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## Dynamic Job Satisfaction Shifts: Implications for Manager Behavior and Crossover to Employees

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Dynamic Job Satisfaction Shifts:  
Implications for Manager Behavior and Crossover to Employees

by  
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A dissertation submitted in partial fulfillment of the  
requirements for the degree of

Doctor of Philosophy  
in  
Applied Psychology

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**Abstract**

In this dissertation, I investigated job satisfaction from a dynamic perspective. Specifically, I integrated the momentum model of job satisfaction with the affective shift model and crossover theory in an effort to move beyond traditional, static conceptions of job satisfaction and other constructs. Recent research and theoretical development has focused on the meaning of job satisfaction change for workers and how such change impacts their decisions to leave an organization. To extend this line of inquiry, I posited hypotheses pertaining to: (a) job satisfaction change with respect to positive work behavior (i.e., organizational citizenship behavior, family-supportive supervisor behavior); (b) the potential moderating effect of changes in negative work events (i.e., job demands, interpersonal conflict) on the relation between job satisfaction change and turnover intentions change and positive work behavior; and (c) the crossover of job satisfaction change from managers to employees and the potential underlying behavioral mechanisms.

An archival dataset collected by the Work, Family & Health Network was used to investigate the aforementioned phenomena. Data were collected at two time points with a six-month interval via face-to-face computer-assisted personal interviews from individuals working at 30 facilities from a U.S. extended-healthcare organization. In total, data from 184 managers and 1,524 of their employees were used to test hypotheses. Data were analyzed using multilevel structural equation modeling. In an extension of the momentum model, I found that managers' job satisfaction change positively related to

changes in employee reports of their FSSB; in addition, I replicated prior findings in which job satisfaction change negatively related to turnover intentions change.

Furthermore, based on my integration of the momentum model and the affective shift model, I tested the proposition that changes in negative work events (i.e., job demands, interpersonal conflict) would moderate the relationship between changes in job satisfaction and focal outcomes. For certain operationalizations of negative work events, hypothesis testing revealed significant interactions with respect to changes in all three outcomes: turnover intentions, OCB, and FSSB. The form of the interactions, however, deviated from my predictions for models including changes in turnover intentions and OCB, although my predictions were supported for models including changes in FSSB. In my integration of the momentum model and crossover theory, the associated hypotheses were met with very limited support. Specifically, the relationship between managers' job satisfaction change and employees' job satisfaction change approached significance, but the relationship between managers' level of job satisfaction and their employees' subsequent level of job satisfaction did not receive support. Similarly, the proposed mediational mechanisms (i.e., managers' OCB and FSSB) of these crossover relations went unsupported. In sum, while my contributions to the momentum model and the affective shift model were notable, my proposed integration of the momentum model and crossover theory was met with limited support. Overall, findings from this dissertation yield important implications for both theory and practice, as they may draw more attention to changes in job satisfaction, as well as the potentially beneficial role of changes in perceived negative work events.

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## Chapter 1: Introduction

Job attitudes constitute what are and remain to be some of the most oft-studied constructs in industrial and organizational psychology. Over the years, numerous work-specific job attitude constructs have been introduced in the literature, and of these, some of the most well-known include: job satisfaction, organizational commitment, turnover intentions, job involvement, and organizational identification. To illustrate the vast number of scholarly works addressing job attitudes, I conducted a PsycINFO database search for works from 1900 to May 2014 using the following terms: *job attitudes*, *work attitudes*, *job satisfaction*, *turnover intentions*, *job involvement*, and *organizational commitment*. First, a keyword search uncovered 34,659 scholarly works within the PsycINFO database, and 8,059 of these were published in the past five years. Second, a follow-up search revealed that 7,965 entries included in one or more of the aforementioned terms in their respective titles, and of these, 1,808 were published in the past five years. Third, a keyword search of the term *job satisfaction* by itself produced 15,418 entries, and of these, 3,052 were published in the past five years. Finally, a search for the term *job satisfaction* in titles revealed 5,841 entries, with 1,169 of these published in the past five years. As revealed by this search, an immense number of scholarly works have been published on job attitudes in general, and research on job satisfaction by itself comprises a large swath of the job attitudes literature.

### Traditional Conceptualizations of Job Satisfaction

Despite its vast literature, relatively few studies have conceptualized and operationalized job satisfaction as dynamic and time-varying. Rather, most research has

operationalized job satisfaction (and other job attitudes) as static. Recent theoretical advances, however, point to the importance of investigating attitudinal change over time—relative to some reference point—as such change may hold meaning for workers.

In the job satisfaction literature, scholars' primary interest in job satisfaction has stemmed from its theoretical and empirical relationship with work behavior (Judge & Kammeyer-Mueller, 2012; Locke, 1976; Roethlisberger & Dickson, 1939; Taylor, 1970), such as voluntary turnover, task performance, organizational citizenship behavior, and counterproductive work behavior. Although some qualitative reviews have described smaller relations between job satisfaction and these behavioral outcomes than, perhaps, prevailing theory would suggest (e.g., Brayfield & Crockett, 1955), relatively recent meta-analytic investigations have found small-to-medium effect sizes (e.g., Herscovis et al., 2007; Judge, Thoresen, Bono, & Patton, 2001; Kinicki, McKee-Ryan, Schriesheim, & Carson, 2002; Lau, Au, & Ho, 2003; LePine, Erez, & Johnson, 2002), suggesting that job satisfaction does indeed play a role in behavioral work outcomes.

Further, with respect to voluntary turnover behavior, multiple theoretical models have posited a link between job satisfaction, turnover intentions, and ultimately actual voluntary turnover (e.g., T. W. Lee & Mitchell, 1994; T. W. Lee, Mitchell, Holtom, & McDaniel, 1999; Mobley, 1977; Steers & Mowday, 1981). In support of these proposed links, meta-analytic evidence has found medium-to-large, negative relations between job satisfaction and turnover intentions (i.e., Kinicki et al., 2002; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Tett & Meyer, 1993), and small, negative relations between job satisfaction and voluntary turnover (Griffeth, Hom, & Gaertner, 2000). Thus,

prior theory and research have framed job satisfaction as an antecedent to critical workplace outcomes, including voluntary turnover, task performance, organizational citizenship behavior, and counterproductive work behavior.

### **Job Satisfaction as a Dynamic Construct**

For the most part, the theoretical and empirical findings mentioned above conceptualized job satisfaction as static. In contrast to this long-held conception, more recent theory and research have construed job satisfaction as dynamic. For instance, H. M. Weiss and Cropanzano (1996) developed affective events theory wherein they approached job satisfaction from an event- or experience-based perspective. The authors posited that workers' job satisfaction changes in relation to their perceptions of—and affective reactions to—workplace events and experiences (e.g., hostile coworker, promotion). Similarly, Beal, Weiss, Barros, and MacDermid (2005) proposed a model of dynamic employee performance predicated on affective episodes—a critical component of job satisfaction along with cognition—wherein changes in affective experiences drives work-related attitudinal and behavioral changes.

In support of these dynamic conceptualizations of job satisfaction, empirical evidence has corroborated the time-variant nature of job satisfaction. In their meta-analytic investigation, Dormann and Zapf (2001) found that only about 25% of the variance of workers' current level of satisfaction can be explained by their prior level of job satisfaction; that is, 75% of their current level of job satisfaction can be attributed to other non-dispositional factors. Moreover, a study by Boswell, Shipp, Payne, and Culbertson (2009) concluded that new employees' level of job satisfaction tends to rise in

the months immediately following entry into the organization but then tends to decline in subsequent months. In sum, preliminary empirical evidence aligns with theoretical propositions that job satisfaction does indeed vary over time; however, the preliminary theory and research described above did not explicitly address whether changes in job satisfaction elicit meaning for workers.

To understand whether job satisfaction change provides meaning, G. Chen, Ployhart, Thomas, Anderson, and Bliese (2011) proposed and tested an integrative model of job satisfaction change. Their momentum model of job satisfaction (henceforth referred to as the *momentum model*) posited that workers' job satisfaction change provides important meaning, and depending upon the sign of the change trajectory (i.e., positive vs. negative), workers may entertain thoughts of staying with or leaving the organization. Initial empirical tests of the momentum model conducted by G. Chen et al. (2011) and Liu, Mitchell, Lee, Holtom, and Hinkin (2012) indicated that indeed a downshift in job satisfaction over time increases the likelihood that an individual *considers* quitting his/her respective organization, as well as the likelihood that he/she *actually* quits. As such, these preliminary pieces of evidence have provided an initial glimpse into the important role of job satisfaction change in relation to work outcomes.

Despite this preliminary evidence, however, G. Chen et al. (2011) acknowledged that more work is needed to investigate job satisfaction change in relation to other types of work behavior. Given that positive changes in job satisfaction correspond to workers' desire to remain in their current organization, it seems pertinent to investigate how workers *behave* when they experience such upshifts in job satisfaction—that is, after they

decide to remain in and invest in their organization. From another perspective, it is also important to investigate how workers behave when they experience downshifts in job satisfaction but remain in the organization.

In this dissertation, I investigate additional behavioral outcomes that might be influenced by meaningful changes in job satisfaction. Specifically, I focus on the following types of positive work behavior: organizational citizenship behavior (OCB) and family-supportive supervisor behavior (FSSB). These two types of positive work behavior represent behaviors widely considered to be discretionary (i.e., non-mandatory) in nature—meaning, managers may *choose* whether to help colleagues in ways that exceed their formal job description, and whether to help their employees balance work and family demands. While these behaviors often do not fall within the realm of a formal job description, they support key work functions and outcomes at both the individual and unit level. For instance, a meta-analytic investigation by N. P. Podsakoff, Whiting, Podsakoff, and Blume (2009) demonstrated that individual workers who perform more OCB demonstrate higher task performance. In addition, N. P. Podsakoff et al. found that when workers enact more frequent OCB, their unit does better with respect to unit-level objective performance indicators (i.e., productivity, efficiency, reduced costs, profitability), as well as improved customer satisfaction.

With regard to FSSB, the extant literature has also linked this construct to other forms of positive work behavior such as task performance and OCB (e.g., Bagger & Li, 2014). Due to the growing number of dual-earner couples (Bond, Galinsky, & Swanberg, 1998; Bond, Thompson, Galinsky, & Protts, 2003; U.S. Bureau of Labor Statistics,

2005; U.S. Census Bureau, 2000), the historically large numbers of women in the workforce (U.S. Bureau of Labor Statistics, 2013), the large proportion of working mothers with children (U.S. Bureau of Labor Statistics, 2000), and the increased likelihood that workers will care for their aging parents in the coming years (Penning, 1998), today many workers face competing demands and limited resources stemming from their work and family domains. Accordingly, workers who face such increased demands and finite resources may benefit both at work and at home from family-supportive supervision. In fact, growing research suggests that when workers perceive FSSB from their managers, they tend to experience lower work-family conflict, higher job satisfaction, and fewer turnover intentions (Hammer, Kossek, Bodner, & Crain, 2013; Hammer, Kossek, Yragui, Bodner, & Hanson, 2009). Thus, there exists a need to understand the circumstances and conditions that increase the likelihood that managers perform positive work behavior such as OCB and FSSB, as such behavior can support fellow workers and the organization as a whole. Moreover, it is imperative to understand how meaning gleaned from job satisfaction change could contribute to exhibiting such behavior. Along these lines, as my first overarching objective, I investigate whether managers' job satisfaction change influences their self-reported intentions to quit, as well as their self-reported enactment of OCB and subordinates' reports of their FSSB. To do so, I use a two-time point prospective research design with a six-month interval.

In addition to identifying the consequences of job satisfaction change, it is important to further elucidate the processes through which such change occurs. In particular, it is especially critical to understand the conditions under which job



satisfaction change enhances work outcomes. To that end, initial theory and research pertaining to the affective shift model (Bledow, Rosing, & Frese, 2013; Bledow, Schmitt, Frese, & Kühnel, 2011) have pointed to the important role negative work experiences (or events) play in relation to positive work experiences (e.g., job satisfaction).

As originally conceived, the affective shift model posited that a downshift in negative work experiences (e.g., interpersonal conflict, job demands, negative affect) coupled with an upshift in positive work experiences (e.g., positive affect) leads to heightened work engagement and creative behavior (Bledow et al., 2011, 2013). That is, to achieve optimal levels of motivation and desired work behavior, an initial negative experience—followed by its diminishment—is necessary to augment the beneficial effects of an upshift in positive affect on important work outcomes. Based on this key proposition of the model, it follows that negative work experiences and their subsequent diminishment may similarly augment the relations between job satisfaction change and changes in turnover intentions, OCB, and FSSB. Therefore, my second overarching goal of this dissertation is to integrate the affective shift model with the momentum model and ultimately test whether a concurrent downshift and upshift in negative work events (i.e., interpersonal conflict, job demands) and job satisfaction, respectively, minimizes the likelihood that workers consider leaving their organization and maximizes the likelihood that they engage in positive work behavior such as OCB and FSSB.

Moving beyond the individual's experience of his/her dynamic changes in negative work events and job satisfaction, systems theory (Bronfenbrenner, 1977) and crossover theory (Westman, 2001) would suggest that such experiences may have

implications for others with whom they interact. Although the crossover literature has focused generally on the crossover of stressors and strains from one individual to another, positive experiences and resources may also cross over from person to person. In fact, Bakker, Westman, and van Emmerick (2009), in their qualitative review of the crossover literature, identified comparatively few studies that investigated such positive crossover. Moreover, Bakker et al. described the importance of investigating crossover between managers and employees, as these constitute critical workplace relationships. To address this need, I investigate the crossover of a positive work experience—job satisfaction—between managers and their employees. Further, I introduce a more dynamic conception of crossover theory, wherein I posit that dynamic shifts in job satisfaction have critical implications for crossover processes. In these ways, I contribute to both crossover theory and the momentum model.

To summarize, I provide three important contributions in this dissertation. First, I further theoretical development surrounding the momentum model by broadening the understanding of dynamic changes in job satisfaction with respect to critical behavioral work outcomes—specifically, turnover intentions, OCB, and FSSB. Second, to extend even further the nomological network related to dynamic changes in job satisfaction, I integrate the momentum model with the affective shift model by addressing changes in negative work events (e.g., interpersonal conflict, job demands) and their potential interaction with job satisfaction change. Specifically, I investigate whether, over time, a downshift in individuals' negative work events coupled with an upshift in their job satisfaction results in downshifts in their turnover intentions and upshifts in their OCB

and employee reports of FSSB. Third and finally, I extend the momentum model by incorporating systems theory and crossover theory perspectives. That is, I investigate whether changes in job satisfaction cross over from managers to their employees.

To encapsulate the three primary objectives of this dissertation, I provide a conceptual model (see Figure 1). The model visually depicts the proposed relationships between negative work events, job satisfaction, turnover intentions, OCB, and FSSB for managers, as well as the proposed mechanisms through which job satisfaction crosses over from managers to employees. In the following chapters, I review the theoretical and empirical literatures surrounding the aforementioned focal constructs, as well as pertinent interrelationships between these constructs. Later, I describe the study's methods, report the findings, and discuss the theoretical and practical implications.

## Chapter 2: Job Satisfaction

Job attitudes have long been a focus among organizational scholars, where *job attitudes* refer to “evaluations of one’s job that express one’s feeling toward, beliefs about, and attachment to one’s job” (Judge & Kammeyer-Mueller, 2012, p. 344). Over the years, job attitudes have emerged as a multifaceted construct consisting of specific attitudes such as job satisfaction, organizational commitment, turnover intentions, and job involvement. Of these, scholars have paid perhaps the most attention to job satisfaction. As a result, a voluminous literature surrounds job satisfaction. Below, I review the history of job satisfaction, its temporal stability, and its nomological network (refer to Appendix A for a more comprehensive historical review of job attitudes).

### Origins of Job Satisfaction Research and Theory

**Early history.** Over the past century, research on job satisfaction has proliferated. By the first half of the 20<sup>th</sup> century, Herzberg, Mausner, Peterson, and Capwell (1957) referenced 1,795 papers on the topic. As the number of empirical studies grew, so too did theories aimed at understanding and explaining job satisfaction and its nomological network. From 1950 to 1970, new job satisfaction theories emerged—notably Maslow’s need hierarchy theory (Maslow, 1954, 1970) and Herzberg’s motivator-hygiene (i.e., two-factor) theory (Herzberg, 1966; Herzberg, Mausner, & Snyderman, 1959).

Yet, as the number of job satisfaction studies and theories flourished, Locke (1969) noted that, based on prior research and theory, the causes and components of job satisfaction remained ambiguous. In response, Locke articulated the theoretical link between affect (e.g., emotion) and evaluation. It was his contention that “cognition

(sensation, perception, conception) enables [the individual] to discover what exists, but it does not tell him [or her] what action(s) to take with respect to this knowledge” (p. 314), and only through evaluation can an individual decide how to act. Locke suggested that an individual forms an evaluation of a job through a process of (a) perceiving an aspect of a job, (b) recalling his/her values, and (c) judging the discrepancy between the perceived aspect of a job and his/her values. Ultimately, this evaluative process drives an individual to select an action plan. Thus, according to Locke, affect relates to this process of evaluation in the following manner: Affective reactions (e.g., pleasure, displeasure) result from the process of judging an aspect of the job relative to personal values. Accordingly, Locke defined job satisfaction as “the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating the achievement of one’s job values” (p. 316). That is, his definition of job satisfaction implies both affective (e.g., emotional state) and cognitive (e.g., appraisal) components.

**Affect versus attitude.** During the second half of the 20<sup>th</sup> century, scholars like Locke (1969) and Cranny, Smith, and Stone (1992) described job satisfaction as a type of job-specific affect (e.g., affective reaction, emotional response), while others like Brief (1998) referred to job satisfaction as a type of attitude. More recently, H. M. Weiss (2002) argued that, although affect and attitudes share a conceptual relationship, they are in fact distinct constructs. To this end, he proposed that job satisfaction should be referred to as an attitude, as is consistent with a tripartite view of attitudes wherein an attitude consists of (a) affective responses to an object, (b) beliefs about an object, and (c) behavior related to an object. It is this view of job satisfaction that I adopt for this

dissertation, and it is this view that is exemplified by affective events theory (H. M. Weiss & Cropanzano, 1996). The theory teases apart the unique roles of the work environment, work events, affective reactions, attitudes, and behavior. As is relevant to this dissertation, affective events theory also implies that job satisfaction and other job attitudes are malleable. That is, in response to work events and a changing work environment, job satisfaction fluctuates over time. To that end, in the following section, I review prior investigations into the temporal (in)stability of job satisfaction.

### **Job Satisfaction Change**

Job satisfaction has been linked to heritable genetic determinants (Arvey, Bouchard, Segal, & Abraham, 1989; Song, Li, & Arvey, 2011), suggesting a dispositional aspect of the construct. As an attitude, however, an individual's experienced job satisfaction shares an inextricable link with specific work-related objects or events. Accordingly, should an individual's perception of an object or event change, he/she will likely experience changes in his/her corresponding level of job satisfaction. Therefore, job satisfaction constitutes a malleable and relatively fluid phenomenon influenced by changes in perceived events and the work environment. Corroborating this view, a meta-analytic investigation by Dormann and Zapf (2001) found that the average job satisfaction test-retest correlation across 60 samples was .50, after applying corrections for unreliability. This estimate suggests that, although job satisfaction reflects some degree of stability, only 25% of the variance in workers' future level of job satisfaction can be explained by their prior level of job satisfaction—meaning, 75% of future job satisfaction levels are likely explained by non-dispositional factors.

In the same paper, Dormann and Zapf (2001) conducted a follow-up study with 365 participants who had changed jobs between two assessments of job content, work stressors, and job satisfaction. Despite changing jobs, perceptions of job content and work stressors remained relatively stable, and after controlling for these variables, the test-retest correlation for job satisfaction decreased from .29 to -.04. This latter finding indicates that job satisfaction demonstrates low stability after accounting for perceptions of job content and work stressors, even when looking across jobs within an individual worker. Together, these findings provide evidence that, although job satisfaction has dispositional antecedents (e.g., Arvey et al., 1989; Ilies & Judge, 2002; Judge, Heller, & Mount, 2002; Kaplan, Bradley, Luchman, & Haynes, 2009; Song et al., 2011), job satisfaction demonstrates limited stability over time and such stability may all but disappear after accounting for perceptions of job content and work stressors.

Given this temporal instability, recently researchers have begun to examine job satisfaction trajectories over time to understand the antecedents and consequences of such changes. For example, Boswell et al. (2009) investigated job satisfaction change using a sample of 132 organizational newcomers surveyed at four time points. They found that organizational newcomers' level of job satisfaction tends to rise over the first three months, but soon after this initial increase, their level of job satisfaction tends to decline for the remainder of their first year. Moreover, the authors found that newcomers are more likely to experience an initial rise in job satisfaction when they (a) previously felt dissatisfied with their prior job and (b) report more positive experiences at their new job (e.g., successful onboarding). Accordingly, Boswell et al.'s findings suggest individuals'

job satisfaction change may depend upon their reference point (e.g., job satisfaction at prior job), as well as content and contextual features of their new job and organization. Finally, this study shows that job satisfaction can change within relatively short time periods (i.e., three-month intervals)—at least in the case of organizational newcomers.

Despite such evidence of job satisfaction change, the vast majority of research on job satisfaction has conceptualized and operationalized the construct using a single measurement point. Such static assessments fail to capture the meaning or impact workers may experience as a result of job satisfaction fluctuations. In response, recent research and theory has begun to acknowledge the importance and relevance of job satisfaction change in relation to important work outcomes (e.g., G. Chen et al., 2011; Liu et al., 2012). In recognition of the long-held, static conceptualization of job satisfaction, however, in the following section, I provide an overview of the job satisfaction nomological network based on static operationalizations of the construct. In Chapter 4, I review the relatively nascent literature on job satisfaction change in more detail.

### **Nomological Network of Job Satisfaction**

While job satisfaction represents one of the most studied constructs in industrial and organizational psychology (Spector, 1997), some scholars have criticized the job satisfaction literature for its sometimes atheoretical nature. For example, in their meta-analytic investigation of the construct validity of a well-known job analysis measure (i.e., Job Descriptive Index; P. C. Smith, Kendall, & Hulin, 1969), Kinicki et al. (2002) noted that assessing the measure's construct validity proved difficult due to the lack of theory development surrounding job satisfaction, despite numerous investigations of job



satisfaction in the extant literature. Consequently, Kinicki et al. called for a comprehensive job satisfaction theory and formal tests of propositions pertaining to existing theories.

Despite the lack of a single, well-established, underlying theory, the nomological network surrounding this oft-studied construct has mushroomed since its conception, and below I provide a brief review of the presumed antecedents, correlates, and consequences of job satisfaction (for a more comprehensive review, see Appendix B). Because affective events theory has gained traction over the past two decades, I organize my review of job satisfaction's nomological network in accordance with the theory.

**Antecedents of job satisfaction.** Affective events theory provides one of the more inclusive frameworks for conceptualizing the antecedents of job satisfaction. Specifically, the theory posits that an individual's job satisfaction changes directly and indirectly in response to work events, the work environment, and the individual's disposition. In support, accumulated meta-analytic evidence has linked job satisfaction with the following (non-comprehensive) list of theoretical antecedents: skill variety, task significance, task identity, autonomy, and feedback (Humphrey, Nahrgang, & Morgeson, 2007; Kinicki et al., 2002); role ambiguity and role conflict (Kinicki et al., 2002); workplace aggression (Herscovis & Barling, 2010b; Lapierre, Spector, & Leck, 2005); sexual harassment (Herscovis & Barling, 2010a; Lapierre et al., 2005); work-family conflict (Amstad, Meier, Fasel, Elfering, & Semmer, 2011); emotional stability, extraversion, agreeableness, and conscientious (Judge et al., 2002); positive and negative affectivity (Kaplan et al., 2009); core self-evaluations (i.e., self-esteem, emotional

stability, generalized self-efficacy, internal locus of control) (Judge & Bono, 2001); age (Ng & Feldman, 2010); transformational, initiating-structure, and contingent-reward, passive management-by-exception, and laissez-faire leadership styles (DeRue, Nahrgang, Wellman, & Humphrey, 2011); leader-member exchange quality (Gerstner & Day, 1997); high-commitment human resources practices (e.g., internal promotion, work-life policies, training, rewards) (Kooij, Jansen, Dijkers, & De Lange, 2010); general climate (Carr, Schmidt, Ford, & DeShon, 2003); workplace mistreatment climate (Yang, Caughlin, Gazica, Truxillo, & Spector, 2014); ethical climate (Schwepker, 2001); safety climate (Clarke, 2010); group cohesion (Kinicki et al., 2002); and person-group and person-organization fit (Kristof-Brown, Zimmerman, & Johnson, 2005). Thus, it is evident that—given the voluminous nature of the job satisfaction literature—a multitude of quantitative reviews have focused on the construct’s presumed antecedents.

**Correlates of job satisfaction.** Correlates of job satisfaction include other job attitudes, as well as mental and physical health. As part of the broader job attitudes family of constructs, job satisfaction has been found to meta-analytically co-vary with organizational commitment (Kinicki et al., 2002; Meyer et al., 2002), career commitment (Cooper-Hakim & Viswesvaran, 2005), organizational identification (Riketta, 2005), job involvement (Brown, 1996; Kinicki et al., 2002), work engagement (M. S. Christian, Garza, & Slaughter, 2011), and turnover intentions (Kinicki et al., 2002; Tett & Meyer, 1993). [Regarding turnover intentions, however, I should note that multiple theories of voluntary turnover frame turnover intentions as a consequence of job satisfaction, and in this dissertation, I similarly frame turnover intentions as a consequence.] In addition to

other job attitudes, meta-analytic investigations have generally found small-to-large, negative relationships between workers job satisfaction and indicators of their health problems, where the latter have been operationalized as physical health indicators (e.g., cardiovascular disease, musculoskeletal disorders, physical illness) and mental health indicators (e.g., anxiety, burnout, depression, poor general mental health, poor self-esteem) (Alarcon, 2011; Faragher, Cass, & Cooper, 2005; Kinicki et al., 2002). Thus, accumulated evidence has shown that job satisfaction shares close ties with other attitudes and well-being.

**Consequences of job satisfaction.** Affective events theory posits how job satisfaction forms and changes, as well as how and what it influences. As proposed in the theory, enacted work behavior serves as an outcome of attitude-based judgments regarding a work-related event or object. As such, workers with more favorable attitudes towards their job or workplace in general (e.g., higher job satisfaction) tend to behave in a manner consistent with their attitudes. Depending upon the degree to which job attitudes are favorable or unfavorable, workers may enact various types of beneficial or potentially detrimental work behavior, including various forms of work performance and withdrawal behavior. In support of this proposition, prior research has found *positive* relations between job satisfaction and the following behavioral consequences: task performance (Judge et al., 2001; Kinicki et al., 2002); adaptive work behavior (Franke & Park, 2006); proactive work behavior (Morrison, 1993; Wanberg & Kammeyer-Mueller, 2000); and organizational citizenship behavior (Dalal, 2005; Hoffman, Blair, Meriac, & Woehr, 2007; LePine et al., 2002; Organ & Ryan, 1995). Conversely, prior research has

found *negative* relations between job satisfaction and the following behavioral consequences: counterproductive work behavior (Dalal, 2005; Lau et al., 2003); workplace aggression (Hershcovis et al., 2007); lateness (Harrison, Newman, & Roth, 2006; Kinicki et al., 2002; Koslowsky, Sagie, Krausz, & Singer, 1997); absenteeism (Harrison et al., 2006); turnover intentions (Hom, Caranikas-Walker, Prussia, & Griffeth, 1992; Kinicki et al., 2002; Tett & Meyer, 1993); and turnover (Griffeth et al., 2000). In sum, the extant literature indicates that higher levels of job satisfaction generally correspond to more positive work behavior and less negative work behavior.

### **General Summary of Job Satisfaction Literature**

As described above, job satisfaction refers to an individual's evaluation of and feelings towards his/her job. While some have criticized the job satisfaction literature as largely atheoretical, affective events theory provides a framework for understanding job satisfaction and how it changes. In support of the theory, empirical evidence has identified a number of antecedents, correlates, and consequences of job satisfaction. Moreover, while historically job satisfaction has been conceptualized and operationalized as static, some scholars have begun to view job satisfaction as dynamic by addressing *how* and *why* job satisfaction fluctuates. In this dissertation, I adopt this dynamic perspective, as my goal is to elucidate the consequences of job satisfaction change, as well as the conditions under which the effects of job satisfaction change are augmented in relation to focal consequences. In the following chapter, I describe and review the following three focal consequences of job satisfaction that are of interest in this

dissertation: turnover intentions, organizational citizenship behavior (OCB), and family-supportive supervisor behavior (FSSB).

### **Chapter 3: Turnover Intentions, Organizational Citizenship Behavior (OCB), and Family-Supportive Supervisor Behavior (FSSB)**

As reviewed briefly in the previous chapter, there are numerous presumed consequences of job satisfaction. Such consequences can be labeled generally as work behavior (e.g., task performance, voluntary turnover) or as a proximal process surrounding work behavior (e.g., turnover intentions). Consistent with affective events theory (H. M. Weiss & Cropanzano, 1996), over time, job satisfaction may influence two broad types of work behavior—work performance and work withdrawal behavior—where work performance includes task behavior, helping behavior, and counterproductive behavior, and withdrawal behavior includes lateness, absenteeism, and turnover.

In this dissertation, the focal presumed consequences of job satisfaction include: turnover intentions, organizational citizenship behavior (OCB), and family-supportive supervisor behavior (FSSB). With respect to turnover intentions, while they do not constitute work behavior per se, they do represent a proximal antecedent to withdrawal behavior. As for the latter two, OCB and FSSB represent desirable forms of work performance—or in other words, *positive work behavior*. In the following paragraphs, I review each of these three focal consequences, as well as the relationships they share with job satisfaction (see Appendix C for a comprehensive review of work behavior).

#### **Work Performance and Positive Work Behavior**

Various conceptions of work behavior and its underlying dimensionality have emerged in the organizational literature over the past three decades (see Austin & Crespino, 2006; Austin & Villanova, 1992; Griffin, Neal, & Parker, 2007; Motowidlo,

2003). In general, work behavior can be classified into two broad categories: work performance and withdrawal behavior. Work performance consists of three broad dimensions of work behavior: task performance, counterproductive work behavior, and OCB (Rotundo & Sackett, 2002). First, task performance refers to behavior aimed at meeting formal work expectations related to production, service, administration, and management (Borman & Motowidlo, 1993; Campbell, McCloy, Oppler, & Sager, 1993; Motowidlo, 2003; Rotundo & Sackett, 2002). Second, counterproductive work behavior (CWB) entails potentially harmful and damaging discretionary workplace behavior that violates organizational norms and negatively impacts fellow employees, work groups, or the organization as a whole (Robinson & Bennett, 1995; Rotundo & Sackett, 2002; Sackett, Berry, Wiemann, & Laczko, 2006). In contrast, OCB refers to discretionary, non-task behavior that contributes *positively* to the psychological and social aspects of the work environment (Austin & Crespín, 2006; Borman & Motowidlo, 1993). Specifically, OCB includes discretionary helping behavior that contextually supports organizational functioning (Organ, 1988; C. A. Smith, Organ, & Near, 1983). That is, like task performance, OCB entails behavior that aids organizational effectiveness (e.g., helping a coworker); however, unlike task performance, OCB is not typically associated with formal work expectations (e.g., job description, performance evaluation).

In addition to OCB, other forms of positive work behavior occur in organizations. For instance, behavior related to managing the work-family interface—referred to as FSSB—may be framed as a type of discretionary positive work behavior. Like OCB, FSSB contextually supports organizational effectiveness by helping employees minimize

the impact of their family demands on task performance. In the following sections, I review OCB and FSSB as specific forms of positive work behavior, as well as their presumed relations with job satisfaction.

**OCB.** As described above, OCB constitutes a specific type of discretionary, non-task, positive work behavior that is extra-role in nature and may be directed at other workers or the organization itself. Originally, C. A. Smith et al. (1983) conceived of the OCB construct as comprising two dimensions: altruism and generalized compliance. This two-dimension conceptualization was later extended by Organ (1988) to include the following five dimensions: altruism, courtesy, conscientiousness, civic virtue, and sportsmanship. Williams and Anderson (1991) subsequently took Organ's (1988) five-dimension model and reduced it back to a two-dimension model, albeit a different two-dimension model than was originally proposed by C. A. Smith et al. (1983). Specifically, Williams and Anderson (1991) suggested that a dimension called OCB directed towards individual employees (OCB-I) should subsume Organ's (1988) altruism and courtesy dimensions, while another dimension called OCB directed towards the organization (OCB-O) should subsume Organ's conscientiousness, civic virtue, and sportsmanship dimensions. Given the strong empirical relations between OCB dimensions, LePine et al. (2002) and Hoffman et al. (2007) meta-analytically investigated the factor analytic structure of the OCB construct and concluded that OCB may be best represented as a single overarching latent factor, as opposed to distinguishing between OCB-I and OCB-O. In other words, OCB-I and OCB-O appear to be empirically redundant, and



ultimately, Organ's (1988) original five dimensions represent indicators of a single overarching OCB latent factor. As such, I adopt the single-dimension view.

**OCB and job satisfaction.** To date, multiple meta-analytic reviews have investigated OCB and its relations with a variety of prominent organizational constructs, such as: job satisfaction (Dalal, 2005; Hoffman et al., 2007; LePine et al., 2002; Organ & Ryan, 1995), organizational commitment (Meyer et al., 2002), personality dimensions (Chiaburu, Oh, Berry, Li, & Gardner, 2011; Organ & Ryan, 1995), affect (Kaplan et al., 2009), and organizational justice (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). With respect to job satisfaction, meta-analytic evidence demonstrates that the positive relationship between job satisfaction and OCB ranges from small (Dalal, 2005) to medium (Hoffman et al., 2007; LePine et al., 2002; Organ & Ryan, 1995) in magnitude. That is, workers with higher levels of job satisfaction exhibit a greater tendency to perform OCB in their workplace. Consistent with prior research, I predict:

*Hypothesis 1a: Managers' job satisfaction (Time 1) will be positively associated with their subsequent OCB (Time 2).*

**FSSB.** As mentioned above, FSSB represents another type of positive work behavior. The origins of FSSB stem from research on family-supportive supervisors, wherein family-supportive supervisors were conceptualized as empathic supervisors who facilitate balance between their employees' work and family domains (i.e., Thomas & Ganster, 1995). In contrast to the person- or trait-based family-supportive supervisor construct, FSSB represents a behavior-based construct.

FSSB refers to supervisors' family-supportive behaviors aimed at managing the interface between their employees' work and family domains (Hammer, Kossek, Zimmerman, & Daniels, 2007)—or in other words, “behaviors exhibited by supervisors that are supportive of employees' family roles” (Hammer et al., 2013, p. 286). The construct is comprised of four subordinate dimensions labeled as emotional support, instrumental support, role modeling, and creative work-family management (Hammer et al., 2007, 2009). The first dimension—*emotional support*—refers to supervisor behavior aimed at increasing employees' perceptions that their supervisor cares for them, that their supervisor considers how they are feeling, and that their supervisor is approachable in instances where support might be necessary. The second dimension of the FSSB construct is referred to as *instrumental support*, and it consists of supervisor behavior aimed at responding to employees' work and family needs through regular management transactions. The third dimension is called *role modeling*, and this dimension encapsulates behavior related to a supervisor's enactment and demonstration of integrating and managing the interface between the work and family domains. Finally, the fourth dimension is labeled *creative work-family management*, and in contrast to the reactive nature of the instrumental support dimension, this dimension is proactive in nature. Specifically, this dimension consists of supervisor behaviors related to restructuring work in a manner that facilitates employees' ability to manage successfully both their work and family needs. As demonstrated by Hammer et al. (2013), these four subordinate dimensions can be represented by a single superordinate FSSB dimension, and in this dissertation, I adopt this conceptualization.

The vast majority of published FSSB research has operationalized FSSB using employees' reports of their supervisor's family-supportive behavior; consequently, as it has been most commonly operationalized, the FSSB construct reflects employees' *perceptions* of support as opposed to the actual *receipt* of support. Regarding the distinction between general forms of perceived and received support, a meta-analytic review by Haber, Cohen, Lucas, and Baltes (2007) found a positive albeit medium-sized relation between these two constructs. In other words, an individual's perception of support does not necessarily reflect how often and in what ways support is provided, such that a supportive event may occur in which two employees perceive the support in qualitatively different ways. Such perceptual discrepancies may be attributed to individual differences in judgment and memory processes (Lakey & Drew, 1997). In recognition of this distinction, I acknowledge that employee reports of FSSB may reflect perception as opposed to objective reality. Nevertheless, I contend that employee reports of FSSB reflect, to some extent, a supervisor's enacted provision of support—much like how supervisor ratings of employee task performance can suffer from perceptual distortions but ultimately can be used as a viable indicator of task-related behavioral enactment. Therefore, I argue that employee perceptions can be indicative of actual supervisor behavior. Accordingly, I adopt this perspective for this dissertation.

**FSSB and job satisfaction.** I was unable to identify any research that investigated managers' job satisfaction in relation to their exhibition of FSSB. In general, comparatively little empirical attention has been paid to the antecedents of FSSB. Instead, researchers have focused predominantly on FSSB as an *antecedent* of employee

outcomes. For instance, prior research has found that supervisors who reportedly exhibit FSSB tend to have employees with lower work-family conflict (Hammer et al., 2009, 2013; Kossek, Pichler, Bodner, & Hammer, 2011), perceived stress (Hammer et al., 2013), and turnover intentions (Bagger & Li, 2014; Hammer et al., 2009, 2013; Odle-Dusseau, Britt, & Greene-Shortridge, 2012), as well as higher work-family balance (Greenhaus, Ziegert, & Allen, 2012), work-family positive spillover (Hammer et al., 2009, 2013), job satisfaction (Bagger & Li, 2014; Hammer et al., 2009, 2013; Odle-Dusseau et al., 2012), organizational commitment (Odle-Dusseau et al., 2012), work engagement (Matthews, Mills, Trout, & English, 2014), task performance (Bagger & Li, 2014; Odle-Dusseau et al., 2012), OCB (Bagger & Li, 2014), subjective well-being (Matthews et al., 2014), perceived control over work hours, and perceived family time adequacy (Hammer et al., 2013). In addition, supervisors' exhibition of FSSB has been found to positively relate to the quality of leader-member exchange (Bagger & Li, 2014). In recognition of the limited research pertaining to antecedents of FSSB, a qualitative review by Straub (2012) proposed individual-level and contextual factors that may lead supervisors to exhibit FSSB; these proposed antecedents include environmental factors such as family-supportive organizational climate and the organizational reward system, as well as the supervisor's life-course and family-life stage, gender roles, relationship with followers, and experiences with work-family interference, to name a few. Noticeably absent from Straub's (2012) list of proposed antecedents are the supervisor's job attitudes. According to affective events theory, however, attitudes influence judgment-driven decisions. As such, I expect that workers with higher levels of job

satisfaction will be more likely to exhibit FSSB, as perceived by their subordinates. In other words, workers who have more favorable feelings and cognitions towards their work and work environment (including their subordinates) will feel more inclined to exhibit behavior that facilitates and enhances the work and non-work lives of others, as such behavior may lead to an even more satisfying workplace.

*Hypothesis 1b: Managers' job satisfaction (Time 1) will be positively associated with subsequent employee reports of their FSSB (Time 2).*

Finally, for both OCB and FSSB, I should note that I was unable to identify any published studies that investigated job satisfaction change in relation to enactment of positive work behavior. In Chapter 4, I discuss importance of adopting a dynamic view of job satisfaction in relation to OCB and FSSB.

### **Withdrawal Behavior and Turnover Intentions**

Alongside work performance, withdrawal behavior represents the second major category of work behavior, and consists of lateness, absenteeism, and voluntary turnover (for a comprehensive review of withdrawal behavior, see Appendix C). With respect to voluntary turnover, turnover intentions have been framed as a proximal antecedent to a worker's ultimate decision to leave an organization. Given the focal nature of turnover intentions to this dissertation (see Figure 1), in the following paragraphs, I review turnover, turnover intentions, and the links between turnover intentions and turnover.

**Turnover.** As an observable workplace behavior, turnover represents an oft-studied outcome in the organizational literature (Griffeth et al., 2000; Hom & Kinicki, 2001), as employee turnover can be quite costly for organizations (Cascio, 1991; Mobley,

1982). Some estimates suggesting that selecting and training a replacement may cost organizations between 50% to 200% of the first-year salary for the person who leaves the organization (Fitz-Enz, 1997; Hale, 1998). As a formal definition, the term *turnover* refers to a formal severance of the relationship between an employee and his/her employer. Employee turnover can be categorized with respect to involuntary and voluntary forms, where *involuntary turnover* refers to organization-initiated turnover and *voluntary turnover* refers to worker-initiated turnover. On the one hand, involuntary turnover occurs in those situations in which the organization makes a decision to end an employee's tenure for reasons related to poor or undesirable performance, regardless of whether the worker has a desire to remain at the organization. On the other hand, voluntary turnover occurs when a worker chooses to leave an organization, even when the organization may want to retain the worker. In this dissertation, I focus on voluntary turnover because it more closely aligns with a worker's thoughts of leaving the organization (i.e., turnover intentions). As evidenced by prior research and theory (e.g., Mobley, 1977; Mobley, Griffeth, Hand, & Meglino, 1979), turnover intentions constitute one of the most prominent and proximal antecedents of voluntary turnover.

With respect to turnover theory, two general perspectives on voluntary turnover have emerged over the years: (a) theories that address *why* people turnover (i.e., content models), and (b) theories that address *how* people turnover (i.e., process models) (Maertz & Campion, 2004). Empirical research and theory development surrounding both perspectives have elucidated various aspects of turnover decisions, particularly the roles of job satisfaction and turnover intentions. Finally, although distinguishable, Maertz and

Campion (2004) emphasized that content and process turnover models are indeed compatible. With that said, while content models typically incorporate both job satisfaction and turnover intentions as antecedents to turnover decisions (e.g., Bluedorn, 1982; Price & Mueller, 1981), process models tend to place more emphasis on the roles of job satisfaction and turnover intentions during workers' decisions to quit.

As mentioned above, process models explain the voluntary turnover process itself—that is, *how* employees decide to leave an organization. In a qualitative review of early turnover research, Porter and Steers (1973) concluded that, at that time, much of the turnover process literature focused primarily on the relationship between job satisfaction and voluntary turnover. A few years later, Mobley (1977) developed the intermediate linkage model of turnover processes. Rather than proposing a direct relation between job satisfaction and voluntary turnover, Mobley's original model conceptualized turnover as the final stage in a series of steps consisting of job satisfaction and withdrawal cognitions, the latter of which includes turnover intentions. Specifically, Mobley proposed that low levels of satisfaction with one's job leads to thoughts of leaving the organization, which lead to searching for alternative jobs and evaluating alternatives, which leads to turnover intentions, and which ultimately results in an employee deciding to quit the organization. Thus, Mobley positioned turnover intentions as the most proximal antecedent to turnover, and job satisfaction as a more distal antecedent.

Over the years, variations on process models of turnover have been proposed (e.g., Bannister & Griffeth, 1986; Dalessio, Silverman, & Schuck, 1986; Hom, Griffeth, & Sellaro, 1984; Steers & Mowday, 1981). In general, these models have envisioned

turnover as a sequential process, wherein job satisfaction and turnover intentions feature as prominent antecedents to turnover. Largely, models have been met with empirical support (e.g., Hom et al., 1992; T. W. Lee & Mowday, 1987; Mobley, Horner, & Hollingsworth, 1978).

In a more recent advance in turnover process models, T. W. Lee and Mitchell (1994) proposed an unfolding model of voluntary turnover—though, it should be noted that some scholars suggest that their model also overlaps with turnover content models (see Maertz & Campion, 2004). This model deviates from prior process models in two general ways: (a) unlike the process models reviewed above (e.g., Mobley, 1977), it does not assume a linear path toward turnover decisions, and further (b) it posits five distinct decision paths that an employee might follow. In a departure from the aforementioned literature that focused predominantly on antecedents such as job satisfaction and perceived availability of job alternatives (Hulin, Roznowski, & Hachiya, 1985), T. W. Lee and Mitchell describe other events (e.g., “shocks to the system,” T. W. Lee & Mitchell, 1994, p. 60) and processes (e.g., decision-making heuristics, behavioral scripts) that may influence an individual’s decision to turn over. With that said, the authors include one path in their unfolding model (i.e., Path 4) that incorporates the process underlying Mobley’s (1977) intermediate linkage model, which emphasizes the roles of job satisfaction and turnover intentions.

In subsequent tests of their unfolding model (e.g., T. W. Lee, Mitchell, Holtom, McDaniel, & Hill, 1999; T. W. Lee, Mitchell, Wise, & Fireman, 1996), Lee and colleagues have made some changes to the model, while retaining its nonlinear essence.



