy, enthusiasm, concentration and engagement (Watson, et al, 1988). It has been found to relate to higher levels of job satisfaction (Boehm & Lyubomirsky, 2008; Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010; Levine, Xu, Yang, Ispas et al., 2011; Reio & Ghosh, 2009; Shockley, Ispas, Rossi, & Levine, in press; Thoresen,

Kaplan, Barsky, Warren, & Chermont, 2003), affective organizational commitment, personal accomplishment (Thoresen, et al., 2003), and physical health (Boehm & Lyubomirsky, 2008) as well as lower levels of burnout, depersonalization and intentions to leave (Thoresen, 2003). In addition, those high in PA are more helpful, are involved in organizational citizenship behaviors more frequently, and receive both higher subjective and objective task performance ratings (Boehm & Lyubomirsky, 2008; Levine, et al., 2011; Shockley et al., in press).

On the other hand, and of greater relevance to the current study, high NA is typified by negative emotions and unpleasant feelings such as anger, guilt, nervousness, etc. (Thoresen, et al., 2003; Watson, et al, 1988). Those with trait NA tend to espouse a pessimistic view of the world, generally thinking that the environment is hostile and threatening (Thoresen, et al., 2003). As previously mentioned, negative mood states can be an outcome of various stressors including marital and financial stressors (Zautra, 2003).

Additionally, NA has been linked to worsened outcome variables such as higher levels of perceived stress, greater numbers of health issues, and more frequent encounters with negatively rated events (Stone, 1981; Warr, Barter, & Brownbridge, 1984; Watson, et al, 1988). Strong ties have also been found between negative affectivity and work outcomes such as lowered task performance (Barsade & Gibson, 2007), incivility (Reio & Ghosh, 2009), counterproductive work behavior (Levine, et al., 2011; Spector, Fox, Penney, Bruursema, Goh & Kessler, 2006), emotional exhaustion and turnover intentions (Thoreson, et al., 2003). The next sections utilize variables drawn from Spillover Theory and Affective Events Theory (AET) to illustrate the suggested model demonstrating this

construct, negative mood, as a mediator between marital and financial stressors and work outcomes.

Spillover and Affective Events Theory

First, the spillover model linking work and nonwork domains suggests that there are correspondences between levels of affect, values and behaviors in both domains, which are presumed to result from reciprocal causal influences from one domain on the other (Bergermaier, Borg, & Champoux, 1984; Champoux, 1980; Edwards & Rothbard, 2000; Heller & Watson, 2005, Michie, 2002; Near, et al., 1978). (The presumptive causal sequence is described below). For example, dissatisfaction with one's home life will be reflected in ratings of job satisfaction as well (Heller & Watson, 2005). Furthermore, Bergermaier, et al., (1984) found that those life spaces that are more prominent such as work, parenting and marriage tend to be more strongly related (see also Kandel, et al., 1985). This reasoning suggests that the negative mood off-the-job resulting from nonwork stressors is mirrored by observance of negative mood at work, leading to the following hypothesis:

> *Hypothesis 2: Negative mood at home will be positively correlated with negative mood at work.*

One suggested rationale drawn from the spillover model for the appearance of negative mood in both domains revolves around direct effects of mood on performance. An individual may spend more time concentrating on the negative mood or its cause and less time on work demands, indirectly affecting productivity. This detrimental effect on the employee's performance can affect performance evaluations and reviews thus leading to further negative mood at work (Edwards & Rothbard, 2000). The current model, however, suggested an alternative route whereby negative mood at home affects

appraisals of work events causing them to be more negative than they would otherwise have been if the individual was experiencing a neutral or even positive mood. These appraisals would in turn lead to negative mood reported at work. The combination of Spillover Theory with Affective Events Theory, which deals with such event appraisals, thus appears to be useful in explaining this sequence.

Affective Events Theory (AET)

AET posits that underlying work features (e.g., flexibility) may predispose an employee to experience greater numbers of affective work events (e.g., performance reviews) which can "have an impact on the arousal of emotions and moods at work that, in turn, co-determine job satisfaction of employees" (Wegge, et al., 2006, p. 237; see also Weiss & Cropanzano, 1996). In this theory, an affective event is defined as any "incident that stimulates appraisal of and emotional reaction to a transitory or ongoing job-related agent, object or event" (Ashkanasy, Härtel, & Zerbe, 2000, p. 37).

Naturally, the literature on work events encompasses a very broad list of experiences, many of which are also considered stressors (i.e., negative performance review; missed deadline, etc.) (Bash & Fisher, 2000). Up to this point, most of the focus of this paper has been on negative stressors, it is important, however to realize that AET does not exclude the occurrence of positive events such as receiving recognition and being involved in planning. Although the current study concentrated primarily on the experience of negative events at work, respondents in this study were asked to appraise both types of events as the degree of negativity attributed to any event was of interest.

Affective Events

Generally, researchers agree that the experience of negative events at work is a regular occurrence (Glasø, Vie, Holmdal & Einarsen, 2011). More extreme types such as violence related incidents, however, are probably much less frequent than less severe events (e.g., excess work). The latter, also coined *daily hassles*, has been covered by past research. These are considered "the irritating, frustrating, distressing demands that to some degree characterize everyday transactions with the environment" (Maybery, Neale, Arentz & Jones-Ellis, 2007, p. 163). Hassles typically include a variety of occurrences such as time pressures and minor negative interactions with others (McIntosh, Gillanders & Rodgers, 2010). The literature on these types of negative events indicates positive relationships with a variety of negative outcomes such as a drain in resources leading to fatigue (Gross, Semmer, Meier, Kälin, Jacobshagen & Tschan., 2011; Parrish, Zautra & Davis, 2008) and depressive symptoms (Wang, Inslicht, Metzer, Henn-Hasse, McCaslin, Tong, Neylan & Marmar., 2010).

In comparison, the more extreme forms (*major life events*) are defined as involving "greater change, adjustment or disruption" than daily hassles (McIntosh, et al., 2010, p. 34). As mentioned earlier, major life events are often studied using a checklist approach in which respondents are asked about the occurrence of events such as deaths of those close to them or loss of one's job. Again, these types of events can also encompass those on the positive side such as births and engagement (Brown, 1989; McIntosh, et al., 2010). Some studies have found major life events to be more predictive of the onset of physical and psychological health problems whereas daily hassles are linked to the recurrence of such problems. Furthermore, daily hassles are often found to have stronger

influences on these types of symptoms than major life events (McIntosh, et al., 2010; Tessner, Mittlal, & Walker, 2011).

With specific focus on outcomes at work, research on bullying, a more extreme type of event, has been found to lead to work-related outcomes such as decreased job satisfaction and increased turnover intentions (Glasø, et al, 2011). Additionally, in a study distinguishing between nonwork and work events, Maybery and colleagues (2007) found general work hassles and more specific problems such as those with one's supervisor to be positively related to depression and anxiety.

Affective Reactions

Although Affective Events Theory in essence begins with the employee experiencing an event (either positive or negative) such as those just described, in their chapter, Basch and Fisher (2000) pointed out that these events in and of themselves are actually not as important as the individual's "appraisal, evaluation and interpretation" (p. 37) of them. (This sentiment is similar to those stress researchers described above who directed attention toward the interaction of the environmental stressors/events and the individual's characteristics). Thus, the primary focus of AET is on the affective reactions to work events as drivers of an employee's attitudes (e.g., job satisfaction) and behaviors (e.g., CWB).

According to AET, affective reactions are the sum of a two stage appraisal process of the affective work event. For instance, if an employee does not receive an expected holiday bonus at the end of the year, the employee first decides if the event is good, bad, or neutral with regard to personal goals and values. He or she also determines how personally important the event and the outcome are. In this case, not receiving a

bonus would commonly be considered a rather important, negative event. In the second stage of appraisal, the employee examines the context of the event such as causes and consequences. For example, the employee may view the lack of a bonus as a necessary response to a poor economy affecting everyone. On the other hand, he or she could instead consider it an intentional act by the company aimed personally at him or her to cheat him or her out of well-deserved money. By combining the spillover model with AET, the current model suggested that when a negative mood occurs at home due to such stressors as marital or financial problems it will persist and enter the work domain. When an employee's negative mood from home enters the workplace the model proposed that it will cause the employee to appraise work events more negatively (e.g., lack of a bonus is an intentional act rather than a necessary economic decision) than if the pre-existing negative mood did not exist. These appraisals can in turn result in more negative emotions/mood at work. This sequence sought to explain not only the spillover of mood from the home to the work domain, but through AET, also one potential mechanism underlying this synchronization. Furthermore, the role of pre-existing mood in the appraisal process is supported by other researchers such as Zautra (2003) who suggested that "[emotions] appear to be better described as organizers of meaning, providing direction to our senses" (p. 4). Thus, not only did the study hypothesize correspondence of negative mood at home and negative mood at work, but the rationale just explained led to the following two hypotheses regarding the process of this synchronization:

> *Hypothesis 3: The more negative an employee's mood at home the more negative will be his or her appraisals of work events.*
>
> *Hypothesis 4: The more negative the appraisals of work events, the more negative will be the employee's mood at work.*

At this point, it is important to keep in mind that this pattern may be cyclical, whereby a downward spiral of affect occurs as negative events at work in turn worsen conditions at home and vice versa. For example, if the same employee leaves work in a negative mood due to a poor performance review (negative event) then a negative light could be cast on events that occur later that evening in the home domain. Such a pattern was noticed by Heller and Watson (2005) in that ratings of marital satisfaction at night were strongly correlated with job satisfaction the following afternoon. Ratings of job satisfaction were then correlated with marital satisfaction later that evening. This potential cycle, however, was beyond the scope of the current investigation.

Outcomes of the Negative Lens

Following from the research on affect, which links negative mood to various work outcomes, the model provided a mechanism for the impact of non-work stressors on work outcomes. At this point, the nexus between negative mood at work and work outcomes is elaborated. Emotions and moods experienced as a result of work events (i.e., augmented frustration, and heightened psychological withdrawal) have been shown to be correlated with important outcomes, especially more discretionary behaviors such as counterproductive work behavior, organizational citizenship behavior, commitment to the organization, etc. (e.g., Shockley, et al., in press). This general finding was amplified by findings of Zerbe and colleagues (2008) who suggested that "organizational members' cognitions and behavior at work are much more likely to be affected by the way they feel on a moment-to-moment basis than by stable belief systems or previously formed attitudes about those workplace events" (p. 9). Research on general negative emotions/mood has found ties between it and work outcomes such as lowered task

performance (Barsade & Gibson, 2007), incivility (Reio & Ghosh, 2009), counterproductive work behavior (Spector, Fox, Penney, Bruursema, Goh & Kessler, 2006), emotional exhaustion and turnover intentions (Thoreson, et al., 2003). Furthermore, research on frustration (one specific type of NA, commonly experienced as a result of work stressors, events and constraints (Mazzola, Walker, Shockley & Spector, 2011)) has also indicated relationships with counterproductive work behaviors such as aggression and/or sabotage, and withdrawal (Fox & Spector, 1999; storms and Spector, 1987). This research on the outcomes of mood and types of NA is indicated in the model (illustrated in the next section) by the connection between negative mood at work and three outcomes including job satisfaction, OCB and CWB, and led to the following hypothesis:

> *Hypothesis 5: Higher levels of negative mood at work will be positively correlated with occurrences of CWB and negatively correlated with job satisfaction and occurrences of OCB.*

Moderating the Effects of Mood on Appraisals of Work Events

A number of contextual variables may moderate the relationship described in the previous section between negative mood at home and appraisals of work events. One that seemed to show particular promise as a moderator was social support. This next section provides more detail.

Social Support

According to Haslam and colleagues (2005), there are four main components of social support. First, *emotional support* refers to one's feelings of being accepted and having self-worth. Next, *social companionship* is the feeling of being affiliated or connected to others. Third, *instrumental support* comes in the form of aid and resources.

Finally, *informational support* helps the individual to understand the stressor possibly from a different perspective than originally used.

The idea that employees may view individuals (i.e. coworkers and supervisors) from work as providers of social support was proffered by Burden (1986) who found that men reported heavy reliance on their coworkers for social support. Supporting this view, a study by Beach and colleagues (1993) investigating the sources of social support indicated that coworkers were considered the second most salient source exceeded only by the spouse. Furthermore, it has generally been found that social support can counteract negative outcomes such as strain and disease (Beehr, 1998; Burden, 1986; Davison, Pennebaker, & Dickerson, 2000; DeLongis, Folkman, & Lazarus, 1988, Yang, Spector & Che, 2008).

Research by Folkman and Lazarus (1988) found that seeking social support as a coping mechanism mediated the relationship between stressful encounters and emotion such that the individual experienced more positive emotions. In these situations, it is possible that the individual is using one or more of Haslam's four types of social support to better understand stressors or to view them from a different perspective thus affecting the outcome (e.g., emotion). This notion coincides with Lazarus's proposition that in response to a stressor such as marital discord an individual follows a two phase evaluation system (1993; see also Folkman & Lazarus, 1988, and Lazarus and Folkman, 1984) similar to that of AET. First, an appraisal of whether the stressor is benign or harmful to the individual's personal goals is made, and then also an assessment of coping skills available to deal with the stressor. Lazarus further emphasized that there are two main types of coping to deal with stressors—problem-focused and emotion-focused. The

former refers to the individual's attempts to alter the circumstances causing the stressor, whereas the latter involves changing the interpretation of the stressor to improve the reaction (e.g., use of informational support).

Although this reasoning provides a strong argument for the potential mediating effects of social support from coworkers, social support has also been cited as "the most frequently studied situational moderator" with regard to the stressor-strain relationship (Beehr, 1998). Yang and colleagues (2008) suggested instrumental and emotional support as strong players in this buffering effect, whereas Beehr (1998) proposed forms more closely related to Haslam's informational support as assuming larger roles due to the exchange of information occurring during support-invoking situations (similar to those described above). In her chapter, Beehr does point out that the moderating effects tend to be inconsistent with direct effects such as those observed by Lazarus and Folkman (1988) occurring more regularly. Regardless, the current investigation decided to include social support as a moderator rather than a mediator. As previously noted, it has been studied as a moderator in the stressor-strain relationship, with little evidential support. The current study suggested that rather than buffering the individual in this overall relationship, the moderating effect may be more localized. Specifically, the study proposed social support from coworkers to have its primary effects in the first part of the model to enter the work domain—the relationship between negative mood brought from home and the appraisals of work events. Thus, those with greater amounts of social support awaiting them at work should be buffered from the otherwise negative chain of events described in by the study's model (see Figure 1 below). This leads to the sixth hypothesis.

Hypothesis 6: Social support from coworkers will moderate the relationship between mood at home and appraisals of work events, such that the negative relationship between negative mood at home and appraisals of work events will be lower for those who report higher levels of social support relative to those who report lower levels.

Therefore, the primary model offered by this study and illustrated below highlighted the hypothesized links between marital and financial stressors and one's negative mood while at home. This negative mood then impacts the employee's appraisals of work events such as performance reviews resulting in the creation or aggravation of a negative mood at work. In turn, this negative mood at work is related to decreases in both job satisfaction and OCB as well as increases in CWB. Finally, the model suggested perceived social support may moderate the relationship between the employee's negative mood at home and the negative appraisals of work events (See Figure 1 on the following page).

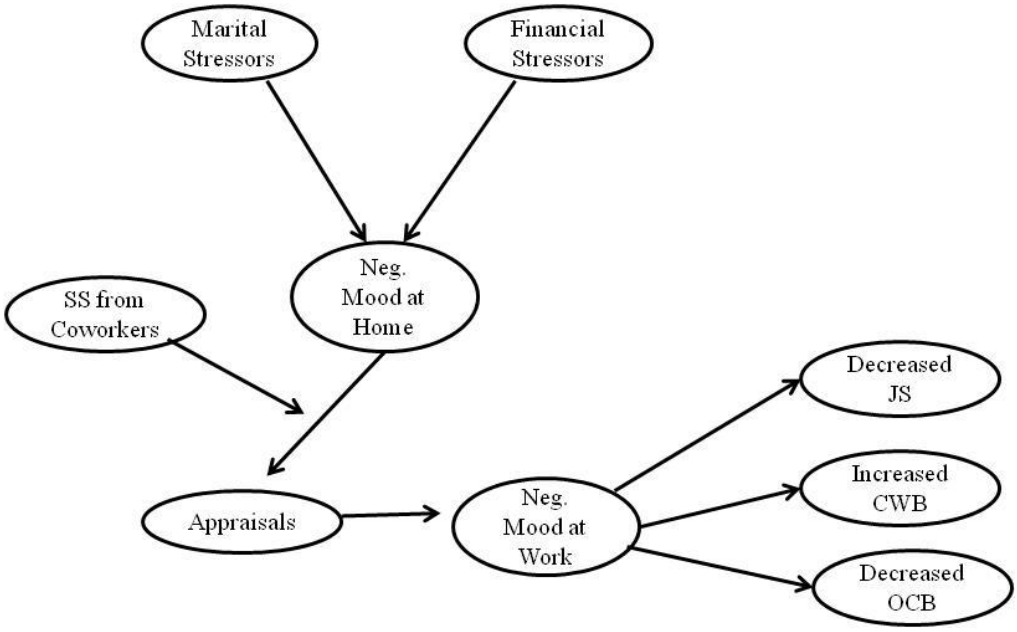

Figure 1. Proposed model demonstrating spillover of negative mood due to non-work related stressors as it affects appraisals of work events, mood at work and outcomes.