As a general critique of the unfolding model, Maertz and Campion (2004) cautioned that negative affect should feature in *every* turnover path option, as opposed to just *some* paths; their rationale is that a great deal of evidence has accumulated that links some affect-laden constructs (e.g., job satisfaction, turnover intentions) with turnover (e.g., Griffeth et al., 2000). Nonetheless, by incorporating “shocks,” the unfolding model represents an important evolution in turnover process models—yet, it still retains the classic sequential process model wherein job satisfaction and then turnover intentions precede actual turnover. Thus, despite advances in turnover theories, both job satisfaction and turnover intentions have remained consistent antecedents of turnover, with turnover intentions being the most proximal.

**Turnover intentions.** As described above, turnover intentions represent perhaps the most proximal antecedent to voluntary turnover behavior—a type of withdrawal behavior. Intentions of any kind have long been framed as precursors to volitional behavior, as is the case with, for example, the theory of planned behavior (Ajzen, 1985, 1991) and affective events theory. Like job satisfaction, employee turnover intentions (e.g., intentions to quit) also represent a prominent attitudinal construct in the organizational sciences. As a presumed outcome of job satisfaction in this dissertation, below, I briefly review job satisfaction as an antecedent of turnover intentions (see Appendix D for a review of the nomological network of turnover intentions).

Prior literature has posited a link between job satisfaction and turnover intentions, and this relation has been framed as a means of understanding enacted turnover behavior. From a process-model perspective, the relation between job satisfaction and turnover

intentions has been most notably framed as part of a larger turnover unfolding process, whereby low job satisfaction leads to thoughts of leaving the organization, which lead to searching for alternative jobs, which leads to turnover intentions, and which ultimately lead to enacted turnover behavior (Mobley, 1977; Mobley et al., 1979; Mobley et al., 1978). From a content-model perspective, job satisfaction represents an affective force that influences decision making surrounding turnover, which implies the inherent role of turnover intentions. Thus, given the near ubiquitous role of job satisfaction in turnover theories (e.g., T. W. Lee & Mitchell, 1994; Mobley, 1977), it follows that job satisfaction should relate to the most proximal antecedent of voluntary turnover: turnover intentions.

In support, several meta-analytic investigations (e.g., Hom et al., 1992; Kinicki et al., 2002; Tett & Meyer, 1993) have identified an inverse relation between job satisfaction and turnover intentions, such that employees who experience higher levels of job satisfaction tend to have fewer intentions to leave their organization—though it is important to reiterate that this relationship reflects static (as opposed to dynamic) operationalizations of the constructs. The meta-analytic effect sizes found in the aforementioned investigations are typically large in magnitude, according to Cohen's (1992) categorization scheme (i.e., small:  $r = .10$ , medium:  $r = .30$ , large:  $r = .50$ ). Therefore, in line with prior research and theory, I contend that workers with higher levels of job satisfaction will experience fewer subsequent turnover intentions:

*Hypothesis 1c: Managers' job satisfaction (Time 1) will be negatively associated with their subsequent turnover intentions (Time 2).*

Finally, consistent with the theory of planned behavior (Ajzen, 1985, 1991), turnover intentions resulting from job satisfaction may ultimately lead to voluntary turnover. In support, Griffeth et al. (2000) found a medium-to-large meta-analytic effect between turnover intentions and actual turnover behavior. Thus, because turnover intentions do not perfectly predict actual turnover behavior, it follows that the relation between job satisfaction and actual turnover should be smaller in magnitude, as was found by Griffeth et al. (2000). In sum, I attempt to replicate prior research by testing the theoretical link between job satisfaction and turnover intentions, the latter of which constitutes a theoretical and empirical antecedent of actual turnover behavior.

### Chapter 4: Momentum Model

Similar to the discussion surrounding the criterion problem in the organizational sciences (see Austin & Villanova, 1992), a growing emphasis has been placed on conceptualizing workplace phenomena from a dynamic—as opposed to a static—perspective. For example, both affective events theory (H. M. Weiss & Cropanzano, 1996) and the episodic process model of affective influences on performance (Beal et al., 2005) conceptualize affect, cognition, and behavior from a temporally dynamic perspective. In other words, such theories contend that workplace phenomena such as affect, cognition, and behavior may be conceptualized as fluid and dynamic, as opposed to rigid and static. This growing interest in change over time has recently made its way into the study of job satisfaction.

With respect to the dynamic relation between job satisfaction and actual turnover, Kammeyer-Mueller, Wanberg, Glomb, and Ahlburg (2005) conducted a study in which they sampled 932 recent hires from seven organizations over the first 18 months since their hire date. The authors found (marginally significant) differences between stayers and leavers with regard to their respective job satisfaction change trajectories. Specifically, the job satisfaction of stayers (i.e., those who did not turn over) remained relatively constant over the 18-month period, while the job satisfaction of leavers (i.e., those who did turn over) declined steadily over that same time period. Thus, Kammeyer-Mueller et al.'s study provides some evidence that job satisfaction change can be a meaningful predictor of turnover, such that workers experiencing downward changes in job satisfaction may be more likely to quit.

### **Momentum Model**

More recently, G. Chen et al. (2011) introduced a theoretical model aimed at explaining job satisfaction change. Their momentum model represents an integration of the following theories: prospect theory (Kahneman & Tversky, 1984), conservation of resources theory (Hobföll, 1989), within-person spirals theory (Lindsley, Brass, & Thomas, 1995), and sensemaking theory (Louis, 1980). Based on their integration, Chen et al. contended that job satisfaction change (i.e., job satisfaction trajectories) provides meaning to employees insofar as it contrasts with job satisfaction at a prior reference point. In the following sections, I review each foundational theory as it relates to the momentum model (see Appendix E for a comprehensive review).

**Prospect theory.** Prospect theory (Kahneman & Tversky, 1984) proposes that individuals perceive gains (or losses) as more salient when the gains (or losses) represent large departures (as opposed to small) from a reference point. When applied to job satisfaction, prospect theory suggests that individuals will be most likely to notice large changes in their job satisfaction relative to a prior reference point.

**Conservation of resources theory.** Also integrated within the momentum model, conservation of resource theory posits that individuals strive to maintain or conserve resources (i.e., objects, conditions, personal characteristics, energies) so as to avoid threats to resources, failures to gain resources, and experiences of an actual loss in resources. When individuals sense potential threats to their ability to conserve resources, they experience strain and attempt to replenish resources or to reduce the loss of resources. Accordingly, when individuals perceive a potential resource loss—as might be

indicated by declining job satisfaction—they try to restore resources to desired levels (and, as a result, their prior level of job satisfaction). In doing so, however, individuals may begin to experience spiraling losses as they apply additional resources toward replenishing depleted resources. To this end, as the threat or actual loss of resources becomes more severe, individuals may begin to entertain quitting the organization.

**Within-person spirals theory.** Also woven into the momentum model, within-person spirals theory proposes that phenomenological spirals provide valuable information to individuals, where spirals are defined as relatively constant, sustained, and systematic changes over time. Spirals provide important meaning to individuals as they attempt to make sense of such trends (i.e., upward trajectory, downward trajectory) and subsequently form forecasts and expectations for the future based on the perceived spirals. For example, workers who perceive that their job satisfaction has had an upward trajectory may extrapolate that their job satisfaction will continue to improve into the future, and as a result, they may form stronger intentions to remain in the organization. Conversely, workers who perceive a downward job satisfaction trajectory may anticipate that their job satisfaction will continue to decline, and as a result, they may want to quit their current organization in an attempt to escape the downward spiral.

**Sensemaking theory.** Sensemaking theory represents the fourth theory integrated into G. Chen and colleagues' (2011) momentum model, and it shares some similarities with prospect theory and within-person spirals theory. Specifically, sensemaking theory posits that individuals possess a desire to make sense of work events and experiences, and to do so they compare current work events and experiences with prior work events

and experiences. When individuals perceive discrepancies, they make projections about the types and frequency of work events and experiences they will experience in the future. For example, workers will expect their job satisfaction to improve in the future if they perceive that their job satisfaction has already improved as a result of positive work events and experiences; consequently, workers will be more likely to remain in the organization because they anticipate a pleasant organizational future.

**Summary and integration.** In summary, the momentum model is based on prospect theory, conservation of resources theory, within-person spirals theory, and sensemaking theory. After integrating these theories, G. Chen et al. (2011) concluded that a perceived job satisfaction change provides meaning for individuals about their prior, current, and future condition in an organization. In the case of a downward trajectory (i.e., downshift), individuals desire to “break” the expected trend by devoting more resources or by quitting the organization, whereas in the case of an upward trajectory (i.e., upshift), they choose to continue the expected trend by remaining in the organization and investing in it (e.g., helping or supporting fellow workers).

Based on the integrated theoretical propositions described above, G. Chen et al. (2011) derived two key propositions that differentiate a dynamic conceptualization of job satisfaction from a static one. First, they proposed: “Job satisfaction at an earlier point in time provides a reference point for interpreting job satisfaction at a later point in time” (p. 163). That is, from a dynamic perspective, workers derive meaning from differences of their prior job satisfaction in relation to their current job satisfaction. Second, the authors proposed: “Job satisfaction is more salient to the extent that it deviates more from prior

job satisfaction levels” (p. 163). This suggests that larger perceived shifts in job satisfaction will become more apparent and receive greater attention from workers. Together, these two propositions explain why and how dynamic job satisfaction change elicits meaning for workers, and under what circumstances workers will be likely to acknowledge and even react to such change.

### **Empirical Support for the Momentum Model**

G. Chen et al. (2011) tested the momentum model using four independent samples. In the first sample, 725 British Army soldiers participated in three surveys separated by one month during their first 10 weeks of military training at three time points. From this initial sample, 202 participants yielded complete data and, thus, were retained for subsequent analyses. After controlling for soldiers’ average level of job satisfaction over the three time points as well as Time 1 turnover intentions, the authors found that changes in job satisfaction did not significantly predict Time 3 turnover intentions. They did, however, find that changes in job satisfaction negatively predicted turnover intentions *change* over the same three time points. In other words, upshifts in employees’ job satisfaction corresponded to concurrent downshifts in turnover intentions. Finally, when investigating the link between turnover intentions and turnover behavior, the authors found that turnover intentions change—but not the average level of turnover intentions—predicted voluntary turnover, such that those who left experienced larger upshifts in turnover intentions than those who stayed. These findings suggest that job satisfaction change (e.g., upshift, downshift) is associated with turnover intentions



change, and that strong upshifts in turnover intentions could ultimately lead workers to voluntarily turn over from their organization.

In their second sample, G. Chen et al. (2011) surveyed 198 new employees at the London office of a large multinational consulting organization at three time points, separated by two-month intervals. From this initial sample, 64 participants yielded complete data and, thus, were retained for subsequent analyses. Unlike their first sample, they found that job satisfaction change negatively predicted Time 3 turnover intentions, such that when an upshift in job satisfaction occurred, workers tended to have fewer intentions to quit at a later time point; this was found even after controlling for the average job satisfaction and Time 1 turnover intentions. Like the first sample, they also found that job satisfaction change was negatively associated with turnover intentions change, even after accounting for average satisfaction and Time 1 turnover intentions. Thus, upshifts in job satisfaction were, again, found to correspond to concurrent downshifts in turnover intentions.

In their third sample, G. Chen et al. (2011) surveyed 800 U.S. Army soldiers from ten companies stationed in Europe, using a three-time point design with a three-month interval. From this initial sample, 289 participants yielded complete data and, thus, were retained for subsequent analyses. The authors found again upshifts in job satisfaction resulted in fewer turnover intentions at Time 3, as well as concurrent downshifts in turnover intentions. The analyses for this sample differed such that, in addition to the mean level of job satisfaction and Time 1 turnover intentions, the authors introduced organizational tenure as another control variable. As such, regardless of how long an

employee worked at the organization, upshifts in job satisfaction led to fewer turnover intentions at Time 3 and concurrent downshifts in turnover intentions.

In their fourth and final sample, G. Chen et al. (2011) surveyed 83 part-time MBA students from a large U.S. university over four time points separated by 2-week intervals. That is, compared to the first three samples, this sample used four time points instead of three, as well the shortest interval between time points. Corroborating prior findings, the authors found that upshifts in job satisfaction corresponded to concurrent downshifts in turnover intentions and fewer Time 4 turnover intentions. Like with the prior sample, the authors controlled for average job satisfaction, Time 1 turnover intentions, and organizational tenure. In this final sample, the authors also investigated the role of work expectations (i.e., how much work and the work environment are expected to change) and found that they partially mediated the relationship between job satisfaction change and turnover intentions change. The latter finding supports the theoretical proposition that job satisfaction change elicits meaning about the future.

In an extension of G. Chen et al. (2011), Liu et al. (2012) investigated job satisfaction change in relation to actual turnover using a sample of 5,270 hospitality workers from 175 units of an organization. To operationalize job satisfaction change, the authors assessed workers' job satisfaction at three time points with six-month time intervals. Like Kammeyer-Mueller et al. (2005) and G. Chen et al., Liu et al. found that workers' job satisfaction change influenced whether they left their organization. Specifically, Liu et al. found that as workers' job satisfaction increased over time, they were less likely to leave their organization.

In summary, G. Chen et al. (2011) and Liu et al. (2012) found that upshifts in job satisfaction corresponded to downshifts in turnover intentions and actual turnover, respectively. In G. Chen et al.'s fourth sample, changing work expectations partially explained how workers' job satisfaction change influenced their decisions to quit. The latter finding supports a core proposition of the momentum model: Job satisfaction change provides important meaning to workers about how their work and work environment will change in the future.

### **Hypotheses 2-3**

Based on the propositions of the momentum model and their empirical support, I contend that upshifts in job satisfaction should result in concurrent downshifts in turnover intentions. That is, workers who perceive an increase in job satisfaction relative to a prior point will anticipate that their work and work environment will continue to improve in the future, resulting in a fewer intentions to leave their organization. Accordingly, as a conceptual replication of prior findings, I predict the following:

*Hypothesis 2: From Time 1 to Time 2, managers' job satisfaction change will negatively relate to their turnover intentions change, such that increases in job satisfaction will be associated with decreases in turnover intentions.*

Heeding calls by G. Chen et al. (2011) and Liu et al. (2012), I investigate job satisfaction change in relation to changes in other behavioral outcomes—namely, OCB and FSSB. As with turnover intentions, workers' job satisfaction change should influence their expectations regarding their work and work environment, thereby influencing their decisions to invest in their colleagues, subordinates, and organization by exhibiting more

OCB and FSSB. As OCB and FSSB constitute forms of discretionary work behavior, workers may be more likely to perform such behavior when they perceive that their efforts will further facilitate their already growing job satisfaction. Thus, paralleling the hypotheses above for turnover intentions, I predict:

*Hypothesis 3: From Time 1 to Time 2, managers' job satisfaction change will positively relate to their changes in (a) OCB and (b) employee reports of their FSSB, such that increases in job satisfaction will be associated with increases in OCB and FSSB.*

### Chapter 5: Affective Shift Model

The momentum model (G. Chen et al., 2011) addresses how dynamic job satisfaction change affects intentions and behavior. In a similar manner, the affective shift model (Bledow et al., 2011, 2013) explains how dynamic changes in positive and negative affect influence motivation and behavior. I contend that together these models identify the conditions under which employee turnover intentions, OCB, and FSSB are enhanced. Thus, in this chapter, I integrate the propositions of the momentum model with those from the affective shift model.

Rooted in personality systems interaction theory (Kuhl, 2000), the affective shift model proposes that optimal levels of work motivation and behavior are achieved after down-regulation of negative affect (NA) and up-regulation of positive (PA). That is, initial NA plays a critical role in regulating motivation and behavior levels, such that the relation between PA and these outcomes is higher when it is preceded by initially high levels of NA. Due to their theoretically orthogonal nature, PA and NA may fluctuate independent of one another (Watson & Tellegen, 1985), allowing for an individual to experience high PA and low NA, low PA and low NA, high PA and low NA, and virtually any other possible combination.

Consistent with broaden and build theory (Fredrickson, 1998, 2001), a high level of initial NA signals a discrepancy between an individual's current state and his/her desired end-state, which narrows his/her focus towards addressing deviations or errors with respect to the desired end-state. As the level of NA subsequently decreases, attention shifts away from this narrow discrepancy-sensitive form of information processing,

thereby permitting access to a more broad and global form of information processing (Förster & Higgins, 2005; Koole & Jostmann, 2004). Further, this downshift in NA, leads to activation of associative memory networks (i.e., extension memory; Baumann & Kuhl, 2002), which constitute a mostly implicit memory system that integrates knowledge about the self and the environment (Koole & Jostmann, 2004). When activated, associative memory networks impact decision making and behavior by granting access to stored information such as needs, preferences, and various behavioral repertoires (Baumann & Kuhl, 2002). In turn, fast yet effective decision-making processes unfold, and efficient goals are selected (i.e., a single goal accomplishes multiple hurdles or minimizes multiple discrepancies). As the level of NA decreases, the level of PA may simultaneously increase, and as a result, attention will shift from more objective and deliberate decision making to relatively automatic behavioral activation and enactment of decision alternatives (Carver & White, 1994; Depue, Krauss, & Spont, 1987; Depue, Luciana, Arbisi, Collins, & Leon, 1994; Kazén & Kuhl, 2005; Tellegen, 1985). When PA is high, cognition broadens towards a more integrative and investigative mental state with behavior following suit (Fredrickson, 1998, 2001).

In sum, when a downshift in NA occurs, individuals tend to narrow their focus to attend to discrepancies between their current state and a desired future state. When an upshift in PA occurs during this same period, individuals broaden their focus towards more exploratory and effortless processing, and ultimately behavioral enactment aimed at reducing the previously identified discrepancies (e.g., goals). Thus, when a downshift in NA co-occurs with an upshift in PA, individuals experience a greater propensity to

identify discrepancies, develop decision alternatives, and ultimately enact preferable behavior based on the most viable decision alternative(s).

### **Empirical Support for the Affective Shift Model**

In an initial investigation of the affective shift model, Bledow et al. (2011) surveyed 55 software developers and computer scientists twice-a-day over nine workdays. First, the authors found that a morning-to-afternoon downshift in NA and upshift in PA resulted in the highest levels of afternoon work engagement—an indicator of motivation. Second, the authors investigated shifts as a potential source of NA—negative work events—and found similar results.

In a subsequent study, Bledow et al. (2013) tested the affective shift model in relation to creative performance. In their first study, a sample of 102 full-time workers from a variety of industries completed twice-a-day surveys for five workdays. Extending the results from Bledow et al. (2011), the authors found that a daily downshift in NA and a concurrent upshift in PA resulted in higher end-of-the day creative performance, such that the relation between PA change and creative performance was more positive when a concurrent decrease in NA occurred.

In a follow-up study, Bledow et al. (2013) conducted an experimental laboratory study using 80 students pursuing a graduate degree in psychology. Participants were randomly assigned to either the experimental or control condition. In the experimental condition, the researchers induced an affective shift. First, participants wrote a short essay about a prior event during which they experienced negative affect (e.g., fear, distress, anxiety). Second, participants wrote a short essay about a prior event during

which they experienced positive affect (e.g., joy, inspiration, enthusiasm). Finally, participants completed a brainstorming task in which they listed as many ideas as they could think of that might improve university quality of teaching. The control condition differed from the experimental condition in only way: Instead of writing an essay about an event that elicited negative affect, participants wrote a detailed account of all the tasks they completed the previous day so as to elicit neutral affect.

Adding further support to the causal nature of the an affective shift, Bledow et al. (2013) found in their second study that indeed individuals who experienced an initial level of high NA followed by high PA did perform more creatively on most indicators when compared to those who initially experienced neutral affect followed by high PA. Compared to those in the control condition, participants in the experimental condition demonstrated significantly higher originality and flexibility on the creativity task, but they did not demonstrate higher levels of creative fluency (e.g., number of ideas generated). In other words, participants who experienced an induced affective shift showed more flexibility and originality, even though they generated, on average, a similar number of ideas to those in the control condition. In sum, both Study 1 and Study 2 from Bledow et al. (2013) extended prior work conducted by Bledow et al. (2011) by investigating affective shifts in relation to a work behavior (i.e., creative performance).

### **Negative Work Events**

As mentioned above, in addition to finding evidence that high levels of work engagement result from a downshift in NA coupled with an upshift in PA, Bledow et al. (2011) also tested the affective shift model using negative work events in place of NA.



Consistent with affective events theory (H. M. Weiss & Cropanzano, 1996), Bledow and colleagues defined a *work event* as any work occurrence resulting in an experienced change and that, further, may elicit an affective reaction. Accordingly, a *negative* work event refers to an occurrence that results in unfavorable changes in condition and/or affect, and the authors operationalized negative work events as self-reported instances of errors made, experienced time pressure, and exposure to interpersonal conflict. Thus, negative work events conceptually overlap with constructs such as psychological job demands and interpersonal conflict. The authors found the same pattern of results for concurrent shifts in negative work events and PA, such that a downshift in negative work events followed by an upshift in PA resulted in the highest levels of work engagement. In this dissertation, I focus on two of the same three negative work events that Bledow and colleagues investigated—namely, exposure to interpersonal conflict and job demands.

**Exposure to interpersonal conflict.** *Interpersonal conflict* represents a broad umbrella term for both psychological (i.e., nonphysical) and physical forms of conflict between two or more people. As a specific type of negative work event, interpersonal conflict can elicit negative affective responses, attitudes, and behavior, particularly when exposure to such events takes place repeatedly over time. Specifically, meta-analytic evidence indicates that exposure to interpersonal conflict may lead to depression, anxiety, frustration, burnout, and psychological distress (Bowling & Beehr, 2006), as well as lower job satisfaction, higher turnover intentions, lower organizational commitment, poorer physical well-being, and higher interpersonal and organizational deviance behavior (Hershcovis & Barling, 2010b).

**Job demands.** Psychological *job demands* represent another type of negative work events and can entail a number of workplace stressors. With that said, job demands are perhaps most classically operationalized workload and time pressure (Karasek, 1985; Karasek et al., 1998), even though they may also subsume concepts such as role conflict and role ambiguity. For the purposes of this dissertation, however, I focus on workload and time pressure to classically operationalize job demands.

According to the job demands-control model (Karasek, 1979), job demands, along with job control, play an important role in stress processes. Accumulated meta-analytic evidence demonstrates that the following constructs may be consequences of perceived job demands: burnout (R. T. Lee & Ashforth, 1996), engagement (Crawford, LePine, & Rich, 2010), and perpetration of workplace aggression (Bowling & Beehr, 2006). Furthermore, original empirical studies have linked job demands to a number of constructs, such as: higher job satisfaction and absenteeism (Dwyer & Ganster, 1991), lower turnover intentions, and higher organizational commitment (Jones, Chonko, Rangarajan, & Roberts, 2007).

For the purposes of this dissertation, I operationalize negative work events as exposure to interpersonal conflict and job demands, as prior evidence suggests such events are integral to an affective shift. Regarding exposure to interpersonal conflict, I include both nonphysical and physical forms. With respect to job demands, I include forms related to workload and time pressure.

### **Integration of the Affective Shift Model and the Momentum Model**

The affective shift model and the momentum model place a common emphasis on dynamic change over time. Despite similarities in observable form (i.e., change over time), however, the presumed mechanisms underlying the proposed changes differ between these theoretical models. With respect to the affective shift model, the concurrent shifts in NA and PA signify implicit changes in attention, behavioral control, and goal-directed cognition and behavior. As a result, individuals who experience the prototypical affective shift (i.e., downshift in NA, upshift in PA) demonstrate improved thought and behavior (e.g., higher work engagement and creativity). In contrast, the momentum model presumes that individuals explicitly perceive deviations in job satisfaction and associated job resources relative to a prior reference point, and these deviations yield meaning whereby individuals think and behave in accordance with their trajectory-based expectations. Thus, as originally conceived, these models are similarly predicated on change, yet their underlying theoretical mechanisms are distinct.

Despite their apparent differences, I contend that these two models are compatible and, as a result, can be integrated. Specifically, the process underlying downshifts in negative work events (and their presumed association with NA) proposed by the affective shift could complement the effects of job satisfaction change proposed by the momentum model, such that a downshift in negative work events and concurrent upshift in job satisfaction should yield more favorable work outcomes. Consistent with affective events theory, an individual's exposure to a negative work event elicits a state of high NA. Accordingly, as negative work events decrease over time, the individual's level of NA should similarly decrease over the same time period. As proposed by the affective shift

model, the initially high levels of NA corresponding to frequent negative work events result in narrowed focus aimed at detecting discrepancies between individuals' desired future state and their current state (e.g., a goal) (Fredrickson, 1998, 2001). As NA decreases along with negative work events, the original state of narrowed information processing gives way to states of increasingly broadened information processing that expands the individual's focus to include broader contexts (Förster & Higgins, 2005; Koole & Jostmann, 2004).

With respect to the momentum model, salient job satisfaction change provides important meaning for the individual, such that an individual who perceives an upshift should have more optimistic expectations for the future. To that end, G. Chen et al. (2011) and Liu et al. (2012) collectively found that positive job satisfaction change resulted in concurrent negative turnover intentions change, lower subsequent turnover intentions, and reduced actual turnover. Thus, individuals who experience upshifts in job satisfaction are more likely to remain in their organization and (as I contend in this dissertation) exhibit positive work behavior that helps and supports the organization and its members.

Extending prior research and theory, I propose that this relationship between job satisfaction shifts and key workplace outcomes (i.e., turnover intentions, OCB, FSSB) may be augmented by the aforementioned downshift in negative work events. First, when individuals experience initially high levels of NA due to frequent negative work events, they experience a state of narrowed information processing wherein they demonstrate a heightened capacity to detect deviations between their current state and a future desired

state. While such discrepancies might pertain to specific tasks, duties, and responsibilities formally dictated by the job, they may also pertain to contextual aspects of the job. For example, during instances of narrowed information processing associated with frequent exposure to negative work events, a manager may pay closer attention to discrepancies between subordinates' current level of work-family-conflict and a more favorable future level of work-family conflict; in response, the manager may set goals to reduce the subordinates' work-family conflict. Next, as the number of negative work events decreases (along with the level of NA), individuals shift to a more global form of information processing in which cognition expands to include broader contexts and sources of information. During a downshift in negative work events individuals also integrate previously processed information into associative memory networks that pertain to their representations of the self and the environment. In continuation of the previous example, when the manager experiences a downshift in negative work events (along with NA) and a subsequent broadened mindset, he/she should become more likely to integrate previously developed work-family conflict goals into his/her associative memory networks and to await opportunities to strive actively, efficiently, and effectively towards goal attainment. As stated previously, activation of these associative memory networks results in quick yet effective decisions and selection of efficient goals that achieve multiple ends. Thus, when the manager experiences a downshift in negative work events, he/she may select goals that efficiently address multiple subordinates' work-family issues to reduce collective levels of work-family conflict.

If during this downshift in NA an *upshift* in job satisfaction occurs, the manager should be positioned to capitalize on the goals selected during the decrease in negative work events. That is, the improvement in job satisfaction will signal that the manager's future prospects are favorable, and he/she may use those goals generated and selected during the downshift in negative work events to effectively enact positive work behavior (e.g., OCB, FSSB). Further, as demonstrated in prior research, upshifts in job satisfaction lead to fewer turnover intentions, and when coupled with downshifts in negative work events, I argue that the worker's intentions to quit in the organization should become minimized. The underlying rationale is as follows. First, increases in job satisfaction signal that conditions are improving and thus will incentivize the manager to stay. Second, decreases in negative work events signal that conditions could improve even more if the manager successfully attains selected goals. As a result, thoughts of leaving are further reduced. Thus, I contend that downshifts in negative work events will augment the negative relation between job satisfaction change and turnover intentions change, as well as the expected positive relation between job satisfaction change and OCB change and FSSB change:

*Hypothesis 4: From Time 1 to Time 2, managers' changes in negative work events (i.e., job demands, interpersonal conflict) will moderate the negative relation between their job satisfaction change and turnover intentions change, such that increases in job satisfaction will be more strongly and negatively associated with changes in turnover intentions when decreases in negative work events occur.*

*Hypothesis 5: From Time 1 to Time 2, managers' changes in negative work events (i.e., job demands, interpersonal conflict) will moderate the positive relation between their job satisfaction change and their changes in (a) OCB and (b) employee reports of their FSSB, such that increases in job satisfaction will be more strongly related to changes in OCB and FSSB when decreases in negative work events occur.<sup>1</sup>*

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<sup>1</sup> Consistent with Bledow et al. (2011, 2013), I operationalize the dynamic shifts using moderation as opposed to mediation. The affective shift model posits that shifts in NA and PA occur concurrently, and thus I similarly propose in my integration of the momentum model and affective shift model that the shifts in negative work events and job satisfaction also occur concurrently. Because a mediation model would imply a temporal order between negative work events and job satisfaction, I decided against using mediation models to approximate these shift hypotheses, as the shifts are posited to occur over the same temporal period, meaning that one does not precede the other.

## Chapter 6: Crossover Theory

Rooted in systems theory (Bronfenbrenner, 1977), crossover theory (Westman, 2001) suggests that the experiences of one individual may impact others with whom they interact. Specifically, *crossover* refers to the transmission of stressors, strains, or resources, from one individual to another individual (Bolger, DeLongis, Kessler, & Schilling, 1989; Westman, 2001). It is important to highlight that the crossover process may involve negative or positive experiences; however, as Bakker et al. (2009) identified in their review, relatively few studies have addressed the crossover of positive work experiences (e.g., work engagement). As such, as a contribution to the crossover literature, I investigate the crossover of job satisfaction—a positive work experience—in this dissertation.

Westman and Vinokur (1998) proposed three distinct crossover mechanisms: direct crossover, indirect crossover, and common stressors. First, *direct crossover* refers to situations in which the stressors, strains, or resources of one individual influence the stressors, strains, or resources of another individual, either through emotional contagion or empathic processes (Bakker & Schaufeli, 2000; Westman, Etzion, & Danon, 2001; Westman & Vinokur, 1998). Second, *indirect crossover* refers to situations in which crossover processes occur due to behavioral interactions between individuals, such as social undermining (Westman & Vinokur, 1998). Finally, the *common stressors* mechanism of crossover is not truly crossover, per se; rather, it refers to situations in which what appears to be direct or indirect crossover is actually the result of a shared common stressor faced by individuals, such as financial insecurity (Westman & Vinokur,



1998). Because the crossover of positive experiences has been understudied thus far in the literature (Bakker et al., 2009; Westman, 2001), the positive work experience of job satisfaction represents a promising avenue through which crossover may unfold.

Moreover, in their qualitative review of the crossover literature, Bakker et al. (2009) identified few studies that investigated crossover processes between manager and employee. As the manager-employee relationship represents a ubiquitous relationship in the workplace, it is my objective to advance the crossover literature by investigating manager-employee crossover of job satisfaction. By investigating the crossover of job satisfaction between manager and employees, I intend to further the understanding of crossover with respect to two understudied areas: (a) crossover of positive work experiences (e.g., job satisfaction), and (b) crossover between manager and employees. Finally, in this dissertation, I investigate the crossover of job satisfaction from manager to employees via direct and indirect crossover mechanisms.

### **Direct Crossover of Job Satisfaction**

Affect represents an integral component of job satisfaction (and job attitudes in general), as posited by affective events theory (H. M. Weiss & Cropanzano, 1996). From a direct crossover perspective, it is through this affective component that one worker's affect may converge with another worker's affect, and this may take place via two general affect-sharing processes: explicit and implicit processes (Kelly & Barsade, 2001). On the one hand, explicit processes include intentional affective induction (e.g., telling a funny story to elicit a positive mood) and surface-level emotional labor (e.g., forcing a smile at an upset customer to elicit a positive mood), while on the other hand, implicit

processes include: (a) interactional synchrony, whereby unconscious behavioral coordination occurs between persons that leads to more positive interactions, (b) vicarious experience of another person's affect, and (c) primitive emotional contagion that occurs via automatic and unconscious processes (Hatfield, Cacioppo, & Rapson, 1994; Kelly & Barsade, 2001). In support of such processes, accumulated evidence from both laboratory and field studies suggests that affect can be shared between individuals (e.g., Ilies, Wagner, & Morgeson, 2007; Neumann & Strack, 2000; Parkinson & Simons, 2009; Totterdell, 2000; Totterdell, Kellett, Teuchmann, & Briner, 1998). Moreover, with respect to affective crossover from managers to their employees, some evidence suggests that those with lower perceived power in a relationship (e.g., employees relative to managers) are more susceptible and sensitive to the affect of others (e.g., Gibson & Schroeder, 2002; Snodgrass, 1985). Thus, consistent with crossover theory, affect-sharing theory (Kelly & Barsade, 2001), and systems theory, I contend that job satisfaction (via its affective component) crosses over from managers to their employees. In partial support of this prediction, past research has found some support for the crossover of more general forms of satisfaction, such as life satisfaction (e.g., Prince, Manolis, & Minetor, 2007). As such, I predict the following:

*Hypothesis 6: Managers' level of job satisfaction (Time 1) will positively correlate with their employees' subsequent level of job satisfaction (Time 2).*

### **Indirect Crossover of Job Satisfaction**

With regard to the indirect crossover mechanism, job satisfaction may cross over from manager to employees via behavioral interactions. Recently, Bakker, Demerouti,

and Sanz-Vergel (2014) reviewed the literature surrounding the job demands-resources (JD-R) model (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). They noted that constructs such as burnout and engagement can cross over via their influence on observable behavior that a person enacts. In turn, another person (e.g., romantic partner, colleague) may imitate or react to such behavior in a way that influences his/her own levels of burnout and engagement (e.g., Bakker & Xanthopoulou, 2009). For example, a manager's high level of engagement may manifest as task dedication and persistence—behaviors that an employee can observe. In response, the employee mimics such behavioral exhibitions of engagement, thereby enhancing his/her own levels of engagement.

With regard to the indirect crossover of job satisfaction, it stands to reason that a similar process may unfold, wherein an individual's inner experience manifests in observable behavior and the observable behavior influences another individual's inner experience. Specifically, a manager who is high in job satisfaction may be more likely to exhibit helping and support-giving behavior (as I propose in Chapter 3), and the exhibited behavior may improve the on-the-job experience for his/her employees and, as a result, enhance their job satisfaction. That is, employees who have a manager with high job satisfaction may observe the manager performing positive work behavior. In turn, employees may benefit from the additional contextual support provided by their manager, thereby increasing employees' level of job satisfaction. To that end, I predict the following:

*Hypothesis 7: Managers' levels of (a) OCB and (b) FSSB (Time 2) will mediate the effect of their level of job satisfaction (Time 1) on their employees' level of job satisfaction (Time 2), such that managers' job satisfaction will positively correlate with their OCB and FSSB, and managers' OCB and FSSB will positively correlate with employees' job satisfaction.*

### **Integration of Crossover Theory and the Momentum Model**

As described above, the momentum model (G. Chen et al., 2011) posits that individuals find meaning and form expectations for the future based on the degree to which their current level of job satisfaction deviates from a prior level of job satisfaction. That is, a perceived upshift signals that work and the work environment continues to improve, while a perceived downshift signals the opposite. Further, the model posits that large deviations in job satisfaction from a past reference point are more salient than small deviations. From these perceived shifts, individuals also anticipate their future work experiences, such that those who experience an upshift in job satisfaction will likely hold a more favorable view of their work future. Conversely, the opposite would be expected for those who experience a downshift. Given these theoretical propositions, it is clear that Chen et al. originally conceived of the momentum model as *intrapersonal* in nature—meaning, an individual reacts cognitively, affectively, and/or behaviorally based upon his/her own perceived changes in job satisfaction. In my integration of crossover theory and the momentum model, I propose that job satisfaction change provides meaning at the *interpersonal* level as well.

As implied by systems theory and crossover theory, a worker's affect, cognition, and behavior do not exist in a vacuum. Rather, the affect, cognition, and behavior of one worker may influence other workers, and vice versa. For instance, through the affect-sharing processes described above, workers experience affective convergence via both explicit and implicit processes, wherein explicit processes involve conscious affect manipulation, and implicit processes involve affect transfer that is largely automatic and subconscious. In these ways, the job satisfaction of one worker may directly crossover to another worker. In addition, a worker could be sensitive to *changes* in another worker's level of job satisfaction, and the underlying processes may be either conscious or subconscious in nature. From a conscious perspective, a worker may knowingly reflect on his/her manager's job satisfaction trajectory by comparing the manager's current level of job satisfaction with his/her prior level of job satisfaction. Like the intra-psychic perspective taken by the momentum model, a manager with a more pronounced change trajectory should send a more powerful and clear message than a less pronounced one.

To explain how a worker's perception of his/her manager's job satisfaction trajectory explicitly influences his/her own job satisfaction trajectory (thereby incorporating a direct crossover perspective), I borrow core propositions from social information processing theory (Salancik & Pfeffer, 1978). According to the theory, the social environment—such as the manager's job satisfaction trajectory—provides important cues to the worker (e.g., socially-accepted attitudes) and attunes the worker to certain aspects of work or the work environment (e.g., manager's attitudes towards specific aspects of his/her job). If, for example, the manager appears increasingly more

satisfied with his/her job, the worker may assimilate this information into his/her own construction of reality by re-evaluating certain aspects of the work environment that seem to be the basis for the manager's increase in job satisfaction. By re-evaluating the work environment, the worker reconciles differences with the manager by forming more favorable impressions of those salient aspects of the work environment. In such a way, the worker may experience a similar upshift in job satisfaction as he/she adjusts and conforms to the manager's social cues (e.g., upshift in job satisfaction). Over time, this process may repeat iteratively such that worker readjusts each time an appreciable change in his/her manager's level of job satisfaction occurs.

As an example of the aforementioned process, suppose that an organization enacts a new family-supportive policy. As a result, the organization creates a number of new work events (e.g., family-supportive informational meetings) and changes to the work environment (e.g., implementation of flexible work schedules). Over time, the manager reacts to each family-supportive policy event and work environment change in a favorable manner, thereby developing increasingly higher job satisfaction (i.e., an upshift in job satisfaction). Through regular communication, the manager's workers notice the manager's upshift in job satisfaction and begin to re-evaluate aspects of the new family-supportive events and work environment. Whereas previously the workers were ambivalent to the changes, they now attune to those aspects of the new work events and environmental changes with which the manager seems most satisfied. Heeding the managerial cues, the workers form more favorable attitudes towards the work changes, ultimately resulting in their own upshifts in job satisfaction.

The process whereby a manager's job satisfaction change crosses over to his/her workers' level of job satisfaction may occur implicitly as well. Through iterative implicit affective sharing processes (e.g., interaction synchrony, behavioral entrainment, primitive emotional contagion), workers' may mirror their manager's level of affect and, over time, their levels of affect may co-vary. Given the inextricable link between affect and job satisfaction (see H. M. Weiss & Cropanzano, 1996), a between-person correspondence in affect should drive a between-person correspondence in job satisfaction. Over time, one individual's job satisfaction change should influence another individual's job satisfaction change, assuming they are sensitive to each other's level of affect. For example, as a manager's level of affect increases so too should his/her job satisfaction. If the manager's workers are implicitly attuned to the manager's affect, the workers should also experience a similar upshift in job satisfaction. Therefore, based on both the explicit and implicit processes outlined above, I predict the following direct crossover hypothesis:

*Hypothesis 8: From Time 1 to Time 2, managers' job satisfaction change will positively correlate with their employees' job satisfaction change.*

Regarding the mechanisms underlying the indirect crossover of job satisfaction change, I provide the following rationale. First, I contend that a manager's job satisfaction change impacts the likelihood that he/she exhibits changes in OCB and FSSB. That is, as a manager experiences increasingly higher levels of job satisfaction, he/she should be more likely to exhibit increasingly more OCB and FSSB. Next, positive changes in OCB and FSSB should directly improve the contextual aspects of workers' work and work environment, and as a result, they may feel increasingly more satisfied

with their job as the manager continues to increase the rate at which he/she performs OCB and FSSB. As an alternative explanation, workers may not directly benefit from a manager's enactment of OCB and FSSB, but notable changes in such behavior could signal important social cues to workers, as would be consistent with context theory (Johns, 2006). These social cues (i.e., enactment of OCB and FSSB) could signal the manager's values, and if workers perceive these values as favorable, they may readjust their level of job satisfaction accordingly. Over time, iterative changes in social cues could unfold as the manager exhibits more frequent OCB and FSSB. In response, employees may review and readjust their level of job satisfaction, and when done repeatedly, employees' level of job satisfaction may increase as well. Consistent with this rationale, I predict that a manager's upshift in job satisfaction will result in an upshift in their OCB and FSSB, which in turn will lead to an upshift in their workers' job satisfaction:

*Hypothesis 9: From Time 1 to Time 2, managers' (a) OCB change and (b) FSSB change will mediate the effect of their job satisfaction change on their employee's job satisfaction change, such that increases in managers' job satisfaction will lead to increases in OCB and FSSB, and ultimately increases their employees' job satisfaction.*



## Chapter 7: Method

### Participants

As part of the Work, Family & Health Network (WFHN; Bray et al., 2013; King et al., 2012), data were collected via face-to-face computer-assisted personal interviews (CAPI) from individuals working at 30 facilities for an U.S. extended-healthcare industry employer. Participants were provided with a \$20 incentive at each time point after completing their CAPI. Eligible participants included managers and employees who were scheduled to work at least work 22 hours per week in direct patient care (e.g., certified nurse assistant, licensed practical nurse, registered nurse) and who worked during the day or evening shifts (and not the night shift). This dissertation includes surveys administered at two time points separated by six months. Between Time 1 ( $t_1$ ) and Time 2 ( $t_2$ ) measurements, an organizational culture and manager training intervention<sup>2</sup> was administered using a randomized cluster approach to select those facilities that would receive the intervention. For the purposes of this study, participants were included from both treatment and control facilities, but the intervention was not of interest and therefore controlled for in all analyses.

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<sup>2</sup> As described in detail in Bray et al. (2013), the WFHN developed the intervention through funding from the National Institute of Health and the Centers for Disease Control, and the intervention was evaluated using a group-randomized experimental design with two organizations from two distinct industries (i.e., extended-healthcare, information technology). The present dissertation uses only those data collected from the extended-healthcare organization. Groups (i.e., facilities) that were randomly selected for the experimental condition were subject to an intervention aimed at improving employees' work time control and augmenting supervisor support for employees' family and non-work lives. Specifically, the intervention involved participatory work redesign aimed at enhancing control of work time and supervisor training aimed at providing support for employees' family/non-work lives and work performance. To evaluate the effectiveness of the training, managers, employees, employees' partners, and employees' children participated in surveys, interviews, and/or physiological/biological assessments, and administrative data were collected (e.g., turnover). The broader study consisted of four data collection time points (i.e., baseline, six months, 12 months, 18 months) in addition to a daily-diary component. In the present study, I use baseline (Time 1) and six-month (Time 2) data.

With respect to managers, 184 individuals provided responses to the CAPI at  $t_1$ , and 154 of those individuals provided responses at  $t_2$ . Managers held various positions at different levels of the organization. Official job titles for managers included but were not limited to: unit manager (36%), administrator (17%), director of nursing (16%), and nurse supervisor (16%). Of the CAPI respondents, 6.57 ( $SD = 8.73$ ) managers, on average, worked at each facility (min. = 3, max. = 11). Overall, the manager sample was 89% female and 89% White (non-Hispanic). Managers were on average 45.79 ( $SD = 10.48$ ) years old with 5.75 ( $SD = 5.39$ ) years of managerial tenure and 8.86 ( $SD = 7.69$ ) years of organizational tenure. Managers worked, on average, 47.60 ( $SD = 8.96$ ) hours per week and cared for .92 ( $SD = 1.07$ ) children who lived at home. Approximately 70% of managers were in a romantic partnership, and 28% cared for an adult relative. Nearly 97% of managers had completed at least one year of college.

With regard to the employees, 1,524 individuals provided responses to CAPIs at  $t_1$ , and 1,273 provided responses at  $t_2$ . Official job titles for employees included but were not limited to: personal care certified nurse assistant (28%), licensed or certified nurse assistant (26%), licensed practical unit nurse (12%), geriatric certified nurse assistant (8%), and licensed practical charge nurse (5%). Of the CAPI respondents, on average, 56.90 ( $SD = 17.85$ ) worked at each facility (min. = 24, max. = 89). Overall, the employee sample was 92% female, 67% White (non-Hispanic), 14% Black, and 13% Hispanic. Employees had an average age of 38.52 ( $SD = 12.48$ ) years and 6.26 ( $SD = 6.51$ ) years of organizational tenure. Employees worked, on average, 36.91 ( $SD = 7.22$ ) hours per week and cared for 1.04 ( $SD = 1.17$ ) children at home. Approximately 63% of employees were

in a romantic partnership, and 28% cared for an adult relative. Nearly 62% of employees had completed at least one year of college.

Employees were matched to their respective manager using records in the archival dataset (e.g., manager and employee identification numbers). I excluded from pertinent analyses those managers lacking at least one employee who provided CAPI responses. For those analyses involving employee-level variables, 1,524 employees were matched to 138 managers. In total, 91% of these managers were matched to two or more employees with, on average, 10.96 ( $SD = 8.51$ ) employees matched to each manager.

### **Procedures and Design**

This dissertation study consisted of a two-time point design with a six-month time interval. With respect to the time interval, prior studies have investigated job satisfaction change using a variety of intervals between time points. For instance, G. Chen et al. (2011) investigated job satisfaction change using intervals of 2 weeks, 1 month, 2 months, and 3 months. Using an even longer interval, Boswell et al. (2009) and Liu et al. (2012) captured job satisfaction change using a six-month interval. Consistent with the latter, I employed a six-month interval to assess job satisfaction change.

Data for this dissertation study were collected from participants during the face-to-face CAPIs (see above). Trained interviewers conducted the interviews which lasted approximately 60 minutes for both managers and employees. As a financial incentive, study organizers provided participants with up to \$60 for each time point they completed.

## Measures

**Manager-report measures.** The following measures were administered to managers at  $t_1$  and  $t_2$ . Managers reported on their own psychological job demands, exposure to interpersonal conflict, job satisfaction, turnover intentions, and OCB (for detailed information regarding focal measures, see Appendix F).

**Job demands.** Job demands were assessed using the three-item Psychological Job Demands subscale of the Job Content Questionnaire (Karasek et al., 1998). Participants responded to each item using a 5-point agreement scale (1 = *strongly disagree*, 5 = *strongly agree*). A sample item was: “You do not have enough time to get your job done.” Cronbach’s alphas were .63 ( $t_1$ ) and .55 ( $t_2$ ). Although these alphas fall below the conventional cutoff of .70, they are consistent with prior research involving managers working in a nursing context (e.g.,  $\alpha = .66$ ; Skagert, Dellve, & Ahlborg, 2012).

**Interpersonal conflict.** Exposure to interpersonal conflict was assessed using a two-item measure developed by Dierdorff and Ellington (2008) based on O\*NET data. Participants responded to each item using a 5-point frequency scale (1 = *never*, 5 = *every day*). The nonphysical aggression and physical aggression items were, respectively: “How often is dealing with unpleasant, angry, or discourteous people a part of your current job? This includes both co-workers and residents.” and “How often is dealing with violent or physically aggressive people a part of your current job?” Cronbach’s alphas were .52 ( $t_1$ ) and .50 ( $t_2$ ). These relatively low alphas could reflect the conflation of two distinguishable phenomena (i.e., nonphysical vs. physical aggression) with different prevalence estimates and antecedents (Schat, Frone, & Kelloway, 2006).

**Job satisfaction.** Job satisfaction was assessed using the three-item Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale (Cammann, Fichman, Jenkins, & Klesh, 1983). Participants responded to each item using a 5-point agreement scale (1 = *strongly disagree*, 5 = *strongly agree*). A sample item was: “In general, you are satisfied with your job.” Cronbach’s alphas were .86 ( $t_1$ ) and .86 ( $t_2$ ).

**Turnover intentions.** Turnover intentions were assessed using a two-item measure developed by Boroff and Lewin (1997). Participants responded to each item using a 5-point agreement scale (1 = *strongly disagree*, 5 = *strongly agree*). A sample item was: “You are seriously considering quitting [ORGANIZATION NAME] for another employer.” Cronbach’s alphas were .88 ( $t_1$ ) and .89 ( $t_2$ ).

**Organizational citizenship behavior (OCB).** OCB was assessed using a four-item measure from Lambert (2000) based on items from Organ and Konovsky (1989) and C. A. Smith et al. (1983). Participants responded to items using a 5-point frequency scale (1 = *never*, 5 = *all of the time*). A sample item was: “To what extent do you help your coworkers when they have too much to do?” Cronbach’s alphas were .71 ( $t_1$ ) and .75 ( $t_2$ ).

**Manager-report control variables.** Managers self-reported their gender (1 = *male*, 2 = *female*), education (1 = *Grade 1-8*, 2 = *Grade 9-11*, 3 = *Grade 12 or GED*; 4 = *College 1-3 years*, 5 = *College 4+ years*), marital status (0 = *not in relationship*, 1 = *married or in a romantic relationship*), number of children cared for at home, whether they cared for an adult (0 = *no*, 1 = *yes*), managerial tenure, organizational tenure, and age. In addition, the intervention condition (0 = *control*, 1 = *treatment*) for each manager’s facility was controlled for in every analysis.

**Employee-report measures.** The following measures were administered to employees at  $t_1$  and  $t_2$ . For the FSSB measure, employees reported their perceptions of their manager's behaviors. In addition, employees reported on their own job satisfaction.

**Family-supportive supervisor behavior (FSSB).** FSSB was assessed using the four-item Family-Supportive Supervisor Behavior Short-Form (FSSB-SF; Hammer et al., 2013). Employees were asked to rate their direct supervisor's (i.e., manager's) family-supportive behaviors using a 5-point agreement scale (1 = *strongly disagree*, 5 = *strongly agree*). A sample item was: "Your supervisor demonstrates effective behaviors in how to juggle work and non-work issues." Cronbach's alphas were .89 ( $t_1$ ) and .90 ( $t_2$ ).

Employee reports of their supervisor's exhibited FSSB were used to alleviate concerns regarding common source bias (see P. M. Podsakoff, MacKenzie, & Podsakoff, 2012).

**Job satisfaction.** Employee job satisfaction was assessed with the same three-item measure used for manager job satisfaction. Cronbach's alphas were .81 ( $t_1$ ) and .84 ( $t_2$ ).

**Employee-report control variables.** Employees self-reported their gender (1 = *male*, 2 = *female*), education (1 = *Grade 1-8*, 2 = *Grade 9-11*, 3 = *Grade 12 or GED*; 4 = *College 1-3 years*, 5 = *College 4+ years*), marital status (0 = *not in relationship*, 1 = *married or in a romantic relationship*), number of children cared for at home, whether they cared for an adult (0 = *no*, 1 = *yes*), organizational tenure, and age.

## Analyses

**Data screening and psychometric assessments.** Multiple steps were taken to clean and assess the psychometrics of the collected data. First, applicable items were reverse coded, and item-level data were screened by evaluating the minimum and

maximum scores, tests of normality (i.e., skew, kurtosis, Kolmogorov-Smirnov, Shapiro-Wilk), univariate outliers (i.e., box plots), and multivariate outliers (i.e., Mahalanobis' distance). All item scores fell within the response-scale boundaries. With respect to item distributions, none of the items exceeded skew indices of 3.00 and kurtosis indices of 10.00 based on Kline's (2011) guidelines, suggesting that the items were normally distributed. Kolmogorov-Smirnov and Shapiro-Wilk tests, however, were significant in most cases, which would suggest departures from normality; with that said, relatively large samples (as in the case with the present study) often result in overly sensitive Kolmogorov-Smirnov and Shapiro-Wilk tests (Kline, 2011). Thus, the latter test results were ignored. Finally, based on my assessments of box plots and Mahalanobis' distance scores, I did not identify any problematic univariate and multivariate outliers.

Second, I assessed the levels of missing data for focal variables. For manager-reported variables, the percentage of missingness ranged from 0% to 16% from  $t_1$  to  $t_2$ . With respect to employee-reported variables, the percentage of missingness ranged from less than 1% to 16% from  $t_1$  to  $t_2$ . As data were collected using computer-assisted interviews, there were very few instances of missingness within each participant's responses to items. These relatively low levels of missingness were deemed as unproblematic. Accordingly, I did not expect missing data to produce substantively biased parameter estimates. Nevertheless, all hypotheses were tested using maximum likelihood (ML) estimation because ML: (a) tends to yield unbiased parameter estimates when data are missing at random and (b) is typically more powerful than traditional

missing data techniques (e.g., listwise deletion, mean imputation) when data are missing completely at random (Baraldi & Enders, 2010; Graham, 2009).

Third, scale scores were computed by calculating the average of all complete item scores for an individual. In addition, scores of employee ratings of their manager's FSSB were aggregated to the manager level by calculating the average for all employees who reported to a given manager. No univariate or multivariate outliers were identified after screening the scale scores. The descriptive statistics (i.e., means, standard deviations, Cronbach's alphas, minimums, maximums, skew, kurtosis, test-retest reliabilities) for manager- and employee-level variables, respectively, are presented in Tables 1 and 2. All skew and kurtosis values fell within acceptable levels; however, the range of scores for OCB ( $t_1$ ) is somewhat restricted given that scores ranged from 3.00 to 5.00 while the response format ranged from 1.00 to 5.00. With the exception of interpersonal conflict and psychological job demands at  $t_1$  and  $t_2$ , Cronbach's alpha estimates were all above .70 and thus were deemed to have adequate internal consistency. The lower-than-expected internal consistency estimates for interpersonal conflict ( $t_1: \alpha = .52, t_2: \alpha = .50$ ) could be attributed to the small number of items (i.e., two) as well as to the nature of the two items. Specifically, one item refers to physical aggression exposure while the other refers to nonphysical aggression exposure. Due to the potential multidimensionality and low internal consistency of the interpersonal conflict measure, hypotheses were tested using the overall scale score, as well as using the score for each item by itself. With regard to the psychological job demands measure, two items pertaining the speed and difficulty of work (i.e., "Your job requires very fast work" and "Your job requires very



hard work”) shared a large inter-item correlation ( $t_1: r = .53, t_2: r = .44$ ). The item pertaining to time pressure, however, only shared medium inter-item correlations with the speed ( $t_1: r = .32, t_2: r = .21$ ) and difficulty ( $t_1: r = .33, t_2: r = .28$ ) items. Thus, it appears that the time pressure item may correspond to a different underlying dimension than the speed and difficulty items. To address this issue, all pertinent hypotheses were tested using the full psychological job demands scale score ( $t_1: \alpha = .63, t_2: \alpha = .55$ ), a composite of the work speed and difficulty items ( $t_1: \alpha = .69, t_2: \alpha = .61$ ), and the time pressure item by itself.

**Operationalizing change.** To operationalize change (i.e., shifts), I used algebraic change scores, wherein  $t_1$  scores for a variable were subtracted from  $t_2$  scores from the same variable. Accordingly, a positive score indicates an increase over time (i.e., upshift, positive trajectory) and a negative score indicates a decrease over time (i.e., downshift, negative trajectory).<sup>3</sup> A change score based on two time points was sufficient to assess whether change occurs and, if change occurs, whether the change was positive or negative in sign. Given the nature of the focal change hypotheses, this two-time point operationalization was appropriate. If I were interested in the *form* of change (which in this preliminary research I am not), three or more time points would be required. That is, with a two-time point design, only linear change can be tested because at least three time points are required to detect curvature.

Using algebraic change (or difference) scores represents somewhat of a contentious issue (e.g., Cronbach & Furby, 1970; Edwards, 1994a; Johns, 1981; Rogosa

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<sup>3</sup> I should note that a change score differs from a difference score because the latter refers to “the difference between distinct but conceptually linked constructs” (Tisak & Smith, 1994, p. 675).

& Willett, 1983; Tisak & Smith, 1994). On the one hand, some critics assert that change scores tend to have lower reliability than either of their component measures (e.g., Lord, 1956), while on the other hand, some supporters counter this assertion by stating that change scores can have respectable reliabilities when there are substantive individual differences in underlying true change (e.g., Rogosa & Willett, 1983). In the case of this dissertation, I expect appreciable individual differences in true scores for the focal variables, and accordingly, algebraic change scores are suited for hypothesis testing. For further discussion of change scores and other related approaches, see Appendix G.

**Hypotheses testing.** Hypotheses were tested using one or both of the following analytical approaches: (a) single-level ordinary least squares (OLS) multiple regression using SPSS Version 22.0 and (b) multilevel structural equation modeling (MSEM) using *Mplus* Version 7.3 (Muthén & Muthén, 1998-2014). As I discuss in more detail in the subsequent chapter, common aggregation indices (e.g., ICC[1], ICC[2], rwg; James, Demaree, & Wolf, 1984; Raudenbush & Bryk, 2002) indicated a modest degree of nesting with respect to managers working in the facilities. The values of the aggregation indices were ambiguous in magnitude such that they did not point to a single analytical strategy. In light of this, I tested Hypotheses 1-5 using both single-level OLS multiple regression and MSEM. With respect to the latter, a two-level model was employed (i.e., Level 1: manager, Level 2: facility). Hypotheses 6-9, however, presumed a hierarchical data structure (i.e., employees nested within managers) due to the nature of the predicted cross-level relations. Thus, I tested these hypotheses using MSEM exclusively. Yet, given the modest aggregation index values, hypotheses were tested using two types of

MSEM: two-level (Level 1: employee, Level 2: manager) and three-level (Level 1: employee, Level 2: manager, Level 3: facility). Below, I discuss the advantages of using a MSEM within an inherent or inferred hierarchical data structure.

**MSEM.** Accounting for multiple levels of analysis is important when a hierarchical structure is apparent in the data. Two prominent analytical approaches exist for accounting for clustering in data: (a) hierarchical linear modeling (HLM; also referred to as mixed-effects modeling, multilevel modeling, or random coefficient modeling), and (b) MSEM. With respect to the former, HLM represents a more suitable alternative to single-level OLS regression when data demonstrate a hierarchical structure, as the approach allows intercepts and slopes to vary between clusters and partitions variance across different levels of analysis (Raudenbush & Bryk, 2002). With relatively recent advances in computing power and analytical software, however, MSEM has emerged as a desirable alternative to HLM, particularly when testing multilevel mediation models.

MSEM integrates standard structural equation modeling into a multilevel framework. In doing so, MSEM readily permits modeling Level 2 latent variables for both predictor and outcome variables. Further, Level 1 observed predictor variables can be operationalized at Level 2 using latent variables, thereby correcting for sampling error (Preacher, Zhang, & Zyphur, 2011). In contrast, in HLM, Level 1 observed predictors are operationalized at Level 2 using cluster means (Raudenbush & Bryk, 2002). Further, as another advantage over HLM, MSEM partitions the variance of Level 1 variables into within and between variance components. This process allows for focal relationships to differ across levels (Preacher et al., 2011; Preacher, Zyphur, & Zhang, 2010). Finally, by

using latent variables, MSEM can account for measurement error by incorporating the measurement structure into the structural model (Marsh et al., 2009).

**Tests of indirect effects.** With regard to Hypotheses 6-9, MSEM approaches to testing multilevel mediation analysis provide several advantages over HLM approaches. First, HLM approaches are often derived from the causal steps approach (Baron & Kenny, 1986) or employ the Sobel test (Sobel, 1982). The causal steps approach tends to suffer from lower power than competing approaches (Fritz & MacKinnon, 2007), resulting in a reduced likelihood of detecting an indirect effect if it in fact exists. Further, as noted by Hayes (2009), the causal steps approach does not directly estimate the indirect effect; rather, the indirect effect is logically inferred from a series of steps (i.e., conditions) with their own respective hypotheses. Finally, Baron and Kenny's (1986) causal steps approach and its various extensions and adaptations (e.g., Zhang, Zyphur, & Preacher, 2009) stipulate that in the first step the predictor must be related the outcome; Hayes (2009) describes, however, how a third variable can mediate the relation between a predictor and an outcome without the predictor and outcome sharing a direct relation. As such, when using the causal steps approach, it is possible to conclude falsely that an indirect effect does not exist due to failure to find statistical significance between the predictor and outcome in the first step.

In comparison to the causal steps approach, the Sobel test directly quantifies the indirect effect and determines its level of statistical significance by calculating the standard error (*SE*) of the indirect effect. The Sobel test, however, assumes that the sampling distribution of the estimated indirect effect is normal—though, in practice the

sampling distribution of an indirect effect tends to be non-normal (Bollen & Stine, 1990). As a more viable option, Hayes (2009) recommends bootstrapping, as it does not assume that a normal sampling distribution for the indirect effect, and it provides confidence-interval estimates that can be used for hypothesis testing.

Bootstrapping has emerged as a preferred approach for testing indirect effects involving traditional mediation models (see Hayes, 2009, 2013). Bootstrapping can be used in conjunction with single-level OLS regression, HLM, single-level structural equation modeling, or MSEM to estimate indirect effects. In general, structural equation modeling-based tests of indirect effects offer distinct advantages over the causal steps approaches used in single-level regression and HLM (see Iacobucci, Saldanha, & Deng, 2007; Preacher et al., 2010). For example, structural equation modeling can be used to simultaneously estimate all relevant effects in a single model as opposed to using separate steps. Moreover, as a general convenience, structural equation modeling readily allows for refined specification of model paths, such as when constraining paths to zero.

When data demonstrate nesting, MSEM serves as a preferred approach to test indirect effects in various types of multilevel mediation (e.g., 1-1-1, 2-1-1, 2-2-1, 1-1-2), mediated-moderation, and moderated-mediation models. MSEM addresses a prominent limitation of HLM. Specifically, HLM tests of a Level 1 predictor on a Level 1 predictor (i.e., 1-1 relation) result in the conflation of the within slope and the between slope (Lüdtke et al., 2008), where the within slope refers to the within-group differences of the predictor in relation to the within-group differences of the outcome, and the between slope refers to the between-group differences of the predictor in relation to the between-

group differences of the outcome. Even after group-mean centering Level 1 predictors and introducing group means at Level 2, such as is the case with an approach proposed by Zhang et al. (2009), the between slope will tend to be biased towards the within slope when the between-group heterogeneity is low and group sizes are small (Lüdtke et al., 2008).

In light of the issues pertaining to HLM, in the present dissertation, I tested mediation models using MSEM. With regard to the type of bootstrapping employed, I determined whether an indirect effect achieved statistical significance by using the parametric bootstrapping approach (Efron & Tibshirani, 1986) with 10,000 repetitions to compute a 95% confidence interval (CI). As recommended by Preacher et al. (2010), I used a web-based utility developed by Selig and Preacher (2008) to conduct the parametric bootstrapping approach.

Regarding 2-2-1 mediation models used to test Hypotheses 7 and 9, I must point to an area of caution with respect to interpreting the indirect effects. Specifically, Preacher et al. (2010) note the following:

In previous literature concerning 2-2-1 designs it has seemingly gone unrecognized that [the Level 2 predictor] and [the Level 2 mediator] can affect only the cluster-level variation in the Level 1 [outcome variable]. That is, the only mediation that can occur in the 2-2-1 design occurs at the cluster level. It is the researcher's task to identify whether and to what extent [the Level 2 mediator] explains the effect of [the Level 2 predictor] on group standing on [the Level 1 outcome]. (p. 230)

That is, when testing the 2-2-1 mediation models for Hypotheses 7 and 9, only the between-manager (Level 2) indirect effects were modeled. In other words, a within-manager (Level 1) indirect effect was *not* modeled for these hypotheses.

**Tests of moderation.** For hypothesis testing involving moderation, interaction terms were created by calculating the product of the grand-mean centered predictor and moderator variables. When a significant moderation effect was identified, I probed the form of the interaction by making plots, calculating the simple slopes, and determining the statistical significance of each simple slope (see Aiken & West, 1991; Preacher, Curran, & Bauer, 2006). For the simple slopes tests, the moderator was set at two levels: one standard deviation above the mean and one standard deviation below the mean.

**Control variables.** Given that control variables can change the conceptual meaning of focal variables due to partialled out shared variance (Becker, Atinc, Breugh, Carlson, & Edwards, 2014), when testing hypotheses, models were tested with and without control variables. With that said, all models were tested with the intervention condition as a covariate. For models involving change-score predictor variables, hypotheses were tested with and without the average level of the predictor variable across  $t_1$  and  $t_2$ , as well as with and without the level of the predictor variable at  $t_1$ . These control variables were employed to account for the average level and the initial start value of the predictor variable in order to assess the incremental variance of the change-score predictor variable with respect to the focal outcome variable. Some models were also tested with additional control variables related to participant demographic characteristics (e.g., gender, age). To determine whether a control variable would be used for a given

analysis, I evaluated the zero-order correlations between the potential control variables and focal outcome variables. When control variables shared significant correlations with focal outcomes, they were selected for the model—unless two or more of the identified control variables shared substantive intercorrelations. In such cases (e.g., age and organizational tenure), I selected the control variable that shared the largest relation with the focal outcome variable. Again, all models were tested with and without the inclusion of control variables. For sample *Mplus* syntax used for MSEM hypotheses testing, please refer to Appendices H-K.



## Chapter 8: Results

Prior to hypothesis testing, descriptive statistics were calculated for focal variables. Tables 3 and 4 show the zero-order correlations for manager- and employee-level static operationalizations of variables, respectively, and Tables 5 and 6 show the zero-order correlations for manager- and employee-level change-score operationalizations of variables, respectively. With respect to nesting in the data, Tables 7-12 report common aggregation indices (i.e., ICC[1], ICC[2],  $r_{wg}$ , average deviation). Regarding the static operationalizations of focal variables, Tables 7 and 8 display aggregation indices for managers and employees nested within facilities, while Table 9 displays aggregation indices for employees nested within managers. Aggregation indices for change-score operationalizations of focal variables are reported in Tables 10-12, where Tables 10 and 11 display aggregation indices for managers and employees nested within facilities, and Table 12 displays the same indices for employees nested within managers. Together, Tables 7-12 provide some evidence of between-facility and between-manager heterogeneity. Accordingly, the pooled-within facility and facility-level correlations for manager-level variables are provided in Table 13, and the pooled-within manager and manager-level correlations for employee-level variables are provided in Table 14. All focal variables were self-reported except for FSSB, as managers' FSSB was reported by their employees. Please refer to Table 15 for a complete list of hypotheses and a summary of findings. Finally, tests of statistical significance were based on two-tailed significance tests with  $\alpha = .050$ . When significance values were equal to or less than .100, these tests were labeled as marginally significant.

### Hypotheses 1-5

Hypotheses 1-5 involve predicted relations between manager-level variables. These hypotheses were tested using single-level OLS multiple regression and two-level MSEM, as the aggregation indices suggested some, but not substantial, clustering of managers (Level 1) within facilities (Level 2) for some focal variables. The pattern of results remained largely the same regardless of the method of analysis—except for those differences noted in the results below. Due to space constraints, I report only the results from two-level MSEM, as this method readily allows for the introduction of Level 2 latent means into models. All MSEM models were just-identified (i.e., saturated), and thus I do not report model fit indices.

Due to the limited sample size and uneven cluster sizes (which limit statistical power), the structural path models were tested by themselves without their corresponding measurement models. Finally, in addition to controlling for the treatment condition, Hypotheses 1-5 were tested with and without various additional control variables. Control variables were included in a model if their zero-order correlations reached statistical significance ( $p < .050$ ) with respect to the focal outcome variable. In instances where two or more identified control variables shared medium or larger intercorrelations, the control variable with the largest relation magnitude with respect to the focal outcome was selected, so as to avoid collinearity issues. Following this process, Hypothesis 1 was tested with and without the following control variables as they pertain to the focal outcomes: turnover intentions ( $t_2$ )—manager age, OCB ( $t_2$ )—no control variables, and

FSSB ( $t_2$ )—manager organizational tenure. With respect to variables pertaining to Hypotheses 2-5, no significant zero-order intercorrelations were identified between the focal outcomes and potential control variables; as such, no control variables were included in the tests of Hypotheses 2-5.

For Hypotheses 2-5 involving change scores as predictors, I present the results for those models in which the mean level of the focal predictor(s) across  $t_1$  and  $t_2$  was controlled. As such, significant change scores signify that the change variable explained additional variance beyond that explained by the average level of the variable across the same time period. Additional models were tested that omitted these mean-level control variables, but because the level of significance for the focal change variable and/or interaction term remained the same with or without the control, the results without controls are not reported. Finally, all models were also tested with  $t_1$  scores on the focal change variable serving as a control variable. In reporting the results of hypotheses testing, I note any instance where using the  $t_1$  resulted in a different level of significance for a particular hypothesis test.

**Hypothesis 1.** Results for Hypothesis 1 appears in Tables 16. Managers' job satisfaction at  $t_1$  would explain variance in the following outcomes at  $t_2$ : (a) managers' OCB, (b) employees' perceptions of managers' FSSB, and (a) managers' turnover intentions. Hypotheses 1a and 1c received full support. The manager-level path between job satisfaction and OCB was significant and positive (.30,  $p < .001$ ), and the path between job satisfaction and turnover intentions was significant and negative (-.88,  $p < .001$ ). Thus, managers with higher initial job satisfaction tended to exhibit fewer turnover

intentions and more frequent OCB six months later. Hypothesis 1b failed to receive support, as the path between job satisfaction and FSSB was nonsignificant ( $.09, p = .279$ ).

**Hypotheses 2 and 3.** Results for Hypotheses 2 and 3 appear in Table 17. For Hypothesis 2, it was predicted that positive changes in managers' job satisfaction would correspond to negative changes in managers' turnover intentions. Hypothesis 2 received full support, as the manager-level path between job satisfaction change and turnover intentions change was significant and negative ( $-.61, p < .001$ ), even after controlling for managers' average level of job satisfaction across  $t_1$  and  $t_2$ . Thus, managers who exhibited upshifts in job satisfaction generally showed concurrent downshifts in turnover intentions.

For Hypothesis 3, it was predicted that positive changes in managers' job satisfaction would correspond to positive changes in (a) managers' OCB and (b) employees' reports of their managers' FSSB. On the one hand, the manager-level path between job satisfaction change and OCB change was not significant ( $-.07, p = .462$ ), and thus Hypothesis 3a was not supported. On the other hand, the manager-level path between in job satisfaction change and FSSB change was marginally significant and in the expected direction ( $.23, p = .060$ ) after controlling for managers' average level of job satisfaction across  $t_1$  and  $t_2$ . When controlling for managers' level of  $t_1$  job satisfaction instead of their average level, however, the relation between job satisfaction change and

FSSB change reached statistical significance ( $.25, p = .047$ ). Thus, Hypothesis 3b received mixed support.<sup>4</sup>

**Hypotheses 4 and 5.** Results for Hypothesis 4 appear in Tables 18 and 19. For Hypothesis 4, it was predicted that managers' changes in negative work events (i.e., interpersonal conflict, job demands) would moderate the relation between their job satisfaction change and turnover intentions change. Hypotheses 4 received mixed support. When using the original three-item psychological job demands measure, the manager-level path between the interaction term and turnover intentions change was significant ( $-.53, p = .013$ ) after controlling for managers' average levels of job satisfaction and job demands across  $t_1$  and  $t_2$ . The form of the interaction, however, differed from my prediction. Specifically, the negative relation between job satisfaction change and turnover intentions change was stronger when job demands *increased* over time (see Figure 2). That is, downshifts in turnover intentions were largest for those who exhibited concurrent upshifts in both job demands *and* job satisfaction. To determine whether the simple slopes between changes in job satisfaction and changes in turnover intentions were significant at different levels of changes in job demands, follow-up tests were conducted using high (1 *SD* above the mean) and low (1 *SD* below the mean) values of changes in job demands, which corresponded to increases and decreases in job demands, respectively. These simple slopes tests revealed that both slopes were statistically significant and negative in sign (+1 *SD*:  $-.95, p < .001$ ; -1 *SD*:  $-.35, p = .042$ ).

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<sup>4</sup> When testing Hypothesis 3b using single-level OLS multiple regression, the path between job satisfaction change and FSSB change was nonsignificant ( $b = .14, p = .130$ ).

Similar interactions were found when using a reduced two-item composite consisting of the work speed and work difficulty items and when using just the time pressure item (see Figures 3 and 4, respectively). With that said, the interaction involving the two-item measure reached only marginal significance ( $-0.37, p = .075$ ).<sup>5</sup> As before, an assessment of the simple slopes indicated that simple slopes were significant at both levels of changes in work speed and difficulty (+1 *SD*:  $-0.81, p < .001$ ; -1 *SD*:  $-0.39, p = .047$ ). In contrast, the interaction involving the one-item time pressure measure was statistically significant ( $-0.30, p = .031$ ), even after controlling for average time pressure across  $t_1$  and  $t_2$ . While both simple slopes were negative, follow-up tests indicated that the simple slope associated with decreases in time pressure was only marginally significant (-1 *SD*:  $-0.32, p = .065$ ), while the slope associated with increases in time pressure was statistically significant (+1 *SD*:  $-0.91, p < .001$ ). Thus, time pressure demands may play a greater role in these shifts than work speed and difficulty demands.

No evidence was found for an interaction effect between changes in negative work events and job satisfaction change when the former was operationalized as changes in interpersonal conflict. Specifically, three models were tested with turnover intentions change as the outcome. The first model employed the original two-item interpersonal conflict composite measure as a moderator, and its interaction with job satisfaction change failed to reach significance ( $-0.09, p = .750$ ). The second and third models used only the nonphysical aggression item or the physical aggression item from the original two-item measure, and both associated interaction terms were also nonsignificant ( $-0.20, p$

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<sup>5</sup> When testing Hypothesis 4 using single-level OLS multiple regression and the two-item composite job demands measure, the interaction term was nonsignificant ( $b = -0.30, p = .149$ ).

= .211 and .07,  $p = .688$ , respectively). Overall, Hypothesis 4 was largely supported when changes in negative work events were operationalized as changes in various job demands but lacked support when changes in negative work events were operationalized as changes in various forms of interpersonal conflict.

Results for Hypothesis 5 appear in Tables 20-23. For Hypothesis 5a, it was predicted that managers' changes in negative work events (i.e., interpersonal conflict, job demands) would moderate the relation between their job satisfaction change and OCB change. The interaction between changes in job demands and job satisfaction change did not predict OCB change, regardless of whether job demands were operationalized as the original three-item measure ( $-.06, p = .640$ ), the two-item work speed and difficulty measure ( $-.14, p = .279$ ), or the one-item time pressure measure ( $.05, p = .596$ ).

Similarly, Hypothesis 5a lacked support when negative work events were operationalized as the original two-item interpersonal conflict measure ( $.18, p = .127$ ) and when operationalized as the one-item physical aggression form of interpersonal conflict ( $.04, p = .588$ ). When negative work events were operationalized as the one-item nonphysical aggression form of interpersonal conflict, however, the interaction between changes in negative work events and job satisfaction change significantly predicted OCB change ( $.22, p = .022$ ). With that said, the form of the interaction was not as predicted. Specifically, the relationship between job satisfaction change and OCB change was positive when nonphysical aggression increased over time and negative when nonphysical aggression decreased over time (see Figure 5). Follow-up tests, however, revealed that the simple slope between job satisfaction change and OCB change was only

significant when nonphysical aggression decreased over time ( $-1\ SD: -.23, p = .023$ ). Further, this simple slope was negative in sign, suggesting that OCB increased over time when individuals experienced concurrent decreases in both job satisfaction and nonphysical aggression, whereas OCB decreased over time when individuals experienced an increase in job satisfaction coupled with a decrease in nonphysical aggression. Conversely, when nonphysical aggression increased, the simple slope was nonsignificant ( $+1\ SD: .11, p = .373$ ). Overall, these findings provide mixed yet limited support for Hypothesis 5a, as the interactions were either nonsignificant or different in form from predictions.

For Hypothesis 5b, it was predicted that managers' changes in negative work events (i.e., interpersonal conflict, job demands) would moderate the relation between their job satisfaction change and FSSB change. When changes in job demands served as the moderator, findings were contingent upon which form(s) of job demands were modeled. With respect to changes in time pressure (i.e., one-item job demands measure), the interaction was nonsignificant ( $-.12, p = .193$ ). In contrast, the interaction between changes in work speed and difficulty (i.e., two-item job demands measure) and job satisfaction change significantly predicted FSSB change ( $-.39, p = .031$ ), even after controlling for managers' average job satisfaction and average work speed and difficulty across  $t_1$  and  $t_2$ .<sup>6</sup> As depicted in Figure 6, the hypothesized form of this interaction was supported in that increases in job satisfaction were more strongly (and positively) related to changes in FSSB when decreases in work speed and difficulty occurred. Simple slopes

<sup>6</sup> When testing Hypothesis 5b using single-level OLS multiple regression and the two-item work speed and difficulty composite, the interaction term reached only marginal significance ( $b = -.31, p = .071$ ).



tests further corroborated the form of the interaction. Specifically, the simple slope associated with decreases in work speed and difficulty was significant and positive ( $-1$  *SD*: .42,  $p = .010$ ), thereby indicating that employees' perceptions of their manager's FSSB increased over time when the manager's work speed and difficulty decreased and job satisfaction increased, while conversely, employees' perceptions of their manager's FSSB decreased over time when the manager's work speed and difficulty decreased and their job satisfaction decreased. The simple slope associated with increases in work speed and difficulty was nonsignificant ( $+1$  *SD*: -.01,  $p = .919$ ).

When the original three-item job demands measure was modeled, the interaction reached marginal significance ( $-.32$ ,  $p = .051$ ) after controlling managers' average job satisfaction and average job demands across  $t_1$  and  $t_2$  (see Figure 7). Similar to the two-item job demands composite described above, the simple slope associated decreases in job demands was significant and positive ( $-1$  *SD*: .34,  $p = .010$ ), while the simple slope associated with increases in job demands was nonsignificant ( $+1$  *SD*: -.04,  $p = .767$ ).

When changes in interpersonal conflict served as the moderator, the interaction term failed to reach significance, regardless of whether interpersonal conflict was operationalized as the two-item nonphysical/physical aggression composite (.15,  $p = .309$ ), the one-item nonphysical aggression item (.02,  $p = .892$ ), or the physical aggression item (.15,  $p = .124$ ). Overall, Hypothesis 5b received partial support in that changes in negative work events were only found to moderate the relation between job satisfaction change and FSSB change when negative work events were operationalized as general job demands and as work speed and difficulty demands.

**Post-hoc exploratory mediated-moderation analyses.** Informed by the findings described for Hypotheses 2-5, I tested mediated-moderation models to further explore the nature of the hypothesized relationships. Specifically, I tested whether the interaction between changes in negative work events (i.e., job demands, interpersonal conflict) and job satisfaction change influenced changes in OCB or FSSB via its influence on turnover intentions change (see Figures 8 and 9).<sup>7</sup> The rationale for these post-hoc analyses is as follows. Workers who experienced a downshift in negative work events and an upshift in job satisfaction may have perceived that their condition was improving and expected that it would continue to improve. Consequently, they may not have developed intentions to quit, as they felt invested, engaged, and secure in their current workplace. With an outlook toward the future and fewer intentions to leave, such workers may have found ways to continue to improve their condition by supporting the social aspects of the job, such as by exhibiting OCB and FSSB.

To date, relatively few studies have investigated turnover intentions (i.e., the proposed mediator) in relation to OCB and FSSB, much less whether a causal order exists from turnover intentions to the two forms of positive work behavior. Based on the propositions of affective events theory (H. M. Weiss & Cropanzano, 1996), however, it follows that an attitude such as turnover intentions could influence OCB and FSSB. Specifically, high levels of turnover intentions could lead to less frequent OCB and FSSB. In other words, individuals who think regularly of quitting their organization

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<sup>7</sup> Please note that I use the term *mediated-moderation* to describe the conceptual diagram that appears in Figure 8; however, the following terms could also be used: first-stage moderation model (Edwards & Lambert, 2007) or conditional indirect effect model (Preacher, Rucker, & Hayes, 2007).

presumably might become disengaged not only with work-related tasks (see Zimmerman & Darnold, 2009), but also with prosocial aspects of a job, including helping coworkers and the organization as well as providing support to employees.

As noted by Coyne and Ong (2007), the direction of causality between turnover intentions and OCB remains unclear, although a few studies have shown a link between the two constructs (e.g., X.-P. Chen, Hui, & Sego, 1998; Coyne & Ong, 2007). With respect to FSSB, I was unable to identify any published studies that investigated managers' turnover intentions in relation to their exhibition of FSSB (as reported by their employees). Given the lack of empirical evidence, I conducted preliminary analyses to test the presumed direction of causality (i.e., turnover intentions  $\rightarrow$  OCB/FSSB). To do so, I compared the relational magnitudes of turnover intentions ( $t_1$ )  $\rightarrow$  OCB/FSSB ( $t_2$ ) and OCB/FSSB ( $t_1$ )  $\rightarrow$  turnover intentions ( $t_2$ ). After controlling for the experimental condition in single-level OLS regression models, the proposed direction of causality was supported for OCB as an outcome. Specifically, the magnitude of the turnover intentions ( $t_1$ )  $\rightarrow$  OCB ( $t_2$ ) standardized regression coefficient (-.13) was stronger than the OCB ( $t_1$ )  $\rightarrow$  turnover intentions ( $t_2$ ) standardized regression coefficient (-.07). The proposed direction of causality for FSSB as an outcome, however, was not supported. That is, the magnitude of the turnover intentions ( $t_1$ )  $\rightarrow$  FSSB ( $t_2$ ) standardized regression coefficient (-.05) was weaker than the FSSB ( $t_1$ )  $\rightarrow$  turnover intentions ( $t_2$ ) standardized regression coefficient (-.16). In light of these relations, the following mediation models were tested: (a) changes in negative work events moderate the relation between job satisfaction change and OCB change, while turnover intentions change mediates the indirect effect,

and (b) changes in negative work events moderate the relation between job satisfaction change and turnover intentions change, and FSSB change mediates the indirect effect.

I tested the mediated-moderation models using both single-level structural equation modeling and two-level MSEM, as well as each operationalization of negative work events (i.e., job demands, interpersonal conflict). Regardless of the type of modeling employed or the operationalization of the moderator, the point estimates of the indirect effects were nonsignificant, and the CIs computed via parametric bootstrapping included zero. Thus, I did not find support for a mediated-moderation effect.<sup>8</sup>

### **Hypotheses 6-9**

Collectively, Hypotheses 6-9 predicted the crossover of job satisfaction from manager to employee. For these hypotheses, I tested the cross-level relations between manager job satisfaction and employee job satisfaction. The difference between hypotheses lies in how job satisfaction was operationalized (i.e., static, dynamic) and whether a manager-level mediator (i.e., OCB, FSSB) was proposed. For these analyses, employee job satisfaction constituted the focal outcome, although the way in which it was operationalized depended upon the hypothesis.

For Hypotheses 6 and 8, employee job satisfaction was operationalized as a static, single-time point assessment at  $t_2$ . As shown in Tables 8 and 9, employee job satisfaction ( $t_2$ ) demonstrated only a slight degree of nesting within managers and within facilities. In particular, the lower-than-expected ICC(2) values for within-manager clustering are

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<sup>8</sup> These exploratory mediated-moderation analyses were also tested using a Bayesian approach, as research evidence suggests that this approach can reduce the likelihood of committing Type II error (Koopman, Howe, Hollenbeck, & Sin, 2015). Nonetheless, all conditional indirect effects remained nonsignificant.

indicative of relatively low cluster means reliabilities. As a consequence, detecting the relationship between manager job satisfaction and the cluster means of employee job satisfaction was disadvantaged in terms of consistency.

Hypotheses 7 and 9 faced a similar issue, wherein employee job satisfaction was operationalized as the change from  $t_1$  to  $t_2$ . As shown in Tables 11 and 12, changes in job satisfaction demonstrated very weak nesting within managers and facilities. As such, Hypotheses 7 and 9 suffered from the same inconsistency with regard to within-manager means as Hypotheses 6 and 8. Finally, the relatively low manager- and employee-within-facility clustering suggests that three-level MSEM (i.e., Level 1: employee, Level 2: manager, Level 3: facility) may not be necessary. Nonetheless, I tested Hypotheses 6-9 using both three-level MSEM as well as two-level MSEM (i.e., Level 1: employee, Level 2: manager). With that said, I report only the two-level MSEM results, as the findings were entirely consistent regardless of whether two- or three-level MSEM was employed.

**Hypotheses 6 and 7.** Results for Hypotheses 6 and 7 appear in Table 24. Zero-order correlations (see Table 4) showed that employee age, marital status, education, and hours worked per week significantly correlated with employee job satisfaction ( $t_2$ ). Accordingly, Hypotheses 6 and 7 were tested with and without these control variables.

For Hypothesis 6, it was predicted that managers' level of job satisfaction ( $t_1$ ) would positively correlate with their employees' subsequent level of job satisfaction ( $t_2$ ). The between-level path from manager job satisfaction to the cluster mean of employee job satisfaction was nonsignificant ( $.01, p = .747$ ). This path remained nonsignificant

when the aforementioned control variables were added to the model. Thus, Hypothesis 6 was not supported.

Hypothesis 7 served as extension to Hypothesis 6, as it proposed that manager positive work behavior (i.e., OCB, FSSB) would mediate the effect of manager-to-employee job satisfaction crossover. For Hypothesis 7a, it was predicted that managers' level of OCB ( $t_2$ ) would mediate the effect of their level of job satisfaction ( $t_1$ ) on their employees' level of job satisfaction ( $t_2$ ), such that managers' job satisfaction would positively correlate with their OCB, and managers' OCB would positively correlate with employees' job satisfaction. The between-level indirect effect point estimate for the 2-2-1 mediation model was nonsignificant ( $-.02, p = .206$ ) and the 95% CI  $[-.06, .01]$  derived from parametric bootstrapping included zero. Thus, I found no support for Hypothesis 7a.

For Hypothesis 7b, it was predicted that managers' level of employee-reported FSSB ( $t_2$ ) would mediate the effect of their level of job satisfaction ( $t_1$ ) on their employees' level of job satisfaction ( $t_2$ ), such that managers' job satisfaction would positively correlate with their FSSB, and managers' FSSB would positively correlate with employees' job satisfaction. Like Hypothesis 7a, the indirect effect estimate for the 2-2-1 mediation model was nonsignificant ( $.02, p = .305$ ) and the 95% CI  $[-.05, .08]$  derived from parametric bootstrapping included zero. Thus, no support was found for Hypothesis 7a and Hypothesis 7b.

**Hypotheses 8 and 9.** Results for Hypotheses 8 and 9 appear in Table 25. Zero-order correlations (see Table 6) showed that none of the potential control variables

significantly correlated with employee job satisfaction change. Accordingly, Hypotheses 8 and 9 were not tested with any control variables.

For Hypothesis 8, it was predicted that managers' job satisfaction change ( $t_1 - t_2$ ) would positively correlate with their employees' job satisfaction change ( $t_1 - t_2$ ). The between-level path from changes in manager job satisfaction to the cluster mean of changes in employee job satisfaction reached marginal significance ( $.09, p = .058$ ), which thereby provided marginal support for Hypothesis 8.

In an extension of Hypothesis 8, Hypothesis 9 predicted that the relation between manager job satisfaction change and employee job satisfaction change would be mediated by changes in positive work behavior (i.e., OCB, FSSB). Neither Hypothesis 9a nor Hypothesis 9b were supported, as the indirect effects through OCB change ( $.00, p = .790$ ) and FSSB change ( $.01, p = .571$ ) were both nonsignificant, and the respective 95% CIs  $[-.02, .02]$  and  $[-.30, .10]$  derived from parametric bootstrapping included zero.

### General Summary of Results

In summary, the hypotheses of this dissertation were met with varying levels of support or lack thereof (see Table 15). With respect to a static operationalization of job satisfaction (see Figure 10 for graphical depiction of findings), managers' job satisfaction at  $t_1$  was positively associated with their OCB and negatively associated with turnover intentions at  $t_2$  but not associated with employee reports of their FSSB at  $t_2$ . As for a dynamic conceptualization of job satisfaction (see Figure 11 for graphical depiction of findings), managers' job satisfaction change from  $t_1$  to  $t_2$  was negatively associated with their turnover intentions change and positively (albeit marginally) associated with FSSB

change over the same time frame; however, managers' job satisfaction change was not associated with OCB change.

The proposed dynamic shift interactions between changes in negative work events (i.e., job demands, interpersonal conflict) and job satisfaction change were met with partial or mixed support (see Figure 12 for a graphical depiction of findings). Regarding turnover intentions change as an outcome, significant and marginally significant interactions were found when changes in negative work events were operationalized as job demands but not interpersonal conflict. The form of the significant interactions was not as hypothesized. Specifically, increases in turnover intentions were largest for those who experienced concurrent upshifts in job demands and job satisfaction. Regarding OCB change as an outcome, a significant interaction was found only when changes in negative work events were operationalized as the nonphysical aggression form of interpersonal conflict. Again, however, the form of the significant interaction was not as hypothesized; instead, increases in OCB occurred when managers showed concurrent downshifts in both nonphysical aggression and job satisfaction. Finally, regarding FSSB change as an outcome, significant and marginally significant interactions were found only when changes in negative work events were operationalized as work speed and difficulty (i.e., specific types of job demands), and as a general job demands composite. The form of these significant interactions was as hypothesized, such that increases in FSSB occurred when managers showed a downshift in job demands (i.e., work speed and difficulty, general job demands composite) coupled with an upshift in job satisfaction.



The hypothesized crossover effects from managers to employees were met with very limited support. With regard to a static operationalization of job satisfaction (see Figure 10 for a graphical depiction of findings), managers' level of job satisfaction at  $t_1$  was not associated with employees' level of job satisfaction at  $t_2$ , and neither OCB nor FSSB exhibited by managers at  $t_2$  mediated the relation. With regard to a dynamic operationalization of job satisfaction (see Figure 11 for a graphical depiction of findings), managers' job satisfaction change from  $t_1$  to  $t_2$  was marginally and positively associated with their employees' job satisfaction change over the same time frame. Managers' changes in OCB and FSSB, however, did not mediate the relation between managers' job satisfaction change and employees' job satisfaction change.