Current Study

As previously described, past research has already found fairly stable support for the link between nonwork stressors and work outcomes. Thus the focus of the current study was primarily on the mechanism by which these variables are connected rather than on the overall link itself. Specifically, a new sequence was proposed whereby negative mood at home (in response to nonwork stressors) is presumed to cause more highly negative appraisals of work events which in turn result in negative mood at work (and subsequent detrimental effects on work outcomes). Two well-researched stressors, marital and financial, were included as well as three commonly cited work outcomes—job satisfaction, CWB and OCB.

Given the perceptual nature of the study's primary variables (mood, appraisals of work events, etc.) with regard to the experiences of employed individuals, self-report survey methods seemed most appropriate. Although this method aims to tap into the participants' cognitive and affective information unavailable to any third party, it does raise concerns about common method variance and it compromises the establishment of causal connections/conclusions. Thus, although the underlying theory behind the model suggests causal relationships, the reader should bear in mind the non-experimental and cross-sectional nature of the study when interpreting the findings. Nevertheless, alternate designs seemed less appropriate for testing the model with a diverse sample of employed individuals.

The survey questionnaire compiled for this study included measures of the two nonwork related stressors (marital and financial), measures of mood both at home and at work, a set of work events which were appraised by the participants with regard to the

degree of positivity or negativity of their experience, and finally the three outcome variables (job satisfaction, CWB and OCB). Although most of the scales were borrowed from previous research in which psychometric properties were tested, two new scales were developed for this study, one to measure appraisals of work events and the other for levels of perceived social support from coworkers, potentially including subordinates, and supervisors. (Construction and evaluation of these measures are described in the following sections). As previously indicated, the survey was intended to be completed at a single time point by working, married and financially obligated individuals. Although a subset of these respondents was initially randomly selected, participation was entirely voluntary causing the final set of respondents to consist of only volunteers.

Before proceeding to the primary study, a brief pilot study was conducted using the same research design and employee populations as the primary study just outlined. The purpose of this pilot was twofold, first to ensure satisfactory levels of clarity and psychometric properties of scale items, and clarity of directions to respondents. Additionally, preliminary correlations among focus variables were examined to check for consistency with the proposed model. The primary study utilized feedback from the pilot to conduct a larger scale investigation of the entire model. For both the pilot and the primary study, surveys of employed individuals were the methods of choice. The pilot study is described first followed by the primary study.

PILOT STUDY

Method

Participants

The target sample for the pilot study consisted of forty pairs of employees and their immediate supervisors. (As will be described in the following sections, initially the author intended to collect supervisor data on performance dimensions. Due to low response rates in the pilot study, however, supervisor information was excluded from the primary study). Participants included government employees selected randomly from the four main regions of the United States through publically available state government employee directories. Additionally, attendees of classes offered by the Department of Organizational Development at a large university in the southeast United States were recruited. These respondents included employees from various departments across the university including parking and transportation workers, custodians, office staff, etc. To participate, employees had to be currently working at least 20 hours per week in a job that they had held for at least two months. In addition, they needed to be married, head or co-head of their own household, and initially before this wave of data collection was abandoned, have an immediate supervisor who was willing to complete a short survey regarding OCB and CWB. No compensation was given.

Measures

A full set of employee survey materials with citations and previously obtained reliability estimates can be found in Appendix A. Supervisor survey material is located in Appendix B. (Note: α statistics listed in this section indicate internal consistency estimates obtained in the pilot study).

Demographics. These questions, providing data to potentially serve as control variables, consisted of age, gender, ethnicity, tenure, and work hours. For these, gender was dummy coded (1 = male, 2 = female). Although ethnicity originally a categorical variable (1 = Caucasian, 2 = African American, 3 = Hispanic or Latino, 4 = Asian, and 5 = Other), for the purpose of analyses, it was dummy coded such that 1 was Caucasian and 2 was equal to all other ethnicities. Age and work hours were both continuous variables. Additionally, tenure was rated on a scale from 1 to 4 (2-3 months, 3-11 months, 1 year-2 years, and longer than 2 years, respectively). One item asking if the participants were single or married was included to ensure all respondents met this inclusion criterion.

Marital Stress. Six items from Matzek and Cooney (2009) were used as the measure of marital stressors for those who are married, separated or divorced (α = .90). Example items include "How often does your spouse or partner criticize you?" and "How often does your spouse or partner make too many demands on you?" Responses were made on a 1-4 Likert scale (a lot to not at all, respectively). Scores may range from 6 to 24 with lower scores indicate higher amounts of stressors.

Financial Stress. Four items used by Kim and Garman (2004) indexed the individual's financial stressors (α = .82). Responses to the items range from 1 to 4 (disagree to agree, respectively) and are summed. Due to positive wording of the majority

of these items (e.g., “My income is enough for me to meet my monthly living expenses”), lower overall scores reflect greater financial stressors (scores may range from 4 to 16). Scores on the negatively worded item, “I worry about how much money I owe” were reverse scored prior to analyses.

Mood at Home. Employees were asked to rate how they have felt over the previous few weeks with regard to 20 feelings and emotions (e.g., enthusiastic, upset) found in the Positive and Negative Affect Schedule (PANAS) (Watson, Clark & Tellegen, 1988). The scale contains two subscales, one measuring positive affect (e.g., interested, strong, excited), the other assessing negative affect (e.g., distressed, guilty, scared). Only those ten emotions reflecting negative affect were of interest to the current investigation ($\alpha = .83$). All responses may range from 1 to 5 (“very slightly or not at all” to “extremely”), but scores are individually summed for each subscale. Thus, on the scale measuring NA, higher scores indicate greater amounts of negative mood.

Mood at Work. Ten items from the State-Trait Emotion Measure (STEM) (Levine & Xu, 2005) were used to measure employees’ mood at work. The original scale asks employees to rate their emotions on 1 to 10 scales ranging from low to high levels of each of five positive (e.g., attentiveness, joy) and five negative (e.g., anger, anxiety) emotion feelings. Only those five emotions reflecting negative affect were of interest to the current investigation ($\alpha = .55$). For this study, participants were asked to rate their mood at work over the past few weeks to remain consistent with the measure of mood at home. Additionally, the theory underlying this study suggested the effects of mood states rather than mood traits, the latter of which would have been obtained if respondents had been asked about their feelings and emotions in general. Like the PANAS, those

statements measuring PA are summed and those measuring NA are summed for final scale scores, although NA is the focus here. NA scores may range from 5-50, again with higher values indicating greater amounts of negative affect. Use of the PANAS for indexing mood at home but a different measure to index mood at work was intended to reduce the impact of common method variance.

Appraisals of Work Events. For this study, a set of general work events and a scale for appraising such events was developed and tested. The process for development and validation is explained below.

Creating Work Events

Step 1. A list of potential affective work events (more on the daily hassles versus major life events end of the spectrum) was collected from previous research on work events and emotions (Bash & Fisher, 2000; Mignonac & Herrbach, 2004; the Organizational Constraints Scale, Spector & Jex, 1998). Wording of these items was then adjusted to increase uniformity, clarity and generality. The resulting set of 29 items included both positive and negative events that are relatively common so as to augment the probability that participants would have experienced the majority if not all of the events over the previous few weeks. Typically, studies addressing stressful events refer only to negative experiences. For example, Gidron and Nyklicek (2009) who also referred to Lazarus and Folkman (1984) in their study only addressed negative events with regard to the amount of distress each caused. However, since the current investigation suggested that those in a negative mood would rate events in general more negatively, it was important to present a full range of situations, positive and negative. Example items include “Had problems with a coworker or supervisor” or “Received

praise from a coworker." This use of both positive and negative events follows precedent from some of the research related to AET (i.e., Basch & Fisher, 2000; Mignonac & Herrbach, 2004).

Step 2. The list of events was given to a set of ten SME's (graduate students in I/O Psychology) who rated each event from 1 to 9 (extremely negative to extremely positive, respectively) with regard to how they felt a typical employee would view the event when encountered. Only items with reasonably high inter-rater agreement as to the median score of positivity/negativity (at least .60, with the majority greater than .80) were retained. The final set of eight items included a range of items with regard to positivity and negativity (four negative, one neutral and three positive).

Appraisals of Events. As previously stated, most studies investigating reactions to events such as the one by Gidron and Nyklicek (2009) have only looked at negative events and individuals' reactions to these. Therefore, a new rating scale capturing reactions to *both* positive and negative events needed to be created. Thus, participants were asked to rate each event on the scale from 1 to 9 (extremely negative to extremely positive, respectively) with regard to how positive or negative the experience was for them. This rating method is similar to those used for appraising stressors as previously indicated (Armm, 2000; Gidron & Nyklicek, 2009; Kaiseler, Polman & Nichollis, 2009). In addition, the rating scale for the participants contained a "0" (did not occur) for individuals who had not experience the event in the past few weeks. The use of this option is explained below.

It was expected that the more negative the individual's mood (at home), the more negative the appraisals of these work events. In addition, the more negative the appraisals of these events, the more negative the expected mood at work.

Scoring. Although the items used for the scale were intended to represent commonly encountered events, there was some expectation that a few employees would not have experienced all eight events. Rather than discarding all data for these individuals and thus losing important information, only participants who indicated they had not experienced three or more of the events listed were excluded from the analyses. Due to the distribution of the items with regard to positivity and negativity (four negative, one neutral, and three positive), these remaining individuals would be forced to rate at least one positive *and* one negative item, reducing chances for floor or ceiling effects in their ratings. Moreover, it was decided that using data based on at least six events provides a somewhat more complete range of events that could be considered affective events, and would preclude floor and ceiling effects on appraisals.

For those that answered "yes" to six or more of the events, averages were calculated based on the number of items to which each individual responded. These scores are considered the average impact of the events on the individual (see Armm, 2000, for a similar use of average impact). Thus, scores can range from 1-9 with lower scores indicating more negative appraisals of the events. As previously mentioned, this scale was tested during the pilot study and results regarding the psychometric properties of this scale are described below.

Job Satisfaction. The three item scale developed by Cammann, Fichman, Jenkins and Klesh (1979) were used to measure overall job satisfaction ($\alpha = .91$). Participants

responded to statements such as “All in all, I am satisfied with my job” using a 1 to 7 Likert scale with 1 indicating disagree very much and 7 indicating agree very much. Item scores are simply summed and may range from 3-21 with higher values indicating greater levels of job satisfaction. The first item of the scale was reverse scored prior to analyses due to negative wording (“In general, I don't like my job”).

Counterproductive Work Behavior. utilized a ten item self-report survey (Spector, Bauer & Fox, 2010). Although the scale is composed of five items asking about behaviors toward another person (CWBI, e.g., “Ignored someone at work”) and five asking about behaviors targeting the organization (CWBO, e.g., Purposely wasted your employer’s materials/supplies”), the current study did not hypothesize a differential relationship based on the target of CWB, thus the ten items were combined to form one rating of CWB ($\alpha = .63$). Responses are made on a 1-5 Likert scale (Never to Every Day, respectively). Scores may range from 10-50 with higher scores indicating greater engagement in CWB. For the supervisor survey, items regarding CWB were reworded to address the supervisor’s perception of employee behaviors.

Organizational Citizenship Behaviors. were measured with 16 items from Lee and Allen (2002) ($\alpha = .91$). Eight of the items measured behaviors directed towards other individuals (OCBI, e.g., “Help others who have been absent”) and eight measured behaviors directed toward the organization (OCBO, e.g., “Keep up with developments in the organization”). (As with CWB, the current study did not predict a differential relationship based on the target of these behaviors. Thus, scores on all items were combined to create one score for OCB). Responses to the items are made on a 1 to 5 Likert type scale (never to everyday, respectively). Scores may range from 16 to 80 with

higher scores indicating more performance of OCB. For the supervisor survey, the items were adjusted to address the supervisor's perceptions of employee behaviors.

Social Support. The measure of perceived social support at work was created for this investigation. Items were combined from multiple existing scales of social support (i.e., Haslam, et al., 2005; Madjar, 2008; Undén, 1996) and tailored to fit the work environment. A range of items was gathered and expected to load on the four dimensions of emotional support as suggested by Haslam and colleagues (2005). For example, the item, "the people I work with provide me with different perspectives and viewpoints about problems I encounter" should reflect informational support. Similarly, the item, "I get along with the people I work with" should load on the dimension of belonging. Respondents were asked to indicated the extent to which they agreed or disagreed with each item using a 1-7 Likert type scale (strongly disagree to strongly agree, respectively). Item scores were summed, thus higher scale totals indicated higher levels of perceived social support at work and may range from 9 to 63. Two items were negatively worded and thus reverse scored prior to analysis ("The people I work with seldom offer me advice" and "The people I work with criticize me"). The scale was tested during the pilot study. Thus, results regarding its psychometric properties are described below. Again, it is important to note, the current study hypothesized the importance of *perceived* social support rather than actual amount. Thus, the items do not tap into the extent to which social support is actually obtained.

Procedure

Government employees were randomly selected by combinations of letters in their last names from publically accessible directories. These individuals were sent a

recruitment e-mail including a survey packet (described below). They were made aware in the e-mail that their participation was completely voluntary and if they chose not to participate, to please disregard the e-mail.

Participants associated with the Department of Organizational Development were notified of the study in person. The principle investigator attended classes and meetings to give a very brief overview of the study and request volunteers to participate. Those interested were then given a survey packet. On the first page of the packet, these individuals were made aware of the online version of the survey if they preferred to use the computer rather than return a hard copy.

Regardless of the sample and recruitment method, interested individuals were assured that by the end of the study the PI would no longer be in possession of any identifying information. Thus, all responses were completely anonymous and confidential.

The survey packet contained an introduction letter and directions for the employee for accessing the online survey. The introduction letter explained the purpose and benefits of the investigation as well as reiterated the methods taken to ensure confidentiality and anonymity. The letter also informed the employee that completion of the survey was considered consent to participate, and that at any point during the investigation, he or she could withdraw from the study without penalty (See Appendix C).

Instructions for employees (also included in the packet/email) directed them to the survey website and the appropriate study (for those either recruited via e-mail or who wished to complete the electronic version). Participants then completed the survey

regarding demographics, stressors at home, mood at home, appraisals of work events, mood at work, social support, job satisfaction, CWB and OCB. Participants were asked to think about their feelings and behaviors over the past few weeks when responding to the items. Next, the employee was asked to create an identification code containing no less than 5 characters with at least 1 numeral, 1 letter, and 1 special character (to reduce the chance of duplicate codes). (This code was the only form of identification and was matched to the code on the supervisor's survey. No personal contact information was collected). A final question asked the employee participants for the name and e-mail of their supervisors. Once supervisors were e-mailed the supervisor packet, this information was deleted from the records. Again, participant and supervisor surveys were only matched via the identification codes. No personal identifying information was kept.

The primary investigator used the e-mail addresses provided by the employees to send the supervisors the link to the online supervisor survey as well as a similar introduction letter explaining the purpose and methods to ensure anonymity and confidentiality. Supervisors were asked to enter the matched identification code provided in the e-mail and then present information about the employee's performance of CWB and OCB over the past few weeks. (Survey packets distributed to employees associated with the Department of Organizational Development also contained a survey packet for supervisors with the same information as was sent to supervisors via e-mail. As with their employees, these supervisors were also given the option to complete a hard copy of the survey and return it to the PI in a preaddressed envelope or to use the link in the introduction letter to be complete the survey online).

A final question on each survey (participant or supervisor) asked each respondent to provide feedback regarding the verbiage, length, comprehension, etc. All responses were kept anonymous and no identifying information was retained by the investigator.

Results

Most scales demonstrated very good reliability (alphas ranging from .81 to .91) with the exceptions of negative mood at work ($\alpha = .55$) and CWB ($\alpha = .63$). An item analysis for each of these scales indicated one item in each with a low item remainder, but also that the removal of those items would not significantly increase the reliability estimates for the scales. Additionally, for CWB which consists of two subscales reliability analyses were conducted on each (although the scale has previously demonstrated acceptable internal consistency when these subscales are combined). For the subscale of behaviors targeting the organization, the reliability decreased to .50 with no indication of items needing deletion. For the subscale of behaviors targeting other individuals, the reliability estimate increased to .67, again with no indication of items requiring exclusion. Therefore it was decided an item analysis of both the mood at work and CWB scales should again be conducted with the final data from the primary study to reexamine these two items. Both of these measures, however, have previously been found to have acceptable reliabilities (See Levine & Xu, 2005 and Spector, Bauer & Fox, 2010, respectively). It was expected that increases in alphas would be observed during the primary study when there was a larger sample size.