### Chapter 9: Discussion

In this dissertation, I attempted to develop theory surrounding the momentum model (G. Chen et al., 2011) by investigating new behavioral outcomes and by integrating the affective shift model (Bledow et al., 2011, 2013) and crossover theory (Westman, 2001). Associated hypotheses were met with varying levels of support. First, job satisfaction change covaried to a significant and negative extent with turnover intentions change and covaried to a marginally significant and positive extent with FSSB change. Job satisfaction change, however, was not associated with OCB change. As such, the momentum model was expanded to include a new behavioral outcome: FSSB change. Second, in support of my integration of the momentum model and affective shift models, the interaction between job satisfaction change and changes in negative work events (i.e., job demands, interpersonal conflict) explained significant variance in changes in turnover intentions, OCB, and FSSB—contingent upon the particular operationalization of negative work events. In some instances, however, the interaction took an unexpected form, suggesting that more research and theory development is needed to understand the interplay between changes in job satisfaction and negative work events. Finally, I found very little evidence to support my integration of the momentum model with crossover theory, as only job satisfaction change was found to cross over from managers to their employees. Moreover, this relation reached only marginal significance. In other words, I did not find that managers' OCB change or FSSB change mediated the effects of their job satisfaction change on their employees' job satisfaction change. Below, I discuss the

findings of this dissertation in greater detail along with their theoretical and practical implications.

### **Theoretical Implications**

Overall, this dissertation's hypotheses were met with mixed support, as well as some unanticipated relationships. To begin, the first set of hypotheses were used to establish whether the focal constructs shared significant relations when operationalized in a traditional, static manner. In line with prior research and theory (e.g., Dalal, 2005; LePine et al., 2002; Mobley, 1977), managers' levels of job satisfaction predicted their subsequent turnover intentions and OCB, such that higher levels of job satisfaction corresponded to fewer turnover intentions and more frequent OCB six months later. Moreover, follow-up analyses indicated that the hypothesized causal directions were stronger in magnitude than the magnitudes of the reversed-order relations, over the same six-month interval. As such, these findings provide additional support for job satisfaction as a predictor of turnover intentions and OCB.

Contrary to my prediction, however, managers' levels of job satisfaction did not predict their subsequent level of FSSB (as reported by employees). The failure to find significance could be attributed to the relatively low level of agreement between employees' perceptions of their manager's FSSB. That is, employees reporting to the same manager may have held idiosyncratic perceptions of the manager's FSSB. Consistent with leader-member exchange (LMX) theory (Dansereau, Graen, & Haga, 1975; Graen & Uhl-Bien, 1995; Liden & Maslyn, 1998), managers often share unique (or idiosyncratic) relationships with each of their employees. In the context of family-

supportive practices, some employees may have experienced or perceived different levels of FSSB exhibited by their manager due to the relational quality shared with their manager and/or the idiosyncratic needs for such family-supportive supervision. As such, the failure to find support for job satisfaction as an antecedent of FSSB could be attributed to the quality and quantity of interactions between managers and their employees.

**Extending the momentum model.** Static operationalizations of job satisfaction and its correlates (as tested above) provide only a snapshot of individuals' experiences and behavior. Affective events theory (H. M. Weiss & Cropanzano, 1996), however, posits that job satisfaction is dynamic and changes over time in response to affective reactions, dispositional characteristics, and the work environment. Furthermore, the momentum model indicates that such changes in job satisfaction provide important meaning for individuals with respect to their past, current, and future status within the organization. As individuals compare their current state with a prior state, the momentum model posits that detected deviations become more salient as they increase in magnitude. Using these discrepancy-based trajectories, individuals make inferences and form expectations regarding their future with the organization. In fact, prior evidence has shown that individuals who experience an upward trajectory in their job satisfaction demonstrate fewer turnover intentions, and those who experience an upward trajectory in turnover intentions are more likely to quit the organization (G. Chen et al., 2011). More directly, individuals who experience a downward trajectory in job satisfaction are more likely to quit their organization (Liu et al., 2012). Thus, job satisfaction change yields

important implications for both behavioral intentions and actual behavior—though Chen et al. and Liu et al. noted that additional behavioral outcomes should be investigated to understand how far these effects reach.

With respect to this dissertation, I corroborated the findings of G. Chen et al. (2011) using a conceptual replication. I found that managers' job satisfaction change negatively related to their turnover intentions change over a six-month period, such that upshifts (increases) in job satisfaction corresponded to concurrent downshifts (decreases) in turnover intentions. This significant association remained regardless of controlling for initial levels of job satisfaction or the average level of job satisfaction across time. Thus, individuals who experienced a positive job satisfaction change tended to feel increasingly fewer intentions to leave.

Heeding calls made by G. Chen et al. (2011) and Liu et al. (2012), I attempted to advance the momentum model by investigating additional behavioral outcomes—specifically, positive work behavior (i.e., OCB, FSSB). First, I found a positive yet marginal association between in job satisfaction change and FSSB change, the latter of which consisted of employees' reports of their managers' behavior. When managers' job satisfaction increased over time, employees' perceptions of their managers' FSSB increased concurrently. This relation remained marginally significant after accounting for managers' average job satisfaction, and it reached statistical significance after accounting for managers' initial level of job satisfaction. This finding lends some support to the notion that managers' upshifts in job satisfaction may signal that their condition in the organization is improving and will likely continue to improve, and in response, they may

decide to improve the condition of their employees via family-supportive supervision. Interestingly, however, this job satisfaction change process did not influence managers' enactment of OCB.

At first glance, the lack of support for the relation between changes in job satisfaction and OCB seems puzzling given the marginally significant relation between changes in job satisfaction and another form of positive work behavior: FSSB. As individuals' conditions improve in an organization (as evidenced by increased job satisfaction), it follows that they might feel more inclined and more motivated to stay and invest in the organization, including by helping their colleagues and the organization. This, however, does not appear to be the case in the current sample of managers. Instead, managers' average level and initial level of job satisfaction shared significant, positive relations with OCB change. This suggests that those who, on average, feel more satisfied with their job or those who start with higher job satisfaction tend to enact OCB with increasingly greater frequency, regardless of whether their job satisfaction increases or decreases. Thus, my preliminary findings indicate that job satisfaction is important for understanding changes in individuals' helping behavior—just not when operationalized in a dynamic manner. Yet, as I discuss below, job satisfaction change may prove consequential for OCB change under certain conditions.

In summary, consistent with the momentum model, job satisfaction change appears to hold meaning for individuals—at least with respect to their turnover intentions and possibly their exhibition of FSSB. When individuals perceive that their condition in the organization has improved over time, they likely feel more confident that their

satisfaction with their job and associated job resources will continue in an upward trajectory into the future. While holding such an optimistic outlook, individuals may feel an increasing urge to remain a part of the organization and to help their employees via family-supportive supervision.

**Integrating the momentum model and affective shift model.** Extending the momentum model even further, I investigated the conditions under which changes in job satisfaction best predicted focal outcomes by integrating propositions from the affective shift model. Based on this integration, I hypothesized that a downshift in negative work events would augment the expected negative relation between job satisfaction change and turnover intentions change, as well as the expected positive relations between job satisfaction change and changes in OCB and FSSB. In this dissertation, individuals' shifts in job satisfaction differentially related to changes in focal outcomes, contingent upon changes in the type of experienced negative work events (i.e., job demands, interpersonal conflict). The nature of these shift interactions, however, ran counter to hypotheses in several cases. Below, I organize the findings by focal outcome.

***Turnover intentions change.*** As predicted, managers' job satisfaction change shared a negative relationship with their turnover intentions change—though, unexpectedly, the relationship grew stronger when managers' perceptions of job demands increased over the same time period. In other words, managers who experienced concurrent upshifts in both job satisfaction and job demands exhibited the greatest *decreases* in turnover intentions. Conversely, those who experienced an upshift in job demands and a downshift in job satisfaction demonstrated the greatest *increases* in

turnover intentions over time. The moderating role of changes in job demands was most pronounced when only job demands associated with time pressure were modeled. Thus, contrary to my predictions, upshifts in job demands appear to complement upshifts in job satisfaction, at least in relation to turnover intentions change.

This finding, however, is not entirely inconsistent with my integration of the momentum model and affective shift model. Rather, it can be explained by a reinterpretation of the integrative model in relation to the specific outcome of turnover intentions change. In line with affective events theory, during upshifts in job demands (which in this dissertation are framed as a type of negative work event), individuals' negative affect may increase in lockstep. As negative affect increases, individuals begin to narrow their focus toward detecting discrepancies between their current state and a desired future state (Fredrickson, 1998, 2001). With this narrowed focus, individuals become particularly attuned to problems in their immediate work environment. Moreover, their heightened level of negative affect may result in a prevention self-regulatory focus (Lanaj, Chang, & Johnson, 2012) in which they focus on fulfilling their job responsibilities and regulating their security needs (Brockner & Higgins, 2001). Accordingly, in this frame of mind, individuals may feel more motivated to complete their work so as to hold onto their job for reasons of financial security. When coupled with concurrent upshifts in job satisfaction, such individuals may experience an even greater need to remain in the organization, as they project that their condition in the organization will improve in the future. Thus, while unexpected, the interaction effect between job satisfaction change and changes in job demands with respect to turnover



intentions change can be explained through an integration of the momentum model and the affective shift model. Moreover, the form of this interaction suggests that the augmented effects resulting from these concurrent shifts may be specific to the focal outcome of turnover intentions change.

With that said, the nature of this moderating effect can also be explained via an alternative theoretical framework. In a qualitative review of the burnout and engagement literature, Bakker et al. (2014) state that “job demands amplify the impact of job resources on motivation/engagement” (p. 400)—a statement that is aligned with the core tenants of the job demands-resources (JD-R) model (Bakker & Demerouti, 2007; Demerouti et al., 2001). Extending this proposition to the presenting findings, the coupling of concurrent upshifts in both job satisfaction (an outcome of job resources) and job demands may have enhanced managers’ engagement. In turn, this heightened level of engagement may have resulted in fewer turnover intentions, as was previously found in a meta-analytic investigation by Halbesleben (2010). Following this process, those who experienced higher engagement levels resulting from the concurrent shifts may have felt more invested and engrossed in their work, contributing to a decreased desire to detach from the organization. In this way, the JD-R model provides a foundation for understanding and interpreting the unexpected nature of the interaction between job satisfaction change and changes in job demands with respect to turnover intentions change. With that said, the JD-R model does not explicitly address how changes in job resources and demands might provide meaning for individuals; however, when

considered in relation to the momentum model, upshifts in job demands and job satisfaction may increase their saliency and thereby accentuate their meaning to workers.

Unlike changes in job demands, changes in interpersonal conflict did not moderate the relation between job satisfaction change and turnover intentions change. Further, the interaction term remained nonsignificant even when changes in nonphysical or physical aggression were modeled separately as moderators. In a departure from prior meta-analytic evidence (i.e., Hershcovis & Barling, 2010b) the zero-order correlations between interpersonal conflict (and its specific forms) at Time 1 and turnover intentions at Time 2 were nonsignificant in this dissertation. Further, with respect to changes in interpersonal conflict, only the nonphysical aggression form shared a substantive relation with turnover intentions; with that said, this relation reached only marginally significance. Thus, by itself, interpersonal conflict did not demonstrate the expected relation with turnover intentions. The failure to find a significant interaction could be due in part to a restriction of variance, owing to the use of one- and two-item operationalizations of interpersonal conflict.

Alternatively, it is possible that the managers in this sample differentially experienced and appraised interpersonal conflict as a stressor. Consistent with the challenge-hindrance occupational stressor model (Cavanaugh, Boswell, Roehling, & Boudreau, 2000), managers may have experienced exposure to interpersonal conflict as a hindrance stressor, while others may have experienced it as a challenge stressor. Although interpersonal conflict is often conceptualized as a hindrance stressor (see Chang & Lyons, 2012; LePine, Podsakoff, & LePine, 2005), it is possible that some

managers perceived it (particularly the nonphysical form) as a challenge stressor (i.e., an obstacle to overcome along the path to goal attainment). As opposed to a perceived barrier to successful goal attainment (i.e., a hindrance stressor), some managers may have perceived interpersonal conflict as a contributor to workload demands, both of which have been operationalized as forms of challenge stressors (Cavanaugh et al., 2000). Given the focus on managers, it stands to reason that the managers in the present sample may have perceived exposure and management of interpersonal conflict as an expected component of their supervisory role. Accordingly, some managers may have viewed exposure to interpersonal conflict as a challenge to overcome while attempting to complete their other supervisory duties. In support of this perspective, a competency model developed by Chase (1994) for nurse managers indicated that managing interpersonal relations represented a focal part of their job. Thus, while it is likely many managers appraised interpersonal conflict as a hindrance stressor, it is also possible that some managers appraised such conflict as an expected aspect of their supervisory role. These differing appraisals may have impacted how managers experienced changes in exposure to interpersonal conflict in relation to job satisfaction change, at least with respect to turnover intentions change. In the end, these inconsistent perspectives may have offset the dynamic interaction effect I hypothesized based on my integration of the momentum model and affective shift model.

**OCB change.** The interaction effects between job satisfaction change and changes in the various forms of negative work events yielded limited influence on OCB change. To begin with, changes in job demands—regardless of the type—did not moderate the

relation between job satisfaction change and OCB change. These null finding may be explained by managers' perceptions of job demands. In this dissertation, job demands are operationalized as work speed, difficulty, and time pressure, which together constitute indicators of role overload. From a challenge-hindrane stressor perspective, role overload represents both a challenge and a hindrance for workers because work speed, difficulty, and time pressure can be perceived as both threatening impediments and challenging opportunities for growth (Gilboa, Shirom, Fried, & Cooper, 2008). In fact, the dual-nature of role overload may explain the small meta-analytic relations it shares with task performance (Gilboa et al., 2008) and OCB (Eatough, Chang, Miloslavica, & Johnson, 2011). With respect to the present findings, the relation between managers' changes in job demands and OCB may have been muddled by the challenge and hindrance aspects of the construct. On the one hand, managers' perceptions of job demands as a hindrance may have led to resource depletion and thus a reduced capacity to perform OCB. On the other hand, managers' perceptions of job demands as a challenge may have led to an elevated sense of responsibility and thus greater motivation to perform OCB. Taken together, these competing perceptions of job demands may have counterbalanced one another with respect to OCB. In support of this explanation, the zero-order correlation between job demands and OCB was small in magnitude in this dissertation. Further and as stated above, no substantive relationship was found between job satisfaction change and OCB change. Thus, it stands to reason that an interaction between job satisfaction change and changes in job demands would be unlikely to exert a

clear influence on OCB change due to the complicated nature of the job demands-OCB relation and the nonsignificant job satisfaction-OCB relation.

Concerning the moderator interpersonal conflict, neither the composite measure of nonphysical and physical aggression nor physical aggression by itself moderated the relation between job satisfaction change and OCB change. As described above, the conflation of nonphysical and physical aggression may be inappropriate for psychometric reasons, as Cronbach's alphas and inter-item correlations were low at both Time 1 and Time 2. Accordingly, the lack of an interaction effect when the interpersonal conflict composite measure was used could be attributed to a measurement artifact. With respect to physical aggression, specifically, the average score for the item (2.34) is suggestive of a low base rate, which is not surprising given prior prevalence estimates workplace physical aggression in the U.S. (e.g., Schat et al., 2006). The average score falls between the following two response scale frequency anchors: "Once in the past 6 months" and "Once a month but not every week." Given that, on average, managers only experienced these negative events every one to six months, they may have been less sensitive to changes over the six-month time frame of this study. In other words, the infrequency of managers' exposure to physical aggression may have reduced their salience, resulting in a diminished influence on OCB and other outcomes. From the perspectives of the affective shift model and affective events theory, the relative infrequency of physical aggression (i.e., a negative work event) may not have yielded a lasting influence on negative affect. Consequently, any downshifts in managers' underlying negative affect may have been

negligible or inconsequential. Without a substantive downshift in negative affect, I would not expect the proposed dynamic interaction with job satisfaction change.

In contrast to the above null findings, changes in exposure to nonphysical aggression did in fact moderate the relation between job satisfaction change and OCB change. The form of this significant interaction, however, ran counter to predictions. Specifically, the relationship between job satisfaction change and OCB change was nonsignificant when exposure to nonphysical aggression increased over time and negative when nonphysical aggression decreased over time. Interestingly, this finding suggests that managers exhibited *increases* in OCB when both job satisfaction and nonphysical aggression decreased over time—or from the opposite perspective: Managers exhibited *decreases* in OCB when job satisfaction increased and nonphysical aggression decreased over time.

As described above, however, descriptive statistics showed range restriction in managers' OCB scores for Time 1. Specifically, managers' average OCB scale scores ranged from only 3.00 to 5.00. In other words, none of the managers had average scale scores that corresponded to a behavioral frequency of "never" or "rarely." To the contrary, managers indicated that they enacted OCB "some of the time," "most of the time," or "all of the time." Regardless of whether these restricted scores reflect truly high levels of OCB or simply response biases (e.g., social desirability), it is a distinct possibility that these scores regressed to the mean at the subsequent time point. In fact, the average OCB scale score was lower at Time 2 (4.14 vs. 4.09), as was the minimum score (2.50). To account for the initially high OCB scores at Time 1, I ran a follow-up

test in which I controlled for managers' OCB at Time 1. Upon doing so, the interaction between changes in job satisfaction and nonphysical aggression became nonsignificant (.14,  $p = .203$ ). Thus, this unexpected finding could be attributed to the regression-to-the-mean phenomenon, and consequently, I will not attempt to explain the finding via the focal or countervailing theoretical frameworks.

**FSSB change.** With respect to FSSB change, the interaction effects resulting from job satisfaction change and changes in negative work events were contingent upon the operationalization of negative work events. For example, when changes in interpersonal conflict and its various forms served as the moderator, its interaction with job satisfaction change was nonsignificant. As described above, the lack of support for this interaction could be attributed to the use of one- and two-item measures of interpersonal conflict, the relative infrequency of physical aggression, and/or differing qualitative appraisals of interpersonal conflict as a challenge or hindrance stressor.

In contrast, the interaction effects between job satisfaction change and changes in job demands (specifically, work speed and difficulty demands) resulted in the largest, most positive FSSB change, as reported by managers' employees. With general job demands or time pressure as the moderator, the interaction with job satisfaction change was marginally significant and nonsignificant, respectively; however, when job demands were operationalized as changes in work speed and difficulty demands, the interaction with job satisfaction change reached statistical significance and exhibited the predicted form. Changes in work speed and difficulty demands moderated the relation between job satisfaction change and FSSB change such that there was no relation when perceived

work speed and difficulty demands increased over time, but there was a significant and positive relation when work speed and difficulty demands increased over time. That is, managers' exhibited changes in FSSB were greatest when they experienced a concurrent downshift in work speed and difficulty demands coupled with an upshift in job satisfaction. This finding lends support to my integration of the momentum model and affective shift model, as it illustrates the importance of concurrent dynamic changes in both job satisfaction and job demands.

***Crossover of job satisfaction change.*** To extend crossover theory, I investigated the transmission of job satisfaction from managers to employees. In accordance with Bakker et al.'s (2009) review, the crossover of positive work experiences represents an understudied area. With respect to static operationalizations of job satisfaction, managers' level of job satisfaction did not predict their employees' subsequent level of job satisfaction. The lack of evidence could be attributed to the design of this dissertation. With respect to the interval between assessments, the effect of managers' job satisfaction was perhaps drastically weakened by the time employees' job satisfaction was assessed six months later. In addition, I did not have access to a variable pertaining to the frequency or the quality of interactions between manager-employee dyads, as such a variable was not collected. Consequently, I was unable to control for the role that interaction frequency and quality may have played. From an emotional contagion perspective, the frequency and quality of the interactions could have affected whether or the extent to which the affective component of job satisfaction was transmitted from manager to employee.



I did, however, find some evidence to support my hypotheses involving the crossover of job satisfaction change. When operationalizing job satisfaction as a dynamic construct, managers' job satisfaction change was found to cross over directly to their employees' job satisfaction change, although this relation was only marginally significant. Thus, I did find some evidence that employees were attuned to their managers' job satisfaction. The underlying mechanisms, however, remain unclear. It is possible that manager-employee job satisfaction acted in lock step over time as a result of explicit or implicit affect-sharing processes (Kelly & Barsade, 2001). As an alternative mechanism, employees may have been sensitive to their managers' job satisfaction change, which then provided them with important cues and attuned them to certain aspects of the work environment (Salancik & Pfeffer, 1978). That is, a perceived upshift in manager job satisfaction may have signaled to employees that the job and the work environment, in general, are desirable. In response, the employees may have adjusted their own job satisfaction in an upward manner.

In an attempt to elucidate the mechanism through which job satisfaction might cross over from managers to employees, I investigated the role of managers' positive work behavior. Specifically, for both static and dynamic operationalizations of job satisfaction, I tested models in which managers' OCB and FSSB (i.e., positive work behavior) served as mediators. Neither OCB nor FSSB mediated the transmission of manager job satisfaction on employee job satisfaction, irrespective of whether models were tested using static or dynamic operationalizations of the focal variables. Thus, contrary to my predictions, managers' exhibition of OCB and FSSB did not appear to

serve as the behavioral manifestation of their level of job satisfaction which, in turn, might have positively impacted their employees' level of job satisfaction. As noted above, however, I was unable to control for the interaction frequency or quality and, thus, could not account for dyadic manager-employee relational idiosyncrasies in this respect. That is, employees may have differed with respect to the quantity and quality of the time they shared with their manager, which in turn may have influenced their opportunities to witness or benefit from OCB or FSSB. Finally, as an alternative explanation, job satisfaction may in fact cross over via observable behavior, but perhaps not specifically through OCB or FSSB. Given the positive relation between individuals' job satisfaction and task performance (Judge et al., 2001), task performance and other forms of in-role behavior may represent a more promising behavioral conduit via which managers' job satisfaction transmits to their employees.

**Summary.** In this dissertation, I made several notable contributions to theory. I replicated prior work involving the momentum model by finding that job satisfaction change negatively related to turnover intentions change. In an extension of the momentum model, I found that managers' job satisfaction change positively related to changes in employee reports of their FSSB. Furthermore, based on my integration of the momentum model and the affective shift model, I tested the proposition that changes in negative work events (i.e., job demands, interpersonal conflict) would moderate the relationship between changes in job satisfaction and focal outcomes. For certain operationalizations of negative work events, hypothesis testing revealed significant interactions with respect to changes in all three outcomes: turnover intentions, OCB, and

FSSB. The form of the interactions, however, deviated from my predictions for models involving in turnover intentions change and OCB change. My prediction was supported for models involving FSSB change. Thus, regarding the interaction hypotheses, it is evident that additional research and theoretical development are needed to refine and support my integration of the momentum model with the affective shift model. In the second part of this dissertation, I integrated the momentum model with crossover theory, but the associated hypotheses were met with very limited support. Specifically, the relationship between managers' job satisfaction change and employees' job satisfaction change approached significance, but the relationship between managers' level of job satisfaction and their employees' subsequent level of job satisfaction did not receive support. Similarly, the proposed mediational mechanisms (i.e., managers' OCB and FSSB) underlying these crossover relations went unsupported. In sum, while my contributions to the momentum model and affective shift model were notable, my proposed integration of the momentum model and crossover theory found limited support.

### **Practical Implications**

The findings from this dissertation raise important implications for practice. First, this dissertation lends some support to the importance of measuring job satisfaction repeatedly over time, as job satisfaction change explained incremental variance in turnover intentions change and FSSB change over and above average job satisfaction and initial job satisfaction. From a workforce planning standpoint, organizations might be wise to assess their employees' job satisfaction (and presumably other job attitudes) on

multiple occasions throughout the work year, as failure to do so could result in diminished predictive utility when forecasting turnover and desired work behavior. In terms of the time interval between measurement occasions, like Boswell et al. (2009) and Liu et al. (2012), this dissertation used a six-month interval, while previously G. Chen et al. (2011) used 2-week, 1-month, 2-month, and 3-month intervals. Across these prior studies and this dissertation, meaningful changes in job satisfaction were detected using time intervals ranging from 2 weeks to 6 months. Therefore, while organizations could aim for smaller intervals and more frequent assessments for a more nuanced understanding of change, growing evidence suggests that twice a year may be sufficient to detect meaningful job satisfaction change. I should caution, however, that this area of research is still very much in its infancy, as only a handful of cognitive and behavioral outcomes have been investigated. Consequently, additional research is required in order to more effectively guide organizations in the implementation of multiple-occasion assessments.

In addition to the implications for organizational assessment and measurement, the present findings suggest that organizations may benefit from inducing positive job satisfaction change and preventing negative job satisfaction change. To increase job satisfaction among workers, an organization could stage an intervention to bolster established antecedents of job satisfaction, such as by redesigning jobs to increase perceptions of core job characteristics (e.g., skill variety, task significance, feedback; Hackman & Oldham, 1975, 1976; Humphrey et al., 2007) or by training leaders to initiate structure, demonstrate consideration, and provide contingent rewards (DeRue et al.,

2011). From a different perspective, organizations could also focus on buffering periods of time in which workers' job satisfaction is expected to decline. For example, Boswell et al. (2009) showed that workers typically begin a new job with relatively high job satisfaction and then experience a gradual decline in the subsequent months. To avoid negative consequences for managers' turnover intentions and FSSB associated with declines in job satisfaction, an organization could pay extra attention to organizational newcomers so as to buffer the typical job satisfaction decline period. Specifically, an organization could improve new workers' role clarity, self-efficacy, and social acceptance by developing an effective onboarding and socialization program aimed at disseminating important information (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007).

Second, in addition to job satisfaction change, findings from this dissertation point to the potential value of assessing negative work events over multiple occasions. What is more, the present findings suggest that the type and direction of changing negative work events (e.g., job demands, interpersonal conflict) matters—particularly in the context of changes in job satisfaction and various outcomes (e.g., turnover intentions, OCB, FSSB). By focusing on the dynamic interplay between changes in negative work events and job satisfaction change, organizations could potentially anticipate changes in worker cognition and behavior, which in turn could facilitate more effective workforce planning and intervention implementations. For instance, to anticipate future labor supply shortages, an organization could assess changes in workers' perceived job demands and job satisfaction to project which workers will be more likely to stay and which will be

more likely to leave. Specifically, my preliminary findings suggest that workers will be more likely to remain in the organization if they experienced concurrent upshifts in job demands and job satisfaction over the prior six months. This signifies that an upshift in job demands (e.g., work speed and difficulty, time pressure) has the potential to augment the already beneficial effect of upward job satisfaction change on workers' intentions to stay. Given the preliminary nature of these findings, I must emphasize that more research is needed to provide clearer guidance for identifying the types of changing work-related experiences from which workers may glean the most meaning, as well as the conditions under which the positive effects of changing experiences may be augmented.

As with job satisfaction change, organizations can take steps toward driving upshifts and downshifts in various types of negative work events. For example, a reduction in workers' exposure to interpersonal conflict can be achieved by developing a mistreatment-prevention climate, wherein policies, procedures, and practices are devised to reduce and prevent workers' exposure to various forms of mistreatment (e.g., incivility, nonphysical aggression, physical aggression) (Yang et al., 2014). Initial research indicates that workers' direct supervisors play a critical role in disseminating mistreatment-prevention knowledge and skills (Yang & Caughlin, 2012). Similarly, when it comes to driving changes in job demands, direct supervisors can also play an important role. For example, to increase perceived work speed, difficulty, and time pressure, a supervisor could set more aggressive and challenging goals for their workers. Conversely, to decrease perceived work speed, difficulty, and a direct supervisors could guide workers to select and develop more attainable goals.

Third and finally, preliminary (albeit marginally significant) evidence from this dissertation suggests that employees may be sensitive to their manager's fluctuations in job satisfaction. While more research is needed to elucidate how this crossover process unfolds, organizations should (re)emphasize to managers that their own changing experiences could hold meaning for their employees. Further, based on these trickle-down effects of job satisfaction change, organizations could focus resources on increasing managers' job satisfaction in order to improve not only the managers' work outcomes but also their employees' job satisfaction and work outcomes. As described above, organizations could drive upshifts in managers' job satisfaction through job design, supervisor leadership training, and socialization tactics, depending upon the circumstance.

In summary, while findings from this dissertation are preliminary in nature, organizations could benefit from taking them into consideration. Based on this dissertation's findings, I encourage organizations to consider when and how they assess their workers' experiences (e.g., negative work events, job satisfaction), as well as how they can drive desired changes in their workers' perceptions of negative work events and job satisfaction. Finally, organizations should take into account how changes in managers' job experiences (e.g., job satisfaction) can affect their employees.

### **Limitations and Directions for Future Research**

In terms of theory and methodology, there are several notable limitations to this dissertation. First, alternative explanations exist for the proposed dynamic interaction between changes in negative work events and job satisfaction change. For instance,

consistent with the JD-R model (Bakker & Demerouti, 2007; Demerouti et al., 2001), the influence of job resources on engagement is amplified by job demands (see Bakker et al., 2014). As an indicator of job resources, job satisfaction may interact with job demands (a type of negative work event), resulting in enhanced benefits for workers' engagement and presumably work behavior. The JD-R, however, does not explicitly address how changing job resources and job demands might affect engagement. As demonstrated in this dissertation, the relation between static operationalizations of two constructs does not necessarily mirror dynamic operationalizations of the same two constructs. Thus, while the JD-R model may provide an alternative route for understanding and interpreting an interaction effect between changes in negative work events and job satisfaction change, more theoretical development is needed to explicitly frame the model from a dynamic perspective.

As another alternative explanation for the dynamic interactions found in this dissertation, the affective shift model by itself—without the momentum model—could explain the mechanisms underlying the dynamic and concurrent shifts between job satisfaction and negative work events. Specifically, these shifts could be explained by the positive and negative affective counterparts to job satisfaction and negative work events, respectively. That is, in accordance with affective events theory, negative work events presumably elicit negative affective reactions, and positive affect presumably serves as a proximal antecedent to job satisfaction. As such, concurrent shifts in negative work events and job satisfaction may be proxies for the underlying shifts in negative and positive affect, respectively, which could add credence to the affective shift model as the



primary theoretical model given its ability to explain the proposed shifts and their consequences. To address this alternative explanation involving positive and negative affect corollaries, future research should assess and control for changes in positive and negative affect.

With all that said, the challenge-hindrane theory of occupational stressors (Cavanaugh et al., 2000) suggests that not all stressors should be treated the same. Rather, the theory posits that stressors (i.e., negative work events) may be appraised as either a challenge or a hindrance, which depending upon the appraisal, differentially affects a variety of workplace outcomes (LePine et al., 2005). Accordingly, the level of negative affect experienced by workers likely depends on whether they appraise a particular negative work event as a challenge or a hindrance stressor. Furthermore, in this dissertation, I focused on shifts in negative work events experienced by *managers*. As mentioned briefly above, managers may appraise events and workplace stressors differently than those who do not have supervisory responsibilities. For example, managing interpersonal conflict and other social aspects of work may be part of a manager's formal job description, and as a result, a manager may appraise interpersonal conflict as a challenging part of the job but not necessarily a hindrance. As such, in the context of managers' formal job descriptions and expectations, negative work events may hold different meanings for managers relative to those who do not supervisor others.

In a similar manner, different job contexts could affect the way in which managers (versus employees) perceive and react to job satisfaction change. For example, prior research has found that individuals differ with respect to whether they consider

OCB to be an in-role or extra-role behavior (Morrison, 1994). Consequently, the degree to which individuals perceive a behavior as required versus discretionary may impact how they react to job satisfaction change, as well as changes in work events. Given these considerations, future research should investigate the extent to which changes in different types of negative work events are perceived as challenges versus hindrances. In addition, future studies should explore whether any systematic differences exist between managers and non-managers when it comes to appraising changes in negative work events and job satisfaction, as well as deciding whether to engage in a particular behavior.

As a second limitation, I did not directly investigate *why* job satisfaction changed over time for individuals. Based on the propositions of the momentum model, it is presumed that job satisfaction change reflects, in part, perceived losses or gains in job resources. With that said, I did not assess what those specific resource losses and gains might entail and, thus, they remain unknown in the context of the present findings. It is possible, for example, that the presumed underlying resource changes could be attributed to feedback received on recent performance appraisals, or on changes in other work characteristics (e.g., increased autonomy, skill variety). Without direct evidence, however, I cannot conclude which factors influenced job satisfaction change in this dissertation. Moreover, from a practice perspective, it is important to understand what factors drive job satisfaction change so as to capitalize on the resulting reduction in turnover intentions and increases in FSSB. Thus, I encourage additional research aimed at investigating the underlying resource change that is posited by the momentum model to drive job satisfaction change.

Third, the momentum model implies that workers are aware of discrepancies between their current level of job satisfaction and a prior level of job satisfaction. Previous studies that investigated the model (i.e., G. Chen et al., 2011; Liu et al., 2012) did not directly assess whether respondents demonstrated awareness of changes in their job satisfaction, and this dissertation faces the same limitation. Therefore, based on the empirical findings from this dissertation, I am unable to conclude that job satisfaction change did, in fact, elicit explicit meaning for workers. To address this deficiency, future research should investigate the momentum model via qualitative interviews with workers, wherein workers are asked about their perceived prior, current, and expected future levels of job satisfaction. With that said, asking participants to recall prior job satisfaction could elicit hindsight and other recall biases. An alternative direction for future research would involve disentangling the implicit (i.e., subconscious) and explicit (i.e., conscious) levels of job satisfaction. Consistent with a dual-processing perspective (R. E. Johnson, Tolentino, Rodopman, & Cho, 2010; E. R. Smith & DeCoster, 2000), affect and attitudes exist at both the implicit and explicit levels of awareness, which can operate relatively independently of one another. If it were found that shifts in *implicit* job satisfaction impact work outcomes (while controlling for *explicit* job satisfaction), it could be argued that workers are largely unaware of these changes, thereby requiring a revision to the momentum model.

Fourth, I did not investigate how perceptions of time may play a role in how experiences of change influence workers and their behavior. Recent work by Shipp, Edwards, and Lambert (2009) and Sonnentag (2012) has urged researchers to focus on

the role of time in organizational life. To that end, Shipp et al. investigated the manner in which individuals perceive time and ultimately their affect, cognition, and behavior. To do so, the authors developed a measure of *temporal focus*, which is defined as an individual's tendency to dedicate his/her attention toward thoughts of the past, present, and future (Bluedorn, 2002; Shipp et al., 2009). In their preliminary work, Shipp et al. found that past-focused individuals are less optimistic and more negative in general, whereas present- and future-focused individuals are more optimistic and more positive in general. Further, they found, for example, that past-focused individuals tend to have higher current turnover intentions when their prior job had high levels of perceived autonomy, pay, opportunities, and recognition. In light of this recent work, future research should extend the findings of this dissertation by assessing individuals' temporal focus. For instance, I suspect that past-focused individuals may be more sensitive to previous downshifts in negative work events and job satisfaction, which may result in a more pronounced effect on their decisions to engage in various types of work behavior.

Fifth, the level of interpersonal interaction between managers and employees in this sample may have influenced how employees responded to the FSSB-SF measure (Hammer et al., 2013), as well as the likelihood that direct and indirect forms of crossover may have occurred between managers and employees. Compared to a worker with limited contact with his/her manager, a worker who interacts with the same manager with greater frequency may have a different perception of the manager's FSSB. Relatedly, managers and employees who share more social and task interdependence may experience greater crossover via underlying affect-sharing processes (Bartel & Saavedra,

2000). Finally, LMX theory posits that manager-employee dyads share idiosyncratic relations, which result in varying relationship qualities across dyads. Adopting a LMX perspective, in the present dissertation, it is possible that managers' application of FSSB may have lacked consistency between their individual employees, which could have further differentiated employees' perceptions of their managers' FSSB. Thus, future research should control for task and social interdependence between manager and employees, the general frequency of their interactions, and the quality of employees' relationship with their manager.

Sixth, in terms of the research design, the present study used only two time points to assess change. In order to assess the form of change (e.g., linear vs. nonlinear change), three or more time points are necessary. Furthermore, the use of algebraic change scores to operationalize change has received some criticism (e.g., Lord, 1956). As such, future studies should attempt to replicate the anticipated findings using three or more time points, and in addition, future studies should formulate research questions regarding the *form* of change with respect to the hypotheses proposed in this dissertation. Growth curve modeling represents a viable analytical technique for assessing such change. I should note that a third and fourth time point may be attainable for this study, as the archival dataset from which these findings are based includes two additional time points, each six months after the prior. I do, however, have concerns regarding missing data due to attrition at the third and fourth time points which could substantially limit power and bias results.

Seventh, a two-time point design is not ideal for meeting the assumptions of mediation. That is, evidence for mediation is most compelling when the predictor is measured before the mediator and the mediator is measured before the outcome (Frazier, Tix, & Barron, 2004; Gollob & Reichardt, 1987). For the 2-2-1 mediation hypothesis that did not involve change scores (i.e., Hypothesis 7), the predictor (i.e., managers' level of job satisfaction at Time 1) precedes the mediator (i.e., managers' OCB and FSSB at Time 2), but the mediator occurs at the same time point as the outcome (i.e., employees' level of job satisfaction at Time 2). Consequently, even if the indirect effect were significant, it would not be possible to build a strong case for causality between the mediator and the outcome. With respect to the mediation hypothesis involving change scores (i.e., Hypothesis 9), determining causality would also have been even more problematic had the indirect effect reached statistical significance. In the 2-2-1 mediation models associated with Hypothesis 9, the change for all focal variables takes place between the same two time points. Therefore, future research should employ time-lagged designs, wherein the predictors, mediators, and outcomes are measured at separate time points. Moreover, for hypotheses involving changes in focal variables over time, additional time points should be used to help build a stronger case for direction of causality. For example, a design could measure focal mediational variables using the following measurement points: (a) predictor—Time 1→Time 2, (b) mediator—Time 2→Time 3, and (c) outcome—Time 3→Time 4.

Eighth, I did not test hypotheses using structural regression models (i.e., structural equation models with both the measurement and structural components). Structural

regression models have the added advantage of accounting for measurement unreliability in modeled variables, whereas more traditional regression and path analytic techniques assume perfect reliability (Hox, 2010; Preacher, 2015). For example, when not accounting for the measurement structure, confidence intervals in more complex models (e.g., mediated-moderation) have a tendency to be underestimated (Cheung & Lau, 2014). The primary drawback in using structural regression models is that model convergence may become problematic due to added complexity (e.g., more parameters) and reduced statistical power owing to over-parameterization. Nevertheless, I recommend that future studies gather larger samples and use structural regression models to test the focal relations from this dissertation.

Ninth, the sample for this dissertation was drawn from the healthcare industry. Even more specifically, the participants from this sample all work in the extended-care industry. While the results from this dissertation may generalize to other working populations, the present sample had unique characteristics that may affect external validity. For instance, the manager and employee subsamples were 89% and 92% female, respectively. In addition, the manager subsample was 89% White. Finally, the employees subsample consists of individuals with relatively low-wage jobs. Given these idiosyncrasies, the results of this dissertation may not generalize to male, non-White, or white-collar workers. Future studies should attempt to replicate these findings using samples drawn from more diverse working populations and different industries.

Tenth, I tested my integration of the momentum model and affective shift model by investigating job satisfaction change in relation to changes in the following outcomes:

turnover intentions, OCB, and FSSB. When OCB change was used as an outcome, tests of hypotheses were mostly unsupported. As detailed above, prior research has shown that OCB shares a convoluted relation with those job demands commonly associated with role overload given that workers perceive them as both challenges and hindrances. Further, particularly with respect to managers, individuals' motives for performing OCB depend upon whether they perceive OCB as an in-role task behavior or as an extra-role non-task behavior. Next, while job satisfaction change did not influence OCB change, initial and average levels of job satisfaction did. Taken together, these issues illustrate the apparently complicated nature of OCB in relation to the presumed antecedents from this dissertation. Thus, future research is needed that attempts to disentangle OCB change in relation to changes in negative work events and job satisfaction change. To do so, future studies should address whether workers' perceive negative work events as hindrances and/or challenges, and whether they perceive OCB as an in-role or extra-role behavior. In addition, future research should test the momentum model using additional behavioral outcomes, such as counterproductive work behavior, task performance, adaptive behavior, creative behavior, and proactive behavior. Finally, it is possible that changes in other job attitudes (e.g., organizational commitment, job involvement) may also provide meaning for individuals. As such, additional research is needed that investigates the consequences of changes in other job attitudes.

Eleventh, negative work events were operationalized solely as job demands and interpersonal conflict in this dissertation. Accordingly, future research is needed that investigates other forms of negative work events, such as role ambiguity, role conflict,



injustice, and negative feedback. With regard to the interpersonal conflict measure used in this dissertation, however, it suffered from content insufficiency and poor psychometric qualities (e.g., low Cronbach's alpha). Interpersonal conflict was operationalized using a two-item measure and its single-item components (i.e., nonphysical aggression, physical aggression). As described above, on average, managers' reported their exposure to physical aggression as a relatively infrequent occurrence. As a result, changes in exposure to physical aggression may have been relatively subtle given the low base rate of this form of mistreatment. Moreover, physical aggression subsumes a variety of specific acts (e.g., hitting, kicking, biting, spitting), and the single item used in this dissertation only referred to physical aggression in a general sense (i.e., "dealing with violent or physically aggressive people"). Further, the psychometric shortcomings of the interpersonal conflict measure and its two items could explain the null findings associated with hypotheses involving changes in interpersonal conflict as moderator. To address these issues, I encourage future research that re-tests my hypotheses using more nuanced and behavior-specific multi-item measures of interpersonal conflict and other forms of mistreatment (e.g., incivility, bullying), as well as measurement tools that capture other qualities of aggressive behavior such as the intent, intensity, and the source (e.g., coworker, supervisor, client), as these may be consequential from the victim's perspective (Hershcovis, 2011). In sum, future research is needed to test my integration of the momentum model and affective shift model using alternative measures and other types of negative work events.

As a twelfth and final limitation, based on a series of post-hoc power analyses, I have concluded that many of the models used for hypothesis-testing were underpowered, which may explain some of the nonsignificant findings. I was specifically concerned about the power associated with the interaction, cross-level, and mediation hypotheses, and thus I estimated power for Hypotheses 4-9. To do so, I conducted Monte Carlo simulations with 1,000 replications (i.e., the number of samples drawn from the population) using the *Mplus* Version 7.3 software package. For all power simulations, I set the alpha level at .050 and designated the effective sample sizes and cluster-level information (i.e., number and sizes of clusters) for each model. Next, I used the observed sample-estimated coefficients as input into the power simulations. I should note, however, that such coefficients do not take into account sampling error and consequently may have biased the computed power estimates; nonetheless, the sample coefficients still serve as an approximation of population parameters. Traditionally, when the estimated power is greater than .80, it is considered adequate. The hypotheses involving dynamic-shift interactions (i.e., Hypotheses 4-5) yielded, in general, the highest power estimates. In fact, post-hoc power estimates reached mostly adequate levels when turnover intentions change and FSSB change were used as outcomes, and negative work events were operationalized as job demands. For the hypotheses used to test crossover from managers to employees, however, power estimates were very low ( $< .10$ ). The relatively large variations in the number and sizes of Level 2 (i.e., managers and facilities, respectively) likely diminished power substantially. Thus, as a final direction for future research, I encourage researchers to test these cross-level crossover hypotheses using a

larger number of managers with a relatively consistent number of employees reporting to each manager.

In summary, this dissertation is not without its limitations. To address these limitations, I encourage future studies to incorporate the following design features and theoretical considerations. First, statistical power and generalizability can be bolstered by using a larger sample size with more diverse demographic characteristics and occupations, wherein more employees are matched to each manager. Second, by adopting a design with three or more time points, some of the shortcomings associated with change scores could be avoided, as growth-modeling techniques could be used for hypothesis testing. Further, adding additional time points would allow for a more nuanced investigation into not only the direction of change but also the functional form of change (e.g., linear, quadratic, cubic). Coupling additional time points with shorter time intervals between measurement occasions could provide a more refined understanding of how and when fluctuations in focal variables occur. Third, additional job attitudes (e.g., organizational commitment), types of work events (both negative and positive), and types of work behavior should be investigated, so as to understand if/how changes in such variables hold the same or different meaning for workers in terms of their decision to engage in various types of behavior (e.g., counterproductive work behavior, proactive behavior) and whether they may cross over to their subordinates. Fourth and finally, recent research points to the importance of understanding individuals' temporal focus with respect to their organizational experiences, and I therefore urge future studies to investigate whether having a predominantly past, present, and/or future temporal focus

affects how an individual experiences and reacts to changes in their own prior work events and job attitudes, as well as to changes in others. By incorporating all or most of the aforementioned design features, the field can gain a broader yet more nuanced understanding of individuals' exposure to and experiences of change.

### **Conclusion**

In this dissertation, I investigated shifts in job satisfaction in relation to key work outcomes, as well as proposed interactions between concurrent shifts in negative work events and job satisfaction. Further, I addressed whether job satisfaction change crosses over from managers to employees. While job satisfaction change was associated with changes in turnover intentions and employees' perceptions of FSSB, it was not related to OCB change. Further, changes in negative work events (i.e., job demands, interpersonal conflict) moderated the relationships between changes in job satisfaction and focal outcomes—though, the nature of the some of these interactions ran counter to expectations. Finally, only marginal support was found for the crossover of job satisfaction from managers to employees.

Together, these findings advance theory and practice, as they have important implications for how researchers and practitioners conceptualize often-studied concepts such as job satisfaction and negative work events. Specifically, job satisfaction change uniquely contributes to the variance explained in turnover intentions and FSSB relative to traditional conceptualizations and operationalizations of the construct (i.e., average or single-time point assessments of job satisfaction). Moreover, changes in negative work events influence the magnitude and, in some cases, the sign of the relations between job

satisfaction change and focal outcomes. Overall, these findings suggest that workers derive meaning from their changing circumstances and experiences, which in turn impacts their cognition and behavior. As such, capturing such changes may offer a glimpse into an important yet traditionally overlooked process.

## Tables

Table 1. Descriptive Statistics for Manager-Level Variables

Variables	N	No. of Items	M	SD	Min	Max	Skew	Kurtosis	Cronbach's $\alpha$	Test-Retest Reliabilities
<i>Time 1</i>										
Interpersonal Conflict	184	2	3.25	.84	1.50	5.00	.09	-.58	.52	-
Nonphysical Aggression	184	1	4.16	.83	2.00	5.00	-.70	-.24	-	-
Physical Aggression	184	1	2.34	1.19	1.00	5.00	.47	-.76	-	-
Job Demands	184	3	3.87	.78	1.67	5.00	-.42	-.37	.63	-
Work Speed & Difficulty	184	2	4.10	.79	1.50	5.00	-.76	.20	.69	-
Time Pressure	184	1	3.41	1.24	1.00	5.00	-.32	-.98	-	-
Job Satisfaction	184	3	4.37	.61	2.00	5.00	-.95	.94	.86	-
Turnover Intentions	183	2	1.87	1.01	1.00	5.00	1.22	1.01	.88	-
OCB	184	4	4.14	.50	3.00	5.00	-.07	-.70	.71	-
FSSB - aggregated	139	4	3.79	.88	2.50	5.00	.23	.33	-	-
<i>Time 2</i>										
Interpersonal Conflict	154	2	3.26	.81	1.00	5.00	-.10	-.40	.50	.63
Nonphysical Aggression	154	1	4.18	.86	1.00	5.00	-.91	.48	-	.52
Physical Aggression	154	1	2.34	1.12	1.00	5.00	.42	-.83	-	.61
Job Demands	154	3	3.79	.66	2.00	5.00	.20	-.62	.55	.61
Work Speed & Difficulty	154	2	4.01	.68	2.00	5.00	-.13	-.55	.61	.55
Time Pressure	154	1	3.36	1.10	1.00	5.00	.03	-1.26	-	.63
Job Satisfaction	154	3	4.34	.57	2.67	5.00	-.57	.06	.86	.65
Turnover Intentions	154	2	1.82	.93	1.00	5.00	1.06	.65	.89	.61
OCB	154	4	4.09	.54	2.50	5.00	-.36	-.30	.75	.55
FSSB - aggregated	135	4	3.70	.46	2.50	5.00	.16	.45	-	.58

Note. Dash (“-”) indicates that value is not applicable. OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior.

Table 2. Descriptive Statistics for Employee-Level Variables

Variables	<i>N</i>	No. of Items	<i>M</i>	<i>SD</i>	Min.	Max.	Skew	Kurtosis	Cronbach's $\alpha$	Test-Retest Reliabilities
<i>Time 1</i>										
Job Satisfaction	1521	3	4.19	.65	1.33	5.00	-.72	.87	.81	-
FSSB - non-aggregated	1492	4	3.69	.88	1.00	5.00	-.73	.27	.89	-
<i>Time 2</i>										
Job Satisfaction	1273	3	4.14	.67	1.00	5.00	-.82	1.62	.84	.54
FSSB - non-aggregated	1254	4	3.63	.88	1.00	5.00	-.71	.50	.90	.52

Note. Dash (“-”) indicates that value is not applicable. OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior.

Table 3. Zero-Order Correlations for Manager-Level Variables

Variables	1	2	3	4	5	6	7
<i>Time 1</i>							
1. Interpersonal Conflict							
2. Nonphysical	.76**						
3. Physical Aggression	.89**	.37**					
4. Job Demands	.25**	.24**	.18*				
5. Work Speed &	.22**	.24**	.15*	.87**			
6. Time Pressure	.19*	.15*	.16*	.78**	.37**		
7. Job Satisfaction	-.02	-.03	-.01	-.17*	-.02	-.29**	
8. Turnover Intentions	-.06	.01	-.10	.02	-.09	.15*	-.55**
9. OCB	.19**	.12 <sup>†</sup>	.18*	.13 <sup>†</sup>	.18*	.02	-.20**
10. FSSB - aggregated	.00	-.02	.01	-.05	.01	-.11	.11
<i>Time 2</i>							
11. Interpersonal Conflict	.63**	.52**	.55**	.24**	.20*	.19*	.01
12. Nonphysical	.42**	.52**	.25**	.31**	.27**	.24**	-.02
13. Physical Aggression	.60**	.34**	.61**	.11	.08	.10	.03
14. Job Demands	.28**	.31**	.19*	.61**	.51**	.50**	-.05
15. Work Speed &	.20*	.26**	.11	.48**	.55**	.21**	.06
16. Time Pressure	.25**	.24**	.20*	.50**	.24**	.63**	-.16 <sup>†</sup>
17. Job Satisfaction	-.08	-.08	-.06	-.15 <sup>†</sup>	-.01	-.26**	.65**
18. Turnover Intentions	.02	.05	-.01	.09	.00	.17*	-.50**
19. OCB	.25**	.19*	.23**	.01	.07	-.07	.33**
20. FSSB - aggregated	.04	-.02	.07	.07	.08	.01	.10
<i>Demographics</i>							
21. Gender	.02	-.06	.07	.07	.08	.02	.08
22. Age	-.06	-.14 <sup>†</sup>	.01	-.14 <sup>†</sup>	-.19*	-.03	.34**
23. Tenure as Manager	.02	-.00	.03	.06	.07	.03	.23**
24. Tenure in	.03	.00	.04	.08	.15	-.03	.21**
25. Education	.01	.06	-.05	-.01	-.01	.01	-.12 <sup>†</sup>
26. No. of Children	.03	.02	.02	-.02	-.05	.02	-.15*
27. Adult Care	.05	.01	.06	.11	.13	.04	-.08
28. Marital Status	-.15*	-.09	-.15*	-.00	.06	-.08	-.02
29. Work Hours per Week	.07	.03	.07	.27**	.18*	.28**	-.05
30. Condition	.04	.03	.04	.14 <sup>†</sup>	.09	.16*	.17*

Note. OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior; Gender (1 = male, 2 = female); Education (1 = Grade 1-8, 2 = Grade 9-11, 3 = Grade 12 or GED; 4 = College 1-3 years, 5 = College 4+ years); Condition (0 = control, 1 = treatment). *N* ranges from 97-184. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .



Table 3. Zero-Order Correlations for Manager-Level Variables (Continued)

Variables	8	9	10	11	12	13	14
<i>Time 1</i>							
1. Interpersonal Conflict							
2. Nonphysical							
3. Physical Aggression							
4. Job Demands							
5. Work Speed &							
6. Time Pressure							
7. Job Satisfaction							
8. Turnover Intentions							
9. OCB	-.07						
10. FSSB - aggregated	-.11	-.04					
<i>Time 2</i>							
11. Interpersonal Conflict	-.10	.10	-.09				
12. Nonphysical	-.04	.08	-.20 <sup>†</sup>	.76**			
13. Physical Aggression	-.11	.09	.01	.87**	.34**		
14. Job Demands	.10	.18*	-.08	.30**	.29**	.21**	
15. Work Speed &	.07	.24*	-.01	.22**	.21**	.16*	.85**
16. Time Pressure	.10	.03	-.14	.26**	.26**	.18*	.76**
17. Job Satisfaction	-.43**	.10	.06	-.10	-.13 <sup>†</sup>	-.05	-.15 <sup>†</sup>
18. Turnover Intentions	.61**	-.07	-.16	.10	.15 <sup>†</sup>	.03	.11
19. OCB	-.14 <sup>†</sup>	.55**	.05	.25**	.16*	.24**	.15 <sup>†</sup>
20. FSSB - aggregated	-.04	.13	.54**	-.04	-.15	.05	.04
<i>Demographics</i>							
21. Gender	-.08	.03	.15 <sup>†</sup>	.05	.02	.06	-.00
22. Age	-.29**	-.10	.10	-.12	-.11	-.08	-.25**
23. Tenure as Manager	-.25**	-.06	.02	.08	.13	.01	-.09
24. Tenure in	-.21**	.02	.03	.02	.06	-.01	-.14 <sup>†</sup>
25. Education	.09	-.14 <sup>†</sup>	.13	-.06	.00	-.08	.01
26. No. of Children	.10	.06	-.04	.06	-.03	.11	.11
27. Adult Care	.01	-.00	.12	-.02	.04	-.05	.01
28. Marital Status	.05	-.16*	.01	-.10	.01	-.15 <sup>†</sup>	-.10
29. Work Hours per	-.06	-.01	-.09	.13 <sup>†</sup>	.14 <sup>†</sup>	.08	.20*
30. Condition	.04	.03	-.05	.08	.07	.06	.19*

Note. OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior; Gender (1 = male, 2 = female); Education (1 = Grade 1-8, 2 = Grade 9-11, 3 = Grade 12 or GED; 4 = College 1-3 years, 5 = College 4+ years); Condition (0 = control, 1 = treatment). *N* ranges from 97-184. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 3. Zero-Order Correlations for Manager-Level Variables (Continued)

Variables	15	16	17	18	19	20	21
<i>Time 1</i>							
1. Interpersonal Conflict							
2. Nonphysical							
3. Physical Aggression							
4. Job Demands							
5. Work Speed &							
6. Time Pressure							
7. Job Satisfaction							
8. Turnover Intentions							
9. OCB							
10. FSSB - aggregated							
<i>Time 2</i>							
11. Interpersonal Conflict							
12. Nonphysical							
13. Physical Aggression							
14. Job Demands							
15. Work Speed &							
16. Time Pressure	.29**						
17. Job Satisfaction	-.02	-.24**					
18. Turnover Intentions	.02	.17*	-.67**				
19. OCB	.22**	-.00	.21**	-.19*			
20. FSSB - aggregated	.14	-.10	.23*	-.17 <sup>†</sup>	.12		
<i>Demographics</i>							
21. Gender	-.08	.09	-.03	.06	.04	.17 <sup>†</sup>	
22. Age	-.33**	-.03	.20*	-.20*	-.15 <sup>†</sup>	-.01	.11
23. Tenure as Manager	-.12	-.01	.07	-.16*	.09	.15	.08
24. Tenure in Organization	-.13	-.10	.07	-.16 <sup>†</sup>	-.01	.20*	.11
25. Education	.08	-.08	-.07	.16 <sup>†</sup>	-.07	.13	-.13 <sup>†</sup>
26. No. of Children	.12	.05	-.02	.15 <sup>†</sup>	.05	.13	-.11
27. Adult Care	-.01	.03	-.05	-.13	-.08	.10	.15*
28. Marital Status	-.08	-.09	-.06	.10	-.15	.06	-.05
29. Work Hours per Week	.11	.22**	-.03	-.01	-.13	.03	-.01
30. Condition	.08	.23**	-.14 <sup>†</sup>	.04	-.06	.04	-.14 <sup>†</sup>

Note. OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior; Gender (1 = male, 2 = female); Education (1 = Grade 1-8, 2 = Grade 9-11, 3 = Grade 12 or GED; 4 = College 1-3 years, 5 = College 4+ years); Condition (0 = control, 1 = treatment). *N* ranges from 97-184. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 3. Zero-Order Correlations for Manager-Level Variables (Continued)

Variables	22	23	24	25	26	27	28	29
<i>Time 1</i>								
1. Interpersonal Conflict								
2. Nonphysical								
3. Physical Aggression								
4. Job Demands								
5. Work Speed &								
6. Time Pressure								
7. Job Satisfaction								
8. Turnover Intentions								
9. OCB								
10. FSSB - aggregated								
<i>Time 2</i>								
11. Interpersonal Conflict								
12. Nonphysical								
13. Physical Aggression								
14. Job Demands								
15. Work Speed &								
16. Time Pressure								
17. Job Satisfaction								
18. Turnover Intentions								
19. OCB								
20. FSSB - aggregated								
<i>Demographics</i>								
21. Gender								
22. Age								
23. Tenure as Manager	.34**							
24. Tenure in	.32**	.68*						
25. Education	-.06	-.01	-.19*					
26. No. of Children	-.37**	-.14 <sup>†</sup>	-.11	.04				
27. Adult Care	.08	.03	-.03	.01	-.16*			
28. Marital Status	-.06	.03	-.03	-.03	-.01	.12		
29. Work Hours per	.03	.21**	.05	.12 <sup>†</sup>	.00	.10	-.05	
30. Condition	-.12	-.02	.01	-.11	.09	.00	-.04	.10

*Note.* OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior; Gender (1 = male, 2 = female); Education (1 = Grade 1-8, 2 = Grade 9-11, 3 = Grade 12 or GED; 4 = College 1-3 years, 5 = College 4+ years); Condition (0 = control, 1 = treatment). *N* ranges from 97-184. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 4. Zero-Order Correlations for Employee-Level Variables

Variables	1	2	3	4	5	6	7
<i>Time 1</i>							
1. Job Satisfaction							
2. FSSB - non-aggregated	.30**						
<i>Time 2</i>							
3. Job Satisfaction	.54**	.23**					
4. FSSB - non-aggregated	.16**	.52**	.27**				
<i>Demographics</i>							
5. Gender	.02	-.03	.02	-.03			
6. Age	.16**	-.02	.21**	.01	.05 <sup>†</sup>		
7. Tenure at Organization	.11**	-.00	.15**	.05	.04	.49**	
8. No. of Children at Home	.00	.03	-.00	.05	.08**	-.08**	-.01
9. Adult Care	.02	.01	.05 <sup>†</sup>	-.01	-.02	-.04	-.00
10. Marital Status	.06*	.06*	.06*	.07*	.07**	-.18**	-.15**
11. Education	-.13**	-.04	-.13**	-.01	-.10**	.00	-.06*
12. Work Hours per Week	.09**	.01	.10**	.05 <sup>†</sup>	-.06*	.07**	.11**
13. Condition	-.06*	-.02	-.03	.00	.04	-.05 <sup>†</sup>	-.01

*Note.* OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior; Gender (1 = male, 2 = female); Marital Status (0 = no partner, 1 = married or in romantic partnership); Adult Care (0 = do not care for an adult relative, 1 = care for an adult relative); Education (1 = Grade 1-8, 2 = Grade 9-11, 3 = Grade 12 or GED; 4 = College 1-3 years, 5 = College 4+ years); Condition (0 = control, 1 = treatment). *N* ranges from 1247-1524. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 4. Zero-Order Correlations for Employee-Level Variables (Continued)

Variables	8	9	10	11	12
<i>Time 1</i>					
1. Job Satisfaction					
2. FSSB - non-aggregated					
<i>Time 2</i>					
3. Job Satisfaction					
4. FSSB - non-aggregated					
<i>Demographics</i>					
5. Gender					
6. Age					
7. Tenure at Organization					
8. No. of Children at Home					
9. Adult Care	.00				
10. Marital Status	-.15**	-.04			
11. Education	-.09**	.01	-.08**		
12. Work Hours per Week	-.02	.03	.00	.08**	
13. Condition	-.03	-.05 <sup>†</sup>	.04	-.04	-.07*

*Note.* OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior; Gender (1 = *male*, 2 = *female*); Marital Status (0 = no partner, 1 = married or in romantic partnership); Adult Care (0 = do not care for an adult relative, 1 = care for an adult relative); Education (1 = *Grade 1-8*, 2 = *Grade 9-11*, 3 = *Grade 12 or GED*; 4 = *College 1-3 years*, 5 = *College 4+ years*); Condition (0 = *control*, 1 = *treatment*). *N* ranges from 1247-1524. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 5. Zero-Order Correlations for Manager-Level Change Variables

Variables	1	2	3	4	5	6	7
1. Δ Interpersonal Conflict							
2. Δ Nonphysical	.72**						
3. Δ Physical Aggression	.83**	.20*					
4. Δ Job Demands	-.01	-.12	.09				
5. Δ Work Speed &	-.01	-.12	.08	.86**			
6. Δ Time Pressure	-.01	-.07	.05	.72**	.26**		
7. Δ Job Satisfaction	.03	-.04	.08	-.10	-.03	-.14 <sup>†</sup>	
8. Δ Turnover Intentions	.11	.15 <sup>†</sup>	.04	.01	-.06	.10	-.34**
9. Δ OCB	.04	.01	.04	.14 <sup>†</sup>	.12	.09	-.10
10. Δ FSSB - aggregated	.04	.03	.03	-.06	-.01	-.10	.16
<i>Demographics</i>							
11. Gender	.09	.12	.03	-.01	-.08	.09	-.16 <sup>†</sup>
12. Age	-.05	.03	-.09	-.09	-.12	-.01	-.11
13. Tenure as Manager	.03	.12	-.06	-.19*	-.20*	-.09	-.14
14. Tenure in Organization	-.03	.05	-.09	-.29**	-.32**	-.12	-.09
15. Education	-.10	-.09	-.07	.09	.14	-.02	.03
16. No. of Children	.05	-.06	.11	.12	.14 <sup>†</sup>	.04	.10
17. Adult Care	-.05	.03	-.10	-.15 <sup>†</sup>	-.17*	-.04	-.10
18. Marital Status	.03	.08	-.02	-.12	-.18*	.02	.01
19. Work Hours per Week	.17*	.18*	.09	-.12	-.06	-.14 <sup>†</sup>	.02
20. Condition	.05	.03	.04	-.03	-.07	.03	.01

Note. OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior; Gender (1 = male, 2 = female); Education (1 = Grade 1-8, 2 = Grade 9-11, 3 = Grade 12 or GED; 4 = College 1-3 years, 5 = College 4+ years); Condition (0 = control, 1 = treatment). *N* ranges from 97-184. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 5. Zero-Order Correlations for Manager-Level Change Variables (Continued)

Variables	8	9	10	11	12	13	14
1. $\Delta$ Interpersonal Conflict							
2. $\Delta$ Nonphysical							
3. $\Delta$ Physical Aggression							
4. $\Delta$ Job Demands							
5. $\Delta$ Work Speed &							
6. $\Delta$ Time Pressure							
7. $\Delta$ Job Satisfaction							
8. $\Delta$ Turnover Intentions							
9. $\Delta$ OCB	-.01						
10. $\Delta$ FSSB - aggregated	-.05	-.16					
<i>Demographics</i>							
11. Gender	.11	.07	.03				
12. Age	.07	-.02	-.11	.11			
13. Tenure as Manager	.07	.13	.13	.08	.34**		
14. Tenure in Organization	.01	-.06	.18 <sup>†</sup>	.11	.32**	.68**	
15. Education	.05	.09	.02	-.13 <sup>†</sup>	-.06	-.01	-.19*
16. No. of Children	.16 <sup>†</sup>	-.02	.16 <sup>†</sup>	-.11	-.37**	-.14 <sup>†</sup>	-.11
17. Adult Care	-.02	-.07	-.02	.15*	.08	.03	-.03
18. Marital Status	.07	.04	.04	-.05	-.06	.03	-.03
19. Work Hours per Week	.09	-.03	.06	-.01	.03	.21**	.05
20. Condition	-.04	-.09	.06	-.14 <sup>†</sup>	-.12	-.02	.01

*Note.* OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior; Gender (1 = male, 2 = female); Education (1 = Grade 1-8, 2 = Grade 9-11, 3 = Grade 12 or GED; 4 = College 1-3 years, 5 = College 4+ years); Condition (0 = control, 1 = treatment). *N* ranges from 97-184. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 5. Zero-Order Correlations for Manager-Level Change Variables (Continued)

Variables	15	16	17	18	19
1. $\Delta$ Interpersonal Conflict					
2. $\Delta$ Nonphysical					
3. $\Delta$ Physical Aggression					
4. $\Delta$ Job Demands					
5. $\Delta$ Work Speed &					
6. $\Delta$ Time Pressure					
7. $\Delta$ Job Satisfaction					
8. $\Delta$ Turnover Intentions					
9. $\Delta$ OCB					
10. $\Delta$ FSSB - aggregated					
<i>Demographics</i>					
11. Gender					
12. Age					
13. Tenure as Manager					
14. Tenure in Organization					
15. Education					
16. No. of Children	.04				
17. Adult Care	.01	-.16*			
18. Marital Status	-.03	-.01	.12		
19. Work Hours per Week	.12 <sup>†</sup>	.00	.10	-.05	
20. Condition	-.11	.09	.00	-.04	.10

*Note.* OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior; Gender (1 = male, 2 = female); Education (1 = Grade 1-8, 2 = Grade 9-11, 3 = Grade 12 or GED; 4 = College 1-3 years, 5 = College 4+ years); Condition (0 = control, 1 = treatment). *N* ranges from 97-184. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .



Table 6. Zero-Order Correlations for Employee-Level Change Variables

Variables	1	2	3	4	5	6	7	8	9	10
1. $\Delta$ Job Satisfaction										
2. $\Delta$ FSSB - non-aggregated	.16**									
<i>Demographics</i>										
3. Gender	-.02	-.02								
4. Age	.04	.00	.05							
5. Tenure at Organization	.05 <sup>†</sup>	.04	.04	.49**						
6. No. of Children at Home	.01	-.00	.08**	-.08**	-.01					
7. Adult Care	-.00	-.01	-.02	-.04	-.00	.00				
8. Marital Status	.02	.03	-.07**	-.18**	-.15**	-.15**	-.04			
9. Education	-.02	.02	-.10**	.00	-.06*	-.09**	.01	-.08**		
10. Work Hours per Week	.03	.04	-.06*	.07**	.11**	-.02	.03	.00	.08**	
11. Condition	.03	.06 <sup>†</sup>	.02	-.05 <sup>†</sup>	-.01	-.03	-.05 <sup>†</sup>	.04	-.04	-.07*

Note. OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior; Gender (1 = male, 2 = female); Marital Status (0 = no partner, 1 = married or in romantic partnership); Adult Care (0 = do not care for an adult relative, 1 = care for an adult relative); Education (1 = Grade 1-8, 2 = Grade 9-11, 3 = Grade 12 or GED; 4 = College 1-3 years, 5 = College 4+ years); Condition (0 = control, 1 = treatment). *N* ranges from 1247-1524. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 7. Aggregation Indices for Managers Nested within Facilities

Variables	ICC(1)	ICC(2)	$r_{wg}$	Average Deviation (AD)
<i>Time 1</i>				
Interpersonal Conflict	.06	.26	.70	.57
Nonphysical Aggression	.00	.00	.68	.64
Physical Aggression	.08	.33	.33	.82
Job Demands	.07	.31	.80	.50
Work Speed & Difficulty	.03	.18	.75	.52
Time Pressure	.06	.30	.23	.99
Job Satisfaction	.08	.36	.86	.44
Turnover Intentions	.06	.28	.66	.67
OCB	.03	.16	.90	.36
FSSB - aggregated	.00	.00	.91	.31
<i>Time 2</i>				
Interpersonal Conflict	.12	.42	.72	.57
Nonphysical Aggression	.00	.00	.67	.63
Physical Aggression	.12	.42	.57	.74
Job Demands	.20	.56	.86	.40
Work Speed & Difficulty	.20	.57	.84	.43
Time Pressure	.08	.32	.50	.75
Job Satisfaction	.00	.00	.87	.43
Turnover Intentions	.04	.17	.69	.61
OCB	.12	.41	.89	.36
FSSB - aggregated	.06	.20	.93	.30

*Note.* ICC = intraclass correlation coefficient; ICC(1) = index of within-cluster reliability (Raudenbush & Bryk, 2002); ICC(2) = index of reliability of cluster means (Raudenbush & Bryk, 2002);  $r_{wg}$  = median of index of within-cluster agreement (James et al., 1984); Average Deviation (AD) = index of mean differences across clusters of individuals' values in relation to their cluster median (Burke & Dunlap, 2002), where the critical value is  $5/6 = .83$  is based upon the 5-point Likert-type response format used for measures in the present study; OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior.

Table 8. Aggregation Indices for Employees Nested within Facilities

Variables	ICC(1)	ICC(2)	$r_{wg}$	Average Deviation (AD)
<i>Time 1</i>				
Job Satisfaction	.02	.55	.81	.49
FSSB	.02	.56	.63	.65
<i>Time 2</i>				
Job Satisfaction	.02	.44	.79	.50
FSSB	.04	.61	.62	.65

*Note.* ICC = intraclass correlation coefficient; ICC(1) = index of within-cluster reliability (Raudenbush & Bryk, 2002); ICC(2) = index of reliability of cluster means (Raudenbush & Bryk, 2002);  $r_{wg}$  = median of index of within-cluster agreement (James, Demaree, & Wolf, 1984); Average Deviation (AD) = index of mean differences across clusters of individuals' values in relation to their cluster median (Burke & Dunlap, 2002), where the critical value is  $5/6 = .83$  is based upon the 5-point Likert-type response format used for measures in the present study; FSSB = family-supportive supervisor behavior.

Table 9. Aggregation Indices for Employees Nested within Managers

Variables	ICC(1)	ICC(2)	$r_{wg}$	Average Deviation (AD)
<i>Time 1</i>				
Job Satisfaction	.02	.18	.84	.44
FSSB	.09	.51	.69	.58
<i>Time 2</i>				
Job Satisfaction	.02	.18	.82	.46
FSSB	.10	.50	.74	.56

*Note.* ICC = intraclass correlation coefficient; ICC(1) = index of within-cluster reliability (Raudenbush & Bryk, 2002); ICC(2) = index of reliability of cluster means (Raudenbush & Bryk, 2002);  $r_{wg}$  = median of index of within-cluster agreement (James, Demaree, & Wolf, 1984); Average Deviation (AD) = index of mean differences across clusters of individuals' values in relation to their cluster median (Burke & Dunlap, 2002), where the critical value is  $5/6 = .83$  is based upon the 5-point Likert-type response format used for measures in the present study; FSSB = family-supportive supervisor behavior.

Table 10. Aggregation Indices for Manager Change Scores Nested within Facilities

Variables	ICC(1)	ICC(2)	$r_{wg}$	Average Deviation (AD)
Δ Interpersonal Conflict	.09	.34	.79	.50
Δ Nonphysical Aggression	.11	.39	.78	.49
Δ Physical Aggression	.07	.26	.61	.67
Δ Job Demands	.00	.00	.84	.43
Δ Work Speed & Difficulty	.00	.00	.80	.50
Δ Time Pressure	.06	.25	.50	.74
Δ Job Satisfaction	.20	.56	.94	.25
Δ Turnover Intentions	.00	.00	.81	.48
Δ OCB	.04	.18	.90	.33
Δ FSSB - aggregated	.00	.00	.94	.28

*Note.* ICC = intraclass correlation coefficient; ICC(1) = index of within-cluster reliability (Raudenbush & Bryk, 2002); ICC(2) = index of reliability of cluster means (Raudenbush & Bryk, 2002);  $r_{wg}$  = median of index of within-cluster agreement (James, Demaree, & Wolf, 1984); Average Deviation (AD) = index of mean differences across clusters of individuals' values in relation to their cluster median (Burke & Dunlap, 2002), where the critical value is  $5/6 = .83$  is based upon the 5-point Likert-type response format used for measures in the present study; OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior.

Table 11. Aggregation Indices for Employee Change Scores Nested within Facilities

Variables	ICC(1)	ICC(2)	$r_{wg}$	Average Deviation (AD)
$\Delta$ Job Satisfaction	.01	.39	.81	.46
$\Delta$ FSSB	.00	.10	.62	.61

*Note.* ICC = intraclass correlation coefficient; ICC(1) = index of within-cluster reliability (Raudenbush & Bryk, 2002); ICC(2) = index of reliability of cluster means (Raudenbush & Bryk, 2002);  $r_{wg}$  = median of index of within-cluster agreement (James, Demaree, & Wolf, 1984); Average Deviation (AD) = index of mean differences across clusters of individuals' values in relation to their cluster median (Burke & Dunlap, 2002), where the critical value is  $5/6 = .83$  is based upon the 5-point Likert-type response format used for measures in the present study; FSSB = family-supportive supervisor behavior.

Table 12. Aggregation Indices for Employee Change Scores Nested within Managers

Variables	ICC(1)	ICC(2)	$r_{wg}$	Average Deviation (AD)
$\Delta$ Job Satisfaction	.00	.00	.83	.43
$\Delta$ FSSB	.02	.18	.72	.55

*Note.* ICC = intraclass correlation coefficient; ICC(1) = index of within-cluster reliability (Raudenbush & Bryk, 2002); ICC(2) = index of reliability of cluster means (Raudenbush & Bryk, 2002);  $r_{wg}$  = median of index of within-cluster agreement (James, Demaree, & Wolf, 1984); Average Deviation (AD) = index of mean differences across clusters of individuals' values in relation to their cluster median (Burke & Dunlap, 2002), where the critical value is  $5/6 = .83$  is based upon the 5-point Likert-type response format used for measures in the present study; FSSB = family-supportive supervisor behavior.

Table 13. Pooled Within-Facility and Between-Facility Correlations for Manager-Level Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
<i>Time 1</i>												
1. Interpersonal Conflict		.03	.08	-.27	.14	.07	.56**	.36 <sup>†</sup>	-.09	-.05	.59**	.18
2. Job Demands	.31**		-.34 <sup>†</sup>	.15	.27	-.12	.38*	.72**	-.46*	.31 <sup>†</sup>	.08	.15
3. Job Satisfaction	-.05	-.12		-.46*	.12	.25	-.05	-.42*	.44*	-.40*	.36 <sup>†</sup>	.10
4. Turnover Intentions	-.01	-.01	-.58**		-.08	.06	-.26	.21	-.25	.62**	-.36 <sup>†</sup>	-.03
5. OCB	.20*	.09	.22**	-.07		-.05	-.01	.27	-.09	.07	.59**	.08
6. FSSB - aggregated	.05	.00	.02	-.07	-.03		-.13	-.07	.21	-.14	.09	.67**
<i>Time 2</i>												
7. Interpersonal Conflict	.62**	.19*	-.03	-.02	.12	-.04		.62**	-.28	.07	.42*	.20
8. Job Demands	.24**	.51**	.01	.10	.12	-.07	.15 <sup>†</sup>		-.50*	.34 <sup>†</sup>	.30	.20
9. Job Satisfaction	-.08	-.03	.68**	-.43**	.14 <sup>†</sup>	.06	-.06	-.03		-.69**	.15	.23
10. Turnover Intentions	.04	-.01	-.49**	.56**	-.09	-.08	.11	.02	-.67**		-.28	-.27
11. OCB	.12	.01	.27**	-.05	.51**	.06	.18*	.07	.24**	-.17*		.21
12. FSSB - aggregated	.07	.05	.07	.01	.15	.52**	-.06	-.01	.22*	-.07	.18 <sup>†</sup>	
<i>Demographics</i>												
13. Gender	.00	.11	-.02	.00	.01	.13	.07	.01	-.07	.13	.00	.10
14. Age	-.05	-.02	.30**	-.29**	-.11	.08	-.02	-.06	.11	-.09	-.15 <sup>†</sup>	-.04
15. Tenure as Manager	.03	.14 <sup>†</sup>	.20*	-.25**	-.08	.01	.12	-.03	.04	-.13	.11	.17 <sup>†</sup>
16. Tenure in Organization	.06	.14 <sup>†</sup>	.19*	-.24**	.01	-.02	.09	-.14 <sup>†</sup>	.00	-.10	-.02	.19*
17. Education	-.02	.02	-.14 <sup>†</sup>	.07	-.15 <sup>†</sup>	.12	-.03	.13	-.20*	.22*	-.07	.10
18. No. of Children	.01	-.13 <sup>†</sup>	-.07	.07	.10	-.02	-.01	-.01	.04	.10	.06	.17 <sup>†</sup>
19. Adult Care	-.07	-.10	.13 <sup>†</sup>	-.05	.00	-.13	.02	-.11	.05	.10	.09	-.12
20. Marital Status	.11	-.01	-.00	.06	-.11	-.02	-.10	-.10	-.10	-.10	-.10	.02
21. Condition	-	-	-	-	-	-	-	-	-	-	-	-

Note. Between-facility correlations are located in the upper diagonal and pooled within-facility correlations are located in the lower diagonal. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .



Table 13. Pooled Within-Facility and Between-Facility Correlations for Manager-Level Variables (Continued)

Variables	13	14	15	16	17	18	19	20	21
<i>Time 1</i>									
1. Interpersonal Conflict	.13	-.10	-.09	-.12	.12	.11	.05	-.31	.09
2. Job Demands	-.11	-.58**	-.41*	-.16	-.11	.52**	-.14	.02	.30 <sup>†</sup>
3. Job Satisfaction	.46*	.46*	.47*	.29	-.05	-.52**	-.13	.05	-.35 <sup>†</sup>
4. Turnover Intentions	-.42*	-.29	-.28	-.12	.16	.26	.17	.00	.10
5. OCB	.15	-.06	.02	.03	-.11	-.14	.01	-.43*	.06
6. FSSB - aggregated	.12	-.02	-.05	.21	.05	-.22	.14	-.01	-.07
<i>Time 2</i>									
7. Interpersonal Conflict	.07	-.40*	-.14	-.16	-.12	.34 <sup>†</sup>	.02	-.23	.18
8. Job Demands	-.12	-.67**	-.34 <sup>†</sup>	-.18	-.20	.52**	.06	-.25	.39*
9. Job Satisfaction	.26	.50*	.33 <sup>†</sup>	.40*	.37 <sup>†</sup>	-.43*	.07	.04	-.39*
10. Turnover Intentions	-.37*	-.43*	-.46*	-.44*	.00	.41*	.12	.03	.10
11. OCB	.35 <sup>†</sup>	-.05	.12	.10	-.04	-.25	-.11	-.50*	-.08
12. FSSB - aggregated	.21	-.04	-.04	.18	.12	-.01	.14	.06	.10
<i>Demographics</i>									
13. Gender		.26	.43*	.31 <sup>†</sup>	-.14	-.09	-.33 <sup>†</sup>	.00	-.33 <sup>†</sup>
14. Age	.08		.48*	.29	.26	-.64**	.09	.04	-.25
15. Tenure as Manager	.03	.33**		.77**	-.13	-.39*	-.20	-.02	-.08
16. Tenure in Organization	.07	.33**	.68**		-.03	-.24	-.15	-.01	.02
17. Education	-.13 <sup>†</sup>	-.15*	.01	-.23**		-.03	.12	-.18	-.21
18. No. of Children	-.11	-.32**	-.11	-.08	.05		.15	.12	.26
19. Adult Care	-.11	-.12 <sup>†</sup>	.00	.07	-.04	.16*		-.13	-.01
20. Marital Status	-.06	-.08	.04	-.03	.01	-.03	-.12**		.13
21. Condition	-	-	-	-	-	-	-	-	-

Note. Between-facility correlations are located in the upper diagonal and pooled within-facility correlations are located in the lower diagonal. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 14. Pooled Within-Manager and Between-Manager Correlations for Employee-Level Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Job Satisfaction		.32**	.62**	.16 <sup>†</sup>	.14 <sup>†</sup>	.25**	.24**	-.16 <sup>†</sup>	.16 <sup>†</sup>	.28**	-.08	-.20*
2. FSSB - non-aggregated	.30**		.28**	.67**	.07	.21*	.19*	-.01	.09	.07	.00	-.05
3. Job Satisfaction	.52**	.22**		.29**	.05	.20*	.20*	-.13	.20*	.24*	-.04	-.10
4. FSSB - non-aggregated	.16**	.48**	.27**		.08	.10	.10	-.01	.13	-.02	.13	.03
5. Gender	.00	-.04 <sup>†</sup>	.01	-.04		.14	.19*	.16 <sup>†</sup>	-.15 <sup>†</sup>	.19*	-.08	.13
6. Age	.15**	-.07*	.20**	.00	.04		.57**	-.14 <sup>†</sup>	.02	.10	.18*	-.12
7. Tenure at Organization	.09**	-.04 <sup>†</sup>	.13**	.03	.01	.47**		.06	-.02	.08	.04	-.05
8. No. of Children at Home	.02	.04	.01	.05 <sup>†</sup>	.07*	-.07*	-.02		-.15 <sup>†</sup>	.04	-.18*	-.11
9. Adult Care	.01	.00	.03	-.02	.00	-.05 <sup>†</sup>	.00	.02		.17 <sup>†</sup>	.08	-.16 <sup>†</sup>
10. Marital Status	.04	.06*	.03	.08**	.05*	.05 <sup>†</sup>	.08**	.12**	.04		.12	-.14 <sup>†</sup>
11. Education	-.14**	-.05 <sup>†</sup>	-.14**	-.04	-.10**	-.03	-.07**	-.08**	.00	.06*		-.10
12. Condition	-	-	-	-	-	-	-	-	-	-	-	-

Note. Between-facility correlations are located in the upper diagonal and pooled within-facility correlations are located in the lower diagonal. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 15. Dissertation Hypotheses

Number	Hypothesis	Supported?
1(a)	Managers' job satisfaction ( $t_1$ ) will be positively associated with their subsequent OCB ( $t_2$ ).	<i>Yes, full support</i>
1(b)	Managers' job satisfaction ( $t_1$ ) will be positively associated with subsequent employee reports of their FSSB ( $t_2$ ).	<i>No, not supported</i>
1(c)	Managers' job satisfaction ( $t_1$ ) will be negatively associated with their subsequent turnover intentions ( $t_2$ ).	<i>Yes, full support</i>
2	From $t_1$ to $t_2$ , managers' job satisfaction change will negatively relate to their turnover intentions change, such that increases in job satisfaction will be associated with decreases in turnover intentions.	<i>Yes, full support</i>
3(a)	From $t_1$ to $t_2$ , managers' job satisfaction change will positively relate to their OCB change, such that increases in job satisfaction will be associated with increases in OCB.	<i>No, not supported</i>
3(b)	From $t_1$ to $t_2$ , managers' job satisfaction change will positively relate to employee reports of their FSSB change, such that increases in job satisfaction will be associated with increases in FSSB.	<i>Marginal (<math>p \leq .10</math>) support</i>
4	From $t_1$ to $t_2$ , managers' changes in negative work events (i.e., job demands, interpersonal conflict) will moderate the negative relation between their job satisfaction change and turnover intentions change, such that increases in job satisfaction will be more strongly and negatively associated with changes in turnover intentions when decreases in negative work events occur.	<i>Partial, mixed support:</i> Changes in job demands as the moderator: Significant and marginally significant interactions were found depending upon whether all or some of the job demands items were used; however, the form of these interactions were unexpected. Specifically, downshifts in turnover intentions were largest for those who experienced concurrent increases in job demands and job satisfaction. Changes in interpersonal conflict as the moderator: In relation to turnover intentions change, no significant interactions were found between changes in various forms of interpersonal conflict and job satisfaction change.
5(a)	From $t_1$ to $t_2$ , managers' changes in negative work events (i.e., job demands, interpersonal conflict) will moderate the positive relation between their job satisfaction change and OCB change, such that increases in job satisfaction will be more strongly	<i>Partial, mixed support:</i> Changes in job demands as the moderator: In relation to OCB change, no significant interactions were

	related to changes in OCB when decreases in negative work events occur.	found between changes in job demands, regardless of whether all or some of the job demands items were used Changes in interpersonal conflict as the moderator: A significant interaction was found only when interpersonal conflict was operationalized as nonphysical aggression; however, the form of this interaction was unexpected. Specifically, OCB increased when individuals experienced concurrent decreases in nonphysical aggression and job satisfaction.
5(b)	From $t_1$ to $t_2$ , managers' changes in negative work events (i.e., job demands, interpersonal conflict) will moderate the positive relation between their job satisfaction change and change in employee reports of their FSSB, such that increases in job satisfaction will be more strongly related to changes in FSSB when decreases in negative work events occur.	<i>Partial support:</i> Changes in job demands as the moderator: A significant interaction was found when job demands were operationalized as work speed and difficulty, and a marginally significant interaction was found when a general job demands composite measure was used; however, when job demands were operationalized as time pressure, the interaction was nonsignificant. Of the (marginally) significant interactions, their form was as hypothesized. Specifically, an increase in FSSB occurred when job demands decreased and job satisfaction increased concurrently. Changes in interpersonal conflict as the moderator: In relation to FSSB change, no significant interactions were found between changes in various forms of interpersonal conflict and job satisfaction change.
6	Managers' level of job satisfaction ( $t_1$ ) will positively correlate with their employees' subsequent level of job satisfaction ( $t_2$ ).	<i>No, not supported</i>
7(a)	Managers' levels of OCB ( $t_2$ ) will mediate the effect of their level of job satisfaction ( $t_1$ ) on their	<i>No, not supported</i>

	employees' level of job satisfaction ( $t_2$ ), such that managers' job satisfaction will positively correlate with their OCB, and managers' OCB will positively correlate with employees' job satisfaction.	
7(b)	Managers' levels of FSSB ( $t_2$ ) will mediate the effect of their level of job satisfaction ( $t_1$ ) on their employees' level of job satisfaction ( $t_2$ ), such that managers' job satisfaction will positively correlate with their FSSB, and managers' FSSB will positively correlate with employees' job satisfaction.	<i>No, not supported</i>
8	From $t_1$ to $t_2$ , managers' job satisfaction change will positively correlate with their employees' job satisfaction change.	<i>Marginal (<math>p \leq .10</math>)</i>
9(a)	From $t_1$ to $t_2$ , managers' OCB change will mediate the effect of their job satisfaction change on their employee's job satisfaction change, such that increases in managers' job satisfaction will lead to increases in managers' OCB, and ultimately increases in their employees' job satisfaction.	<i>No, not supported</i>
9(b)	From $t_1$ to $t_2$ , managers' FSSB change will mediate the effect of their job satisfaction change on their employee's job satisfaction change, such that increases in managers' job satisfaction will lead to increases in managers' FSSB, and ultimately increases in their employees' job satisfaction.	<i>No, not supported</i>

*Note.* OCB = organizational citizenship behavior; FSSB = family-supportive supervisor behavior;  $t_1$  = Time 1;  $t_2$  = Time 2.

Table 16. Hypothesis 1: Multilevel SEM for Job Satisfaction in Relation to Focal

## Outcomes

Parameter	Hypothesis 1a: OCB ( $t_2$ )		Hypothesis 1b: FSSB ( $t_2$ )		Hypothesis 1c: TI ( $t_2$ )	
	Estimate	SE	Estimate	SE	Estimate	SE
Between Level						
Intercept	-.67	6.56	9.30	134.54	.63	8.66
Residual Variance	.01	.02	.01	.04	.01	.06
Condition	.13	.27	-.24	6.80	.11	.37
Job Satisfaction ( $t_1$ )	1.06	1.45	-1.24	29.74	.26	1.92
Within Level						
Residual Variance	.24**	.03	.18**	.03	.63**	.08
Job Satisfaction ( $t_1$ )	.30**	.08	.09	.08	-.88**	.13

*Note.* TI = turnover intentions; OCB = organizational citizenship behavior, FSSB = employee reports of manager's family-supportive supervisor behavior;  $t_1$  = Time 1;  $t_2$  = Time 2. For Hypothesis 1a, an additional model was tested using manager age as a control based on significant zero-order correlation with TI. For Hypothesis 1b, no additional model with controls was tested as no zero-order correlations were significant with respect to control variables and OCB. For Hypothesis 1c, an additional model was tested using organizational tenure as a control based on significant zero-order correlation with FSSB.