Lastly, two scales—Appraisals of Work Events and Social Support from Coworkers—were being developed for this study and thus required additional scrutiny. First, although the scale for social support from coworkers had a high reliability ($\alpha =$

.80), there was one item (*The people I work with criticize me*) which had a low item-total correlation (.26). When deleted, the scale alpha increased to .81. Thus, this item was excluded for the primary study.

With regard to the work events scale, over 50% of respondents had not encountered five of the eight events in the previous "few weeks" (as previously mentioned, participants must have responded to at least five of the events for their data to be retained). These items included *Had problems with a coworker or supervisor, Received a promotion, Had a well-liked coworker leave your work unit, Received a negative performance evaluation, Was forced to wait for a response from a supervisor or coworker for a prolonged period of time.* Therefore, analysis of this scale was impossible. For the primary study, the author made three changes to this scale to resolve this issue. First, the major premise of this study is that negative mood caused by nonwork stressors affects appraisals of work events. Therefore, rather than asking if employees encountered each event in the "past few weeks", they were asked if they encountered each within the "past 6 months." This was not expected to present any theoretical concerns since the scale would still be investigating the employees' retrospective appraisals of previously encountered events. It was anticipated, however, this change should increase the likelihood that more participants would be able to endorse the occurrence of the events.

Secondly, a few events list above, although commonly cited in the literature, may have been rather uncommon for a large proportion of employees even over a 6 month span *(Had problems with a coworker. Received a promotion. Had a well-liked coworker leave your work unit.).* Thus, each of these three items was substituted for other events with the similar median positivity/negativity rating, reasonably high inter-rater

agreement, and similar variance scores (all from the ratings of SEMs). Thus, *Had problems with a coworker* was changed to *Was not given help when requested*. *Received a promotion* became *Received praise from your supervisor.* Third, *Had a well-liked coworker leave your work unit* was substituted with *Was given contradictory instructions/task.* Lastly, for the item *Received a negative performance evaluation,* the wording was simply altered to *Received negative performance feedback from your supervisor,* as many times formal performance evaluations are not given on a regular basis. Thus, the final set of events for the primary study totaled eight with a distribution similar to that in the pilot study—four negative, one neutral and three positive events.

Preliminary correlational analyses, shown in Table 1, found support for *Hypotheses 1a* and *1b* linking martial stressors and financial stressors to negative mood at home, with significant negative correlations of -.43 and -.50, respectively ($p < .01$). *Hypothesis 2* relating negative mood at home to negative mood at work was also supported with a significant *r* of .68 ($p < .01$). Parts *a* and *c* of *Hypothesis 5* linking negative mood at work to job satisfaction and CWBs was also supported with significant *r*'s of -.39 and .49, respectively ($p < .05$ and $p < .01$, respectively). Unexpectedly, the correlation between negative mood at work and OCBs was in the opposite direction ($r = .37$, $p < .05$) (For descriptive statistics and correlations, please see Table 1). Although the current study was not interested in the differentiation between targets of CWB and OCB, due to this unanticipated finding, the author conducted additional correlational analyses in which OCB was broken into its subscales of OCB toward individuals (OCBI) and OCB toward the organization (OCBO). When analyzed in this manner, OCBI remained significant and actually had a stronger positive correlation with negative mood at work (*r*

= .46, $p < .01$). The correlation between OCBO and negative mood at work, although still positive became nonsignificant ($r = .21$, *n.s.*). Since the target of OCB seemed to make relatively little difference, the next step was to analyze responses to the individual OCB items for univariate normality and outliers. Although each indicator did tend to deviate slightly from a normal distribution, there did not appear to be extreme outliers. Additionally, all univariate skewness and kurtosis values were within acceptable limits (-1.00 < skewness < 1.00, -2.00 < kurtosis < 2.00).

Table 1.
Preliminary means, standard deviations and correlations among primary variables.

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1	Marital Stress	18.62	3.53	0.90								
2	Finacial Stress	11.20	3.51	0.42**	0.82							
3	Negative Mood at Home	16.51	5.13	-0.43**	-0.50**	0.83						
4	Appraisals of Work Events	--	--	--	--	--	--					
5	Negative Mood at Work	12.52	5.20	-0.42**	-0.43**	0.68**	--	0.55				
6	Social Support	51.93	7.13	0.12	-0.02	-0.13	--	-0.07	0.80			
7	Job Satisfaction	17.28	3.95	0.18	0.10	-0.20	--	-0.39*	0.36*	0.91		
8	OCB	53.88	11.59	0.25	0.38*	0.36*	--	0.37*	0.29	0.17	0.91	
9	CWB	13.63	3.26	-0.18	-0.30	0.49**	--	0.49**	-0.02	-0.38*	0.36*	0.63

*Note: N = 40; * p < .05, ** p < .01*

Since further investigation into common errors revealed no reason for this contrary finding, it was decided, OCB (with targets combined) should remain in the primary study. If the results remained contrary to the hypothesis, the same steps would be taken to investigate differences among the OCB subscales as well as univariate normality of each OCB item. If these again divulged no abnormalities, the final procedure would be to run two versions of the study's model in SEM—one with OCB (with targets combined) and the other without the construct as the finding may not be an anomaly but rather a consistent finding worthy of individual attention in future research. For this study, though, its inclusion could cause the fit statistics to indicate an incorrect model.

Those hypotheses involving the variable *appraisals of work events* (*Hypotheses 3, 4,* and *6)* were unable to be analyzed due to the scale concerns. For the most part, the primary relationships tended in the directions proposed by the study's model. Another important finding was the extremely low response rate of employee-supervisor dyads (less than .4%). The response rate for employee participants, however, was higher at around 2.7%. In total, over 10,000 recruitment e-mails/in-person contacts were made. Of the e-mails around 15% to 25% were returned as undeliverable. Of those recruitment requests presumably received, 299 employee surveys and 40 supervisor surveys were obtained. (Note: All those contacted were notified of the need to have an immediate supervisor willing to participate. Thus, even though there were still quite a few employees without willing supervisors who completed the survey, it was believed a large number of employee-only participants probably self-selected out due to this inclusion criteria). In hopes of increasing the response rate, the immediate supervisor requirement was omitted from the primary sample. Those who felt their supervisor would be willing to complete the short performance survey were still given the option, but no employees chose to do so.

PRIMARY STUDY

Method

Participants

Due to the extremely low response rate of employee-supervisor dyads as previously noted, the primary study recruited only employee participants. These included state government employees from across the United States and attendees of classes offered by the Department of Organizational Development at the same large southeastern university which supplied respondents for the pilot study as well as other affiliates of the department (e.g., parking and transportation personnel, custodians, etc.). According to power analyses for interactional structural equation modeling, the target sample size was set at 164 participants to achieve a power of .80 to detect the effects of the moderated mediation model described above. To participate, employees had to have been currently working at least 20 hours per week in a job that they had held for at least two months. In addition, they needed to be married and either head or co-head of their own household. No compensation was given and participants were assured that their identities would remain anonymous and all responses confidential.

Measures

Scales for marital stressors, financial stressors, mood at home, mood at work, job satisfaction, CWB's and OCB's were the same as those included in the pilot study. As indicated in the results from the pilot study, one item was omitted from the original scale

for Social Support from Coworkers. The final scale consisted of eight items, each rated from 1 to 7 (strongly disagree to strongly agree, respectively). Higher scores on this scale indicated higher levels of perceived social support received from coworkers.

Additionally, due to the issues with the scale measuring Appraisals of Work Events, three main changes were made to the scale for the primary study. First, the time frame was altered from experiences "over the past few weeks" to "the past 6 months." Second, the three items *Had problems with a coworker; Received a promotion;* and *Had a well-liked coworker leave your work unit* were replaced with *Was not given help when requested*; *Received praise from your supervisor;* and *Was given contradictory instructions/task,* respectively. Lastly, for the item *Received a negative performance evaluation,* the wording was simply altered to *Received negative performance feedback from your supervisor,* as many times formal performance evaluations are not given on a regular basis. These alterations retained the original range of events with regard to positivity and negativity. Specifically, one item had originally been rated by the SME's as neutral, four items tended toward greater negativity and the remaining three tended toward higher degrees of positivity.

Procedure

Similar procedures to those used in the pilot study were employed for the primary study. One difference was the lack of a page asking for feedback regarding the scales. Lastly, any respondents who desired a summary of the final results of the study were given the option leave an e-mail address to which results could be sent upon completion of the study. Only results at the group level will be released.

Results

The primary study investigated the relationships among key variables such as nonwork related stressors, negative mood at home and work, appraisals of work events, and work outcomes. The principal focus in these relationships was the proposed synchronization of mood at home and work through its relationship with appraisals of work events. In addition, the potential moderating effect of social support from coworkers was examined. These relationships were studied individually through correlational analyses and moderated regression, and as a system through the use of structural equation modeling.

Scale Psychometric Properties

Scale means, standard deviations and correlations among primary variables were calculated for the 301 participants returning surveys and are shown in Table 2. Generally, all scales demonstrated moderate to high reliability (> .70) (see Table 2), with the exception of CWB (α = .67). This scale, however, has had its psychometric properties previously established at acceptable levels (see Spector, Bauer & Fox, 2010). The two scales developed for this study also demonstrated reasonable to high levels of internal consistency and that no items should be removed following corrections indicated by the pilot results. Alpha for Social Support was .90, and that for Appraisals of Work events was .83. (See Table 2 for all scale reliability estimates). Although the eight statements comprising the Social Support from Coworkers measure did include items measuring Haslam and colleagues' (2005) four types of social support, exploratory factor analysis indicated all items loaded best on only one factor.

With regard to the Appraisals of Work Events measure, of the 301 total respondents, 137 had not experienced at least six of the work events over the past six months. As previously explained, to reduce the chances of floor and/or ceiling effects in the ratings of events, data for these individuals was excluded from all analyses involving appraisals of work events as well as model testing. It was, however, retained for hypothesis testing whenever possible (i.e., *Hypotheses 1, 2* and *5*) to increase the power of the tests. Of the 164 final participants 83 had not experienced the item "Received negative performance feedback from supervisor." Although these findings do highlight some concerns with the events included in the scale (as will be discussed in subsequent sections), it was decided to proceed with hypothesis and model testing as planned since the remaining sample of 164 matched that required from the power analysis for interactional structural equation modeling.

Sample Characteristics and Demographic Variables/Controls

In total around 10,000 individuals were contacted in person and via e-mail asking for their participation in the study with nearly 25% of the recruitment e-mails being returned as non-deliverable. Of those presumably received, 301 returned complete surveys, resulting in a response rate very similar to that of the pilot study (4%). It is important to note that recruitment group did cause a variation in the response rates. For those affiliated with the Human Resources Organizational Development who were recruited in person, the response rate rose to 25%. For those randomly selected from state government employee directories, response rates were less than 1%.

Of the 301 total respondents, the average age was 43.76 (SD = 11.64). The majority of participants was female (64.10%) and Caucasian (81.10%) and had held their

current positions for more than two years (63.80%). Additionally, the average number of hours worked per week was 41.32 (*SD* = 8.10) with a range from 20 to 90 hours per week. Per selection criteria, all participants were married and either head or co-head of their own households. There were no significant differences between the total sample and the 164 who had experienced at least six of the events.

As noted in the correlation table, each of the demographic variables (gender, age, ethnicity, tenure and work hours) was significantly correlated with at least one of the primary variables, warranting additional examination of these relationships. (Note: gender and ethnicity were both dummy coded, age and work hours were continuous variables, and tenure was rate from 1 to 5, 2-3 months to longer than 2 years, respectively). Thus, regression analyses for each set of proposed relationships were conducted controlling for these demographic variables. Results indicated the principal relationships to be unaffected by the inclusion of the demographic variables, suggesting no further need to control for them in subsequent analyses and model testing.

Table 2.

Means, standard deviations and correlations among primary variables.

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Gender	1.63	0.50	N/A													
2	Age	43.76	11.64	-.25**	N/A												
3	Ethnicity	1.13	0.34	-0.06	-0.07	N/A											
4	Tenure	3.47	0.83	-0.16**	.28**	-.19**	N/A										
5	Work Hours	41.32	8.10	-0.10	.12*	-0.02	0.07	N/A									
6	Marital Stress	18.02	3.82	.13*	-0.01	-.13*	0.02	-0.03	0.85								
7	Finacial Stress	10.66	3.40	-0.02	0.06	-.16**	.14*	0.03	.18**	0.79							
8	Negative Mood at Home	18.41	6.66	-0.03	-0.10	.12*	-0.01	0.01	-.42**	-.40**	0.89						
9	Appraisals of Work Even	5.41	1.18	0.10	-0.06	-0.09	0.03	-0.06	.19*	.17*	-.32**	0.83					
10	Negative Mood at Work	14.69	7.37	-0.03	-0.11	0.10	0.07	.23**	-.28**	-.24**	.52**	-.44**	0.76				
11	Social Support	40.87	6.83	0.01	0.04	0.03	-0.02	-0.03	0.10	.16**	-.21**	.45**	-.30**	0.90			
12	Job Satisfaction	17.03	4.52	0.00	0.10	0.00	-0.06	0.03	0.01	.15**	-.24**	.45**	-.39**	.46**	0.91		
13	CWB	14.52	3.45	-0.05	-.19**	0.06	.15**	0.08	-.11*	-.13*	.19**	-.30**	.34**	-.28**	-.30**	0.67	
14	OCB	54.10	11.46	-0.03	0.04	0.02	0.00	.20**	-0.06	-0.06	-0.02	0.05	-0.08	-.23**	.25**	-.13*	0.90

*Note: N ranges from 164 to 301; * p < .05, ** p < .01; For scale reliability estimates N = 301 except for Appraisals of Work Events (N = 164).*

Hypothesis Testing

As previously mentioned, whenever possible, hypothesis testing included all 301 sets of responses. This applied for *Hypotheses 1*, *2*, and *5*. The first hypothesis suggested that non-work stressors (marital and financial) would be related to a more negative mood reported in the home domain. Correlational analyses revealed both parts *a* and *b* of *Hypothesis 1* were supported

($r = -.42$, $p < .01$ and $r = -.40$, $p < .01$, respectively). *Hypotheses 2* was also supported as negative mood at home corresponded to negative mood at work ($r = .52$, $p < .01$).

The next two hypotheses involved the average impact of work events ($N = 164$). To calculate this statistic, the participants' ratings of work events were summed and then divided by the total number of events to which they indicated occurrence. For instance, if a participant only encountered six of the eight possible events, his/her summed ratings of positivity or negativity were only divided by six rather than eight. (The lower this number, the more negative the ratings and average impact of the affective work events). *Hypothesis 3* regarding the relationships between one's negative mood at home and appraisals of work events found that the more negative the mood in the home domain, the more negative the appraisals of events encountered at work ($r = -.32$, $p < .01$, $N = 164$). *Hypothesis 4*, then proposed a relationship between these negative event appraisals and negative mood at work, such that the less positive the appraisals the more negative the mood at work, which was also supported ($r = -.44$, $p < .01$, $N = 164$).

A final set of correlational analyses was used to investigate the relationships between negative mood at work and the three work outcomes. Support for *Hypothesis 5* was mixed with more negative mood associated with worse ratings of job satisfaction (*r*

= -.39, $p < .05$, $N = 301$) and greater indications of counterproductive work behaviors (r = .34, $p < .01$, $N = 301$). Part *c* suggesting a negative relationship with organizational citizenship behaviors, however, found no support (r = -.08, *n.s.*, $N = 301$). This was also true for the two major facets of the OCB scale when examined independently—OCB's directed toward individual and OCB's directed toward the organization (r = -.02, *n.s.* and r = -.11, *n.s.*, respectively). As with the pilot results, although investigation the distributions and outliers of each OCB item revealed some items to be slightly skewed, the tests for univariate normality of each were well within acceptable limits.

Lastly, *Hypothesis 6* proposed a moderating effect of social support from coworkers on the relationship between negative mood at home and appraisals of work events such that the work events appraisals of those who perceived greater amounts of social support would be buffered from the detrimental effects of negative mood at home. Moderated regression was employed to test this relationship, where appraisals were regressed on the individual effects of negative mood at home and social support from coworkers entered into *step 1* and the interaction of the two added at *step 2.* Unfortunately, no moderating effect was found (See Table 3). While negative mood at home revealed a significant negative effect and social support a significant positive effect no evidence of buffering was detected. Again, the inclusion of demographic variables as controls did not affect this relationship. It is important to note that the multiple *R* for predicting appraisals of work events based on the additive combination of negative mood at home and social support was .496 indicating an *R*-squared of .25, a substantial effect.

Table 3.
Moderating effects of social support from coworkers on the relationship between negative mood at home and appraisals of work events.