*N* ranges from 117-154. †  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 17. Hypotheses 2 and 3: Multilevel SEM for Change in Job Satisfaction in Relation to Change in Focal Outcomes

Parameter	Hypothesis 2: $\Delta$ TI		Hypothesis 3a: $\Delta$ OCB		Hypothesis 3b: $\Delta$ FSSB	
	Estimate	SE	Estimate	SE	Estimate	SE
<b>Between Level</b>						
Intercept	.08	.30	-.12	.38	-.11	.47
Residual Variance	.00	.05	.00	.02	.00	.02
Condition	-.17	.82	.08	1.09	.02	.71
Mean Job Satisfaction ( $t_1$ - $t_2$ )	-.67	4.85	.99	6.52	.05	4.46
Change in Job Satisfaction	-.60	1.16	-.07	1.60	-.06	.30
<b>Within Level</b>						
Residual Variance	.58**	.07	.22**	.03	.16**	.03
Mean Job Satisfaction ( $t_1$ - $t_2$ )	-.23 <sup>†</sup>	.12	.16*	.08	.05	.08
Change in Job Satisfaction	-.61**	.16	-.07	.10	.23 <sup>†</sup>	.12

Note.  $\Delta$ TI = change in turnover intentions;  $\Delta$ OCB = change in organizational citizenship behavior,  $\Delta$ FSSB = change in employee reports of manager's family-supportive supervisor behavior;  $t_1$  = Time 1;  $t_2$  = Time 2. Based on zero-order correlations, none of the potential control variables were significantly related to changes in turnover intentions; as such, no additional models with control variables were tested.  $N$  ranges from 94-154. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 18. Hypothesis 4: Multilevel SEM for Job Satisfaction Change in Relation to Turnover Intentions Change with Job Demands Change as a Moderator

Parameter	Original 3-item JD Measure as Moderator		Reduced 2-item Work Speed & Difficulty JD Measure as Moderator		Reduced 1-item Time Pressure JD Measure as Moderator	
	Estimate	SE	Estimate	SE	Estimate	SE
<b>Between Level</b>						
Intercept	.17	.23	.06	.42	.25	.26
Residual Variance	.00	.06	.00	.06	.00	.06
Condition	-.09	.59	-.08	.93	-.32	.34
Mean Job Satisfaction ( $t_1 - t_2$ )	-.34	5.54	-.33	5.41	-.42	5.01
Mean JD ( $t_1 - t_2$ )	.18	1.79	-.02	1.64	.35	1.47
Change in Job Satisfaction	-.45	1.68	-.71	1.96	-.21	1.98
Change in JD	.77	1.71	.47	3.61	.46	.93
Interaction: Change in Job Satisfaction X Change in JD	.94	3.84	1.05	5.30	.46	2.00
<b>Within Level</b>						
Residual Variance	.54**	.07	.55**	.07	.55**	.07
Mean Job Satisfaction ( $t_1 - t_2$ )	-.23 <sup>†</sup>	.12	-.21 <sup>†</sup>	.12	-.22 <sup>†</sup>	.13
Mean JD ( $t_1 - t_2$ )	-.11	.11	-.15	.12	.01	.07
Change in Job Satisfaction	-.84**	.16	-.70**	.16	-.64**	.16
Change in JD	-.09	.10	-.14	.09	.01	.07
Interaction: Change in Job Satisfaction X Change in JD	-.53*	.22	-.37 <sup>†</sup>	.21	-.30*	.14

Note. JD = job demands;  $t_1$  = Time 1;  $t_2$  = Time 2. Based on zero-order correlations, none of the potential control variables were significantly related to changes in turnover intentions; as such, no additional models with control variables were tested.

$N = 154$ . <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .



Table 19. Hypothesis 4: Multilevel SEM for Job Satisfaction Change in Relation to

Turnover Intentions Change with Interpersonal Conflict Change as a Moderator

Parameter	Original 2-item IC Measure as Moderator		1-item Nonphysical Aggression IC Measure as Moderator		1-item Physical Aggression IC Measure as Moderator	
	Estimate	SE	Estimate	SE	Estimate	SE
<b>Between Level</b>						
Intercept	.11	4.97	.16	.47	.09	5.47
Residual Variance	.00	.07	.00	.05	.00	.07
Condition	-.14	10.96	-.21	.98	-.12	12.48
Mean Job Satisfaction ( $t_1 - t_2$ )	-.47	62.76	-.58	6.25	-.49	74.31
Mean IC ( $t_1 - t_2$ )	.35	14.76	.51	5.25	.25	4.60
Change in Job Satisfaction	-.19	16.17	-.34	3.51	-.19	17.50
Change in IC	.02	13.21	.08	.86	.05	18.48
Interaction: Change in Job Satisfaction X Change in IC	.85	47.22	.44	7.95	.65	23.01
<b>Within Level</b>						
Residual Variance	.54**	.05	.55**	.07	.55**	.05
Mean Job Satisfaction ( $t_1 - t_2$ )	-.22	.24	-.19	.12	-.23	.28
Mean IC ( $t_1 - t_2$ )	.14	.11	.13	.09	.07	.11
Change in Job Satisfaction	-.60*	.26	-.61**	.15	-.57*	.28
Change in IC	.17	.16	.15 <sup>†</sup>	.08	.08	.11
Interaction: Change in Job Satisfaction X Change in IC	-.09	.29	-.20	.16	.07	.16

Note. IC = interpersonal conflict;  $t_1$  = Time 1;  $t_2$  = Time 2. Based on zero-order correlations, none of the potential control variables were significantly related to changes in turnover intentions; as such, no additional models with control variables were tested.  $N = 154$ . <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 20. Hypothesis 5a: Multilevel SEM for Job Satisfaction Change in Relation to

OCB Change with Job Demands Change as a Moderator

Parameter	Original 3-item JD Measure as Moderator		Reduced 2-item Work Speed & Difficulty JD Measure as Moderator		Reduced 1-item Time Pressure JD Measure as Moderator	
	Estimate	SE	Estimate	SE	Estimate	SE
<b>Between Level</b>						
Intercept	-.02	.21	-.16	.35	.06	.22
Residual Variance	.00	.03	.00	.02	.00	.03
Condition	.08	.32	.20	.73	-.11	.34
Mean Job Satisfaction ( $t_1 - t_2$ )	.74	4.19	1.03	7.10	-.44	3.50
Mean JD ( $t_1 - t_2$ )	.17	1.40	.10	2.60	.17	1.07
Change in Job Satisfaction	-.03	1.33	-.30	3.34	.07	1.48
Change in JD	.66	1.54	.50	5.93	.39	.67
Interaction: Change in Job Satisfaction X Change in JD	1.53	2.02	1.53	5.34	.99	1.00
<b>Within Level</b>						
Residual Variance	.21**	.03	.21**	.03	.22**	.03
Mean Job Satisfaction ( $t_1 - t_2$ )	.16*	.08	.17*	.08	.15 <sup>†</sup>	.08
Mean JD ( $t_1 - t_2$ )	.07	.06	-.09	.07	-.01	.04
Change in Job Satisfaction	-.09	.10	-.10	.10	-.07	.10
Change in JD	.07	.06	.06	.06	.03	.04
Interaction: Change in Job Satisfaction X Change in JD	-.06	.07	-.14	.13	.05	.09

Note. JD = job demands;  $t_1$  = Time 1;  $t_2$  = Time 2. Based on zero-order correlations, none of the potential control variables were significantly related to changes in OCB; as such, models with additional control variables were not tested.

$N = 154$ . <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 21. Hypothesis 5a: Multilevel SEM for Job Satisfaction Change in Relation to

## OCB Change with Interpersonal Conflict Change as a Moderator

Parameter	Original 2-item IC Measure as Moderator		1-item Nonphysical Aggression IC Measure as Moderator		1-item Physical Aggression IC Measure as Moderator	
	Estimate	SE	Estimate	SE	Estimate	SE
<b>Between Level</b>						
Intercept	-.03	.22	-.04	.34	-.04	.24
Residual Variance	.00	.03	.00	.03	.00	.02
Condition	-.08	.49	-.06	.69	-.07	.53
Mean Job Satisfaction ( $t_1 - t_2$ )	.41	2.86	.66	3.59	.37	3.09
Mean IC ( $t_1 - t_2$ )	.57	.46	.91	1.32	.34	.29
Change in Job Satisfaction	.11	.72	.32	.90	.05	.77
Change in IC	-.06	.63	-.06	.54	-.03	.84
Interaction: Change in Job Satisfaction X Change in IC	-.42	2.10	.04	4.79	-.14	1.77
<b>Within Level</b>						
Residual Variance	.21**	.03	.21**	.03	.21**	.03
Mean Job Satisfaction ( $t_1 - t_2$ )	.17*	.08	.15*	.08	.16*	.08
Mean IC ( $t_1 - t_2$ )	.06	.06	.04	.05	.04	.04
Change in Job Satisfaction	-.03	.10	-.01	.10	-.06	.10
Change in IC	.05	.06	.01	.05	.04	.04
Interaction: Change in Job Satisfaction X Change in IC	.18	.12	.22*	.10	.04	.07

Note. IC = interpersonal conflict;  $t_1$  = Time 1;  $t_2$  = Time 2. Based on zero-order correlations, none of the potential control variables were significantly related to changes OCB; as such, no additional models with control variables were tested.

$N = 154$ . †  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 22. Hypothesis 5b: Multilevel SEM for Job Satisfaction Change in Relation to

FSSB Change with Job Demands Change as a Moderator

Parameter	Original 3-item JD Measure as Moderator		Reduced 2-item Work Speed & Difficulty JD Measure as Moderator		Reduced 1-item Time Pressure JD Measure as Moderator	
	Estimate	SE	Estimate	SE	Estimate	SE
<b>Between Level</b>						
Intercept	-.10	.40	-.08	.74	-.13	.40
Residual Variance	.00	.04	.00	.03	.00	.04
Condition	.06	.70	.07	.83	.05	.52
Mean Job Satisfaction ( $t_1 - t_2$ )	.26	3.97	.33	4.65	.21	3.92
Mean JD ( $t_1 - t_2$ )	.15	1.41	.05	1.45	-.03	1.21
Change in Job Satisfaction	.13	.76	-.00	1.61	-.06	.70
Change in JD	-.31	1.84	-.27	3.07	-.24	.91
Interaction: Change in Job Satisfaction X Change in JD	.56	5.17	1.45	3.62	-.17	3.65
<b>Within Level</b>						
Residual Variance	.14**	.02	.14**	.02	.15**	.03
Mean Job Satisfaction ( $t_1 - t_2$ )	.05	.08	.03	.08	.09	.09
Mean JD ( $t_1 - t_2$ )	.09	.07	.06	.08	.03	.05
Change in Job Satisfaction	.21 <sup>†</sup>	.13	.25*	.12	.19	.13
Change in JD	-.01	.08	.01	.07	-.04	.05
Interaction: Change in Job Satisfaction X Change in JD	-.32 <sup>†</sup>	.17	-.39*	.18	-.12	.09

Note. JD = job demands;  $t_1$  = Time 1;  $t_2$  = Time 2. Based on zero-order correlations, none of the potential control variables were significantly related to changes in FSSB; as such, no additional models with control variables were tested.

$N = 97$ . <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 23. Hypothesis 5b: Multilevel SEM for Job Satisfaction Change in Relation to

FSSB Change with Interpersonal Conflict Change as a Moderator

Parameter	Original 2-item IC Measure as Moderator		1-item Nonphysical Aggression IC Measure as Moderator		1-item Physical Aggression IC Measure as Moderator	
	Estimate	SE	Estimate	SE	Estimate	SE
<b>Between Level</b>						
Intercept	-.13	.40	-.11	.33	-.10	.46
Residual Variance	.00	.03	.00	.03	.00	.02
Condition	.03	.41	.02	.62	.02	.56
Mean Job Satisfaction ( $t_1 - t_2$ )	.15	3.86	.09	3.51	.03	4.23
Mean IC ( $t_1 - t_2$ )	.10	1.69	.03	2.58	-.01	.49
Change in Job Satisfaction	-.14	.29	-.06	.52	-.17	.60
Change in IC	.09	1.06	.09	.57	-.02	.73
Interaction: Change in Job Satisfaction X Change in IC	-.73	2.67	-.30	1.18	-.44	3.12
<b>Within Level</b>						
Residual Variance	.15**	.02	.15**	.02	.15**	.02
Mean Job Satisfaction ( $t_1 - t_2$ )	.05	.08	.05	.08	.07	.09
Mean IC ( $t_1 - t_2$ )	.04	.06	.05	.06	.00	.04
Change in Job Satisfaction	.31*	.13	.24 <sup>†</sup>	.12	.30*	.13
Change in IC	.00	.07	-.01	.06	.03	.05
Interaction: Change in Job Satisfaction X Change in IC	.15	.15	-.02	.11	.15	.10

Note. IC = interpersonal conflict;  $t_1$  = Time 1;  $t_2$  = Time 2. Based on zero-order correlations, none of the potential control variables were significantly related to changes in FSSB; as such, no additional models with control variables were tested.  $N = 97$ . <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 24. Hypotheses 6 and 7: Multilevel SEM for Manager Job Satisfaction in relation to Employee Job Satisfaction

Parameter	Hypothesis 6:		Hypothesis 7a: 2-2-1 Mediation		Hypothesis 7b: 2-2-1 Mediation	
	Estimate	SE	Estimate	SE	Estimate	SE
Within Level						
Variance	.43**	.03	.43**	.03	.43**	.03
Between Level						
Intercepts:						
Emp. Job Sat. ( $t_2$ )	4.10**	.18	4.37**	.31	3.54**	.26
Mgr. OCB ( $t_2$ )			3.10**	.49		
Mgr. FSSB ( $t_2$ )					3.34**	.36
Residual Variances:						
Emp. Job Sat. ( $t_2$ )	.01	.01	.00	.01	.00	.01
Mgr. OCB ( $t_2$ )			.23**	.03		
Mgr. FSSB ( $t_2$ )					.19**	.03
Mgr. OCB ( $t_2$ ) on:						
Condition			-.03	.10		
Mgr. Job Sat. ( $t_1$ ) [Path a]			.23*	.10		
Mgr. FSSB ( $t_2$ ) on:						
Condition					.05	.08
Mgr. Job Sat. ( $t_1$ ) [Path a]					.08	.08
Emp. Job Sat. ( $t_2$ ) on:						
Condition	-.02	.04	-.02	.04	-.03	.04
Mgr. OCB ( $t_2$ ) [Path b]			-.09	.07		
Mgr. FSSB ( $t_2$ ) [Path b]					.19**	.07
Mgr. Job Sat. ( $t_1$ )	.01	.04	.04	.04	-.02	.04
Indirect Effect			-.02 <sup>a</sup>	.02	.02 <sup>a</sup>	.02

Note. TI = turnover intentions; OCB = organizational citizenship behavior, FSSB = employee reports of manager's family-supportive supervisor behavior;  $t_1$  = Time 1;  $t_2$  = Time 2. Manager  $N$  ranges from 117-154. Employee  $N$  ranges from 914-1,278.

<sup>a</sup> 95% confidence interval based on parametric bootstrap (10,000 repetitions) included zero. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Table 25. Hypotheses 8 and 9: Multilevel SEM for Manager Job Satisfaction Change in

## Relation to Employee Job Satisfaction Change

Parameter	Hypothesis 8:		Hypothesis 9a: 2-2-1 Mediation		Hypothesis 9b: 2-2-1 Mediation	
	Estimate	SE	Estimate	SE	Estimate	SE
Within Level						
Variance	.37**	.02	.37**	.02	.37**	.02
Between Level						
Intercepts:						
Δ Emp. Job Sat.	-.06 <sup>†</sup>	.04	-.07*	.04	-.07*	.04
Δ Mgr. OCB			.03	.05		
Δ Mgr. FSSB					-.01	.06
Residual Variances:						
Δ Emp. Job Sat.	.00	.01	.00	.01	.00	.01
Δ Mgr. OCB			.20**	.03		
Δ Mgr. FSSB					.16**	.03
Δ Mgr. OCB on:						
Condition			-.07	.09		
Δ Mgr. Job Sat. [Path a]			.15	.11		
Δ Mgr. FSSB on:						
Condition					.02	.08
Δ Mgr. Job Sat. [Path a]					.15	.11
Δ Emp. Job Sat. on:						
Condition	.02	.04	.02	.04	.02	.04
Δ Mgr. OCB [Path b]			-.01	.06		
Δ Mgr. FSSB [Path b]					.04	.06
Δ Mgr. Job Sat.	.09 <sup>†</sup>	.05	.09	.05	.08 <sup>†</sup>	.05
Indirect Effect			.00 <sup>a</sup>	.01	.01 <sup>a</sup>	.01

Note. TI = turnover intentions; OCB = organizational citizenship behavior, FSSB = employee reports of manager's family-supportive supervisor behavior. Manager *N* ranges from 117-154. Employee *N* ranges from 914-1,278.

<sup>a</sup> 95% confidence interval based on parametric bootstrap (10,000 repetitions) included zero. <sup>†</sup>  $p \leq .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

Figures

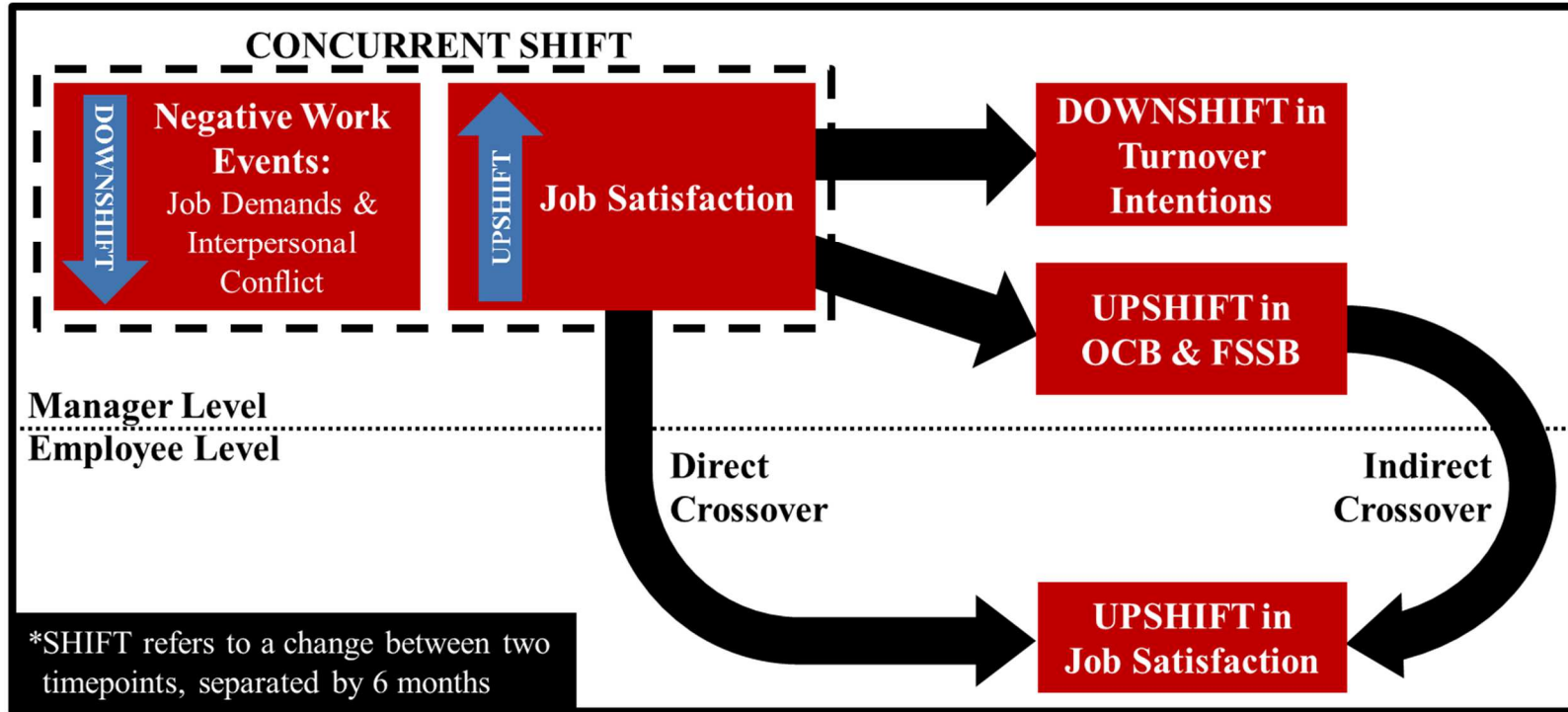


Figure 1. Conceptual Model



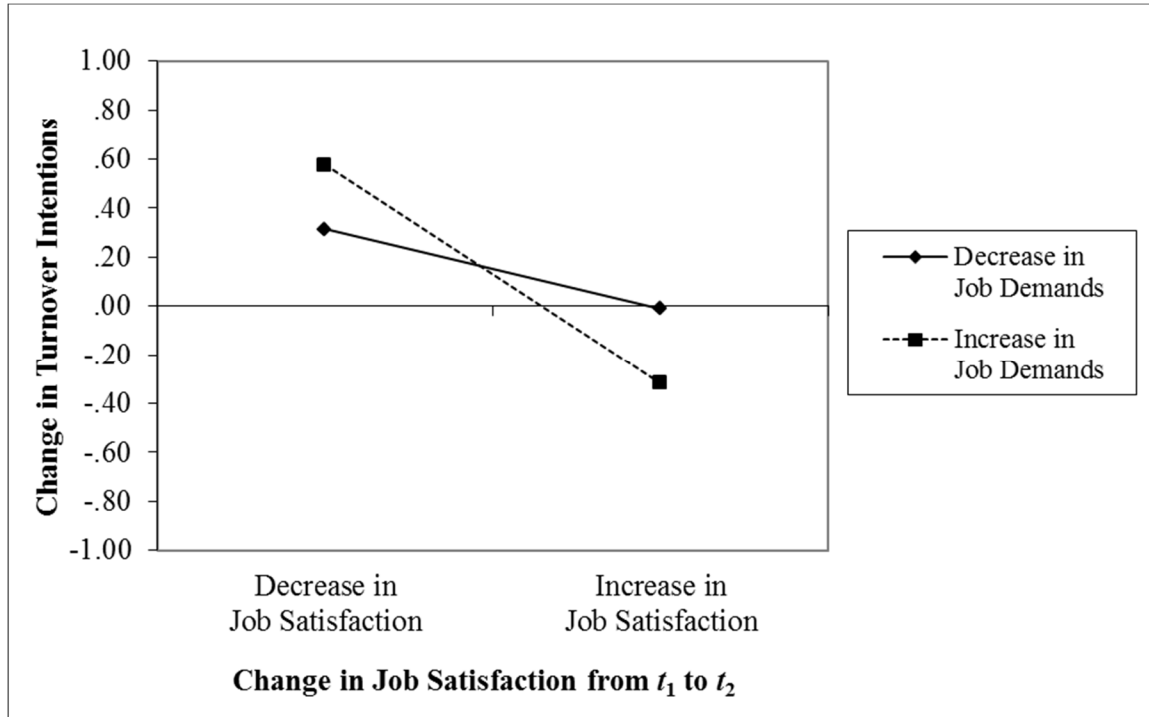


Figure 2. Hypothesis 4a: Job Demands Change as a Moderator

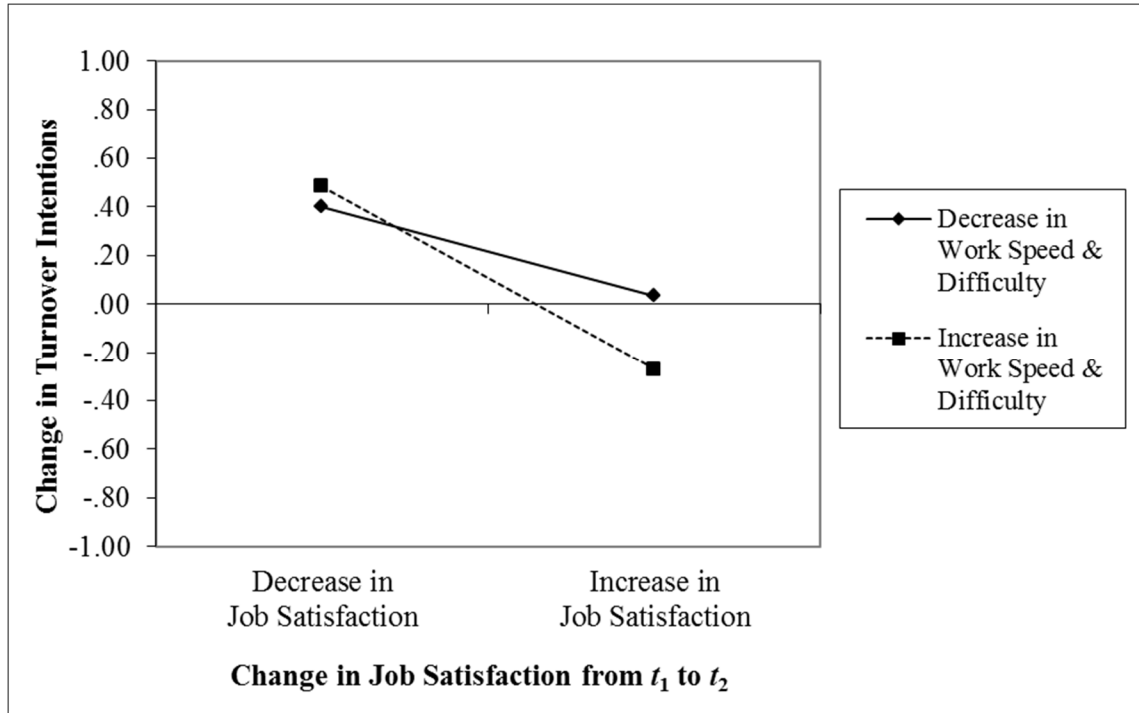


Figure 3. Hypothesis 4a: Work Speed and Difficulty Change as a Moderator

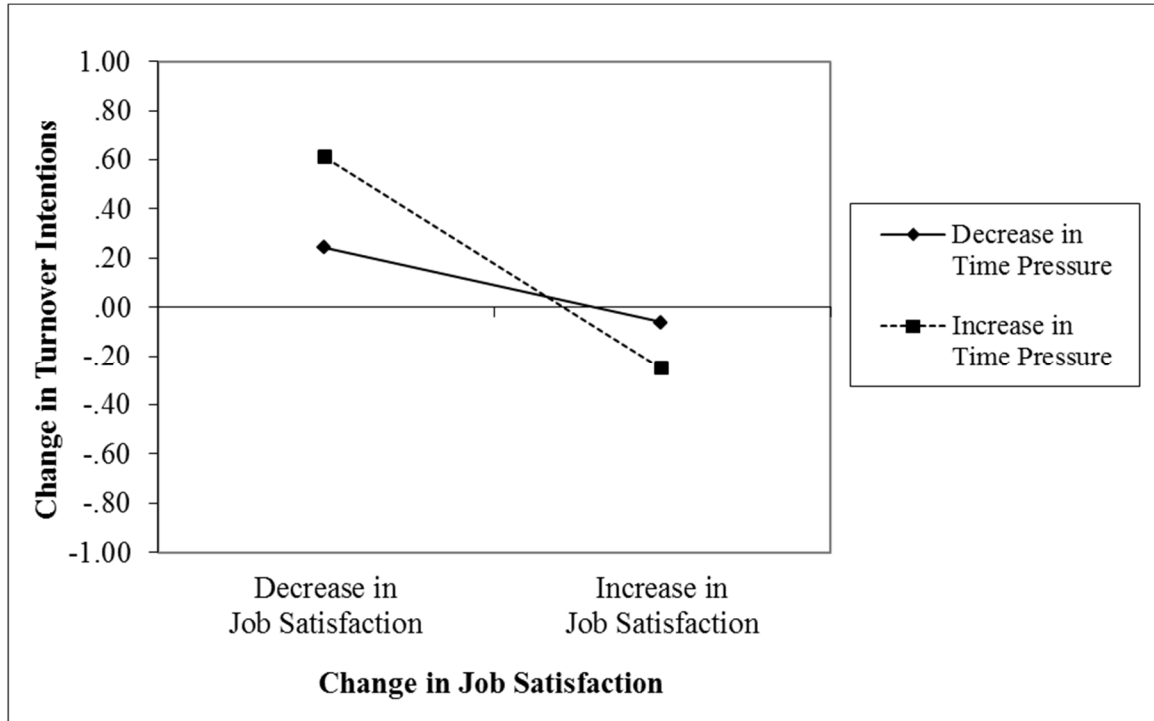


Figure 4. Hypothesis 4a: Time Pressure Change as a Moderator

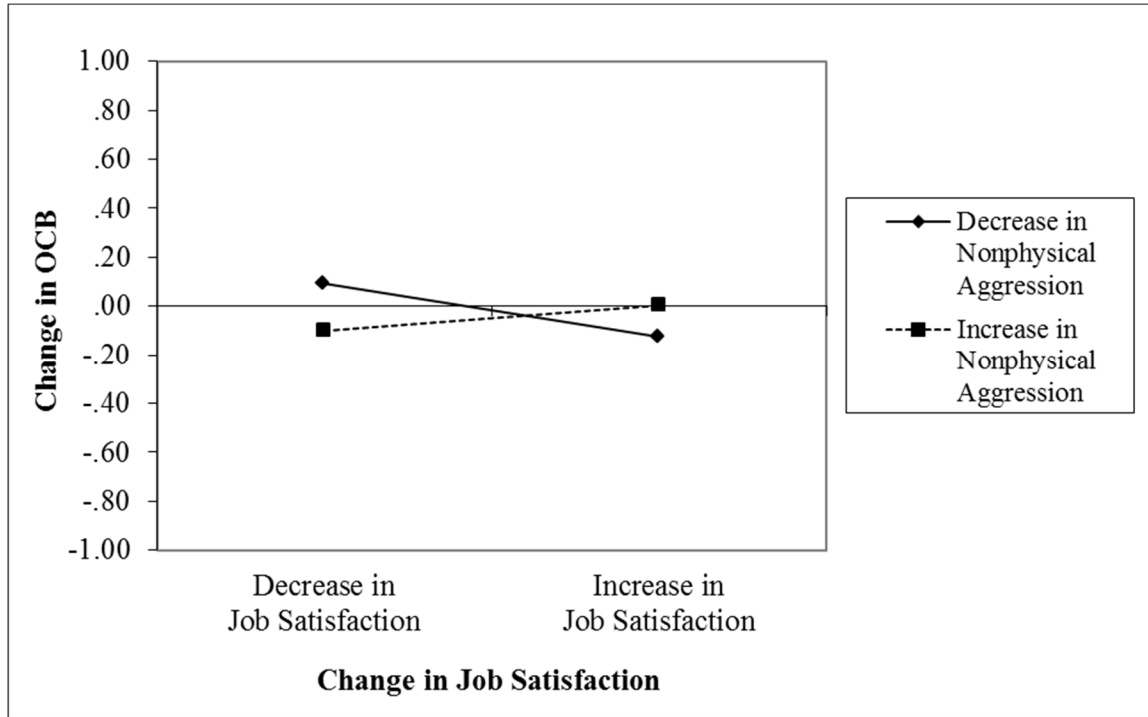


Figure 5. Hypothesis 5a: Nonphysical Aggression Change as a Moderator

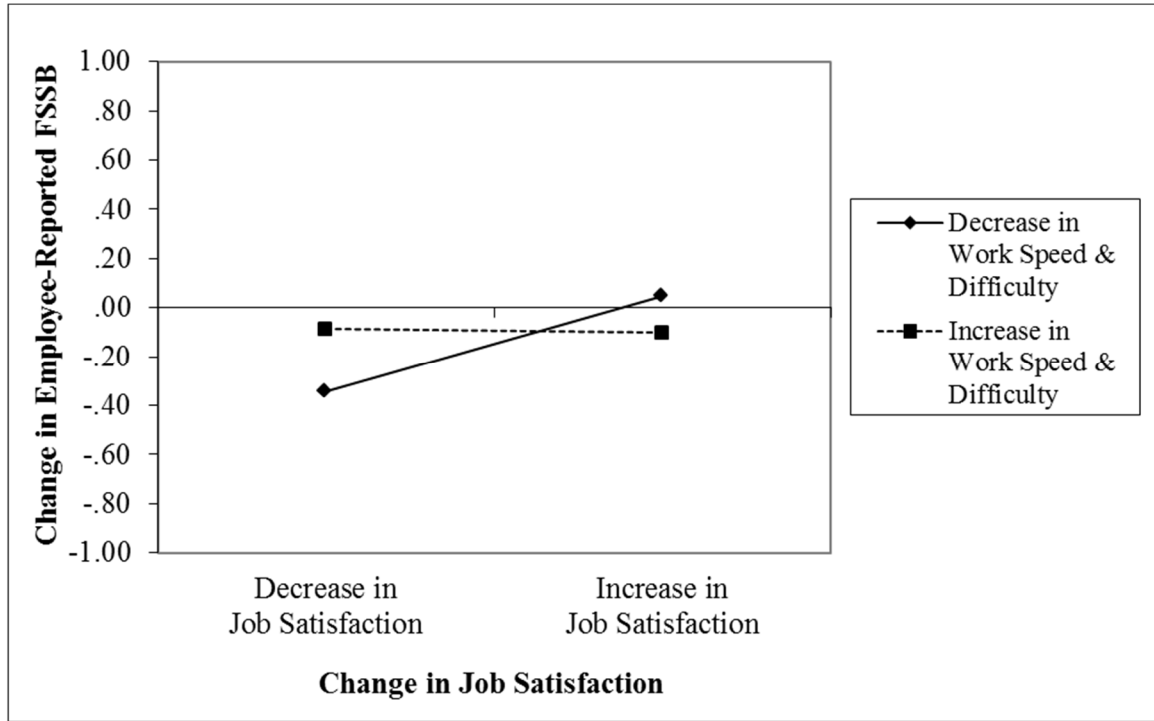


Figure 6. Hypothesis 5b: Work Speed and Difficulty Change as a Moderator

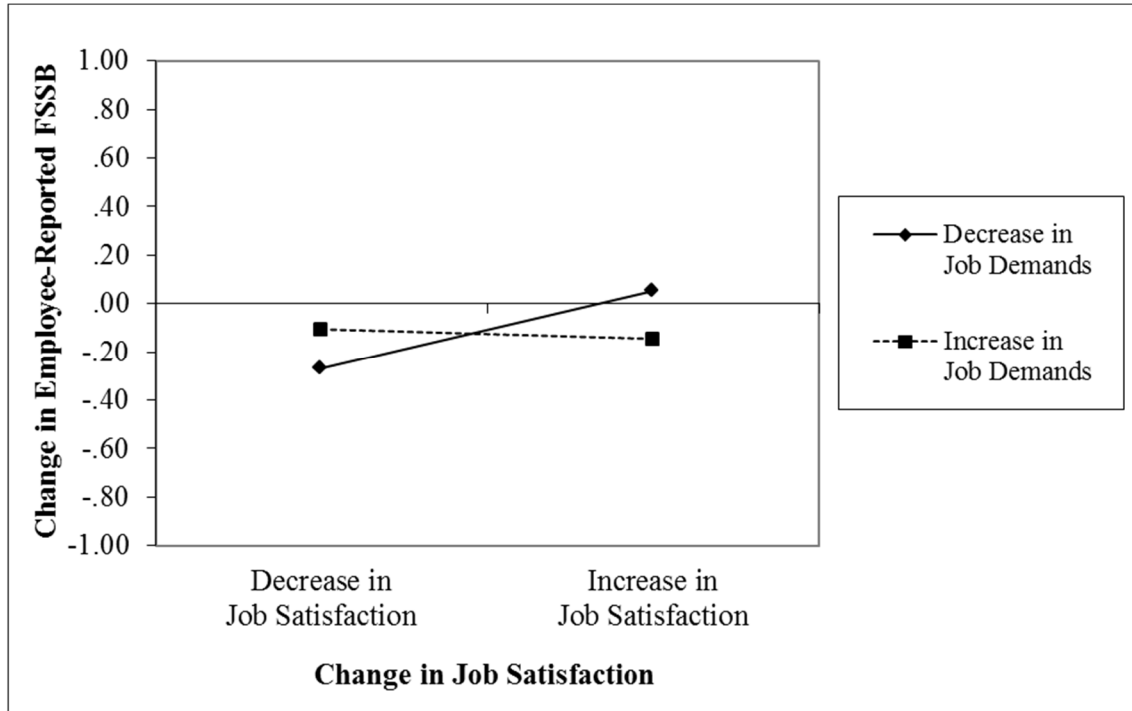


Figure 7. Hypothesis 5b: Job Demands Change as a Moderator

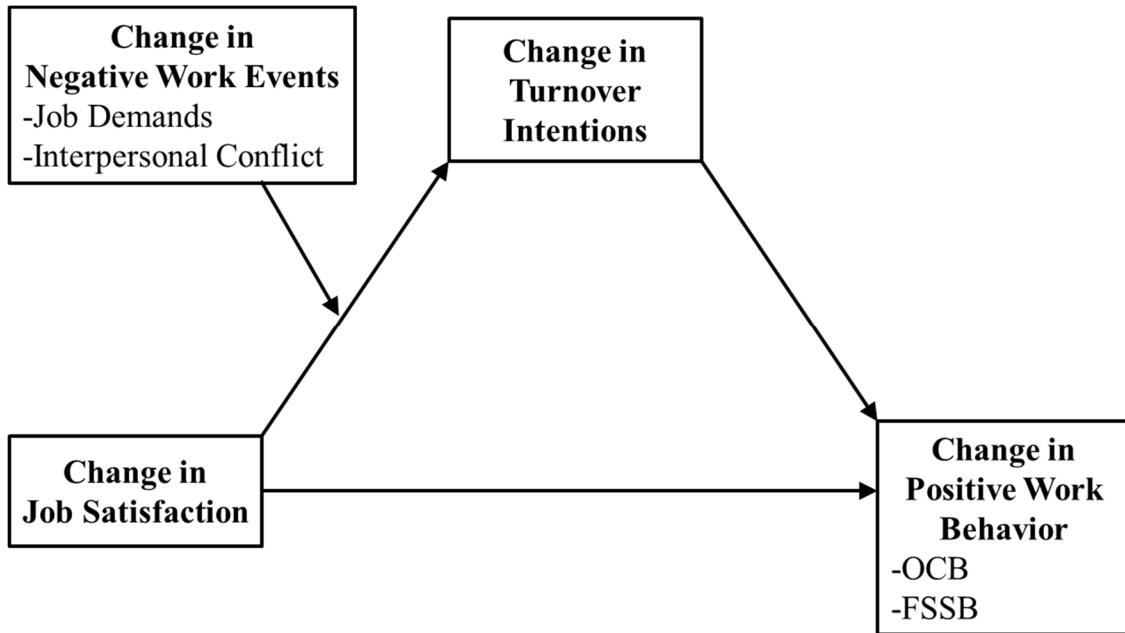


Figure 8. Conceptual Diagram of the Mediated-Moderation Model

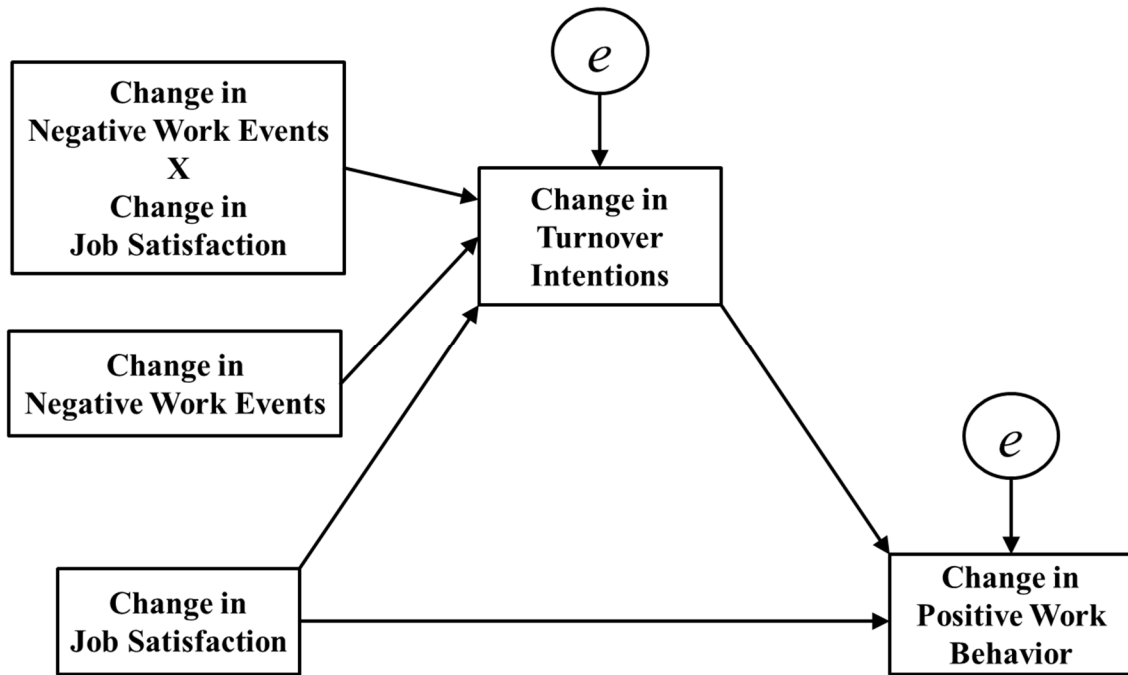


Figure 9. Single-Level Path Analysis of the Mediated-Moderation Model



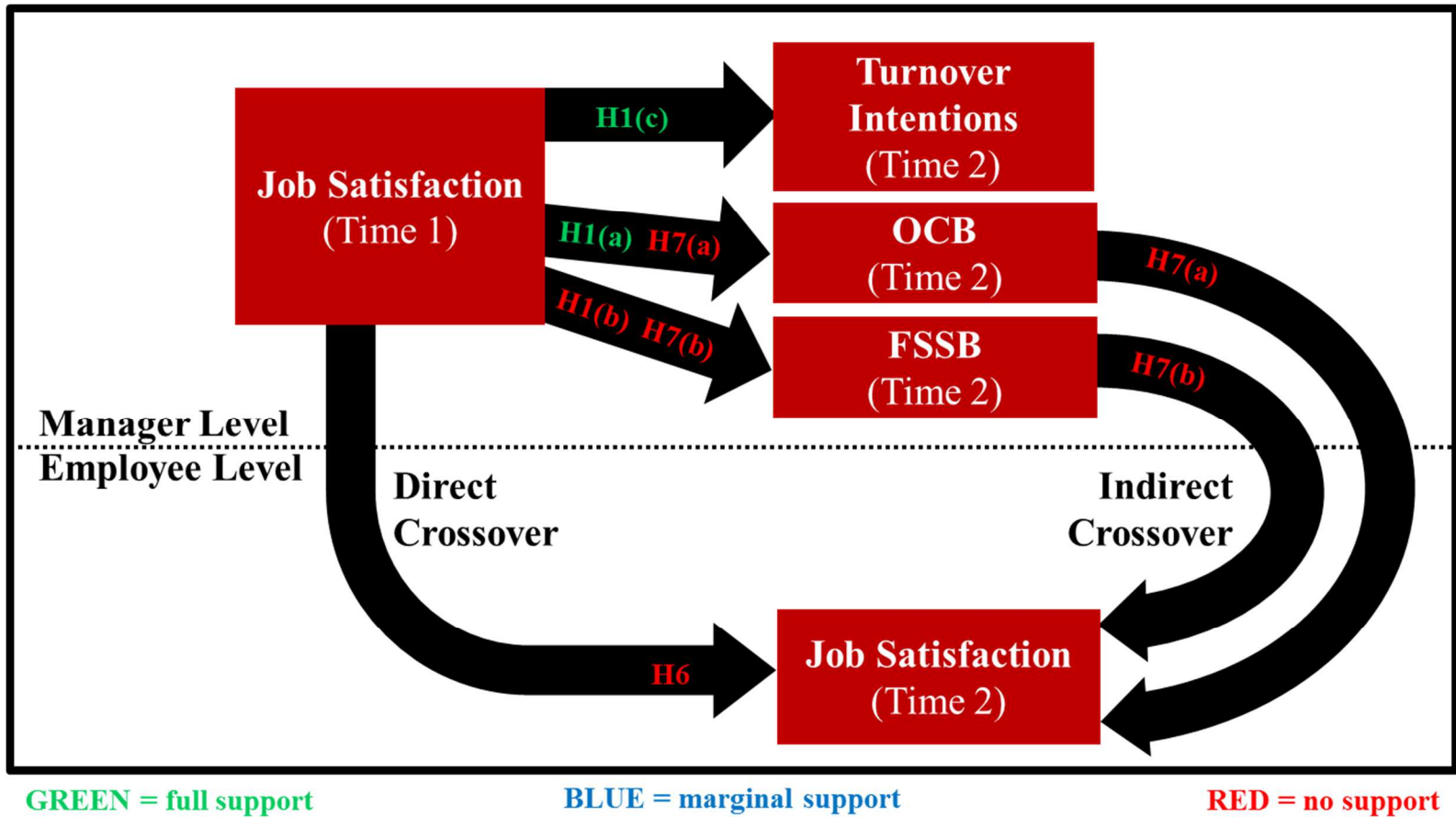


Figure 10. Graphical Depiction of Hypotheses Involving Static Operationalizations of Job Satisfaction