Predictors	Appraisals of Work Events
Step 1 - Direct effects	
NA at Home	-0.30*
SS	0.46*
F	26.08*
ΔR^2	0.25*
Step 2 - Interaction	
NA at Home X SS	0.01
ΔF	0.08
ΔR^2	.00, *n.s.*

Note: The coefficients are the standardized beta weights from the final step of the multiple regression.
** p < .05, N = 164*

Model Testing

As described in the preceding sections, the primary purpose of this study was to test a model proposing mood as a principal linking mechanism in the relationship between non-work stressors and work outcomes in combination with its effect on appraisals of work events. To accomplish this through structural equation modeling, some of the scales required item parceling. These included CWB, OCB, Social Support from Coworkers and Negative Mood at Home. For CWB, OCB, and Negative Mood at Home, the logical solutions were to use the existing divisions (i.e., CWBO and CWBI, OCBO and OCBI, and the five emotions categories described in Watson and colleagues, 1988, distressed and upset, hostile and irritable, scared and afraid, guilty and ashamed, nervous and jittery). Since exploratory factor analysis had indicated all items measuring social support loaded best on one factor, the eight items were parceled arbitrarily as

seems to be common in much of the SEM literature (Parcel 1 = items 1-3, Parcel 2 = items 4-6, Parcel 3 = items 7-10) (Bandalos & Finney, 2001).

Additionally, since the proposed model included a moderating effect of social support from coworkers on the relationship between negative mood at home and appraisals of work events, a new latent variable for the interaction term had to be created. A matched pairs approach was taken for creating parcels for the interaction term. Since there were five indicators for negative mood at work and only three for social support from coworkers, the best three indicators for negative mood at home were selected. This was based on their loadings on the latent variable, normality and R^2 (Marsh, Wen & Hua, 2006).

To ensure adequate fit of each of the latent variables prior to testing the full model, CFAs were conducted on each latent variable and its indicators. Results demonstrated issues with the measurement model for OCB. Thus, the 16 items for OCB were reparceled using factor analysis which resulted in a better division using three parcels. (Parcel 1 = all OCBO items, Parcel 2 = items 4-6, and 8 on the OCBI subscale, Parcel 3 = items 1-3, and 7 on the OCBI subscale). Reinvestigation of these parcels provided acceptable fit for the measurement model. Additionally, the measurement model for the entire model was investigated by adding one latent variable and its indicators at a time.

Analyses for univariate normality suggested the distribution of most indicators to be within acceptable limits (skewness < 1.00; kurtosis < 4.00) (See Table A1 in Appendix D for skewness and kurtosis values). There were however a handful deserving further investigation for outliers. The first two to note were parcels 4 and 5 for negative

mood at home and negative mood at work, respectively (skewness = 1.67, kurtosis = 3.01 and skewness = 2.03, kurtosis = 4.11). Examination of the individual data points did not indicate outliers requiring exclusion. Thus, all cases remained for the sake of statistical power. One indicator of CWB was also of concern (CWBI/Parcel 2, skewness = 1.62, kurtosis = 3.25). Again, all cases were retained due to no indications of outliers. The kurtosis value for multivariate normality indicated no reason for concern in proceeding with structural equation modeling (multivariate kurtosis = 1.13).

Although convergence criteria were satisfied for the proposed model (Model 1), all fit indices indicated an incorrect model with a great deal of misfit ($X^2(546) = 2176.05$, $p < .0001$; *SRMSR* = .12; *RMSEA* = .14; *CFI* = .57). Examination of the R^2 terms and path coefficients, however, did support some aspects of the model, specifically, the underlying sequence. Marital and financial stressors were found to account for 52% of the variance in mood at home. Mood at home was also significantly related to appraisals of work events with a regression coefficient of -.31. Thus, the more negative mood brought to the workplace, the more negative the individual's appraisals of various work events (both positive and negative events). These appraisals further accounted for 42% of the variance in negative mood at work, which was significantly related to two of the three outcomes (job satisfaction and CWB) (See Figure 2). (Note: The proposed model was also investigated using data from the full 301 participants. Although results suggested similar values for the SRMSR, RMSEA and CFI, the X^2 did indicate significantly worse fit when including participants who had experienced less than six work events ($X^2(546) = 3467.88$, $p < .0001$; *SRMSR* = .10; *RMSEA* = .13; *CFI* = .58). This was presumably due to the decrease in the reliability estimate for the scale assessing appraisals of work events (α =

.83, when N = 164, α = .75, when N = 301). Therefore, further model testing utilized only the 164 who had reached the previously established cutoff).

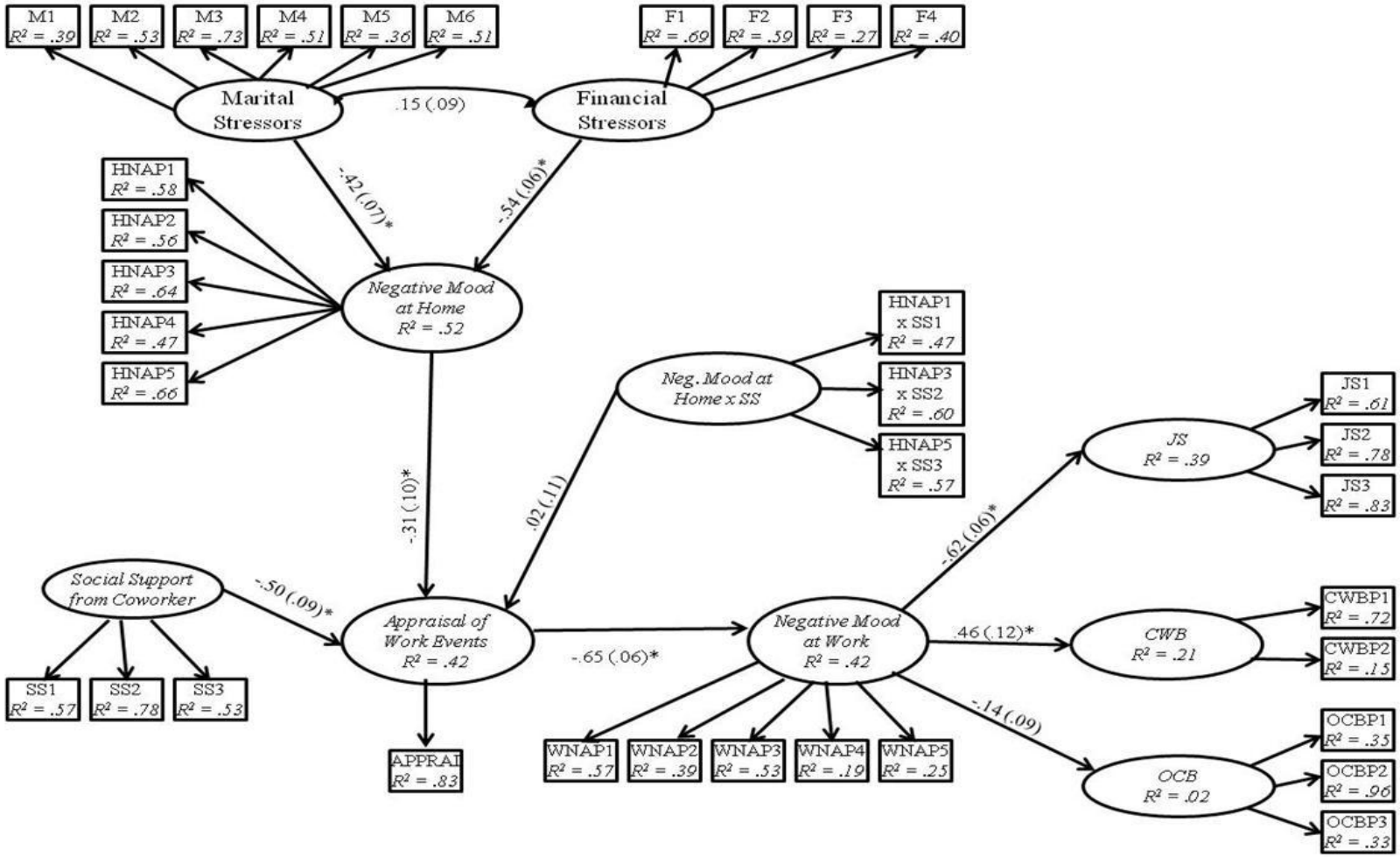

Figure 2. Standardized solution for SEM test of the proposed model. Demonstrates the effects of non-work stressors on work outcomes through the effects of negative mood at home on appraisals of work events and subsequent negative mood at work. Social support included as a moderator between negative mood at home and appraisals of work events. The model is both incorrect and demonstrates poor fit ($X^2(546) = 2176.05$, $p < .0001$; SRMSR = .12; RMSEA = .14; CFI = .57). *(Note: *$p < .05$, $N = 164$)*

The results from Model 1 combined with correlational findings from the Pilot and Primary Studies and moderated regression from the Primary Study led to the testing of two additional models. The first alternative model (Model 2) began by eliminating both social support from coworkers and OCB for three primary reasons (See Figure 3). First, moderated regression and SEM for Model 1 had indicated no moderating effect of social support on the relationship between mood at home and appraisals of work events. Thus, its incorrect inclusion in the model may have contributed to the misfit of Model 1. Second, the relationship between negative mood at work and OCB was contrary to the hypothesis in the Pilot Study, and non-significant in the Primary Study for both correlational and regression analyses. Similarly to social support, its inclusion in the original model most likely attributed to some of the misfit. Lastly, since there did appear to be some support for the spillover of negative mood, the purpose of Model 2 was to determine the extent to which the proposed model might still have been suitable after excluding the two misspecified paths listed above.

Model 2 indicated significantly better fit although examination of the chi-square statistic still suggested the model to be at least partially incorrect ($X^2(293) = 521.73$, $p < .01$). It is important to note, although the chi-square value indicates a correct or incorrect model in SEM (correct if p = n.s.), there is some debate as to the practical importance of this fit statistics since it tends to be highly influenced by sample size when the model tested is not entirely correct. Thus, many researchers often rely on other absolute fit indices (i.e., *SRMSR*), as well as parsimony and incremental fit indices. For Model 2, the parsimony index, did suggest reasonable fit to the data (*RMSEA* = .07), again finding some support for the primary sequence proposed. Unfortunately, with the exclusion of

social support in Model 2, the variance accounted for in appraisals of work events, did decrease quite a bit from .42 to .18. Appraisals of work events, however, did still account for 40% of the variance in negative mood at work. Furthermore, the path coefficients and these R^2 value were all still significant for the proposed effects of negative mood at home on appraisals of work event and their subsequent effects on negative mood at work. Thus, Model 3 drew upon these results and previous research (described earlier and elaborated in the Discussions) to support the addition of social support back into the model.

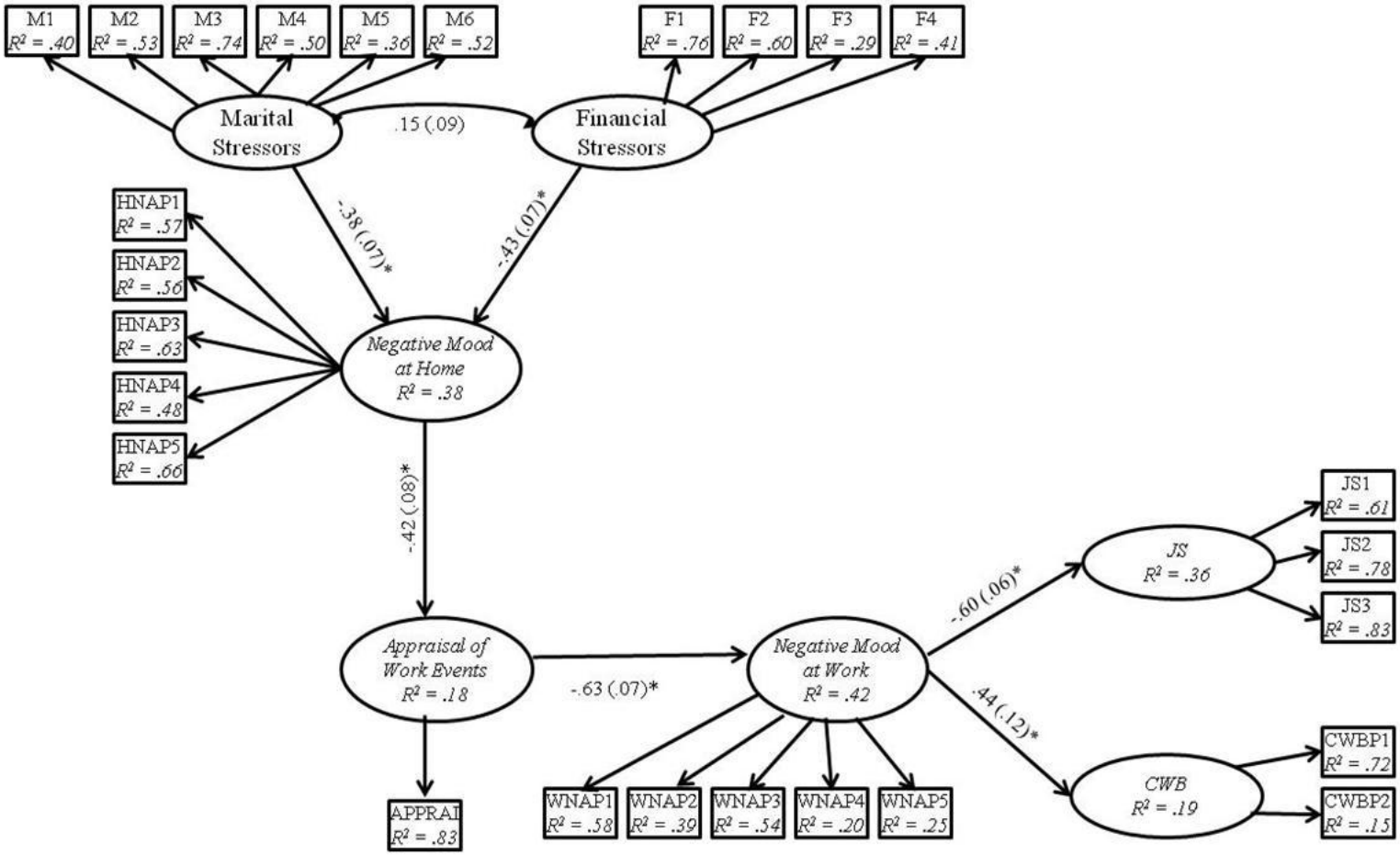

Figure 3. Standardized solution for SEM test of Model 2 (first alternative model). Demonstrates the effects of non-work stressors on work outcomes (excluding OCB) through the effects of negative mood at home on appraisals of work events and subsequent negative mood at work. Although the model is incorrect, it does appear to have adequate fit indicated by the Absolute Fit Index and good fit according to the Parsimony Fit Index ($X^2(293) = 521.73$, $p < .0001$; *SRMSR* = .10; *RMSEA* = .07; *CFI* = .88). (Note: * $p < .05$, $N = 164$)

As previously mentioned, some research has found the effects of social support to be more direct rather than moderating (e.g., Beehr, 1998; Folkman and Lazarus (1988). Thus, the third model tested the direct effects of social support from coworkers on all work-related variables to determine 1) if social support indeed has direct effects as others have proposed, and 2) on which work-related variables social support may have its strongest effects. Additionally, since a large amount of the variance in mood at work was unaccounted for in Model 2, a direct path from negative mood at home to negative mood at work was included indicating a direct carryover effect (See Figure 4).