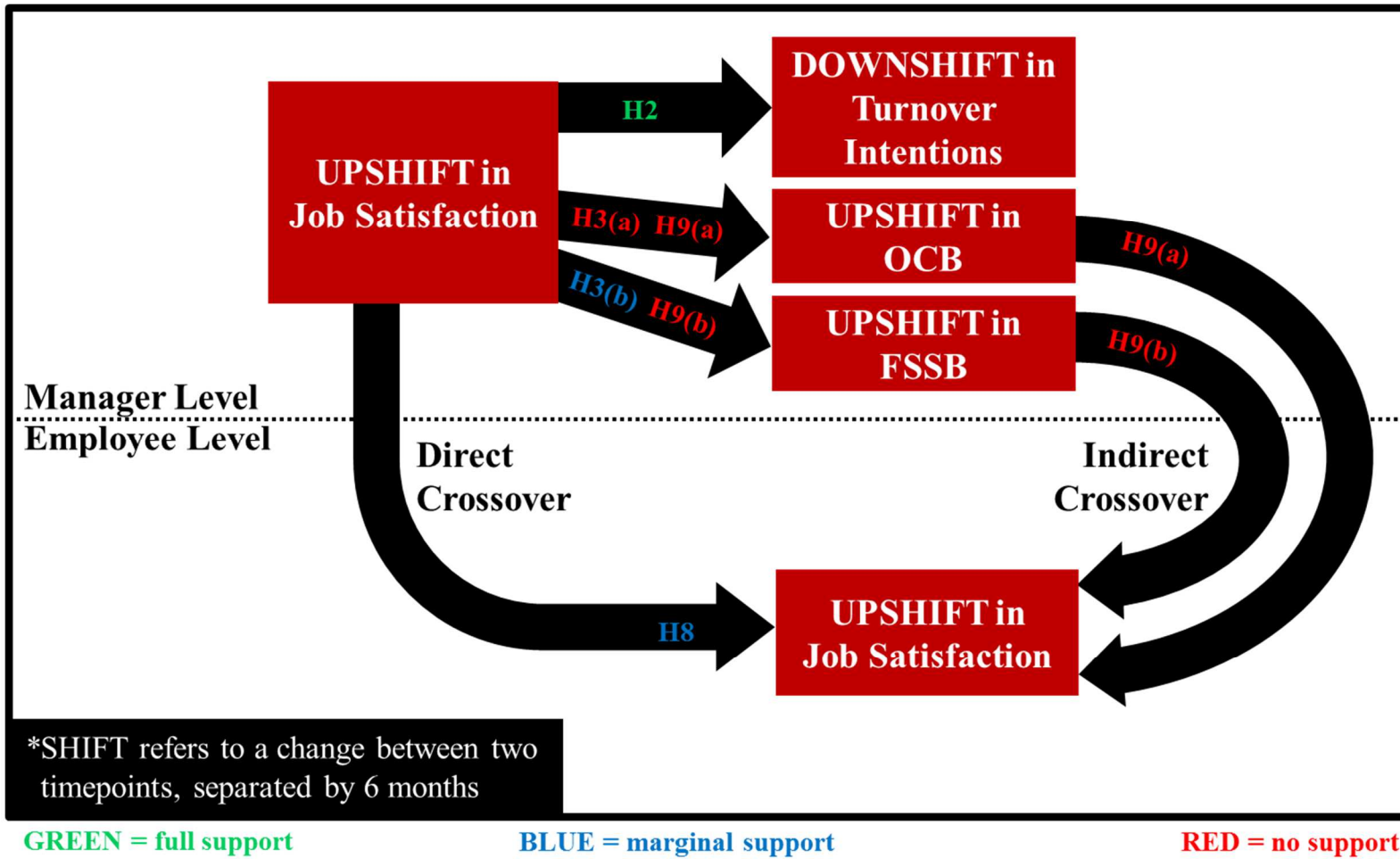


Figure 11. Graphical Depiction of Hypotheses Involving Dynamic Operationalizations of Job Satisfaction

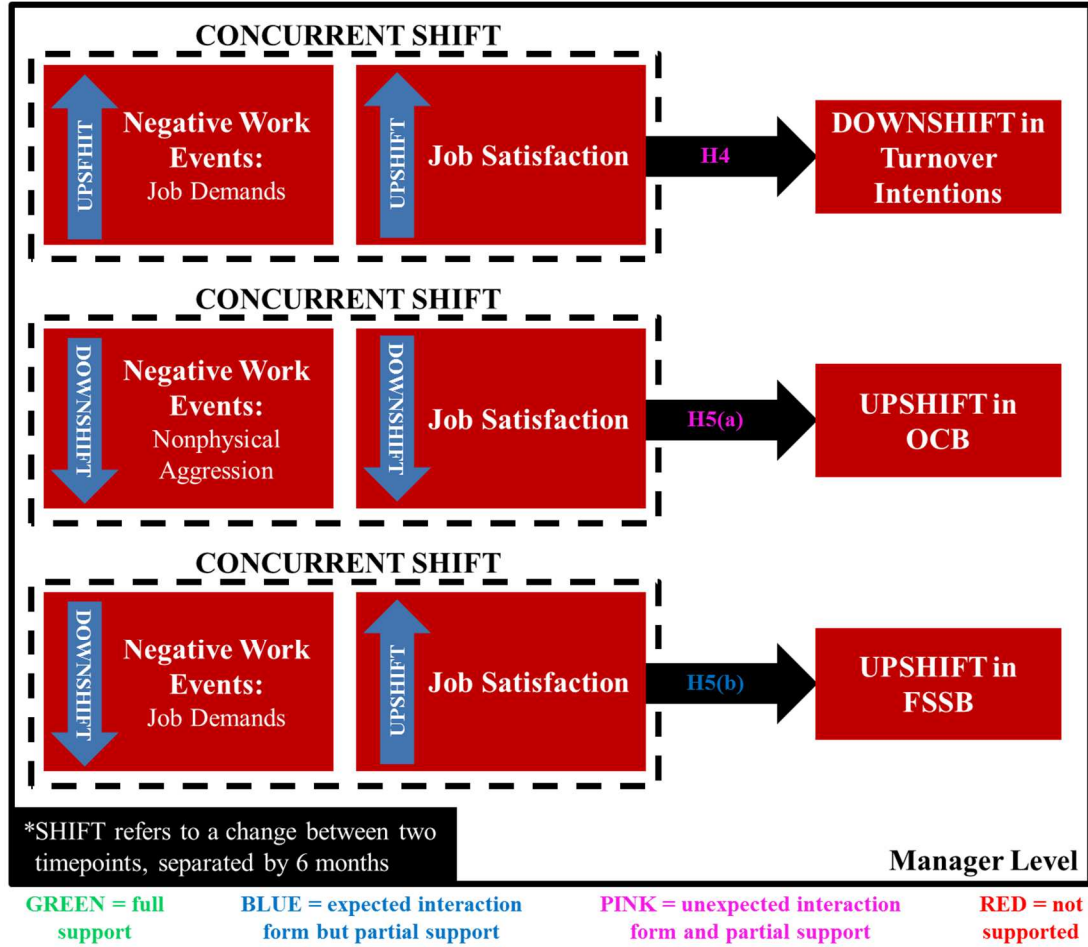


Figure 12. Graphical Depiction of Hypotheses Involving Dynamic Shift Interactions

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## Appendices

### Appendix A: Brief History of Job Attitudes

Attitudes have long been a focus among social science scholars. An *attitude* may be defined generally as an individual's evaluation of a perceived object, framed in terms of a pleasant-unpleasant continuum (Ajzen & Fishbein, 2000; Eagly & Chaiken, 1993). Both affect and cognition have been conceived as proximal antecedents of attitude formation (for a review, see Ajzen & Fishbein, 2000), although it must be noted that affect and cognition are conceptually distinct but operationally intertwined (Adolphs & Damasio, 2001). The object towards which an attitude is directed may include any number of entities in the perceived world, and the evaluation of these objects is driven by the individual's affective and cognitive experiences. In the organizational sciences, scholars narrow the parameters of attitudes to include evaluations of objects existing within the scope of organizations—or *job attitudes*—which may be defined as “evaluations of one's job that express one's feeling toward, beliefs about, and attachment to one's job” (Judge & Kammeyer-Mueller, 2012, p. 344).

Initial interest in job attitudes stemmed in part from a series of studies conducted at the Hawthorne plant of the Western Electric Company from 1924 to 1933 (i.e., the Hawthorne Studies; Roethlisberger & Dickson, 1939). With intentions to investigate the effects of the physical work environment (e.g., lighting, workday length) and rewards (e.g., incentive pay) on workers' productivity, researchers concluded that, at times, regardless of the experimental manipulation condition (e.g., dark vs. light), workers'

productivity levels improved. Follow-up interviews and examination of workers' diaries led the researchers to address the role of increased supervisor attention on worker productivity. That is, the researchers suspected that workers' attitudes towards their supervisors influenced worker productivity. With that said, in subsequent years, re-analysis and re-interpretation of the data has yielded alternative explanations and critiques (e.g., Carey, 1967; Landsberger, 1958; Parsons, 1974). Nonetheless, the Hawthorne Studies drew attention towards job attitudes and spurred organizational scholars' interest towards this area of study.

Over the years, job satisfaction emerged as a predominant job attitude among organizational scholars. Over the past century, research on job satisfaction has proliferated. For instance, in one of the first rigorous studies on job satisfaction, Hoppock (1935) found that individual differences and job-related factors influenced job satisfaction. As an indicator of growing scholarly interest, a little more than two decades later, Herzberg et al. (1957) referenced 1,795 papers on the topic of job satisfaction. As the number of empirical studies grew, so too did theories aimed at understanding and explaining job satisfaction and its nomological network. From 1950 to 1970, new job satisfaction theories emerged—most notably Maslow's need hierarchy theory (Maslow, 1954, 1970) and Herzberg's motivator-hygiene (i.e., two-factor) theory (Herzberg, 1966; Herzberg et al., 1959).

Yet, as the number of job satisfaction studies and theories flourished, Locke (1969) noted that, based on prior research and theory, the causes of job satisfaction remained ambiguous. In response, Locke discussed the theoretical link between affect

(e.g., emotion) and evaluation. It was his contention that “cognition (sensation, perception, conception) enables [the individual] to discover what exists, but it does not tell him [or her] what action(s) to take with respect to this knowledge” (p. 314), and only through evaluation can an individual decide how to act. Locke suggested that an individual forms an evaluation of a job through a process of (a) perceiving an aspect of a job, (b) recalling his/her values, and (c) judging the discrepancy between the perceived aspect of a job and his/her values. Ultimately, this evaluative process drives an individual to select an action plan. Thus, according to Locke, affect relates to this process of evaluation in the following manner: Affective reactions (e.g., pleasure, displeasure) result from the process of judging an aspect of the job relative to personal values. Accordingly, Locke defined job satisfaction as “the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating the achievement of one’s job values” (p. 316). That is, his definition of job satisfaction implies both affective (e.g., emotional state) and cognitive (e.g., appraisal) components.

**Dimensionality.** While some have conceptualized the construct as comprising the distinct dimensions of job satisfaction and job dissatisfaction (e.g., Herzberg, 1966), prevailing research and theory popularly conceptualizes job satisfaction along a single dimension with high job satisfaction on one end of the continuum and high job dissatisfaction the other end. As such, I adopt the latter conceptualization for the purposes of this dissertation, as it also reflects operationalization used in some of the most widely used and validated job satisfaction measures, such as: Job Descriptive Index (Balzer et al., 1990; P. C. Smith et al., 1969), Minnesota Satisfaction Questionnaire (D. J. Weiss,



Dawis, England, & Lofquist, 1967), Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale (Cammann et al., 1983).

**Affect versus attitudes.** During the second half of the 20<sup>th</sup> century, scholars like Locke (1969) and Cranny et al. (1992) described job satisfaction as a type of job-specific affect (e.g., affective reaction, emotional response), while others like Brief (1998) referred to job satisfaction as a type of attitude. More recently, H. M. Weiss (2002) argued that, although affect and attitudes share a conceptual relationship, they are in fact distinct constructs. To this end, he proposed that job satisfaction should be referred to as an attitude, as is consistent with a tripartite view of attitudes wherein an attitude consists of (a) affective responses to an object, (b) beliefs about an object, and (c) behavior related to an object. This view of job satisfaction as an attitude is exemplified by affective events theory (H. M. Weiss & Cropanzano, 1996) in that the theory teases apart the unique roles of the work environment, work events, affective reactions, attitudes, and behavior. Of particular importance to this dissertation, affective events theory also suggests that job satisfaction (as well as other job attitudes) is malleable. That is, in response to work events and a changing work environment, job satisfaction fluctuates over time.

### **Appendix B: Review of the Antecedents and Correlates of Job Satisfaction**

While job satisfaction represents one of the most studied constructs in industrial and organizational psychology (Spector, 1997), the job satisfaction literature has received numerous critiques over recent years due to its atheoretical nature. For example, in their meta-analytic investigation of the construct validity of a well-known job analysis measure (i.e., Job Descriptive Index; P. C. Smith et al., 1969), Kinicki et al. (2002) noted that assessing the measure's construct validity was made difficult due to the lack of theory development surrounding job satisfaction, despite numerous investigations of job satisfaction in the extant literature. Consequently, Kinicki and colleagues called for a comprehensive job satisfaction theory and tests of propositions associated with previously published theories. Despite a single, well-established underlying theory, the nomological network surrounding this often-studied construct has mushroomed since its conception, which I review in the following paragraphs.

**Antecedents of job satisfaction.** Multiple theories and models exist that frame job satisfaction as an outcome to various antecedents. These antecedents can be classified according to the following categories, though this list is not intended to be comprehensive: work characteristics, workplace stressors, individual differences, leadership, and group and organizational characteristics.

**Work characteristics.** With regard to perceived work characteristics, the job characteristics model (Hackman & Oldham, 1975, 1976) posits that workers who perceive higher levels of job-related skill variety, task significance, task identity, autonomy, and feedback will experience greater job satisfaction via the critical

psychological states of perceived meaningfulness, responsibility, and knowledge of the results. In support, meta-analytic evidence demonstrates moderate-to-large-in-magnitude relations between these five core job characteristics and job satisfaction (Humphrey et al., 2007; Kinicki et al., 2002). That is, workers who perceive higher on-the-job skill variety, task significance, task identity, autonomy, and feedback tend to experience a higher degree of satisfaction with their respective jobs. Thus, (re)designing jobs to elicit these five core job characteristics may improve workers' job satisfaction.

**Workplace stressors.** In addition to core characteristics of a job itself, other aspects of work and the work environment, including interactions with colleagues have been demonstrated to influence workers' experienced job satisfaction. Specifically and in line with affective events theory (H. M. Weiss & Cropanzano, 1996), workplace stressors (e.g., work events) represent a critical antecedent of job satisfaction formation. Workplace stressors trigger affective reactions which ultimately lead to attitude formation and behavioral enactment. While numerous workplace stressors have been reviewed in the organizational literature, meta-analytic evidence suggests that the following workplace stressors share negative relations with job satisfaction: role ambiguity and role conflict (Kinicki et al., 2002); workplace aggression (Hershcovis & Barling, 2010b; Lapiere et al., 2005), sexual harassment (Hershcovis & Barling, 2010a; Lapiere et al., 2005); and work-family conflict (Amstad et al., 2011). That is, workers tend to report lower job satisfaction when exposed to high degrees of at-work role stressors and conflict between their work and family domains, as well as frequent exposure to workplace mistreatment.

***Individual differences.*** As theoretical antecedents of job satisfaction, individual differences (e.g., dispositions) represent innate and relatively stable individual characteristics. Individual differences include variables such as age, personality, and self-esteem, to name a few. These relatively stable and/or inherent traits influence the manner with which workers interpret, experience, and interact with the work environment, including colleagues, inanimate workplace objects (e.g., policies, procedures, technology), and the work itself.

With an ever-increasing volume of research linking individual differences to job satisfaction, over recent decades, scholars have conducted meta-analytic investigations of these relations. With respect to personality, Judge et al. (2002) found that the Big Five dimensions of emotional stability, extraversion, agreeableness, and conscientious all shared small-to-medium, positive relationships with job satisfaction, while no relationship was found between openness to experience and job satisfaction.

Relatedly, given the inextricable link between affect and job satisfaction, a voluminous research has emerged over the years investigating dispositional affect (i.e., affectivity) as it relates to workers' dispositional propensity to experience work events, people, or other aspects of the environment as positive or negative. For instance, those high in negatively affectivity may demonstrate a propensity to focus on and recall negative aspects of the environment, and this propensity could play a role in experiences of work-related stimuli and associated attitude formation (Levin & Stokes, 1989; Necowitz & Roznowski, 1994). Quantitative syntheses of such research has demonstrated that workers' trait positive and negative affectivity share positive and negative

(respectively) medium-sized relations with job satisfaction (Kaplan et al., 2009).

Furthermore, the higher-order disposition referred to as core self-evaluations—comprised of the subdimensions of self-esteem, emotional stability, generalized self-efficacy, and internal locus of control—demonstrates medium-to-large, positive relations with job satisfaction (Judge & Bono, 2001). In other words, those with positive core self-concepts tend to experience their workplace more favorably.

Initial evidence, although not meta-analytic, has suggested that some variation in job satisfaction can be explained by an individual's genetic background. For example, using a sample of 34 monozygotic twins who grew up apart from one another, Arvey et al. (1989) found convergence in job satisfaction levels within twin pairs, suggesting the existence of genetic determinants for job satisfaction. More recently, Song et al. (2011) sampled 1,772 participants from the National Longitudinal Study of Adolescent Health (Harris, 2009) and found that a small but statistically significant amount variance in job satisfaction could be attributed to variations in the dopamine and serotonin receptor genes called DRD4 VNTR and 5-HTTLPR, respectively. Moreover, individuals' genetic characteristics have been found to influence their level of job satisfaction via their effect on personality (i.e., positive and negative affectivity, Big Five dimensions; Ilies & Judge, 2003). Thus, the evidence to date indicates that individuals may be born with certain genetic determinants that increase the likelihood that they develop personality characteristics that lead to higher levels of job satisfaction experienced throughout their working lives.

Beyond the aforementioned dispositions, workers' age tends to influence their general level of job satisfaction. Although workers' chronological age undoubtedly changes over time, this change occurs slowly and thus its categorization as a disposition seems warranted. In support, Ng and Feldman (2010) found that older workers tend to have higher job satisfaction compared to younger workers. As a proxy variable, age's influence on job satisfaction likely reflects gradual developmental changes in individuals' underlying psychological processes and dispositions. To this end, a meta-analytic investigation by Roberts, Walton, and Viechtbauer (2006) revealed that indicators of Big Five dimensions changed over individuals' lifespan; for example, Conscientiousness tends to increase steadily over time, agreeableness tends to increase sharply in when individuals reach their 50s, and emotional stability tends to increase steadily until they reach age 40, at which point it stabilizes. Such evidence suggests a potential maturational effect that unfolds as workers age and begin to experience the workplace in a different light. Together, the body of evidence related to individual differences suggests that relatively stable dispositions and even genetic background play at least some role in the formation of job satisfaction.

**Leadership.** Beyond perceived job characteristics, work stressors, and individual differences, leadership behavior has also been framed as an antecedent of follower's job satisfaction. Indeed, a meta-analytic investigation by DeRue et al. (2011) demonstrated that transformational leadership (i.e., idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration; Bass, 1985; Burns, 1978) and other leadership behavior associated with initiating structure, demonstrating

consideration, and providing contingent reward share small-to-large, positive relations with followers' job satisfaction. That is, workers tend to experience greater job satisfaction when their leader provides, in general, structure, individualized consideration and treatment, goal-based feedback and rewards, and a motivating and stimulating work environment. In contrast, DeRue and colleagues found that passive forms of leadership (i.e., passive management-by-exception, laissez-faire) shared medium-in-magnitude, negative relations with followers' job satisfaction, while the authors found no relationship between the more active form of management-by-exception and followers' job satisfaction. In other words, workers tend to experience lower job satisfaction when their leader fails to demonstrate leadership behavior or when their leader focuses primarily on their mistakes (or errors)—but only when those mistakes reach a critical level where intervention becomes necessary. Interestingly, a relative importance analysis (for a review of this methodology see J. W. Johnson & LeBreton, 2004) of these meta-analyzed leadership styles revealed that contingent rewards provided nearly half (43.9%) of the variance explained in followers' job satisfaction, compared to the other forms of leadership behavior; transformational leadership behavior, as the next largest contributor to variance explained, provided approximately one fifth (21.0%) of the variance explained in followers' job satisfaction.

In line with the individualized consideration dimension of transformational leadership mentioned above, the dyadic social exchange between a leader and a follower, most commonly referred to as leader-member exchange (LMX; Dansereau et al., 1975), has also demonstrated important implications for followers' job satisfaction. As posited

by Walumbwa, Cropanzano, and Goldman (2011), strong LMX leads to a follower's enactment of effective work behavior via the follower's desire to reciprocate the investment of the leader, as well as through the guidance and assurance provided by the leader to the follower during the exchange process. In support, meta-analytic evidence indicates that a strong LMX between a leader and a follower relates not only to more effective follower work behavior but also to higher follower job satisfaction (Gerstner & Day, 1997); in fact, this meta-analytic relation was found to be strong in magnitude. In sum, the cumulated evidence suggests that leaders can maximize followers' job satisfaction by providing goal-based feedback and rewards and, to a lesser extent, transformational leadership. In contrast, engaging in passive forms of leadership (e.g., laissez-faire, passive management-by-exception) may ameliorate followers' job satisfaction.

***Group and organizational characteristics.*** In addition job characteristics, workplace stressors, individual differences, leadership, prior research and theory have also pointed toward the critical role of the group and organizational environment as they relate to job satisfaction formation. Group and organizational characteristics include constructs such as climate, group conflict and cohesion, and person-group and person-organization fit. Regarding perceptions of workplace climate, workers' perceptions of group or organizational policies, procedures, and practices related to a particular focus (e.g., workplace violence prevention) may directly influence workers' job satisfaction. Consistent with context theory (Johns, 2006), perceptions of workplace climate may communicate social cues to workers that emphasize a particular stance or goal of



organizational leaders (e.g., to prevent workplace violence). If such social cues hold value for workers, they may form more favorable attitudes (e.g., job satisfaction) towards their work. In support of the role of workplace climate, recent meta-analyses have documented the effect of workers' perceptions of policies, procedures, and practices on their level of job satisfaction. For example, Kooij et al. (2010) found that high-commitment human resources practices (e.g., internal promotion, work-life policies, training, rewards), as perceived by workers, generally correspond to higher levels of worker job satisfaction.

Regarding workplace climate, Carr et al. (2003) found medium-to-large, positive meta-analytic effect sizes between forms of general climate and job satisfaction. Further, meta-analytic evidence suggests that a perceived climate aimed at workplace mistreatment reduction can have similarly beneficial effects for workers' level of job satisfaction (Yang et al., 2014). Similarly, empirical research has begun to connect other climate types. For example, ethical climate and climate for innovation and creativity have been linked with higher worker job satisfaction (Schwepker, 2001), as has safety climate (Clarke, 2010).

Other aspects of a work group's milieu may also demonstrate effects on members' job satisfaction. Namely, positive relations have been shown between group cohesion and workers' job satisfaction (Kinicki et al., 2002). Given that work groups serve as sub-environments within the broader context of an organization, it follows that the task and relational cohesion shared by members should heighten members' satisfaction aimed at their work group and at their job. Relatedly, the degree to which a worker perceives fit

between his/her work group and his/her organization as a whole may have important implications for job satisfaction as well. The term fit in these contexts refers to the degree to which a worker perceives a match between his/her own characteristics and that of his/her work group or organization. According to meta-analytic evidence, as a worker's perception of fit increases with respect to his/her work group or organization, so too does his/her level of job satisfaction (Kristof-Brown et al., 2005).

**Summary.** Together, the prior studies reviewed above elucidate the relationships between job satisfaction and the following theoretical antecedents: work characteristics, workplace stressors, individual differences, leadership, and group and organizational characteristics. The sizes of meta-analytic relations shared by job satisfaction and the sampling of theoretically-relevant antecedents described above are generally medium-to-large in magnitude. Moreover, the wide variety of job satisfaction antecedents highlight the conceptual importance of the construct, as it varies with respect to a number of often-studied organizational science constructs. That is, characteristics of the worker, organizational leadership, the job, and generally the workplace psychosocial environment influence the level of job satisfaction an individual experiences.

**Correlates of job satisfaction.** As part of the broader job attitudes family of constructs, job satisfaction has been found to meta-analytically co-vary with organizational commitment (Kinicki et al., 2002; Meyer et al., 2002), career commitment (Cooper-Hakim & Viswesvaran, 2005), organizational identification (Ricketta, 2005), job involvement (Brown, 1996; Kinicki et al., 2002), work engagement (M. S. Christian et al., 2011), and turnover intentions (Kinicki et al., 2002; Tett & Meyer, 1993). With that

said, as I review in the following chapter, multiple theories of voluntary turnover frame turnover intentions as a consequence of job satisfaction. Accordingly, I frame turnover intentions as a consequence of job satisfaction.

In addition to other job attitudes, scholars often frame workers' mental and physical health as correlates of job satisfaction, as the nature of the relationship between the constructs is likely bidirectional in form. In support, meta-analytic investigations have generally found small-to-large, negative relationships between workers job satisfaction and indicators of their health, where the latter have been operationalized as physical health indicators (e.g., cardiovascular disease, musculoskeletal disorders, physical illness) and mental health indicators (e.g., anxiety, burnout, depression, poor general mental health, poor self-esteem) (Alarcon, 2011; Faragher et al., 2005; Kinicki et al., 2002). Comparatively, the largest effect sizes tend to be associated with mental health indicators, while the effect sizes associated with physical health indicators tend to be smaller in magnitude—a difference that may be at least partially attributed to issues of common method bias that arise when correlating two constructs, such as job satisfaction and mental health, that are often assessed using self-reports. Physical health, in contrast, may be more amenable to non-self-report methods of assessment, thereby reducing common source bias.

**Consequences of job satisfaction.** Consistent with the propositions set forth by affective events theory (H. M. Weiss & Cropanzano, 1996), enacted work behavior serves as an outcome of attitude-based judgments regarding a work-related event or object. As such, workers with more favorable attitudes towards their job or workplace in

general (e.g., higher job satisfaction) tend to behave in a manner consistent with their attitudes. Depending up on the degree to which job attitudes are favorable or unfavorable, workers may enact various types of beneficial and/or potentially harmful work behavior, including various types of work performance as well as withdrawal behavior.

**Work performance.** The relationship between job satisfaction and work performance varies with respect to the specific type of task or non-task behavior in question. With respect to task behavior, meta-analytic point estimates suggest that the relationship between task performance and job satisfaction is medium in magnitude and positive in sign (Judge et al., 2001; Kinicki et al., 2002). Regarding adaptive performance and proactive behavior, the literature generally frames job satisfaction as a consequence of these types of positive in-role work behaviors, whereby those who demonstrate more frequent adaptive behavior on-the-job, tend to be more satisfied (Franke & Park, 2006), as do those who engage in more frequent proactive work behavior (Morrison, 1993; Wanberg & Kammeyer-Mueller, 2000).

As for non-task behavior, meta-analytic evidence indicates that the magnitude of the negative relationship between job satisfaction and CWB ranges from small (Lau et al., 2003) to medium (Dalal, 2005) in size. Similarly, in a quantitative synthesis of the workplace aggression (i.e., a specific form of CWB) literature, Hershcovis et al. (2007) found that workers who are dissatisfied with their jobs are more likely to behave aggressively towards colleagues and the organization itself. Thus, cumulative evidence suggests that job satisfaction shares a negative relationship with this type of negative non-task behavior.

Regarding a type of positive non-task behavior, organizational citizenship behavior (OCB) constitutes a specific type of discretionary non-task behaviors that are extra-role in nature and may be directed at other workers or the organization itself. Given the inherently discretionary nature of OCB, in accordance with affective events theory (H. M. Weiss & Cropanzano, 1996), such helping behavior can be influenced by the formation of job attitudes like job satisfaction. With respect to job satisfaction, meta-analytic evidence demonstrates that a positive relationship between job satisfaction and OCB that ranges from small (Dalal, 2005) to medium (Hoffman et al., 2007; LePine et al., 2002; Organ & Ryan, 1995) in magnitude. That is, workers with higher levels of job satisfaction have a greater tendency to enact OCB in their workplace. It should be noted, however, that I was unable to identify any studies that investigated change in job satisfaction over time and its relation to OCB.

Like OCB, family-supportive supervisor behavior (FSSB) represents another type of positive, non-task, discretionary behavior and, accordingly, may also be influenced by a person's level of job satisfaction. With that said, most research to date on job satisfaction has focused predominantly on FSSB as an antecedent of various employee outcomes. As a result, I was unable to identify any published studies that investigated the relationship between a supervisor's level of job satisfaction and their reported level of FSSB. Despite this lack of research, affective events theory (H. M. Weiss & Cropanzano, 1996) would suggest that an individual's level of job satisfaction could influence their decision to enact FSSB.

***Physical withdrawal behavior.*** In addition to work performance, physical withdrawal behavior represents another class of behavioral constructs that can be influenced by job satisfaction. Physical withdrawal behavior includes lateness, absenteeism, and turnover. First, also called tardiness, lateness refers to late arrivals to work that are either unplanned or unscheduled—though, it should be noted that some researchers conceptualize lateness as a specific type of absenteeism (e.g., Salgado, 2002). Research has long held lateness to be, at least partially, indicative of workers' job attitudes and, in particular, job satisfaction (e.g., Adler & Golan, 1981). In general, for the most part, research has supported the attitudes-lateness relationship. Specifically, meta-analytic reviews indicate that workers with lower levels of job satisfaction exhibit a slightly greater propensity to arrive late to work (Harrison et al., 2006; Kinicki et al., 2002; Koslowsky et al., 1997).

The next form of physical withdrawal behavior—absenteeism—refers to unplanned or unscheduled nonattendance at work, and this form of physical withdrawal from work corresponds with relatively high costs to organizations. Regarding its relation with job satisfaction, Harrison and colleagues' (2006) meta-analytic review revealed that absenteeism shares a small, negative association with job satisfaction. That is, those with higher levels of job satisfaction are slightly less likely to be absent from work.

The third and final form of physical withdrawal behavior—turnover—refers to a formal severance of the relationship between an employee and his/her employer. Voluntary turnover, specifically, is often framed as a potential outcome of key job attitudes such as job satisfaction and turnover intentions (e.g., Mobley, 1977; Mobley et

al., 1979). In support, Griffeth and colleagues (2000) found a small, negative meta-analytic relation between job satisfaction and turnover. Thus, although an individual's level of job satisfaction may influence his/her decision to leave an organization, the effect is relatively small. The relationship between job satisfaction and turnover intentions—a presumed proximal antecedent of turnover—however, is larger in magnitude, as indicated in several meta-analytic investigations (e.g., Hom et al., 1992; Kinicki et al., 2002; Tett & Meyer, 1993).

### Appendix C: Review of Work Behavior

#### Work Performance

Regarding the first general type of work behavior, in the field of industrial and organizational psychology, scholars have historically used the term *job performance* to describe volitional work behavior that influences organizational goals and objectives (Campbell et al., 1993; Rotundo & Sackett, 2002). Due to relatively recent changes in work and organizations (e.g., increasing uncertainty and interdependency), however, some scholars have suggested that the term *work performance* may be more appropriate (e.g., Griffin et al., 2007), as it encompasses additional behavior beyond what might typically be associated with an individual's formal job description. To acknowledge the changing nature of work, in this dissertation, I use the term work performance in lieu of job performance.

Various conceptions of work performance and its underlying dimensionality have emerged in the organizational literature over the past three decades (see Austin & Crespin, 2006; Austin & Villanova, 1992; Griffin et al., 2007; Motowidlo, 2003). Offering one of the first multidimensional models of work performance, Campbell et al. (1993) introduced an eight-factor model comprised of the following dimensions: (1) job-specific task proficiency, (2) non-job-specific task proficiency, (3) written and oral communication, (4) demonstrating effort, (5) maintaining personal discipline, (6) facilitating team and peer performance, (7) supervision and leadership, and (8) management and administration. Published in the same year, Borman and Motowidlo (1993) provided another notable contribution as they differentiated between two types of



work performance: task performance and contextual performance. *Task performance* embodies many of the dimensions described in Campbell et al.'s (1993) eight-factor model in that it defines task performance as behavior considered formally part of work expectations that (a) directly impact goods production or service provision, or (b) indirectly support goods production or service provision through administrative activities, materials replenishment, and product distribution, as well as management/supervision practices related to planning and staffing (Borman & Motowidlo, 1993; Motowidlo, 2003; Rotundo & Sackett, 2002). Terms used to describe task performance often include in-role performance, task behavior, proficiency, productivity, efficiency, and effectiveness. In contrast, *contextual performance* refers to discretionary, non-task behavior that contributes to the psychological and social aspects of the work environment but that are not directly associated with task performance, per se (Austin & Crespino, 2006; Borman & Motowidlo, 1993). That is, like task performance, contextual performance entails behavior that aids organizational effectiveness; however, unlike task performance, contextual performance behavior typically is not associated with formal work expectations (e.g., job description, performance evaluation). Examples of this behavior include: congratulating a coworker and lending a helping hand when a coworker is in need. Conceptually, contextual performance closely resembles (and may be synonymous with) constructs such as organizational citizenship behavior (Organ, 1988; C. A. Smith et al., 1983), prosocial organizational behavior (Brief & Motowidlo, 1986), and other forms of extra-role behavior.

Expanding upon the concept of work performance, Rotundo and Sackett (2002) reviewed the literature and concluded that work performance can be categorized into three distinguishable behavioral dimensions: task performance, organizational citizenship behavior, and counterproductive work behavior. As mentioned above, the second dimension called organizational citizenship behavior (OCB) constitutes a type of contextual behavior, and this dimension can be described as discretionary helping behavior that contextually supports organizational functioning (Organ, 1988). Further, like task performance, workers may direct organizational citizenship behavior towards the individual, the work group, or the organization. Examples of OCB include: altruism, conscientiousness, and courtesy. The third dimension—counterproductive work behavior (CWB)—entails potentially harmful and damaging discretionary workplace behavior that violates organizational norms and negatively impact fellow employees, a work group, or the organization as a whole (Robinson & Bennett, 1995; Rotundo & Sackett, 2002; Sackett et al., 2006). Examples of CWB include: theft, sabotage, vandalism, workplace aggression, and other deviant behavior.

Both OCB and CWB, on the one hand, represent forms of non-task behavior, albeit positive and negative forms, respectively, while task performance, on the other hand, consists of behavior that may be broadly described as task behavior (Sackett et al., 2006). Using this task vs. non-task behavioral categorization, other subsets of work behavior can be readily classified within one of these categories. For example, adaptive performance (Hesketh & Neal, 1999; Pulakos, Arad, Donovan, & Plamondon, 2000) and proactive work behavior (Crant, 2000; Frese & Fay, 2001; Parker, Williams, & Turner,

2006) exemplify forms of task behavior, as they directly relate to task completion. In contrast, workplace behavior related to managing the work-family interface—referred to as family-supportive supervisor behavior—can be described as a type of non-task behavior. Specifically, family-supportive supervisor behavior contextually supports organizational effectiveness by helping employees minimize the impact of their family demands on task performance.

**Job satisfaction and work performance.** The relationship between job satisfaction and work performance varies with respect to the specific type of task or non-task behavior in question. With respect to task behavior, meta-analytic point estimates suggest that the relationship between task performance and job satisfaction is medium in magnitude and positive in sign (Judge et al., 2001; Kinicki et al., 2002). Regarding adaptive performance and proactive behavior, the literature generally frames job satisfaction as a consequence of these types of positive in-role work behaviors, whereby those who demonstrate more frequent adaptive behavior on-the-job, tend to be more satisfied (Franke & Park, 2006), as do those who engage in more frequent proactive work behavior (Morrison, 1993; Wanberg & Kammeyer-Mueller, 2000).

As for non-task behavior, meta-analytic evidence indicates that the magnitude of the negative relationship between job satisfaction and CWB ranges from small (Lau et al., 2003) to medium (Dalal, 2005) in size. Similarly, in a quantitative synthesis of the workplace aggression (i.e., a specific form of CWB) literature, Hershcovis et al. (2007) found that workers who are dissatisfied with their jobs are more likely to behave aggressively towards colleagues and the organization itself. Thus, cumulative evidence

suggests that job satisfaction shares a negative relationship with the type of negative non-task behavior called CWB. In the paragraphs below, I describe in greater detail two additional types of non-task behavior that are instrumental to this dissertation: OCB and family-supportive supervisor behavior.

***Organizational citizenship behavior (OCB).*** As described above, OCB constitutes a specific type of discretionary non-task behaviors that are extra-role in nature and may be directed at other workers or the organization itself. Originally, C. A. Smith et al. (1983) conceived the OCB construct as comprising two dimensions: altruism and generalized compliance. This two-dimension conceptualization was later extended by Organ (1988) to include the following five dimensions: altruism, courtesy, conscientiousness, civic virtue, and sportsmanship. Williams and Anderson (1991) later took Organ's (1988) five-dimension model and reduced it back to a two-dimension model, albeit a different two-dimension model than what was originally proposed by C. A. Smith et al. (1983). That is, Williams and Anderson (1991) suggested that a dimension called OCB directed toward individual employees (OCB-I) should subsume Organ's (1988) altruism and courtesy dimensions, while another dimension called OCB directed toward the organization (OCB-O) should subsume Organ's (1988) conscientiousness, civic virtue, and sportsmanship dimensions. Given strong empirical relations between OCB dimensions, LePine et al. (2002) Hoffman et al. (2007) have meta-analytically investigated the factor analytic structure of the OCB construct and concluded that OCB may be best represented as a single overarching latent factor, as opposed to distinguishing between OCB-I and OCB-O. In other words, OCB-I and OCB-O appear to be empirically

redundant, and ultimately, Organ's (1988) original five dimensions represent indicators of a single overarching OCB latent factor.

Adding to the construct validity of OCB, quantitative evidence lends support to the construct's distinctiveness from other task and non-task behavior. For instance, Sackett et al. (2006) surveyed 900 U.S. university employees, and the results from their confirmatory factor analyses suggested that OCB and CWB are in fact distinct constructs and share a negative and medium-sized correlation. Moreover, the pattern effects between dimensions of the Big Five and OCB vs. CWB varied. Specifically, openness to experience, conscientiousness, extraversion, and agreeableness shared positive, small-to-medium, and significant relations with OCB, while conscientiousness, agreeableness, and emotional stability shared negative, small-to-medium, and significant relations with CWB. In corroboration of Sackett et al.'s findings, a meta-analytic investigation by Dalal (2005) found a negative, medium-sized relationship between OCB and CWB. Like Sackett and colleagues' findings, Dalal found that OCB and CWB share different relational patterns with a variety of antecedents (e.g., job satisfaction, negative affect). In sum, cumulative evidence suggests that OCB and CWB—although both types of non-task behavior—represent two distinct constructs as opposed to two ends of the same continuum.

Just as OCB represents a distinct construct from CWB, OCB may be also empirically differentiated from task behavior—specifically, task performance. In their meta-analytic review, Hoffman et al. (2007) demonstrated through confirmatory factor analysis that OCB can be empirically distinguished from task performance, although it

should be noted that their finding depict a very large, positive correlation between the two constructs. (With that said, a subsequent meta-analytic review by N. P. Podsakoff et al. (2009) found notably smaller correlations between OCB-I and OCB-O dimensions in relation task performance.) In addition, Hoffman and colleagues found that OCB shared stronger, positive relationships with attitudinal (i.e., job satisfaction, organizational commitment) and justice (i.e., procedural justice, interactional justice) constructs than task performance shared with these same constructs. Thus, evidence surrounding the construct validity OCB indicates that the behavioral construct can be differentiated from both task performance and CWB.

To date, multiple meta-analytic reviews have investigated OCB and its relations with a variety of prominent organizational constructs, such as: job satisfaction (Dalal, 2005; Hoffman et al., 2007; LePine et al., 2002; Organ & Ryan, 1995), organizational commitment (Meyer et al., 2002), personality dimensions (Chiaburu et al., 2011; Organ & Ryan, 1995), affect (Kaplan et al., 2009), and organizational justice (Colquitt et al., 2001). With respect to job satisfaction, meta-analytic evidence demonstrates that a positive relationship between job satisfaction and OCB that ranges from small (Dalal, 2005) to medium (Hoffman et al., 2007; LePine et al., 2002; Organ & Ryan, 1995) in magnitude. That is, workers with higher levels of job satisfaction have a greater tendency to enact OCB in their workplace. It should be noted, however, that I was unable to identify any studies that investigated change in job satisfaction over time and its relation to OCB. As I discuss in subsequent chapters, this omission in the literature represents an important area for theory testing and empirical exploration.

**Family-supportive supervisor behavior (FSSB).** Like OCB, family-supportive supervisor behavior (FSSB) represents another type of positive non-task behavior. The construct, which represents a form of supervisor support, was developed in recognition of changing work and family demands, and generally, such changes can be described by three overarching trends in the U.S. labor force and population in general. First, over recent decades, the number of dual-earner couples has exhibited an upward trend. Estimates suggest that dual-earner couples comprise more than half of U.S. married couples (U.S. Census Bureau, 2000), and as of 2004, approximately 73 million U.S. workers were in dual-earner relationships (U.S. Bureau of Labor Statistics, 2005). Consequently, when both partners work, they may experience a scarcity of resources (e.g., time, energy) that could be used to address competing family and work demands. For example, as an example of time-related scarcity, a working couple may find it difficult to find sufficient time to pick up children from school when both work.

Second, the proportion of women in the U.S. labor force has grown since the middle part of the 20<sup>th</sup> century, and the proportion of women who work and have children has also grown. In 2011, over half (58.1%) of U.S. women were part of the labor force, and the vast majority (73.5%) of these women worked predominantly full-time schedules throughout the year (U.S. Bureau of Labor Statistics, 2013). Further, more than two thirds (70.9%) of women with children under 18 years old worked in 2011 (U.S. Bureau of Labor Statistics, 2013). Due to greater involvement in the labor force, women today may be more likely to experience competing work and family demands, particularly in instances where women also serve as a primary caregiver for one or more children.

Third and finally, as a large proportion of the U.S. population ages and moves into retirement, a growing number of working adults now perform care-taking responsibilities for aging individuals. A report by the U.S. Census Bureau (2008) projects that between 2000 and 2050, the growth rate for individuals 65 years and older will continue to outpace the growth rate for all other age groups. Relatedly, there were 5.3 million U.S. citizens over the age of 85 years in 2006, and that U.S. age group is projected to grow to 21 million by 2050 (Federal Interagency Forum on Aging-Related Statistics, 2008). As members of the population age, they may require additional assistance, thereby contributing to demands on members of the working population. This, in fact, has already come to fruition, as in just five years, the percentage of workers who reportedly provided care for an individual over 65 years of age increased from 25% in 1997 to 35% in 2002 (Bond et al., 1998; Bond et al., 2003). Finally, in what has been termed the “sandwich generation,” a growing number of U.S. workers care for children *and* aging parents (U.S. Census Bureau, 2003), resulting in even more family demands that could potentially conflict with work demands.

Together, the three aforementioned labor force trends potentiate conflict between work and family domains, and enactment of FSSB may prevent the occurrence of or intervene in competing work and family demands and general resource depletion. The origins of FSSB stem from research on the family-supportive supervisor, wherein family-supportive supervisors were conceptualized as empathic supervisors who facilitate balance between their employees’ work and family domains (i.e., Thomas & Ganster,



1995). In contrast to the person- or trait-based family-supportive supervisor construct, FSSB represents a behavior-based construct.

FSSB refers to supervisors' enactment of family-supportive behaviors aimed at managing the interface between their employees' work and family domains (Hammer et al., 2007)—or in other words, “behaviors exhibited by supervisors that are supportive of employees' family roles” (Hammer et al., 2013, p. 286). The construct is comprised of four dimensions labeled as emotional support, instrumental support, role modeling, and creative work-family management (Hammer et al., 2009; Hammer et al., 2007). The first dimension—*emotional support*—refers to supervisor behavior aimed at increasing employees' perceptions that their supervisor cares for them, that their supervisor considers how they are feeling, and that their supervisor is approachable in instances where support might be necessary. The second dimension of the FSSB construct is referred to as *instrumental support*, and it consists of supervisor behavior aimed at responding to employees' work and family needs through regular management transactions. The third dimension is called *role modeling*, and this dimension encapsulates behavior related to a supervisor's enactment and demonstration of integrating and managing the interface between the work and family domains. Finally, the fourth dimension is labeled *creative work-family management*, and in contrast to the reactive nature of the instrumental support dimension, this dimension is proactive in nature. Specifically, this dimension consists of supervisor behaviors related to restructuring work in a manner that facilitates employees' ability to manage successfully both their work and family needs. As demonstrated by Hammer and colleagues (2013),

these four subordinate dimensions can be represented by a single superordinate FSSB dimension, and in this dissertation, I adopt this conceptualization.

The vast majority of published FSSB research has operationalized FSSB using employees' reports of their supervisor's family-supportive behavior; consequently, as it has been most commonly operationalized, the FSSB construct reflects employees' *perceptions* of support as opposed to the actual *receipt* of support. Regarding the distinction between general forms of perceived and received support, a meta-analytic review by Haber et al. (2007) found a positive albeit medium-sized relation between these two constructs. In other words, an individual's perception of support does not necessarily reflect how often and in what ways support is provided, such that a supportive event may occur in which two employees perceive the support in qualitatively different ways. Such perceptual discrepancies may be attributed largely to individual differences in judgment and memory processes (Lahey & Drew, 1997). In recognition of this distinction, I acknowledge that employee reports of FSSB may reflect perception as opposed to objective reality. Nevertheless, I contend that employee reports of FSSB reflect, to some extent, a supervisor's behavioral exhibition of support—much like how supervisor ratings of employee task performance might potentially contend with perceptual distortions but ultimately can be used as a viable indicator of task-related behavioral enactment. Therefore, although prior research (as well as this dissertation) operationalizes FSSB via employee reports, I argue that such reports can be indicative of actual supervisor behavior, and accordingly, I adopt this perspective for the remainder of this dissertation.