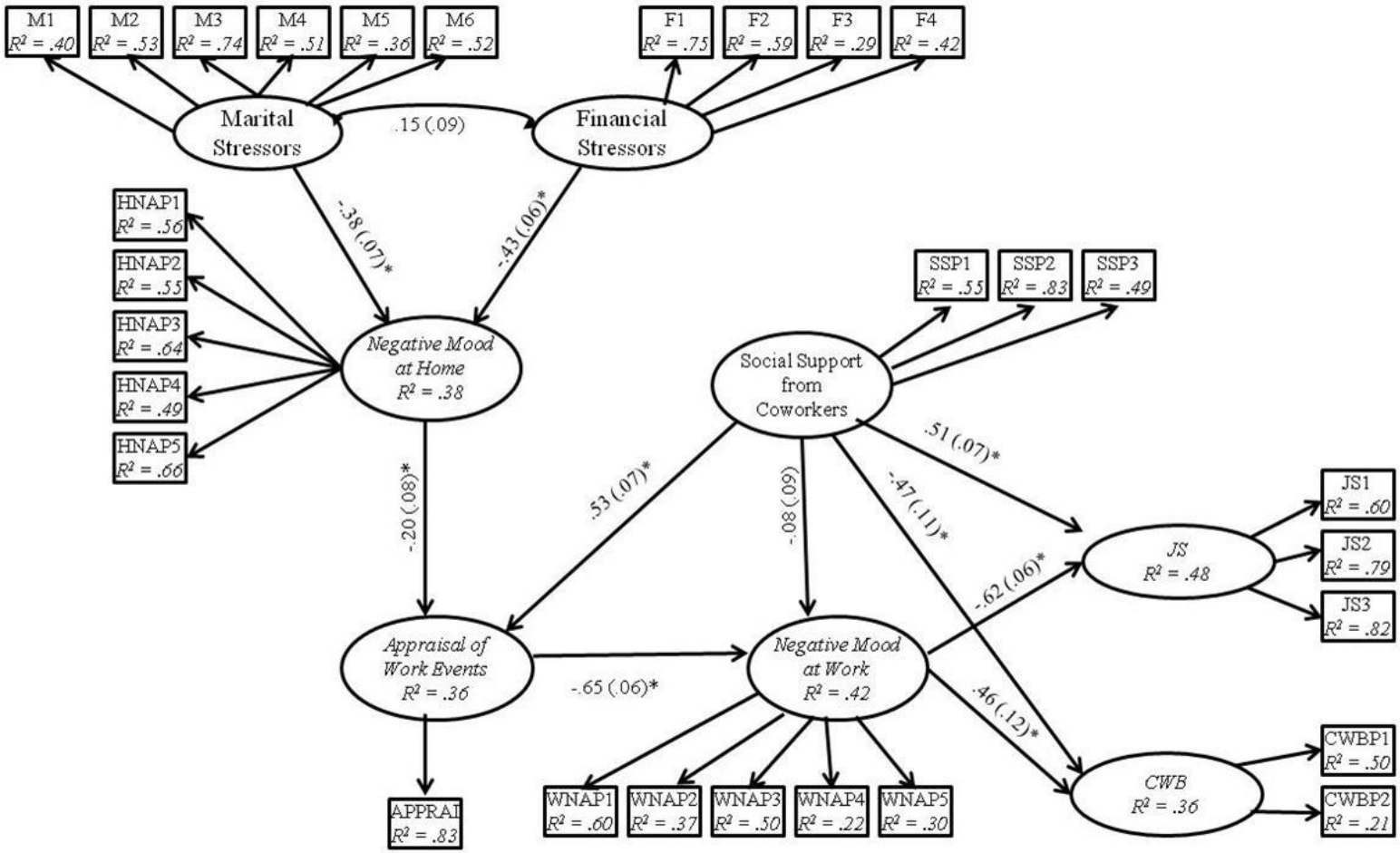

Figure 4. Standardized solution for SEM test of Model 3 (second alternative model). Demonstrates the effects of non-work stressors on work outcomes (excluding OCB) through the effects of negative mood at home on appraisals of work events and subsequent negative mood at work. Additionally, direct effects of social support on all work variables and negative mood at home on mood at work are included Although the model is incorrect, it does appear to have adequate fit indicated by the Absolute Fit Index and good fit according to the Parsimony Fit Index ($X^2(364) = 564.13$, $p < .0001$; *SRMSR* = .07; *RMSEA* = .06; *CFI* = .91). (Note: * $p < .05$, $N = 164$)

Although there did not appear to be a significant difference in the chi-square statistics between Models 2 and 3, examination of the other fit indices indicated superior fit of Model 3 (*SRMSR* = .07, *RMSEA = .06, CFI* = .91, respectively) (See Table 4 for comparisons of fit statistics for all three models). Furthermore, the variance accounted for in all work-related variables increased in Model 3, suggesting social support from coworkers to be an active player but not as a moderator (See Table 5 for a comparison of the R^2 values for Models 2 and 3). Again, the path coefficients among negative mood at home, appraisals of work events, and negative mood at work were all significant ($p <$ .05). This lends some support to the importance of the spillover of negative mood in the relationship between nonwork stressors and work outcomes, although the model misfit and variance left unaccounted for do suggest missing variables. According to correlational analyses (see Table 2), this variance seems not attributable to the direct effects of nonwork stressors on work outcomes as indicated by the relatively small *r*'s (all $\leq \pm .15$) (A list of all parameter estimates for Model 3 can be found in Table A2 in Appendix D).

A supplementary regression analysis was conducted to determine the incremental validity of the three predictors of negative mood at work demonstrated in Model 3, specifically, the variance predicted by appraisals of work events in comparison to the direct carryover of negative mood from home. Thus, negative mood from home was added in Step 1 ($R^2 =$ .31). Step 2 added appraisals of work events accounting for an additional 7% of the variance in negative mood at work. As expected from the nonsignificant path coefficient, the addition of social support from coworkers in Step 3 resulted in no further changes in *R*-squared for negative mood at work. These results

suggest appraisals of work events as proposed to be an important factor in addition to the direct carryover of negative mood at home in predicting negative mood at work.

Table 4.
Goodness-of-fit statistics between models tested.

Model	***X^2***	***df***	***SRMSR***	***RMSEA***	***CFI***
Model 1	2176.05	546	0.12	0.14	0.57
Model 2	521.73	293	0.1	0.07	0.88
Model 3	564.13	364	0.07	0.06	0.91

Note: All chi-squared values significant at $p < .0001$.
N for each model = 164.

Table 5.
Comparison of R^2 values for all work-related variables for Models 2 and 3

	Model 2	***Model 3***
Appraisals of Work Events	0.18	0.36
Negative Mood at Work	0.40	0.54
Job Satisfaction	0.36	0.48
CWB	0.19	0.36

Note: For each model, N = 164

DISCUSSION

The primary purpose of this cross-sectional survey was to investigate the relationships underlying the proposed model in which negative mood at home, due to marital and financial stressors, spills over into the work domain causing employees to appraise various work events more negatively than they would otherwise have done without the influence of NA. These appraisals were hypothesized to be the primary linking mechanism through which negative mood at home and negative mood at work appear synchronized in the two life spaces. Finally, the negative mood at work, resulting from the work event appraisals, was thought to relate to three work outcomes—job satisfaction, CWB and OCB.

Correlational analyses found support for all of the primary relationships with the exception of the detrimental effects of negative mood at work on OCB. Consistent with previous research, both nonwork stressors were significantly related to reports of negative mood at home such that those with greater amounts of stressors reported worse moods (see Brome and colleagues, 1988 and Whisman and Uebelacker, 2009). Additionally, and in line with the spillover model of linking mechanisms (Edwards & Rothbard, 2000), negative mood at home corresponded to negative mood at work. It is noteworthy that this relationship was substantial despite differences in the two measures of NA.

Results of initial correlational analyses also found support for the associations between moods in both domains and appraisals of work events. Specifically, the more

negative the individual's mood reported at home, the more likely he or she was to appraise the eight work events in a more negative fashion *even* if the event was considered by SMEs to be a typically positive event. This coincides with the work of researchers such as Zautra (2003) who suggest emotions to be the "organizers of meaning" (p. 4) in that they may cause various aspects of events to be highlighted and evaluated more heavily or more consistently with regard to the affective state being experienced at that time. Additionally, the negative appraisals of work events were in turn significantly related to negative mood reported at work, lending support to one of the major tenets of AET—the experience of affective events can "have an impact on the arousal of emotions and mood at work" (Wegge, et al., 2006, p. 237; see also Wang, et al., 2010).

Lastly, worsened mood at work was found to relate to significantly lower job satisfaction and greater frequencies of CWB. The relationship with OCB, however, was inconsistent with results and actually contrary to those hypothesized in the pilot study and nonsignificant in the primary study. These findings will be discussed in detail below.

Results of Model Testing

As previously outlined, the associations underlying the proposed model found nearly full support in the current study via correlational analyses with the exception of the relationship between negative mood at work and OCB. Additionally, the results of structural equation modeling mirrored these findings. First, the two nonwork stressors—marital and financial—accounted for over a third of the variance in negative mood at home. The additional variance in mood at home unaccounted for may quite possibly be attributable to other types of nonwork stressors not investigated here (e.g., parenting,

care-taking, etc.). Future research should identify and include those additional areas of the home life capable of producing strain such as negative mood.

In line with Edwards and Rothbard's (2000) spillover theory, negative moods at home and work were found to be positively correlated. The exploratory path in Model 3 leading directly from mood at home to mood at work found the former to account for additional variance in negative mood at work beyond that attributable to appraisals of work events. Supplementary regression analyses further indicated that both appraisals of work events and negative mood at home accounted for unique variance (negative mood at home more so than appraisals) with little to no gain from the inclusion of social support from coworkers. Thus, although there appeared to be some support for this mood synchronization due to its effects on work-related variables (e.g., the event appraisals suggested here or job performance mentioned by Edwards and Rothbard (2000)), there also seems to be a direct carryover effect of mood between domains. Regardless, these findings, still support Barling and MacEwen's (1998) proposition that mood mediates the relationship between work and nonwork stressors and strains. However, the sole-source and cross-sectional nature of the study and other like studies comparing mood in the two domains suggests caution in drawing definitive conclusions.

Generally, the results regarding appraisals of work events tended to support previous research linking NA to the experience of greater reports of adverse events (Stone, 1981; Warr, Barter, & Brownbridge, 1984; Watson, et al, 1988). Although significant, the variance accounted for in appraisals of work events was far less than expected in all three models with the R^2 being lowest in the more simplistic model omitting any effects of social support. In combination with the direct carryover of

negative mood, these three variables (negative mood at home, appraisals of work events and negative mood at work) appear influential in the overall relationship between nonwork stressors and work outcomes, but the sequence of the variables may have been misspecified in the current study. One substitute may be that appraisals of work events are linked more strongly to the more proximal, negative mood at work. Comparison of the associations of these three constructs suggested the correlation between event appraisals and negative mood at work to be slightly stronger than the correlation between appraisals and negative mood at home ($p < .10$). Thus, appraisals of work events may not be the primary reason for the spillover of mood, but rather an important outcome of it.

Another possibility may involve the separation of the event from its evaluation which were confounded in the present study. Specifically, AET posits a two step appraisal system following the occurrence of an affective event. The first appraisal is more immediate and emotion-laden leading to affect-driven behaviors. In this context, negative mood at work may still be an outcome of appraisals supporting the underlying sequence in the proposed model.

The second stage of appraisals according to AET is more thought-out. In this case, it is possible that the final appraisal may be the outcome of the negative mood as suggested above resulting from the first stage of evaluation. These two propositions suggest a need for future research to partition the current model into its individual components such that a sequence may be investigated whereby negative mood at home predisposes an individual to the occurrence of more events at work. The individual then follows the two step appraisal process suggested by AET with negative mood as a

potential outcome of the first stage and mediating factor between the first and second stages.

Regardless, of the sequence results did identify a significant relationship between one's mood in general and the way he or she appraises work events, supporting one of the major tenets of AET—it is not just the occurrence of events, but the way in which individual's appraise them that truly determines outcomes. Future research should investigate the possible ordering effects to determine the exact nature of these relationships. If in fact, negative mood at work has a greater effect on appraisals of work events, then additional research is needed to determine factors that do account for the synchronization of mood in the two domains.

Lastly, the correlates of negative mood at work were found to support previously established detrimental relationship with attitudes and behaviors, specifically overall job satisfaction and CWB (Levine, et al., 2011; Reio & Ghosh, 2009; Spector, Fox, Penney, Bruursema, Goh & Kessler, 2006). Organizational citizenship behaviors, on the other hand demonstrated findings inconsistent with hypotheses both in the Pilot Study and the Primary Study. In the latter, the relationship was nonsignficant (both in correlational analyses and moderated regression), but in the former, greater amounts of OCB were actually reported by those with worse moods at work. This surprising finding could be sample specific, warranting the repeated inclusion of OCB in future research. On the other hand, it is possible that this lack of a decline in the performance of OCBs could be due to the fact that taking part in them may actually act as a mood enhancement strategy by individuals. This notion has received some evidential support from research teams such as Glomb and colleagues (2011) suggesting prosocial behavior as a form of mood

regulation. Thus, those experiencing NA at work may perform OCBs to alleviate the negative emotions or moods hanging over them.

The Role of Social Support

As previously mentioned, one important reason for thoroughly understanding the nature of the relationship between nonwork and work outcomes is to be able to buffer against such negative effects. Thus, perceived social support from coworkers was also included in the initial model as a moderator of the relationship between mood at home and appraisals of work events. Unfortunately, the proposed buffering effect found no support in the current investigation through moderated regression or structural equation modeling coinciding with previous research (see Beehr, 1998). This section outlines a few potential reasons for these findings. First, the current study investigated only the perceived availability of social support whereas measures of actual amounts or frequency of use may produce a different picture.

Additionally, as noted by Beehr (1998), the nature of interactions may be a contributor to inconsistent findings with regard to the moderating effects of social support. This can refer to either the type of social support implemented (Haslam, et al., 2005), or the actual information exchanged. For instance, if negative mood is due to problems and stressors in the nonwork domain, then being able to talk it out with a coworker may be more beneficial (informational) than simply feeling as if one fits with the group (belonging). Furthermore, research suggests those involved in more positive discourse, "focusing their talk on the better things that have happened at work" may benefit more from social support than those centered around complaints and venting (Beehr, 1998, p. 17). For individuals with greater negative mood, however, this positive

communication may be somewhat difficult since their view of the world around them tends to be more pessimistic (Thoresen, et al., 2003).

It is also possible that the specification of social support from "coworkers" may be inappropriate. For example, although an employee may have a dozen coworkers, there may be only one or two with whom he or she truly confides and engages in different forms of social support. Additionally, social support in the work domain may be provided by specific sources that need to be differentiated such as supervisors, who are not differentiated in the measure used in this study (Beehr, 1998). Thus, future research should consider including support from specific sources or even giving participants freedom to indicate persons from any source with whom they perceive supportive relationships.

A final reason, receiving supported in Model 3, suggests social support may be related directly rather than interactionally with work related variables. The inclusion of direct paths on all work-related variables (excluding OCB) produced increases in fit indices and the variance accounted for by the model when compared to Model 2 which eliminated social support altogether as well as Model 1 which included only the interaction of social support on the relationship between negative mood at home and appraisals of work events. These direct effects support previous research (Beehr, 1998; Lazarus & Folkman, 1988), and point toward the integral role of social support from coworkers in the overarching relationship between nonwork stressors and work outcomes. Future research, however, is warranted to determine the exact nature of these effects. The model tested does propose a few different areas that could be used as starting points. Specifically, the effects of social support on 1) appraisals of work events, 2) mood

at work, and 3) work attitudes/behaviors could be investigated. Each of these effects is potentially by previous research. With regard to appraisals of work events, Haslam and colleagues' (2005) concept of informational support combined with the appraisal processes of Lazarus and Weiss and Cropanzano's AET support the notion that input from others regarding interpretations of events may significantly affect the final appraisals of the event. To study this proposition, however, research must separate the occurrence of events and the appraisal of these events which were confounded in the current investigation.

Model 3 also demonstrated direct effects of social support on negative mood at work. Again, this finds support from previous research linking higher levels of social support to the lessening of negative affective states (Abe, Fujise, Fukunaga, Nakagawa & Ikeda, 2012; Zawadzki, Graham, & Gerin, 2012). Lastly, direct effects of social support were exhibited on the two remaining work outcomes (job satisfaction and CWB). With regard to job satisfaction, Sloan (2012) has found those perceiving greater amounts of social support at work to be more satisfied with their jobs. Taken together, these results indicated an integral role played by social support from coworkers with regard to work-related variables. More research is needed, however, to explain exactly how it affects these relationships.

Limitations and Suggestions for Future Research

Generally, results did lend some support to the potential of the causal sequence underlying the model (negative mood at home caused by nonwork stressors affects appraisals of work events which in turn affects negative mood at work and subsequent work outcomes), although not enough to determine it as the principal linking mechanism

between the work and nonwork domains. Additional paths need to be explored, as the fit statistics, regression coefficients, and R^2 values for both Model 2 and Model 3 still suggested missing variables and/or misspecification especially with regard to predicting negative mood at work. Regardless, results of the model testing conducted here did suggest that many of the paths tested explained a large portion of the data, concluding that the role of mood and event appraisals is not to be underestimated.

Combined with the significant correlations among the majority of the primary variables in both the pilot and the primary studies (i.e., stressors and mood, mood and appraisals, appraisals and mood, mood and outcomes) this study supports the relevance of the majority of the variables included in the current investigation (with the exception of OCB) and the possibility of their causal linkage. Future research is needed to determine other contributing variables (especially with regard to negative mood at work) as well as the exact nature of the effects of social support at work. Investigators should also extend the findings of the current study a step further to test the suggested causal relationships.

Additionally, the concerns with univariate normality for mood and CWB parcels should be reinvestigated. With regard to the mood at home and work, it is interesting to note both of these parcels involved ratings of the feelings guilt and shame with few people indicating higher amounts of these. Thus, it is possible that these emotions are not as relevant as other types of negative affect (i.e., anxiety or sadness) with regard to the stressors and events examined here. Similarly, there was a positive skew to the responses regarding CWB targeted at other individuals (in comparison to the organization as a whole). Future research should re-examine this relationship to see if it is maintained in another sample, and if so, why employees are less likely to engage in individually

targeted CWB than organizationally targeted behaviors. Additionally, researchers may want to include a measure of social desirability as employees may intentionally alter their responses on either of these two scales or measures of guilt and shame.

As described earlier, the response rate for this study was extremely low, although this did depend in large part on the targeted population/recruitment technique. Regardless, it immediately draws attention to the possibility of response bias in the primary study as those who actually did complete the survey were such a small subset of volunteers. Additionally, of those surveys returned, nearly half were omitted from many of the primary analyses due to the individuals' experiencing less than the required six work events. Furthermore, of those retained, over half reported not having experienced one of the eight events (receiving negative performance feedback from one's supervisor). Thus, future research regarding affective work events may need to further investigate the prevalence of various events to determine if there are better ones to include in this type of study. Other options such as self-described events could be explored as well. While this convenience sample creates problems for generalizability of results, it included substantial diversity of ethnicities and occupations among a large group of employed respondents. This mitigates in favor of the generalizability of the correlational results and is further supported by parallel findings of others.

Another area of concern involves the fact that all data was self-report, thus there may be issues with common method variance. Supplementary CFA did suggest this to be a potential issue as all variables loaded with reasonable strength on one general factor. Unfortunately, many of the focal variables and sequences (i.e., mood at home→appraisals of work events→mood at work) are best rated by the individual rather than a third party,

making this an unfortunate, but somewhat unavoidable problem. Still, future research should explore creative means to obtain objective measures of these variables.

Lastly, due to the cross-sectional nature of this investigation, readers should be cautious when interpreting the results. Although the findings presented here do lend support to the possibility of the causal model proposed, such conclusions are impossible to make with the current cross-sectional design. Future research should invest time and resources in longitudinal and even experimental methods to study the associations discovered.

Conclusions

Results of this study expand upon previous research linking the work and non-work domains (especially with regard to the effects of negative mood and event appraisals). Additionally, they have implications for areas such as employee assistance programs at work that deal with stress monitoring and coping as well as financial management (Garman, et al., 1996; Sulsky & Smith, 2005). In light of the negative chain of events tested in this study, there did emerge a couple rays of hope. First, regardless of an employee's negative mood, OCBs were found to remain unrelated. This may indicate a potentially positive coping mechanism with benefits to both the employee and the organization. The decreased job satisfaction and higher occurrence of CWB's does nonetheless advocate organizational concern for employees' emotional well-being due to nonwork stressors. Secondly, the amount of social support perceived from coworkers was found to be beneficially related to all work-related variables. Although the exact nature of social support's effects is unknown, these results are reason enough to promote the enhancement of social support among coworkers and potentially other sources at work.

Finally, although the results of the current study must be interpreted cautiously with regard to causality, the findings do advocate the importance of the underlying theoretical sequence as a partial linking mechanism between the work and nonwork domains. Future research should focus on establishing causality, as well as investigating potential methods for interrupting this sequence as the results of this study seem to reflect an important process whereby an individual's mood can spill into the work domain and affect a variety of experiences, attitudes and behaviors at work.

LIST OF REFERENCES

Abe, Y., Fujise, N., Fukunaga, R., Nakagawa, Y., & Ikeda, M. (2012). Comparisons of the prevalence of and risk factors for elderly depression between urban and rural populations in Japan. *International Psychogeriatrics, 24*(8), 1235-1241.

Armm, J. (2000). The relationship between personality characteristics and local muscle tenderness development in first-year psychology graduate students: A prospective study. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 60*(11-B), 5824.

Ashkanasy, N., Härtel, C., & Zerbe, W. (2000). *Emotions in the workplace: Research, theory, and practice.* Westport, CT: Quorum.

Babiak, P. (1983). Locus of control as a moderator of the relationship between worker frustration and aggression, escape, avoidance, stress and fixation. *Dissertation Abstracts International, 43*(12-B), 4184-4185.

Bandalos, D. & Finney, S. (2001). Item parceling issues in structural equation modeling. In G. Marcoulides & R. Schumacker (Eds.), *New developments and techniques in structural equation modeling* (pp. 269-296). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Barling, J. & Macewen, K. E. (1992). Linking work experiences to facets of marital functioning. *Journal of Organizational Behavior, 13*(6), 573-583.

Barsade, S. & Gbson, D. (2007). Why does affect matter in organizations? *Academy of Management Perspectives, 21,* 36-59.

Basch, J. & Fisher, C. (2000). Affective events-emotions matrix: A classification of work events and associated emotions. In Ashkanasy, N., Härtel, C. & Zerbe, W. (Ed), *Emotions in the Workplace: Research, Theory and Practice* (pp. 36-48). Westport, CT: Quorum Books.

Beach, S., Martin, J., Blum, T. & Roman, P. (1993). Effects of martial and co-worker relationships on negative affect: Testing the central role of marriage. *The American Journal of Family Therapy, 21*(4), 313-323.

Beehr, T.A. (1998). An organizational psychology meta-model of occupational stress. In C. L. Cooper (Ed.). *Theories of organizational stress* (pp. 6-27). Oxford, UK: Oxford University Press.

Bergermaier, R., Borg, I., & Champoux, J. (1984). Structural relationships among facets of work, nonwork, and general well-being. *Work and Occupations, 11,* 163-181.

Boehm, J. & Lyubomirsky, S. (2008). Does happiness promote career success? *Journal of Career Assessment, 16,* 101-116.

Brackett, M., Palomera, R., Mojsa-Kaja, J. Reyes, M. & Salovey, P. (2010). Emotion regulation ability, burnout, and job satisfaction among British secondary-school teachers. *Psychology in the Schools, 47*(4), 406-417.

Brome, E., Dew, M., Parkinson, D., & Schulberg, H. (1988). Predictive effects of occupational and marital stress on the mental health of a male workforce. *Journal of Organizational Behavior, 9*(1), 1-13.

Brown, G. (1989). Life events and measurement. In G.W. Brown & TO.O. Harris (Eds.) Life Events and Illness. Guilford Press, New York, NY.

Burden, D. (1986). Single parents and the work setting: The impact of multiple job and homelife responsibilities. *Family Relations, 35*(1), 37-43.

Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1979) *The Michigan Organizational Assessment Questionnaire.* Unpublished manuscript, University of Michigan, Ann Arbor.

Champoux, J. (1980). The world of nonwork: Some implications for job re-design efforts. *Personnel Psychology, 33,* 61-75.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. Journal of Health and Social Behavior, 24, 385-396.

Davison, K. P., Pennebaker, J. W., & Dickerson, S. S. (2000). Who talks? The social psychology of illness support groups. *American Psychologist, 55,* 205-217.

DeLongis, A., Folkman, S., & Lazarus, R. (1988). The impact of daily stress on health and mood: Psychological and social resources as mediators. *Journal of Personality and Social Psychology, 54*(3), 486-495.

Edwards, J. & Rothbard, N. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *The Academy of Management Review, 25*(1), 178-199.

Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. *Journal of Personality and Social Psychology, 46*(4), 839-852.

Folkman, S. & Lazarus, R. (1988). Coping as a mediator of emotion. *Journal of Personality and Social Psychology, 54*(3), 466-475.

Fox, S. & Spector, P. E. (1999). A model of work frustration-aggression. *Journal of Organizational Behavior, 20*, 915-931.

Garman, Leech, & Grable. (1996). The Negative Impact of Employee Poor Personal Financial Behaviors on Employers. *Association for Financial Counseling and Planning Education, 7*, 157-168.

Gidron, Y. & Nyklicek, I. (2009). Experimentally testing Taylor's stress, coping and adaptation framework. *Anxiety, Stress & Coping, 22*(5), 525-535.

Glasó, L., Vie, T., Holmdal, G., & Einarsen, S. (2011). An application of affective events theory to workplace bullying: The role of emotions, trait anxiety, and trait anger. *European Psychologist, 16*(3), 198-208.

Gross, S., Semmer, N., Meier, Tschan, F., L., Kälin, W., & Jacobshagen, N. (2011). The effect of positive events at work on after-work fatigue: They matter most in face of adversity. *Journal of Applied Psychology, 96*(3), 654-664.

Haslam, S., O'Brien, A., Jetten, J., Vormedal, K., & Penna, S. (2005). Taking the strain: Social identity, social support, and the experience of stress. *British Journal of Social Psychology, 44*, 355-370.

Heller, D. & Watson, D. (2005). The dynamic spillover of satisfaction between work and marriage: the role of time and mood. *Journal of Applied Psychology, 6,* 1273-1279.

Hobfoll, S. (1989). Conservation of resources: Anew attempt at conceptualizing stress. *American Psychologist, 44*, 513-524.

Holmes, T. & Rahe, R. (1967). The Social Readjustment Rating Scale. *Journal of PsychosomaticResearch, 11*, 213-218.

Honkonen, T., Ahola, K., Pertovaara, M., Isometä, E., Kalimo, R., Nykyri, E., Aromaa, A. & Lönnqvist, J. (2006). The association between burnout and physical illness in the general population—results from the Finnish Health 2000 Study. *Journal of Psychosomatic Research, 61,* 59-66.

Horowitz, J., Damato, E., Duffy, M. & Solon, L. (2005). The relationship of material attributes, resources, and perceptions of postpartum experiences to depression. *Research in Nursing & Health, 28*, 159-171.

Jamal, M. (1984). Job stress and job performance controversy: An empirical assessment. *Organizational Behavior & Human Performance, 33*(1), 1-21.

Kaiseler, M., Polman, R., & Nicholls, A. (2009). Mental toughness, stress, stress appraisal, coping and coping effectiveness in sport. *Personality and Individual Differences, 47*(7), 728-733.

Kandel, D. B., Davies, M., & Raveis, V. H. (1985). The stressfulness of daily social roles for women: Martial, occupational and household roles. *Journal of Health and Social Behavior, 26*(1), 64-78.

Keenan, A. & Newton, T. (1985). Stressful Events, Stressors and Psychological Strains in Young Professional Engineers. *Journal of Occupational Behavior, 6*(2), 151-156.

Kim & Garman. (2004). Financial Stress, Pay Satisfaction and Workplace Performance. *Compensation & Benefits Review. 69-76.*

Kim & Garman. (2003). Financial Stress and Absenteeism: An Empirically Derived Research Model. *Association for Financial Counseling and Planning Education, 14(*1), 2-12.

Koslowsky, M., Sagie, A., Krausz, M., & Singer, A. (1997). Correlates of employee lateness: Some theoretical considerations. *Journal of Applied Psychology, 82*(1), 79-88.

Lavoie, J. & Douglas, K. (2012). The Perceived Stress Scale: Evaluating configural, metric and scalar invariance across mental health status and gender. *Journal of Psychopathology and Behavioral Assessment, 34*, 48-57.

Lazarus, R. (1993). From psychological stress to the emotions: A history of changing outlooks. *Annual Review of Psychology, 44*, 1-21.

Lazarus, R. & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer.

Lee, K. & Allen, N. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology, 87*(1), 131-142.

Levine, E. & Xu, X. (2005). *Development and validation of the State-Trait Emotion Measure (STEM).* Paper presented at the 20th Annual Conference of the Society for Industrial and Organizational Psychology, April.

Levine, E., Xu, S., Yang, L., Ispas, D., Pitariu, H., Bian, R., … Musat, S. (in press). Cross national explorations of the impact of affect at work using the State-Trait Emotion Measure (STEM): A coordinated series of studies in the three countries. *Human Performance.*

Madjar, N. (2008). Emotional and informational support from different sources and employee creativity. *Journal of Occupational and Organizational Psychology, 81*(1), 83-100.

Marsh, H., Wen, Z., & Hau, K. (2006). Structural equation models of latent interaction and quadratic effects. In R. Hancock & R. Mueller (Eds.), *Structural equation modeling: A second course* (pp. 225-268), Greenwich, CT: Information Age Publishing.

Matzek, A. & Cooney, T. (2009). Spousal perceptions of marital stress and support among grandparent caregivers: Variations by life stage. *International Journal of Aging and Human Development, 68*(2), 109-126.

Maybery, D., Neale, J., Arentz, A., & Jones-Ellis, J. (2007). The Negative Events Scale: Measuring frequency and intensity of adult hassles. *Anxiety, Stress, & Coping, 20*(2), 163-176.

Mazzola, J., Walker, E., Shockley, K. & Spector, P. (2011). Examining stress in graduate assistants: Combining qualitative and quantitative survey methods. *Journal of Mixed Methods Research, 5*(3), 198-211.

Meyer, R. & Haggerty, R. (1962). Streptococcal infections in families: Factors altering individual susceptibility. *Pediatrics,* 29(4), 539.

Michie, S. (2002). Causes and Management of stress at work. *Occupational Environmental Medicine, 59,* 67-72.

McIntosh, E., Gillanders, D., & Rodgers, S. (2010). Rumination, goal linking, daily hassles and life events in major depression. *Clinical Psychology and Psychotherapy, 17,* 33-43.

Mignonac, K. & Herrbach, O. (2004). Linking work events, affective states, and attitudes: An empirical study of managers' emotions. *Journal of Business and Psychology, 19*(2), 221-240.

Mills, R., Grasmmick, H., Morgan, C., & Wenk, D. (1992). The effects of gender, family satisfaction, and economic strain on psychological well-being. *Family Relations.*

Motowidlo, S., Packard, J., & Manning, M. (1986). Occupational stress: Its causes and consequences for job performance. *Journal of Applied Psychology, 71*(4), 618-629.

Mumby, D. & Putnam, L. (1992). The politics of emotion: A feminist reading of bounded rationality. *Academy of Management Review, 17*(3), 465-486.

Near, J. P., Rice, R. W., & Hunt, R. G. (1980). The relationship between work and nonwork domains: A review of empirical research. *The Academy of Management Review, 5*(3), 415-429.

Ng, T., Sorensen, K., & Feldman, D. (2007). Dimensions, antecedents, and consequences of workaholism: A conceptual integration and extension. *Journal of Organizational Behavior, 28*, 111-136.

Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and Family, 45*(1), 141-151.

Parrish, B., Zautra, A., & Davis, M. (2008). The role of positive and negative interpersonal events on daily fatigue in women with fibromyalgia, rheumatoid arthritis, and osteoarthritis. *Health Psychology, 27*(6), 694-702.

Reio, T. & Ghosh, R. (2009). Antecedents and outcomes of workplace incivility: Implications for human resource development research and practice. *Human Resource Development Quarterly, 20*(3), 237-264.

Rogers, S. & May, D. (2003). Spillover between marital quality and job satisfaction: Long-term patterns and gender differences. *Journal of Marriage and Family, 65*, 482-495.

Rotundo, M. & Sackett, P. (2002).The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach. *Journal of Applied Psychology, 87*(1), 66-80.

Shockley, K., Ispas, D., Rossi, M. & Levine, E. (in press). A meta-analytic investigation of the relationship between state affect, discrete emotions and job performance. *Human Performance.*

Siahpush, M., Yong, H., Borland, R., Reid, J. & Hammond, D. (2009). Smokers with financial stress are more likely to want to quite but less likely to try or succeed: Findings from the International Tobacco Control (ITC) Four Country Survey. *Addiction, 104,* 1382-1390.

Sloan, M. (2012). Unfair treatment in the workplace and worker well-being: The role of coworker support in a service work environment. *Work and Occupation, 39*(1), 3-34.

Smith, T., Uchino, B., Berg, C., & Florsheim, P. (2012). Marital discord and coronary artery disease: A comparison of behaviorally defined discrete groups. *Journal of Consulting and Clinical Psychology, 80*(1), 87-92.

Spector, P. (2006). *Industrial and organizational psychology: Research and practice.* (4th ed.). John Wiley & Sons.

Spector, P., Bauer, J., & Fox, S. (2010). Measurement artifacts in the assessment of counterproductive work behavior and organizational citizenship behavior: Do we know what we think we know? *Journal of Applied Psychology, 95*(4), 781-790.

Spector, P., Fox, S., Penney, L., Bruursema, K., Goh, A. & Kessler, S. (2006). The dimensionality of counterproductivity: Are all counterproductive behaviors created equal? *Journal of Vocationaaal Behavior, 68,* 446-460.

Spector, P. & Jex, S. (1998). Development of four self-report measures of job stressors and strain: Interpersonal Conflict at Work Scale, Organizational Constraints Scale, Quantitative Workload Inventory, and Physical Symptoms Inventory. *Journal of Occupational Health Psychology, 3*(4), 356-367.

Stallman, H. (2010). Psychological distress in university students: A comparison with general population data. *Australian Psychology, 45*(4), 249-257.

Stone, A. (1981). The associated between perceptions of daily experiences and self- and spouse rated mood. *Journal of Research in Personality, 15,* 510-522.

Storms, P. L. & Spector, P. E. (1987). Relationships of organizational frustration with reported behavioral reactions: The moderating effect of locus of control. *Journal of Occupational Psychology, 60,* 227-234.

Taris, T. W., Schreurs, P. J. G., Van Iersel-Van Silfhout, I., J. (2001). Job stress, job strain, and psychological withdrawal among Dutch university staff. Towards a dual-process model for the effects of occupational stress. *Work and Stress, 15*(4), 283-296.

Tessner, K., Mittal, V., & Walker, E. (2011). Longitudinal study of stressful life events and daily stressors among adolescents at high risk for psychotic disorder. *Schizophrenia Bulletin, 37*(2), 432-441.

Thoresen, C., Kaplan, S., Barsky, A., Warren, C. & Chermont, K. (2003). The affective underpinnings of job perceptions and attitudes: A meta-analytic review and integrations. *Psychological Bulletin, 129*(6), 914-945.

Undén, A. (1996). Social support at work and its relationship to absenteeism. *Work & Stress,10*(1), 46-61.

Verbrugge, L. (1983). Multiple roles and physical health of women and men. *Journal of Health and Social Behavior, 24,* 16-30.

Waldron, I., Weiss, C., & Hughes, M. (1998). Interacting effects of multiple roles on women's health. *Journal of Health and Social Behavior, 39*(3), 216-236.

Wang, Z., Inslicht, S., Metzler, T., Henn-Hasse, C., McCaslin, S., Tong, H., Neylan, T., & Marmar, C. (2010). A prospective study of predictors of depression symptoms in police. *Psychiatry Research, 175,* 211-216.

Warr, P., Barter, J. & Brownbridge, G. (1983). On the independence of positive and negative affect. *Journal of Personality and Social Psychology, 44*(3), 644-651.

Watson, D., Clark, L., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070.

Wegge, J., van Dick, R., Fisher, G., West, M., & Dawson, J. (2006). A test of basic assumptions of affective events theory (AET) in call centre work. *British Journal of Management, 17,* 237-254.

Weiss, H. & Cropanzano, R. (1996). Affective Events Theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behavior, 18,* 1-74.

Whisman, M. & Uebelacker, L. (2009). Prospective associations between marital discord and depressive symptoms in middle-aged and older adults. *Psychology and Aging, 24*(1), 184-189.

Whisman, M., Uebelacker, L. & Settles, T. (2010). Marital distress and the Metabolic Syndrome: Linking social functioning with physical health. *Journal of Family Psychology, 24*(3), 367-370.

Williams, L., & Anderson, S., (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*(3), 601-617.

Yang, L., Che, H., & Spector, P. (2008). Job stress and well-being: An examination from the view of person-environment fit. Journal of Occupational and Organizational Psychology, 81, 567-587.

Zautra, A. (2003). *Emotions, Stress, and Health.* New York: Oxford University Press.

Zawadzki, M., Graham, J. & Gerin, W. (2012). Rumination and anxiety mediate the effect of loneliness on depressed mood and sleep quality in college students. *Health Psychology,* 1-11.

Zerbe, W., Härtel, C., & Ashkanasy, N. (2008). *Research on emotion in organizations: Emotions, ethics and decision-making.* Bingly, UK: Emerald Group Publishing Limited.

APPENDICES

Appendix A: Survey for Participant Employees

Martial Stress:

Matzek, A. & Cooney, T. (2009). Spousal perceptions of marital stress and support among grandparent caregivers: Variations by life stage. *International Journal of Aging and Human Development, 68*(2), 109-126.

α=.83

	How often	A Lot	Some	A Little	Not at All
1.	…does your spouse or partner make too many demands on you?	1	2	3	4
2.	…does he or she argue with you?	1	2	3	4
3.	…does he or she make you feel tense?	1	2	3	4
4.	…does he or she criticize you?	1	2	3	4
5.	…does he or she let you down when you are counting on him or her?	1	2	3	4
6.	…does he or she get on your nerves?	1	2	3	4

Financial Stress:

Kim & Garman. (2004). Financial Stress, Pay Satisfaction and Workplace Performance. *Compensation & Benefits Review. 69-76.*

α=.79

	Indicate your level of agreement with the following statements.	Disagree	Somewhat Disagree	Somewhat Agree	Agree
1.	I am satisfied with my present financial situation	1	2	3	4
2.	My income is enough for me to meet my monthly living expenses	1	2	3	4
3.	I worry about how much money I owe	1	2	3	4
4.	I am satisfied with the amount of money that I am saving and investing for retirement	1	2	3	4

Appendix A (Continued)

Mood at Home:

Watson, D., Clark, L., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070.

α=.87 (both PA and NA)

	This scale consists of a number of words that describe different feelings and emotions. Please indicate to what extent you have felt this way within the past few weeks while at home.	Very Slightly or	A Little	Moderately	Quite a Bit	Extremely
1.	Interested	1	2	3	4	5
2.	Distressed	1	2	3	4	5
3.	Excited	1	2	3	4	5
4.	Upset	1	2	3	4	5
5.	Strong	1	2	3	4	5
6.	Guilty	1	2	3	4	5
7.	Scared	1	2	3	4	5
8.	Hostile	1	2	3	4	5
9.	Enthusiastic	1	2	3	4	5
10.	Proud	1	2	3	4	5
11.	Irritable	1	2	3	4	5
12.	Alert	1	2	3	4	5
13.	Ashamed	1	2	3	4	5
14.	Inspired	1	2	3	4	5
15.	Nervous	1	2	3	4	5
16.	Determined	1	2	3	4	5
17.	Attentive	1	2	3	4	5
18.	Jittery	1	2	3	4	5
19.	Active	1	2	3	4	5
20.	Afraid	1	2	3	4	5

Appendix A (Continued)

Mood at Work:

Levine, E. & Xu, X. (2005). *Development and validation of the State-Trait Emotion Measure (STEM)*. Paper presented at the 20th Annual Conference of the Society for Industrial and Organizational Psychology, April.

α=NA

Definition	**Examples**	**Ratings:** Please circle the **number** on the 10-point scale below (1= little or none and 10= highest) the extent of the emotion you felt while at work**:**
1. Joy is a pleasant emotion. It arises when we, or others we identify strongly with, make progress toward achieving important goals, and when the achievements are part of a pattern that we expect will continue. Bodily signals include smiling and an outgoing bearing.	1. Winning a well-deserved award for our work; 2. Receiving a high prestige assignment from our boss; 3. Getting a big raise because of our excellent work. 4. Achieving a promotion that fulfills our career plan 5. Development of a new, successful product in our work team	Over the past few weeks**:** 1 2 3 4 5 6 7 8 9 10 /____/____/____/____/____/____/____/____/____/____/ / / / / *Little/None Amiable Cheerful Happy*
2. Anxiety is an unpleasant emotion that arises when we view bodily changes, events or people as threatening to our self-esteem, our life or our physical	1. Serious illness or risk of death 2. A negative evaluation by one's boss 3. Conflicts with important others at work or between the roles we fill at	Over the past few weeks**:** 1 2 3 4 5 6 7 8 9 10 /____/____/____/____/____/____/____/____/____/____/ / / / / *Little/None Slightly Edgy Scared Shaking*

Appendix A (Continued)

being, and we are unsure about how to deal with the threats. Bodily signals may also be involved such as trembling, the heart racing, feeling faint, and shortness of breath.	work 4. Being terminated or laid off 5. Too much work to complete in too little time 6. Not having enough training or information to complete a task	
3. Pride is a pleasant emotion. It arises when our efforts or those of our workgroup or team achieve success and enhance our sense of self-worth. We must view ourselves as causing or being part of the success to feel pride.	1. Winning a promotion against good competition 2. Getting an award for a novel idea 3. Being recognized for leading a team to success 4. Giving the boss a suggestion that saves a good amount of money 5. Realizing that our knowledge of our work is highly valued	Over the past few weeks**:** 1 2 3 4 5 6 7 8 9 10 /____/____/____/____/____/____/____/____/____/____/ / / / / *Little/None assured confident victorious*

Appendix A (Continued)

4. Sadness is an unpleasant emotion. We usually feel sad when we lose someone we love, something we value, or the positive regard of another person. Sadness involves a sense that nothing can be done to recover the loss. Hanging one's head, crying, or a slack body posture may accompany sadness.	1. Learning that a coworker has been diagnosed with a fatal illness 2. Learning that the company you have worked for years has to be closed down due to financial difficulties 3. Being fired from a job that you have given a lifelong commitment to 4. Learning that a coworker who is also a good friend will move abroad 5. Witnessing a fatal accident at work	Over the past few weeks**:** 1 2 3 4 5 6 7 8 9 10 /____/____/____/____/____/____/____/____/____/____/ *Little/None Unhappy Grieving Remorse*
5. Attentiveness is a pleasant emotion. It is the feeling of being attentive, uplifted, being alert or full of energy. Your body posture may be erect and forward leaning and your face may reflect substantial mental effort.	1. Facing a challenging task at work, one that engages the highest level of your ability 2. Starting an interesting new assignment 3. Completing work that requires intense attention to details	Over the past few weeks**:** 1 2 3 4 5 6 7 8 9 10 /____/____/____/____/____/____/____/____/____/____/ *Little/None Concentrating Alert Vigorous*

Appendix A (Continued)

6. Anger is a negative emotion. It is an unpleasant feeling that may arise from a number of events or conditions. Anger is often felt together with an urge to strike out against other persons or against the conditions we view as to blame for our distress.	1. Someone, like a boss or coworker, prevents us from achieving our goals 2. Being treated unfairly 3. Pain or stress arising at our workplace 4. Bodily signals like muscle tightness or clenched fists 5. Threats to our self-esteem	Over the past few weeks**:** 1 2 3 4 5 6 7 8 9 10 /____/____/____/____/____/____/____/____/____/____/ / / / / / *Little/None Irritated Indignant Boiling Fighting*
7. Affection is a pleasant emotion. It is the feeling of closeness and warmth toward another person. When affection is experienced, we may feel love and enjoy mutual contact with another. Affection can also include feelings of trust and admiration for someone.	1. Your boss listens sympathetically to your personal problems and offers good advice to help solve them 2. Your teammates tell you they value your contributions to the team effort 3. A coworker tells you that you look great in a new outfit 4. A mentor gives you guidance with your career plans/ personal demeanor	Over the past few weeks**:** 1 2 3 4 5 6 7 8 9 10 /____/____/____/____/____/____/____/____/____/____/ / / / / *Little/None Admiring Trusting Loving*

Appendix A (Continued)

8. Envy is an unpleasant emotion. It represents a desire for what another person or entity has or can do, especially when we believe that we truly deserve it. Envy persists when we believe we can acquire what we want soon or later. This emotion may trigger actions to get and possess what we yearn for. If someone is viewed as purposely standing in our way, we may try to hurt or damage that person or try to block that person in some way.	1. Yearning for the new computer given to a coworker 2. Desiring the corner office with the big window that the boss sits in 3. Wanting the attention of an attractive colleague who is attracted to someone else 4. Needing the time that a coworker has to get a task done 5. Hoping to set one's own work schedule like the boss	Over the past few weeks**:** 1 2 3 4 5 6 7 8 9 10 /____/____/____/____/____/____/____/____/____/____/ / / / / *Little/None Mildly Jealous Yearning Burning with Want*
9.Contentment is a pleasant emotion. It is a feeling of being satisfied with what one has, being happy with one's situation in life and not	1. Comfort with the stability of one's job 2. Comfort with your pay and benefits 3. Enjoyment of your relationship with coworkers	Over the past few weeks**:** 1 2 3 4 5 6 7 8 9 10 /____/____/____/____/____/____/____/____/____/____/ / / / / *Little/None Serene Satisfied Pleased*

Appendix A (Continued)

wanting more. A relaxed body posture and smiling may be associated with contentment.	4. Because of your skills and talents you are easily able to complete your tasks	
10. Guilt and shame are unpleasant emotions. Guilt is felt when you have done or want to do something not acceptable by social or moral standards. Shame can result from failing to live up to the ideal self. We feel disgraced or humiliated, especially when someone whose opinion is important to us judges us negatively.	1. Unsuccessful presentation in front of the company CEO 2. Regretting a refusal to help out a coworker whose child is sick and needs to leave 3. Regretting having stolen some company property 4. Getting caught making long distance personal calls using company phone	Over the past few weeks**:** 1 2 3 4 5 6 7 8 9 10 /____/____/____/____/____/____/____/____/____/____/ *Little/None Exposed Humiliated Ashamed*

Appendix A (Continued)

Appraisals of Work Features:

	Experiences at work. If you encountered the following items within the past few weeks, please rate from 1 to 9 how negative or positive the event was for you. If you did not encounter an event, please mark "0".	Did Not Occur	Extremely Negative	Very Negative	Moderately Negative	Slightly Negative	Neither Negative nor	Slightly Positive	Moderately Positive	Very Positive	Extremely Positive
1	Had trouble with equipment or supplies.	0	1	2	3	4	5	6	7	8	9
2	Had problems with a coworker or supervisor.	0	1	2	3	4	5	6	7	8	9
3	Could not complete a task due to inadequate training or instruction	0	1	2	3	4	5	6	7	8	9
4	Had to meet a deadline	0	1	2	3	4	5	6	7	8	9
5	Received a compliment for job well done	0	1	2	3	4	5	6	7	8	9
6	Received a pay raise	0	1	2	3	4	5	6	7	8	9
7	Received a bonus										
8	Was asked for help due to your expertise or experience in an area	0	1	2	3	4	5	6	7	8	9
9	Had an opportunity to expand or diversify your knowledge, skills and/or abilities	0	1	2	3	4	5	6	7	8	9
10	Successfully completed a project or task	0	1	2	3	4	5	6	7	8	9
11	Received praise from your supervisor	0	1	2	3	4	5	6	7	8	9
12	Received praise from a coworker	0	1	2	3	4	5	6	7	8	9
13	Had an improvement in benefits	0	1	2	3	4	5	6	7	8	9
14	Received a promotion	0	1	2	3	4	5	6	7	8	9
15	Had an unpleasant coworker leave your work unit	0	1	2	3	4	5	6	7	8	9
16	Was assigned undesired work or project	0	1	2	3	4	5	6	7	8	9

Appendix A (Continued)

17	Had a well-liked coworker leave your work unit	0	1	2	3	4	5	6	7	8	9
18	Had benefits reduced	0	1	2	3	4	5	6	7	8	9
19	Was denied a promotion	0	1	2	3	4	5	6	7	8	9
20	Received a negative performance evaluation	0	1	2	3	4	5	6	7	8	9
21	Was denied a raise	0	1	2	3	4	5	6	7	8	9
22	Had a change in work hours or conditions	0	1	2	3	4	5	6	7	8	9
23	Had a change in quality of working space	0	1	2	3	4	5	6	7	8	9
24	Met a personal goal	0	1	2	3	4	5	6	7	8	9
25	Was involved in discussions about future goals or changes	0	1	2	3	4	5	6	7	8	9
26	Was given contradictory instructions/tasks	0	1	2	3	4	5	6	7	8	9
27	Had to do large amounts of work when others were doing none	0	1	2	3	4	5	6	7	8	9
28	Was forced to wait for a response from a supervisor or coworker for a prolonged period of time	0	1	2	3	4	5	6	7	8	9
29	Was not given help when requested	0	1	2	3	4	5	6	7	8	9

(The following are the final eight events for the Appraisals of Work Events scale following results from SME's and the pilot study as described in the procedures section above and in Amendment to the IRB for PRO00001634).

	Experiences at work. If you encountered the following items within the past 6 months, please rate from 1 to 9 how negative or positive the event was for you. If you did not encounter an event, please mark "0".	Did Not Occur	Extremely Negative	Very Negative	Moderately Negative	Slightly Negative	Neither Negative nor Positive	Slightly Positive	Moderately Positive	Very Positive	Extremely Positive
1	Was not given help when requested.	0	1	2	3	4	5	6	7	8	9
2	Had to meet a deadline	0	1	2	3	4	5	6	7	8	9

Appendix A (Continued)

3	Received a compliment for job well done	0	1	2	3	4	5	6	7	8	9
4	Received praise from a coworker	0	1	2	3	4	5	6	7	8	9
5	Received praise from your supervisor.	0	1	2	3	4	5	6	7	8	9
6	Was given contradictory instructions/tasks.	0	1	2	3	4	5	6	7	8	9
7	Received negative performance feedback from your supervisor.	0	1	2	3	4	5	6	7	8	9
8	Was forced to wait for a response from a supervisor or coworker for a prolonged period of time	0	1	2	3	4	5	6	7	8	9

Job Satisfaction:

Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1979). *The Michigan Organizational Assessment Questionnaire.* Unpublished manuscript, University of Michigan, Ann Arbor.

α=.67

	The following items describe feelings experienced at work. Please mark the number to indicate the extent to which they describe how you generally feel when you are working.	Disagree very much	Disagree moderately	Disagree slightly	Neutral	Agree slightly	Agree moderately	Agree very much
1	In general, I don't like my job.	1	2	3	4	5	6	7
2	All in all, I am satisfied with my job.	1	2	3	4	5	6	7
3	In general, I like working at my job.	1	2	3	4	5	6	7

Appendix A (Continued)

Social Support

	Please indicate your level of agreement with the following items.	Strongly Disagree	Disagree Moderately	Disagree Slightly	Neutral	Agree Slightly	Agree Moderately	Strongly Agree
	(Informational Support)							
1	The people I work with provide me with different perspectives and viewpoints about problems I encounter	1	2	3	4	5	6	7
2	The people I work with seldom offer me advice. (r)	1	2	3	4	5	6	7
3	I feel I can speak with the people I work with about events in my life.	1	2	3	4	5	6	7
	(Belonging)							
4	I get along with the people I work with.	1	2	3	4	5	6	7
5	When there are differences of opinion at work, we usually discuss them together	1	2	3	4	5	6	7
	(Emotional Support)							
6	The people I work with encourage me to do well.	1	2	3	4	5	6	7
	(Instrumental Support)							
7	If I get overwhelmed at work, the people I work with will help with my responsibilities.	1	2	3	4	5	6	7
8	The people I work with are willing to help me when I need a special favor.	1	2	3	4	5	6	7

Appendix A (Continued)

Counterproductive Work Behavior:

Spector, P. E., Bauer, J. A., & Fox, S. (in press). Measurement artifacts in the assessment of counterproductive work behavior and organizational citizenship behavior. Do we know what we think we know? *Journal of Applied Psychology*.

$\alpha = .78$

	The following items refer to work related activities. Please indicate how often you partake in the following activities.	Never	Once or Twice	Once or Twice/Month	Once or Twice/Week	Everyday
1.	Purposely wasted your employer's materials/supplies	1	2	3	4	5
2.	Complained about insignificant things at work.	1	2	3	4	5
3.	Told people outside the job what a lousy place you work for.	1	2	3	4	5
4.	Came to work late without permission	1	2	3	4	5
5.	Stayed home from work and said you were sick when you weren't	1	2	3	4	5
6.	Insulted someone about their job performance	1	2	3	4	5
7.	Made fun of someone's personal life.	1	2	3	4	5
8.	Ignored someone at work	1	2	3	4	5
9.	Started an argument with someone at work.	1	2	3	4	5
10.	Insulted or made fun of someone at work.	1	2	3	4	5

Appendix A (Continued)

Organizational Citizenship Behavior

Lee, K. & Allen, N. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology, 87*(1), 131-142.
α = .83 (OCBI (1-8))
α = .88 (OCBO (9-16))

	The following items refer to work related activities. Please indicate how often your employee partakes in the following activities.	Never	Once or Twice	Once or Twice/Month	Once or Twice/Week	Everyday
1.	Help others who have been absent.	1	2	3	4	5
2.	Willingly give your time to help others who have work-related problems.	1	2	3	4	5
3.	Adjust your work schedule to accommodate other employee's requests for time off.	1	2	3	4	5
4.	Go out of the way to make newer employees feel welcome in the work group.	1	2	3	4	5
5.	Show genuine concern and courtesy toward coworkers, even under the most trying business or personal situations.	1	2	3	4	5
6.	Give up time to help others who have work or nonwork problems.	1	2	3	4	5
7.	Assist others with their duties.	1	2	3	4	5
8.	Share personal property with others to help their work.	1	2	3	4	5
9.	Attend functions that are not required but that help the organizational image.	1	2	3	4	5
10	Keep up with developments in the organization.	1	2	3	4	5
11	Defend the organization when other employees criticize it.	1	2	3	4	5
12	Show pride when representing the organization in public.	1	2	3	4	5
13	Offer ideas to improve the functioning of the organization.	1	2	3	4	5
14	Express loyalty toward the organization	1	2	3	4	5
15	Take action to protect the organization from potential problems.	1	2	3	4	5
16.	Demonstrate concern about the image of the organization.	1	2	3	4	5

Appendix A (Continued)

Background Items:

1. I am _____Male _____Female
2. I am _____ years old.
3. My ethnicity
   (1) Caucasian (2) African American (3) Hispanic or Latino (4) Asian
   (5) Other_____
4. I have been at my current job
   (1) 2-3 months; (2) 3 months- 11 months; (3)1 year- 2 years (4) longer than 2 year
5. I work _____ hours per week.
6. I am married _____Yes_____No.
7. Please create an identification code in the space provided. These will be used to match your responses to those of your supervisor, thus ensuring anonymity. Codes must be at least 5 characters and contain at least 1 number, 1 letter and 1 special character. _____

Appendix B: Survey for Supervisors

Counterproductive Work Behavior:

Spector, P. E., Bauer, J. A., & Fox, S. (in press). Measurement artifacts in the assessment of counterproductive work behavior and organizational citizenship behavior. Do we know what we think we know? *Journal of Applied Psychology*.

$\alpha = .89$

	The following items refer to work related activities. Please indicate how often your employee partakes in the following activities.	Never	Once or Twice	Once or Twice/Month	Once or Twice/Week	Everyday
1.	Purposely wasted your employer's materials/supplies	1	2	3	4	5
2.	Complained about insignificant things at work.	1	2	3	4	5
3.	Told people outside the job what a lousy place you work for.	1	2	3	4	5
4.	Came to work late without permission	1	2	3	4	5
5.	Stayed home from work and said you were sick when you weren't	1	2	3	4	5
6.	Insulted someone about their job performance	1	2	3	4	5
7.	Made fun of someone's personal life.	1	2	3	4	5
8.	Ignored someone at work	1	2	3	4	5
9.	Started an argument with someone at work.	1	2	3	4	5
10.	Insulted or made fun of someone at work.	1	2	3	4	5

Appendix B (Continued)

Organizational Citizenship Behavior

Lee, K. & Allen, N. (2002). Organizational citizenship behavior and workplace deviance: The role of affect
and cognitions. *Journal of Applied Psychology, 87*(1), 131-142.
α = .83 (OCBI (1-8))
α = .88 (OCBO (9-16))

	The following items refer to work related activities. Please indicate how often your employee partakes in the following activities.	Never	Once or Twice	Once or Twice/Month	Once or Twice/Week	Everyday
1.	Help others who have been absent.	1	2	3	4	5
2.	Willingly give your time to help others who have work-related problems.	1	2	3	4	5
3.	Adjust your work schedule to accommodate other employee's requests for time off.	1	2	3	4	5
4.	Go out of the way to make newer employees feel welcome in the work group.	1	2	3	4	5
5.	Show genuine concern and courtesy toward coworkers, even under the most trying business or personal situations.	1	2	3	4	5
6.	Give up time to help others who have work or nonwork problems.	1	2	3	4	5
7.	Assist others with their duties.	1	2	3	4	5
8.	Share personal property with others to help their work.	1	2	3	4	5
9.	Attend functions that are not required but that help the organizational image.	1	2	3	4	5
10.	Keep up with developments in the organization.	1	2	3	4	5
11.	Defend the organization when other employees criticize it.	1	2	3	4	5
12.	Show pride when representing the organization in public.	1	2	3	4	5
13.	Offer ideas to improve the functioning of the organization.	1	2	3	4	5
14.	Express loyalty toward the organization	1	2	3	4	5
15.	Take action to protect the organization from potential problems.	1	2	3	4	5
16.	Demonstrate concern about the image of the organization.	1	2	3	4	5

Appendix B (Continued)

In-role performance

Williams, L., & Anderson, S., (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, *17*(3), 601-617.

$\alpha = .91$

	The following items refer to work related activities. Please indicate how often your employee partakes in the following activities.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	Adequately completes assigned duties.	1	2	3	4	5
2.	Fulfills responsibilities specified in job description.	1	2	3	4	5
3.	Performs tasks that are expected of him/her.	1	2	3	4	5
4.	Meets formal performance requirements of the job.	1	2	3	4	5
5.	Engages in activities that will directly affect his/her performance evaluation.	1	2	3	4	5
6.	Neglects aspects of the job he/she is obligated to perform.	1	2	3	4	5
7.	Fails to perform essential duties.	1	2	3	4	5

Appendix C: Study Description for Participants/Informed Consent

Informed Consent to Participate in Research

Information to Consider Before Taking Part in this Research Study

IRB Study # _Pro00001634__

Researchers at the University of South Florida (USF) study many topics. To do this, we need the help of people who agree to take part in a research study. This form tells you about this research study.

We are asking you to take part in a research study that is called:

An Investigation of Negative Appraisals Due to Negative Mood and How They Affect Satisfaction and Job Performance

The person who is in charge of this research study is Cristina Kawamoto. This person is called the Principal Investigator. However, other research staff may be involved and can act on behalf of the person in charge.

The research will be done online via the Qualtrics Survey System.

Purpose of the study

The purpose of this study is to delve into the relationship between non-work related stressors (i.e. marital and financial) and work outcomes (i.e. job satisfaction and performance dimensions). Previous research has suggested that mood play a role in this relationship however, this link remains unclear. Thus, this study will attempt to explain this phenomenon while also including social support as a potential buffer to the negative effects of non-work related stressors on work outcomes.

Study Procedures

If you take part in this study, you will be asked to complete the employee section of the survey online via Qualtrics. You will be required to enter an identification code found in the introduction packet so that at no point during this study will researchers have access to any of your identifying information. After entering the identification code you will be required to answer a number of questions regarding your work and demographics. The entire survey should take no more than 15-20 minutes to complete. At the end of the survey you will be asked to provide the name and e-mail address of your immediate supervisor so that a brief survey regarding your performance at work may be sent to him/her. This contact information will be deleted immediately after the principal investigator sends the survey link to your supervisor. This concludes your required involvement in the study.

Alternatives

You have the alternative to choose not to participate in this research study.

Benefits

We don't know if you will get any benefits by taking part in this study.

Risks or Discomfort

This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study. If there are any questions you feel uncomfortable answering, you may decline to answer that particular question.

Compensation

We will not pay you for the time you volunteer while being in this study.

Confidentiality

We must keep your study records as confidential as possible. To ensure that records are kept confidential, all data will be stored electronically for a period of ten years after which all files will be erased from the computer. Data will only be used for professional publication and conference submissions.

However, certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential. The only people who will be allowed to see these records are:

- The research team, including the Principal Investigator, study coordinator, and co-investigators.
- Certain government and university people who need to know more about the study. For example, individuals who provide oversight on this study may need to look at your records. This is done to make sure that we are doing the study in the right way. They also need to make sure that we are protecting your rights and your safety.) These include:
    - The University of South Florida Institutional Review Board (IRB) and the staff that work for the IRB. Other individuals who work for USF that provide other kinds of oversight may also need to look at your records.
    - The Department of Health and Human Services (DHHS).

We may publish what we learn from this study. If we do, we will not let anyone know your name. We will not publish anything else that would let people know who you are.

Voluntary Participation / Withdrawal

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study, to please the investigator or the research staff. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study. Your decision to participate or not to participate will not affect your job status.

Appendix C (Continued)

Questions, concerns, or complaints

If you have any questions, concerns or complaints about this study, e-mail Cristina Kawamoto at CKawamot@mail.usf.edu

If you have questions about your rights as a participant in this study, general questions, or have complaints, concerns or issues you want to discuss with someone outside the research, call the Division of Research Integrity and Compliance of the University of South Florida at (813) 974-9343.

If you experience an unanticipated problem related to the research email the Principal Investigator, Cristina Kawamoto, at CKawamot@mail.usf.edu

Consent to Take Part in this Research Study

By completing the employee survey and giving the supervisor survey to your immediate supervisor, you are consenting to take part in this research study.

Appendix D: Additional Tables

Table A1.

Univariate skewness and kurtosis values for all model indicators. Skewness values less than 1.00 and kurtosis values less than 4.00 are normally considered acceptable.

Indicator	*Skewness*	*Kurtosis*
Marital Stressors		
M1	-0.45	-0.58
M2	-0.46	-0.03
M3	-0.48	-0.24
M4	-0.91	-0.33
M5	-0.77	-0.17
M6	-0.29	-0.3
Financial Stressors		
FI1	-0.24	-1.19
FI2	-1.17	0.40
FI3	0.22	-1.36
FI4	0.29	-1.32
Negative Mood at Home		
HNAP1	0.50	-0.22
HNAP2	1.04	1.21
HNAP3	1.52	1.79
HNAP4	1.67	3.01
HNAP5	1.23	0.72
Appraisals of Work Events		
APPRAI	-0.82	1.87
Negative Mood at Work		
WNA1	0.54	-0.38
WNA2	0.77	0.56
WNA3	0.38	-0.78
WNA4	1.19	0.80
WNA5	2.03	4.11
Job Satisfaction		
JS1	-1.33	0.57
JS2	-1.47	1.59
JS3	-1.52	1.98
Counterproductive Work Behaviors		
CWBO	1.11	2.13
CWBI	1.62	3.25
Organizational Citizenship Behaviros		
OCBP1	-0.37	-0.29
OCBP2	-0.05	-0.39
OCBP3	0.10	-0.48
Social Support from Coworkers		
SSP1	-0.88	0.64
SSP2	-1.39	2.98
SSP3	-1.10	0.80
Social Support x Negative Mood at Home		
HNAP1SSP1	0.80	0.49
HNAP3SSP1	1.75	3.81
HNAP5SSP1	1.04	0.42

Note: N = 164

Appendix D (Continued)

Table A2.

Parameter Estimates from SEM Analysis Testing Model 3

Parameter Estimate	*Unstandardized*	*Standardized*	*p*
Measurement Model Estimates			
Marital Stressors → X_1	1.00	.63 (.05)	Na
Marital Stressors → X_2	1.06 (.14)	.73 (.04)	< .01
Marital Stressors → X_3	1.36 (.16)	.86 (.03)	< .01
Marital Stressors → X_4	1.12 (.15)	.71 (.05)	< .01
Marital Stressors → X_5	.98 (.15)	.60 (.06)	< .01
Marital Stressors → X_6	1.08 (.14)	.72 (.04)	< .01
Financial Stressors → X_7	1.00	.87 (.04)	Na
Financial Stressors → X_8	.74 (.08)	.77 (.04)	< .01
Financial Stressors → X_9	.65 (.10)	.54 (.06)	< .01
Financial Stressors → X_{10}	.78 (.09)	.65 (.05)	< .01
Social Support → X_{11}	1.00	.91 (.05)	Na
Social Support → X_{12}	1.13 (.11)	.05 (.08)	n.s.
Social Support → X_{13}	.77 (.09)	.65 (.06)	< .01
Mood at Home → Y_1	1.00	.75 (.04)	Na
Mood at Home → Y_2	.80 (.09)	.74 (.04)	< .01
Mood at Home → Y_3	.96 (.10)	.80 (.04)	< .01
Mood at Home → Y_4	.77 (.09)	.70 (.05)	< .01
Mood at Home → Y_5	1.21 (.12)	.81 (.03)	< .01
Appraisals of Work Events → Y_6	1.00	.58 (.06)	Na
Mood at Work → Y_7	1.00	.78 (.04)	Na
Mood at Work → Y_8	.80 (.11)	.61 (.06)	< .01
Mood at Work → Y_9	.89 (.11)	.71 (.05)	< .01
Mood at Work → Y_{10}	.53 (.10)	.47 (.07)	< .01
Mood at Work → Y_{11}	.53 (.08)	.55 (.06)	< .01
Job Satisfaction → Y_{12}	1.00	.78 (.04)	Na
Job Satisfaction → Y_{13}	.98 (.08)	.88 (.02)	< .01
Job Satisafction → Y_{14}	.93 (.07)	.91 (.02)	< .01
CWB → Y_{15}	1.00	.73 (.12)	Na
CWB → Y_{16}	.62(.19)	.44 (.09)	< .01
Covariance Marital Stressors and Financial Stressors	.07 (.05)	.15 (.09)	*n.s.*
Structural Model			
Marital Stressors → Mood at Home	-.98 (.23)	-.38 (.07)	< .01
Financial Stressors → Mood at Home	-.63 (.13)	-.43 (.07)	< .01
Mood at Home → Appraisals of Work Events	-.16 (.06)	-.32 (.11)	< .01
Social Support → Appraisals of Work Events	.21 (.04)	.78 (.10)	< .01
Appraisals of Work Events → Mood at Work	-.52 (.17)	-1.68 (.62)	< .01
Mood at Home → Mood at Work	.67 (.12)		
Social Support → Mood at Work	-.05 (.06)	1.24 (.65)	< .05
Mood at Work → Job Satisfaction	-.26 (.07)	-.34 (.08)	< .01
Social Support → Job Satisfaction	.25 (.04)	.52 (.07)	< .01
Mood at Work → CWB	.21 (.11)	.25 (.11)	< .01
Social Support → CWB	-.27 (.07)	-.44 (.12)	< .01
Residual for Mood at Home	1.18 (.23)	.62 (.07)	< .01
Residual for Appraisals of Work Events	.75 (.12)	.19 (.08)	< .01
Residual for Mood at Work	1.39 (.31)	-.11 (.32)	*n.s.*
Residual for Job Satisfaction	.95 (.18)	.50 (.07)	< .01
Residual for CWB	1.57 (.73)	.67 (.12)	*< .01*

Note: X^2 *(364) = 564.13, p < .0001; SRMSR = .07; RMSEA = .06; CFI = .91, N = 164. Two-tailed P-values are based on the unstandardized parameter estimates.*

ABOUT THE AUTHOR

Cristina K. Hudson is a doctoral student at the University of South Florida located in Tampa, Florida. She is pursuing her degree in Industrial and Organizational Psychology with a concentration in Occupational Health Psychology. As such, she is a trainee of the Occupational Health Psychology program funded by NIOSH. Cristina received her B.A. in Psychology from the University of South Florida in Spring of 2009. Her research interests include employee well-being, person-environment fit, staffing issues and stressors (both work and non-work related).