In terms of its nomological network, preliminary research has focused predominantly on FSSB as an antecedent of various employee outcomes. For instance, supervisors who exhibit FSSB tend to have employees with lower work-family conflict (Hammer et al., 2009, 2013; Kossek et al., 2011), perceived stress (Hammer et al., 2013), and turnover intentions (Bagger & Li, 2014; Hammer et al., 2009, 2013; Odle-Dusseau et al., 2012), as well as higher work-family balance (Greenhaus et al., 2012), work-family positive spillover (Hammer et al., 2009, 2013), job satisfaction (Bagger & Li, 2014; Hammer et al., 2009, 2013; Odle-Dusseau et al., 2012), organizational commitment (Odle-Dusseau et al., 2012), work engagement (Matthews et al., 2014), task performance (Bagger & Li, 2014; Odle-Dusseau et al., 2012), OCB (Bagger & Li, 2014), subjective well-being (Matthews et al., 2014), perceived control over work hours, and perceived family time adequacy (Hammer et al., 2013). In addition, research has demonstrated links between supervisors' enactment of FSSB and the quality of their leader-member exchange (Bagger & Li, 2014).

Regarding the antecedents of FSSB, few published studies have specifically investigated factors that contribute to FSSB (Foley, Linnehan, Greenhaus, & Weer, 2006). For instance, Foley and colleagues (2006) found that employees who perceive a family-supportive organizational climate tend to perceive their supervisor as more family-supportive. Further, the authors found that employees perceived higher FSSB when they were more similar to their supervisor with respect to gender and race.

Given the limited evidence pertaining to FSSB antecedents, I draw upon the general supportive supervision literature, as FSSB represents a specific form of general

supportive supervision. For example, Paustian-Underdahl et al. (2013) found that individuals who describe themselves as warm and sociable exhibit a greater propensity to support their employees. Thus, it stands to reason that warmth and sociability may also contribute to FSSB, as it represents a specific form of supportive supervision.

In recognition of the limited research pertaining to FSSB antecedents, a qualitative review by Straub (2012) proposed individual-level factors and contextual factors that may lead supervisor's to exhibit FSSB; these proposed antecedents include environmental factors such as family-supportive organizational climate and the organizational reward system, as well as the supervisor's life-course and family-life stage, gender roles, relationship with followers, and experiences with work-family interference, to name a few. Notably absent from Straub's (2012) list of proposed antecedents are the supervisor's job attitudes. In sum, to date, job satisfaction has not been investigated as an antecedent of FSSB, even though various theories such as affective events theory (H. M. Weiss & Cropanzano, 1996) posit that an individuals' job attitudes influence their behavior.

### **Withdrawal Behavior**

As the second general type of work behavior, withdrawal behavior includes lateness, absenteeism, and turnover. Some debate exists within the field regarding the (un)relatedness of lateness, absenteeism, and turnover, and whether these three behaviors constitute indicators of a broad construct called withdrawal behavior (e.g., Blau, 1998; Hanisch, Hulin, & Roznowski, 1998; Johns, 1998; Spector, 1998). Various scholars have proposed theory and found supporting evidence that a natural progression exists between

lateness, absenteeism, and turnover (e.g., Herzberg et al., 1957; Lyons, 1972; Rosse, 1988; Rosse & Miller, 1984). That is, workers begin the withdrawal process by coming in late to work, and over time, their behavior escalates to full-day absences from work and, eventually, turnover. In a theoretical and quantitative reviews of the literature, both Koslowsky et al. (1997) and, more recently, Berry, Lelchook, and Clark (2012) found convincing support for such a progression model of withdrawal behavior. In contrast, other scholars have proposed that lateness, absence, and turnover are subsumed under a general withdrawal construct (e.g., Hanisch & Hulin, 1990; Hanisch & Hulin, 1991; March & Simon, 1958; Roznowski & Hanisch, 1990). Consistent with this view, an individual's decision to come in late to work remains independent from the same individual's decision to quit the job, but nonetheless these acts reflect general behavioral withdrawal. Regarding this latter perspective, some have suggested that creating general withdrawal construct may not be warranted or at the very least should be done cautiously (e.g., Blau, 1998; Johns, 1998). That is, they contend that creating a behavioral composite should not be done for the sole purpose of enhancing correlations with other variables; rather, sufficient theoretical and empirical support should be in place that justifies the creation of an overall composite. Furthermore, in their recent meta-analytic investigation, Berry and colleagues' (2012) contend that the interrelationships between lateness, absenteeism, and turnover are not, in fact, large enough to suggest an overarching withdrawal behavior composite is at play. Given the concerns surrounding a general withdrawal composite and mounting evidence for the progression perspective on withdrawal behavior, in the following paragraphs, I err on the side of caution by

reviewing each withdrawal behavior in isolation, as doing so likely provides a more conservative estimate of the effect sizes between withdrawal behavior and its correlates (see Blau, 1998).

**Lateness.** Sometimes referred to as tardiness, *lateness* refers to late arrivals to work that are either unplanned or unscheduled—though, it should be noted that some researchers conceptualize lateness as a specific type of absenteeism (e.g., Salgado, 2002). Lateness serves as important, albeit relatively understudied, type of withdrawal behavior. To date, lateness has received less research attention when compared to other types of withdrawal behavior (i.e., absenteeism and turnover) (Bardsley & Rhodes, 1996), even though evidence indicates that arriving late to work can be quite expensive for organizations. For example, estimates suggest that the direct and indirect costs associated with worker lateness are, on average, \$737 a year per worker (Sagie, Birati, & Tziner, 2002), and, in aggregate, worker lateness may cost U.S. organizations more than \$3 billion a year (DeLonzor, 2005). Finally, in light of the growing support for a progression model withdrawal behavior (see Berry et al., 2012), it seems that organizations would be wise to stave off the potential consequential downstream byproducts of lateness—those being absenteeism and turnover.

Research has long held lateness to be, at least partially, indicative of workers' job attitudes and, in particular, job satisfaction (e.g., Adler & Golan, 1981). In general, for the most part, research has supported the attitudes-lateness relationship. Specifically, meta-analytic reviews indicate that workers with lower levels of job satisfaction exhibit a slightly greater propensity to arrive late to work (Harrison et al., 2006; Kinicki et al.,

2002; Koslowsky et al., 1997), as do those with lower levels of organizational commitment (Harrison et al., 2006; Koslowsky et al., 1997; Mathieu & Zajac, 1990). Moreover, meta-analytic evidence also suggests that a strong, negative relation exists between turnover intentions and lateness, such that workers with stronger intentions to quit are more likely to arrive late to work (Koslowsky et al., 1997).

Beyond attitudinal correlates, limited evidence to date suggests that individual-difference variables may be linked to lateness. For example, compared to their younger counterparts, older workers demonstrate a slightly greater tendency to arrive on time to work (Ng & Feldman, 2008). With regard to personality, relatively few studies have been conducted that assess the interrelationships between the Big Five personality dimensions and lateness, and of that limited number of studies, the evidence has been mixed support. For example, based on a sample of 127 entry-level employees, Ashton (1998) found conscientiousness to share a small, negative correlation with lateness. In contrast, Conte and Jacobs (2003), using a sample of 191 train operators, found a nonsignificant relationship between conscientiousness and lateness. Thus, it is perhaps too early to make any strong conclusions regarding the potential link between personality and lateness.

In terms of work behavior, workers with poor task and contextual performance tend to arrive late to work more frequently (Harrison et al., 2006). With respect to other forms of withdrawal behavior, Berry and colleagues' (2012) meta-analytic review found that lateness shares a medium, positive relation with absenteeism, while the authors found no relationship between lateness and turnover. The latter finding more or less mirrors Griffeth and colleagues' (2000) meta-analytic investigation, but contrasts with

Koslowsky and colleagues' (1997) meta-analytic investigation in which they identified a small, positive relationship between the two withdrawal constructs.

**Absenteeism.** The next form of withdrawal behavior—*absenteeism*—refers to unplanned or unscheduled nonattendance at work, and this form of withdrawal from work corresponds with relatively high costs to organizations. For instance, evidence suggests that approximately 15% of organizations payroll costs go towards employee absenteeism (Gale, 2003; Navarro & Bass, 2006). While prior absences remain one of the best predictors of subsequent absences (Breugh, 1981; Farrell & Stamm, 1988), other factors contribute to workers' absenteeism. Perhaps unexpectedly, meta-analytic evidence indicates that those with poor physical and psychological health experience higher rates of absenteeism (Darr & Johns, 2008; Farrell & Stamm, 1988; Martocchio, Harrison, & Berkson, 2000). With respect to individual differences, younger workers and those with less tenure demonstrate a slightly greater tendency to miss work (Farrell & Stamm, 1988; Ng & Feldman, 2008). Similar to the aforementioned relations with lateness, the Big Five personality dimensions demonstrate generally negligible relations with absenteeism (Salgado, 2002). In contrast, Ones, Viswesvaran, and Schmidt (2003) found a positive, medium meta-analytic correlation between personality-based integrity and absenteeism, such that those with higher integrity show less of a tendency to miss work. As for perceived work and environmental characteristics, individuals working in jobs with higher autonomy, task identity, feedback, interdependence, and social support tend to exhibit fewer absences (Humphrey et al., 2007), and those who perceive a generally unfair workplace demonstrate tend to exhibit more absences (Robbins, Ford, & Tetrick,



2012). Regarding job attitudes, Harrison and colleagues' (2006) meta-analytic review revealed that lateness shares small, negative associations with job satisfaction and organizational commitment. In terms of work behavior, Harrison and colleagues' also found that absenteeism shares a medium-sized, negative relationship with both task and contextual performance. In further support of the latter finding, in their meta-analytic review of the OCB literature, N. P. Podsakoff et al. (2009) found a negative relationship between absenteeism and OCB enactment. Finally, the interrelations between absenteeism and other forms of withdrawal behavior are discussed above in the prior section. In sum, although evidence indicates that the strongest predictor of absenteeism is prior absence, other factors related to individual differences, work characteristics and environment, fairness, and job attitudes (including job satisfaction) also impact absenteeism.

**Turnover.** As an observable workplace behavior, turnover represents an oft-studied outcome in the organizational literature (Griffeth et al., 2000; Hom & Kinicki, 2001). Employee turnover can be quite costly for organizations (Cascio, 1991; Mobley, 1982), with some estimates suggesting that selecting and training a replacement may cost organizations between 50% to 200% of the first-year salary for the person who leaves the organization (Fitz-Enz, 1997; Hale, 1998). Turnover trends vary by industry, and according to a recent Society for Human Resource Management (2011) report, annual turnover is on average 35% in the service industry and 22% in the retail industry.

As a formal definition, the term *turnover* refers to a formal severance of the relationship between an employee and his/her employer. Employee turnover can be

categorized into involuntary and voluntary turnover, where *involuntary turnover* refers to organization-initiated turnover and *voluntary turnover* refers to employee-initiated turnover. On the one hand, involuntary turnover occurs in those situations in which the organization makes a decision to end an employee's tenure for reasons related to poor or undesirable performance, regardless of whether the employee has a desire to remain at the organization. On the other hand, voluntary turnover occurs when an employee chooses to leave an organization, even when the organization wants to retain the employee. In this dissertation, I focus on voluntary turnover (as opposed to involuntary turnover) because it reflects the worker's choice either to remain gainfully employed in the current organization or to leave the organization. Moreover, voluntary turnover is often framed as a potential outcome of key job attitudes such as job satisfaction and turnover intentions (e.g., Mobley, 1977; Mobley et al., 1979), with turnover intentions constituting one of the most prominent and proximal antecedents of voluntary turnover.

Two general theoretical perspectives on voluntary turnover have emerged over the years: (a) those theories that address *how* people turnover (i.e., process models), and (b) those theories that address *why* people turnover (i.e., content models) (Maertz & Campion, 2004). Empirical research and theory development surrounding both perspectives have elucidated various aspects of turnover.

***Process models of turnover.*** Process models explain the voluntary turnover process itself—that is, how employees decide to leave an organization. One of the first models aimed at explaining the turnover process was developed by March and Simon (1958), and it focused on general withdrawal decision processes. Later in 1973, Porter

and Steers (1973) reviewed prior turnover research and theory, and they concluded that, at that time, much of the turnover process literature focused primarily on the relationship between job satisfaction and voluntary turnover. Emerging a few years later, Mobley (1977) developed the intermediate linkage model of turnover processes. Rather than proposing a direct relation between job satisfaction and actual voluntary turnover, Mobley's original model conceptualized voluntary turnover behavior as the final stage in a series of steps consisting of job satisfaction and withdrawal cognitions. Specifically, his model suggests that low levels of satisfaction with one's job leads to thoughts of leaving the organization, which lead to searching for alternative jobs and evaluating alternatives, which leads to turnover intentions, and which ultimately results in an employee deciding to stay or quit the organization.

In subsequent studies aimed at testing this process turnover model, mixed support has been found for Mobley's (1977) intermediate linkage model. For example, Mobley et al. (1978) found some support for the model using a sample of 203 hospital employees. Participants completed a survey that assessed their job satisfaction, thoughts of turning over, intentions to search for an alternative job, perceived probability of finding an acceptable alternative job, and turnover intentions, in addition to age and tenure; voluntary turnover data were then collected from the hospital nearly a year after the initial survey administration. Zero-order correlations revealed that, consistent with the intermediate linkage model, job satisfaction was negatively associated with thoughts of turning over, intentions to search for an alternative job, turnover intentions, and actual voluntary turnover, although the magnitude of the relation with actual voluntary turnover

was small-to-moderate and the other relations were large. Furthermore, the following linkages in the proposed model were all statistically significant (as evidenced by the zero-order correlations): thoughts of turning over → intentions to search for an alternative job; intentions to search for an alternative job → turnover intentions; turnover intentions → actual voluntary turnover; and probability of finding an acceptable job alternative → intentions to search for an alternative job. When testing these same linkages as part of a multiple regression model with actual voluntary turnover as the outcome, however, only the relation between turnover intentions and actual voluntary turnover remained significant; notably, the magnitude of the other nonsignificant and more distal relations tended to decrease in magnitude. This latter finding suggests that perhaps job satisfaction impacts thoughts of turning over and turnover intentions, as opposed to actual voluntary turnover. As evidenced by these findings, turnover intentions seem to be one of the more consistent and potent predictors of voluntary turnover.

To further test Mobley's (1977) intermediate linkage model, Hom et al. (1992) conducted a meta-analytic investigation of 17 studies published after Mobley et al. (1978) initially tested the model. Using structural equation modeling (SEM) based on meta-analytically derived correlation matrix, the authors tested how well Mobley et al.'s model fit the meta-analytic data, as well as how the following variations of the original Mobley et al. model fit the data: Dalessio et al. (1986); Bannister and Griffeth (1986); and Hom et al. (1984). All but the Bannister and Griffeth (1986) model demonstrated adequate model fit to the data. Further, while Mobley et al.'s (1978) original model adequately fit the meta-analytic data, Dalessio et al.'s (1986) model demonstrated the best fit. The latter

model closely resembles Mobley et al.'s model, with the exception that it did not indicate paths between the perceived probability of finding an alternative job and search intentions, and turnover intentions. Thus, as a prominent representative of turnover process models, general support has been found for Mobley et al.'s intermediate linkage model and its subsequent derivatives.

Like Mobley's (1977) intermediate linkage model, Steers and Mowday (1981) proposed a different sequential model of turnover processes, though somewhat akin to the sequence proposed by Mobley. As with Mobley's model, job satisfaction serves as a focal construct. In Steers and Mowday's model, however, they investigate two additional job attitudes—organizational commitment and job involvement—in addition to job satisfaction. In their model, the overarching proposition of the authors is that individual values and met job expectations influence attitudes toward the job; in turn, these attitudes influence turnover intentions; and turnover intentions ultimately lead to voluntary turnover behavior. In an attempt to test the model, T. W. Lee and Mowday (1987) found partial support using a sample of 445 employees sampled from a financial institution. Analysis of the cross-sectional survey data demonstrated substantial support for the theoretical relationships proposed by Steers and Mowday. In terms of the attitudinal antecedents of turnover intentions, Lee and Mowday found that job satisfaction, organizational commitment, and job involvement explained significant variance in turnover intentions. Finally and as expected, turnover intentions explained significant variance in turnover. Thus, an empirical test of Steers and Mowday's turnover model was generally supported, particularly with respect to the roles of job attitudes (i.e., job

satisfaction, organizational commitment, job involvement) in predicting intentions to leave the organization.

Since the publication of Hom et al.'s (1992) meta-analysis, however, there has been a notable advance in the conceptualization of turnover process models. Specifically, T. W. Lee and Mitchell (1994) proposed their unfolding model of voluntary turnover—though, it should be noted that some suggest that their model overlaps with turnover content models as well (see Maertz & Campion, 2004). This model deviates from prior process models in two general ways: (a) unlike the process models reviewed above (Mobley, 1977), it does not assumed a linear path toward turnover decisions, and (b) it posits five distinct decision paths that an employee might follow. In a departure from the aforementioned literature that focused predominantly on antecedents such as job satisfaction and perceived availability of job alternatives (Hulin et al., 1985), T. W. Lee and Mitchell describe other events and processes that may influence an in individuals decision to turnover.

T. W. Lee and Mitchell (1994) scaffold their theoretical propositions for the unfolding model using image theory (Beach, 1990) as a framework. Image theory is predicated on the notion that individuals face a never-ending onslaught of information, and as a result, they attempt to sift pertinent information (e.g., job alternatives) out of the irrelevant. In other words, the theory posits that people innately strive for efficiency when making decisions, wherein they avoid expending excess cognitive resources when coming to a decision by rapidly screening alternatives. As a heuristic for filtering alternatives, individuals attempt to compare and potentially align incoming information

with their personal values, goals, and their strategy for attaining goals. If incoming information is unaligned with their values, goals, and strategy, they filter and ignore the information and assume that the perceived alternative is a poor fit; in such situations, their behavior remains the same (e.g., not turnover decision).

Building on upon these propositions of image theory (Beach, 1990), T. W. Lee and Mitchell (1994) suggest that “shocks to the system” (p. 60) interrupt the normal information screening process and force an individual to engage in more effortful decision making regarding the shocking decision alternative (e.g., promotion, job offer). In some sense, the authors contend that turnover processes function akin to punctuated-equilibrium models, wherein a status quo is maintained until some un-ignorable, disruptive event potentiates change. Based on this notion, T. W. Lee and Mitchell suggest that shocks to the system can initiate three of the five decision paths outlined in their theory, while the fourth and fifth decision paths require no shock. As a terse summary, the first three paths can result in automatic quitting of a job based on a preconceived behavioral script or it can result in controlled (i.e., not automatic) decision making that may or may not include an assessment of relative job dissatisfaction. The fourth and fifth paths do not involve a shock to the system. Instead, the fourth and fifth paths, respectively involve assessment of relative job dissatisfaction and either consideration of job alternatives and job search behavior, or no consideration of job alternatives—that latter path resembles Mobley’s (1977) discussed above.

In subsequent tests of the unfolding model (e.g., T. W. Lee, Mitchell, Holtom, McDaniel, et al., 1999; T. W. Lee et al., 1996), Lee and colleagues have made some

substantive changes to the model, while retaining its nonlinear essence. For instance, the authors now permit more than one path to include behavioral scripts. A critique by Maertz and Campion (2004) cautions that negative affect (perhaps as a component of job satisfaction) should feature in every path option, as opposed to a few—their rationale being that a great deal of evidence has accumulated that links some affect-laden construct (e.g., job satisfaction) with turnover (Griffeth et al., 2000). Nevertheless, the unfolding model represents an important evolution in turnover process models. Contrasting prior models, Lee and Mitchell (1994) provide what might be considered a more accurate depiction of turnover processes, as their model highlights the roles of disruptive or noteworthy events, decision-making heuristics, behavioral scripts, and job dissatisfaction.

***Content models of turnover.*** In contrast to process models of turnover, content models elucidate the reasons underlying turnover decisions—in other words, what are the underlying motives for *why* employees decide to leave an organization. Over the years, scholars have introduced several models in an attempt to understand the content of workers' decisions to stay or leave (e.g., Bluedorn, 1982; Price & Mueller, 1981). Underlying such content models is the concept of motivational forces that drive workers to turnover. In a theoretical synthesis of prior content models receiving empirical support, Maertz and Campion (2004) concluded that the following eight motivational forces influence turnover: (a) affective reactions to organization, (b) psychological contract obligations, (c) commitment to those in the organization, (d) availability of job alternatives, (e) expected level of job satisfaction if decision is made to remain in the organization, (f) expectations of others to stay or remain in the organization, (g)



behavioral commitment, and (h) moral or ethical considerations about leaving. These eight motivational forces represent a comprehensive summary of prior content models of turnover.

***Integrating process and content models of turnover.*** As approaches to understanding voluntary turnover, process and content models should *not* be considered to be competing explanations for turnover, as evidenced by Maertz and Campion (2004). In their study, Maertz and Campion categorized turnover decisions into four generic types based on an *integration* of process and content turnover models; these four types were: impulsive quitters, comparison quitters, preplanned quitters. These four turnover decision types capture both motives underlying why the employee left the organization and the decision-making process they followed to arrive at the decision to do so. The authors found some support for this integrative approach to turnover models. For instance, they found that impulsive quitters reported higher negative affect and chose to quit even though no premeditated job alternative was in mind. Although lacking full support for their generic typology of turnover decisions, Maertz and Campion's work illustrates the promise of integrating process and content models as a means of explaining, understanding, and ultimately predicting voluntary turnover. Of particular importance to this dissertation, the authors found evidence that affect-related forces such as job satisfaction (and other job attitudes) influence why and how individuals turn over.

### Appendix D: Review of Turnover Intentions

Research and theory position turnover intentions as a proximal antecedent to turnover—a type of withdrawal behavior—which is consistent, in general, with intentions serving as a proximal antecedent to any volitional behavior, as indicated by the theory of planned behavior (Ajzen, 1985, 1991) and affective events theory (H. M. Weiss & Cropanzano, 1996). Like job satisfaction, employee turnover intentions (e.g., intentions to quit) also represent a prominent attitudinal construct in the organizational sciences. Given its status as a focal construct in this dissertation, I briefly review the nomological network surrounding turnover intentions in the following paragraphs, with special attention given to how turnover intentions represent a consequence of job satisfaction.

#### **Antecedents of Turnover Intentions.**

Consistent with affective events theory (H. M. Weiss & Cropanzano, 1996), attitudes such as turnover intentions forms as a result of the work environment, affective events, and characteristics of the individual. Though not intended to be exhaustive or comprehensive, I review turnover intentions in relation to the following broad categories of presumed antecedents: work characteristics, work stressors, individual differences, leadership, group and organizational characteristics, and health and well-being.

**Work characteristics.** Consistent with affective events theory (H. M. Weiss & Cropanzano, 1996), in addition to affective reactions, features of the work environment directly influence and shape the formation of turnover intentions and other job attitudes. Further, features of the perceived work environment may indirectly influence turnover intentions formation via their impact on work events. That is, certain aspects of the work

environment, such as work characteristics, may increase the likelihood that certain work events occur (or, conversely, do not occur). For example, in work environments with a high degree of interpersonal feedback, a worker may experience a greater propensity for meaningful conversations with coworkers filled with feedback that is vital for his/her success. Each meaningful conversation (i.e., positive work event), in turn, may leave the worker with a pleasant emotion (e.g., pride, joy, contentment), and over time, consistent exposure to such events may decrease the worker's thoughts of quitting.

With respect to the five core job characteristics from Hackman and Oldham's (1975, 1976) model, a quantitative review of accumulated evidence by Humphrey et al. (2007) suggested that only a job's perceived skill variety substantively influences a workers' turnover intentions, albeit a small effect. More specifically, in jobs with higher perceived skill variety, workers demonstrate a slight tendency for lower turnover intentions. In that same review, however, Humphrey and colleagues assessed other characteristics of the job and work environment that might be best described as falling beneath the broader umbrella of *work* characteristics, as opposed to just *job* characteristics. In fact, as alluded to above in the example pertaining to affective events theory (H. M. Weiss & Cropanzano, 1996), interpersonal feedback (i.e., feedback from others) represents an important antecedent of turnover intentions, such that more and better feedback from others results in fewer turnover intentions. Sharing similarly negative and small-to-medium effects, other interpersonal and social aspects of the work environment also contribute to fewer turnover intentions—specifically, the characteristics of interdependence and social support. Thus, aside from a small relation with skill

variety, more socially-oriented features of the workplace serve as the strongest work-characteristics-related antecedents.

**Work stressors.** Like work characteristics, work stressors fall squarely within the framework of H. M. Weiss and Cropanzano's (1996) affective events theory. In that framework, work stressors represent work events themselves. As such, the theory posits that workers' attitudes form and change in response to their affective reactions to such events. Consistent with that proposition, in a meta-analytic review of the workplace aggression literature, Hershcovis and Barling (2010b) found small-to medium, positive effects of exposure to different sources (e.g., supervisor, coworker, outsider) of workplace aggression on turnover intentions. In other words, as exposure to workplace aggression increases, workers develop stronger intentions to leave their organization. Similarly, in a separate meta-analytic investigation by Hershcovis and Barling (2010a), the authors found that another mistreatment-related work stressor—sexual harassment—also increases the likelihood of turnover intentions. Role-related stressors can also contribute to thoughts of quitting an organization. In their meta-analytic review of role-related stressors, Jackson and Schuler (1985) found role conflict and role ambiguity increase thoughts of leaving. Further, workers who experience great work-family conflict, which is considered a specific form of role conflict, tend to think more seriously about turning over (Amstad et al., 2011).

It should be noted, however, that workers do not perceive all work stressors as undesirable. Two broad types of work stressors, labeled challenge- and hindrance-related stressors, result in differential worker perceptions and subsequent reactions. As the label

implies, challenge-related stressors comprise those stressors that present challenges and opportunities for personal growth; such stressors might relate to workload, responsibility, or time pressure, for example. In contrast, hindrance-related stressors comprise those stressors that pose as obstacles to task performance personal growth. In relation turnover intentions, these two categories of work stressors result in differential effects.

Specifically, challenge-related stressors exhibit a weak, positive relation with turnover intentions, while hindrance-related stressors also exhibit a positive relation, but a relation that is much stronger (N. P. Podsakoff, LePine, & LePine, 2007). Thus, while work stressors generally increase turnover intentions, the strength of the effect may vary based on whether workers perceive a work stressor as a challenge or a hindrance.

**Individual differences.** As inherently stable tendencies of a person, individual differences (e.g., dispositions) represent a presumed antecedent of turnover intentions and other job attitudes. Supporting the antecedent role of dispositions, affective events theory (H. M. Weiss & Cropanzano, 1996) frames dispositions and other individual differences as a direct driver of a worker's affective actions, as well as how a worker perceives and appraises work events, affectively reacts to such work events, and ultimately forms job-related attitudes. With regard to the disposition of personality, various dimensions of the Big Five model influence turnover intentions. In a quantitative synthesis of the literature, Zimmerman (2008) found that workers who are high in extraversion, emotional stability, agreeableness, and conscientiousness are less likely to think of leaving their organization, while no effect was found for openness. Of the Big Five dimensions, emotional stability demonstrated the largest effect on turnover intentions. Exhibiting similarly strong effects,

Zimmerman also found that those high in negative affectivity have a greater propensity to consider leaving their organization, while those high in positive affectively experience the opposite. In sum, various personality traits influence workers' intentions to quit, and the strongest effects are found with emotional stability, negative affectivity, and positive affectivity.

**Leadership.** In addition to work characteristics and individual differences, prior research asserts that the quality of leadership influences followers' intentions to leave. Similar to its relation with job satisfaction described above, the quality of LMX also improves followers' turnover intentions, although the effect is weaker (i.e., medium in magnitude) than the effect found in relation to job satisfaction (Gerstner & Day, 1997). Further, leadership behavior related to reward and punishment matter. Specifically, followers have lower turnover intentions under the supervision of leaders who provide contingent rewards for meeting certain expectations, but they have stronger turnover intentions under the supervision of leaders who hand down punishments that are not contingent upon failing to meet behavioral expectations (P. M. Podsakoff, Bommer, Podsakoff, & MacKenzie, 2006). In sum, the quality leaders' relationships with their followers, as well as the manner in which they reward and punish influence followers' turnover intentions.

**Group and organizational characteristics.** Additional aspects of the perceived work environment related to work groups and the organization as a whole contribute to the level of workers' turnover intentions. As described previously, certain features of the environment (e.g., climate) provide social cues to workers regarding group and

organizational stances or goals, as is consistent with context theory (Johns, 2006). First, specific forms of workplace climate may influence workers' intentions to leave their organization. For example, healthy ethical and mistreatment-reduction climates have been linked with weaker turnover intentions (Schwepker, 2001; Yang et al., 2014). Next, workers' perceived fit with respect to their work group or organization also contributes to diminished intentions to turn over (Kristof-Brown et al., 2005).

**Health and well-being.** Workers' health and well-being represents another conceptual antecedent of turnover intentions, particularly for those who attribute poor physical and/or psychological health and well-being to their work. In other words, if workers perceive that their work may be diminishing their health or well-being, they are more likely to consider removing themselves from the detrimental work environment. In support of this logical proposition, a meta-analytic review by R. T. Lee and Ashforth (1996) revealed a strong effect of emotional exhaustion (i.e., a component of burnout) on turnover intentions, such that those with higher emotional exhaustion tended to have higher turnover intentions. Relatedly, a meta-analytic review by Alarcon (2011) found a medium effect of general burnout on turnover intentions. Similar relations have also been found between turnover intentions and more general, non-work-specific indicators of psychological health. For instance, Spector and Jex (1991) surveyed 232 U.S. civil service employees and found that those with the highest turnover intentions also tended to report signs of high anxiety levels.

In terms of physical health, Kemery, Mossholder, and Bedeian (1987) investigated the link between physical health symptoms and turnover intentions (among

other relationships) using a sample of 370 participants working at a U.S. university. The authors found that, indeed, those with worse physical health symptoms tended to show higher intentions to quit. Together, these findings evidence the role that psychological and physical health or well-being may play in workers' thoughts of leaving their organization. Together, these findings evidence the role that psychological and physical health or well-being may play in workers' thoughts of leaving their organization.

**Summary.** As described above, a wide swatch of antecedents related to job characteristics, individual dispositions, work stressors, leadership, and characteristics of work groups and the organization can all influence workers' turnover intentions. First, workers tend to exhibit fewer turnover intentions when they work in job with high skill variety, social support, and interdependence. Second, those who are exposed to interpersonal conflict (e.g., workplace aggression, sexual harassment), role conflict, and role ambiguity have greater intentions to quit their organization. Third, workers indicating low levels of extraversion, emotional stability, agreeableness, conscientiousness, and positive affectivity are less likely to consider turning over, while those high in negative affectivity are more likely. Fourth, workers' feel less inclined to turn over when they have high-quality relationships with their supervisor and when their supervisor rewards them for a job well done and refrains from punishing them for ambiguous motives. Fifth, aspects of the group and organizational social milieu such as cohesion and a health climate can improve turnover intentions. Finally, workers with poor physical and psychological health or well-being are more likely to thinking of quitting their organization.



### **Correlates of Turnover Intentions**

As another type of job attitudes, turnover intentions share many of the same correlates as job satisfaction. Regarding the relationships between turnover intentions and other attitudinal correlates, turnover intentions share medium-to-large, negative meta-analytic correlations with job satisfaction (Kinicki et al., 2002; Tett & Meyer, 1993), organizational commitment (Cooper-Hakim & Viswesvaran, 2005; Meyer et al., 2002), career commitment (Cooper-Hakim & Viswesvaran, 2005), organizational identification (Riketta, 2005), and job involvement (Brown, 1996). Again, however, it should be noted that prior research and theory often frame job satisfaction as an antecedent of turnover intentions, and accordingly, I adopt this same stance for this dissertation.

### **Consequences of Turnover Intentions**

While various antecedents and correlates influence turnover intentions, turnover intentions have the potential to influence behavior at work, as is consistent with affective events theory (H. M. Weiss & Cropanzano, 1996). The theory contends that those workers with unfavorable attitudes towards their work (e.g., turnover intentions, will be more likely to engage in various types of withdrawal behavior and CWB and less likely to engage in behavior that contributes to and supports their organization. I should note, however, that an individual's turnover intentions (and other job attitudes) may also serve as a consequence of his/her work behavior (see Judge et al., 2001; Zimmerman & Darnold, 2009). For example, a poor performing worker may feel the need to leave his/her organization because he/she does not foresee receiving a performance-tied monetary incentive or because he/she perceives the low performance as indicative as poor

person-organization fit. For the purposes of this dissertation, though, I will report work behavior as an outcome of turnover intentions, unless otherwise stated for a particular study.

**Task performance.** With regard to forms of positive work behavior, turnover intentions have the potential to influence both task and non-task forms of work behavior. A meta-analytic investigation by Zimmerman and Darnold (2009) identified a small, negative relationship between turnover intentions and task performance—suggesting, for example, that perhaps those with intentions to leave the organization may begin to withdraw from normal work expectations, or conversely, those with poor task performance may perceive a need to exit the organization and find opportunities for advancement and financial incentive elsewhere. Similar-in-magnitude relations have been with respect to proactive work behavior as well. For instance, Wanberg and Kammeyer-Mueller (2000) used a sample of 181 workers to investigate the role of proactive work behavior during the socialization process. Zero-order bivariate revealed that turnover intentions significantly co-vary with the relationship-building, feedback-seeking, and positive-framing components of proactive work behavior, such that those with greater intentions to leave exhibit fewer of these forms of proactive behavior.

**Counterproductive work behavior (CWB).** The extant literature also suggests that relations exist between turnover intentions and forms of non-task behavior, such as CWB, OCB, and FSSB. Regarding the link between turnover intentions and CWB, J. S. Christian and Ellis (2014) conducted two studies and found in both samples that indeed higher turnover intentions correspond to more frequent CWB. Interestingly, however, the

authors found that turnover intentions play an important role in the relationship between workers' moral disengagement and their decision to engage in deviant behavior at work. That is, the relationship between moral disengagement and deviant behavior was strongest when workers have frequent thoughts of quitting, and in terms of the underlying psychological process involved, the authors contend that workers with high turnover intentions may perceive an end to their psychological contract with organization, thereby opening the door for them to act on their moral disengagement by acting in a deviant manner.

**Organizational citizenship behavior (OCB).** As for OCB, as mentioned previously, conceptual arguments can be made for OCB as both an antecedent and a consequence of turnover intentions. For instance, in their study of 205 supervisor-employee dyads, X.-P. Chen et al. (1998) found evidence that employees with higher ratings of OCB tended to have fewer turnover intentions. With that said, given its cross-sectional design, it is still possible that workers' turnover intentions may have predicted their OCB. Also employing a cross-sectional design, Coyne and Ong (2007) also found a negative association between the two constructs, and in acknowledgement of their research design limitation, the authors directed future researchers to investigate the relationship in a longitudinal design so as to determine whether turnover intentions predicts OCB or the other way around.

**Family-supportive supervisor behavior (FSSB).** Like the turnover intentions and OCB literature, the FSSB literature is somewhat limited when it comes to predictors of the behavior. While a supervisor's FSSB has been linked with decreased turnover

intentions in his/her subordinates (e.g., Bagger & Li, 2014; Hammer et al., 2009, 2013; Odle-Dusseau et al., 2012), I was unable to identify any studies that investigated attitudes of the supervisor in relation to his/her enactment of FSSB. In light of the absence of empirical evidence, I rely on the theoretical propositions of affective events theory (H. M. Weiss & Cropanzano, 1996) to guide an expected relation between turnover intentions and FSSB. Specifically, I contend that FSSB represents judgment-driven behavior, and as specified by the theory, attitudes directly influence judgment-driven behavior. Accordingly, I suspect that individuals with high turnover intentions will exhibit lower FSSB, as those who intend on leaving an organization may be less likely to support others—especially when that support is not a formal expectation or requirement of their job (e.g., task performance). An important contribution of this dissertation, therefore, will be to elucidate the relationship between turnover intentions and FSSB, as well as the relationship between turnover intentions and OCB.

**Withdrawal behavior.** As a presumed antecedent in the turnover process, numerous theories and studies have framed turnover intention as antecedent to withdrawal behavior such as lateness, absenteeism, and turnover. To begin, a worker's late arrival includes two broad types of predictors: (a) attitudes, and (b) non-attitudinal lateness-specific factors (Koslowsky, 2000). First, consistent with a progression model of withdrawal behavior, various job attitudes influence a worker's decision to arrive late to work, and Koslowsky et al. (1997) found in their meta-analytic review that the turnover intentions construct shares a strong, positive association with lateness. Second, a worker may arrive late for reasons other than his/her attitudes toward work or the organization

itself. Specifically, some workers may experience commuting delays or a work-family conflict; others may have an innate tendency to arrive late (e.g., personality) or perhaps they are part of a culture that accepts lateness; while some situations may call for more or less time urgency (Koslowsky, 2000). Thus, while turnover intentions (and other job attitudes) may partially explain lateness, some situation-, personality-, and/or culture-based factors may also explain lateness independent of turnover intentions.

Compared to lateness, relatively few studies have examined the direct relationship between turnover intentions and absenteeism. Of the limit number of studies, Geurts, Schaufeli, and Rutte (1999) found a small, positive but nonsignificant bivariate correlation between turnover intentions and absenteeism using a cross-sectional design, while A. Cohen and Golan (2007) found a similar nonsignificant bivariate effect of turnover intentions on absenteeism using a longitudinal design. As suggested by Geurts and colleagues (1999), however, the negligible relation between the two constructs could be explained by different underlying mechanisms and associated mechanisms.

Finally, turnover intentions share a rich history with actual turnover behavior, as the former is framed as a critical antecedent to the latter. Multiple theories of turnover have framed turnover intentions as a focal antecedent to turnover. To date, though, the empirical evidence has tempered perceptions regarding the magnitude of this relationship. In their meta-analytic review of the turnover literature, Griffeth et al. (2000) found, as might be expected, a positive association between turnover intentions and turnover; the medium magnitude of the effect, suggests that while turnover intentions

represent an important predictor of turnover, a substantial portion of the variance can be explained by factors other than a worker's level of turnover intentions.

**Summary.** In summary, prior research indicates that turnover intentions influence a number of critical work outcomes. Higher levels of turnover intentions correspond with lower task performance and less proactive behavior, as well as more frequent CWB—the latter relationship could be partially explained by moral disengagement. Regarding the focal constructs of OCB and FSSB, relatively few studies have addressed the link between turnover intentions and OCB and I was unable to identify any empirical investigations of workers' turnover intentions and their FSSB, as rated by themselves or their subordinates. With respect to OCB, evidence generally suggests that fewer turnover intentions correspond with more OCB. Finally, in the absence of a single study linking workers' turnover intentions with their exhibited FSSB, it may be premature to make any assumptions based on existing theory.

### **Appendix E: Review of the Momentum Model of Job Satisfaction**

Similar to the discussion surrounding the criterion problem in the organizational sciences (see Austin & Villanova, 1992), a growing emphasis has been placed on conceptualizing workplace phenomena from a dynamic—as opposed to a static—perspective. For example, both affective events theory (H. M. Weiss & Cropanzano, 1996) and the episodic process model of affective influences on performance (Beal et al., 2005) conceptualize affect, cognition, and behavior from a temporally dynamic perspective. That is, workplace phenomena such as affect, cognition, and behavior may be conceptualized as fluid and dynamic, as opposed to rigid and static.

This growing interest in change over time has recently made its way into the study of job attitudes. For example, Bentein, Vandenberg, Vandenberghe, and Stinglhamber (2005) investigated changes in the organizational commitment and turnover intentions in relation to actual turnover behavior. Using a sample of 330 Belgian university alumni, the authors found that workers' organizational commitment generally declined over a 6-month period, and as one might expect, some workers' organizational commitment declined at a faster rate than other workers. Interestingly, the fastest rate of organizational commitment decline was found for those workers who had initially higher levels of commitment, when compared to those with initially lower levels. In comparison, workers' turnover intentions tended to increase over the course of the study, regardless of their initial level of turnover intentions. Regarding the relations between organizational commitment and turnover intentions, findings indicated that workers who experienced faster declines in organizational commitment tended to likewise experience faster

increases in turnover intentions. Finally, with respect to actual turnover behavior, the authors found that decline in organizational commitment predicted turnover, and moreover, low organizational commitment over the course of the study did *not* predict actual turnover. Thus, the trajectory and rate of change in the job attitude of organizational commitment—a type of job attitude and correlate of job satisfaction—played an important role in workers' turnover intentions and actual turnover.

With respect to the dynamic relation between job satisfaction and turnover, Kammeyer-Mueller et al. (2005) conducted a study in which they sampled 932 recent hires from seven organizations over the first 18 months since their hire date. In support of the unfolding model of turnover (T. W. Lee & Mitchell, 1994), they found that, over time, critical events (e.g., marriage, divorce, promotion, supervisor change, job offer from another organization) indeed influenced enacted turnover in a manner distinct from job attitudes (i.e., job satisfaction, organizational commitment). Of most importance to this proposed study, however, their findings indicated that, to a marginally significant extent, there were differences in the job satisfaction trajectories of stayers versus leavers. Specifically, the job satisfaction of stayers (i.e., those who did not turn over) remained relatively constant over the 18-month period, while the job satisfaction of leavers (i.e., those who did turn over) declined steadily over that same time period. Thus, the Kammeyer-Mueller and colleagues' study provides some evidence that changes in job satisfaction trajectory may be a meaningful predictor for actual voluntary turnover, such that employees who sense a downward trajectory in job satisfaction relative to a prior reference are more likely to leave the organization.



In partial corroboration of the Kammeyer-Mueller et al. (2005) findings, Liu et al. (2012) investigated the relationship between job satisfaction trajectory and voluntary turnover using a sample of 5,270 employees working within 175 units from a hospitality organization. To operationalize changes in job satisfaction over time, the authors assessed employees' level of job satisfaction at three time points, with 6-month time intervals. Like Kammeyer-Mueller and colleagues' findings, Liu and colleagues found that employees' changes in job satisfaction over time did in fact influence whether they stayed at or left their organization. Specifically, Liu and colleagues found that as employees' job satisfaction increased over time, they were less likely to leave their organization.

### **Introduction to the Momentum Model of Job Satisfaction**

Recently, G. Chen et al. (2011) specifically addressed the relationship between workers' changes in job satisfaction in relation to their self-reported *intentions* to turnover from their current organization. They proposed a momentum model of job satisfaction as an integration of the following theories: prospect theory (Kahneman & Tversky, 1984), conservation of resources theory (Hobföll, 1989), within-person spirals theory (Lindsley et al., 1995), and sensemaking theory (Louis, 1980). By integrating the propositions of these theories, Chen and colleagues contend that changes in job satisfaction (i.e., job satisfaction trajectory) are meaningful to employees insofar as they contrast with a prior job satisfaction level reference point. In the following sections, I review each theory as it relates to the momentum model of job satisfaction.

**Prospect theory.** As proposed by prospect theory (Kahneman & Tversky, 1984), an individual's gain or loss increases in saliency the more the gain or loss deviates from an individual's reference point. When applied to changes in experienced job satisfaction, prospect theory would suggest that a change in job satisfaction will be most salient to an individual when it deviates furthest from the individual's initial level of job satisfaction (i.e., the reference point). For example, an employee who experiences very high job satisfaction upon beginning a new job will become more and more cognizant of a decline in their job satisfaction the further their subsequent level of job satisfaction deviates from their initial level. Moreover, prospect theory suggests that losses will be more salient to an individual than gains. Finally, in line with the theory, when an individual's job current satisfaction deviates from his/her initial job satisfaction level, he/she will be more likely to use this information in determining whether to stay at or leave his/her organization.

**Conservation of resources theory.** Also integrated within Chen and colleagues (2011) momentum model of job satisfaction, conservation of resource theory (Hobföll, 1989) posits that an individual strives to maintain or conserve resources (i.e., objects, conditions, personal characteristics, energies) so as to avoid threats to resources, failures to gain resources, and experiences of an actual loss in resources. When an individual senses a potential threat to his/her ability to conserve his/her resources, the individual will experience stress and attempt to replenish resources or reduce the loss of resources. Accordingly, when an individual perceives a potential resources loss, such as declining job satisfaction (i.e., a potential resource loss), he/she will may to replenish the lost job

satisfaction. In doing so, however, the individual may begin to experience spiraling losses as he/she applies more and more resources towards replenishing job satisfaction levels.

To this end, as the threat or actual loss of job satisfaction resources becomes more severe, the individual may begin to consider more seriously whether or not he/she wants to remain in the organization.

**Within-person spirals theory.** Also woven into Chen and colleagues (2011) integrative momentum model of job satisfaction is within-person spirals theory (Lindsley et al., 1995). This theory proposes that phenomenological spirals provide valuable information to an individual, where the theory defines spirals as relatively constant, sustained, and systematic changes over time. Such trajectories provide important meaning to individuals as they attempt to make sense of the trend. Should a downward trajectory appear stable, an individual will likely forecast future change at this same rate and more and more potent outcomes associated with such change. These trajectories can be either positive or negative in nature. For example, an employee who finds that his/her job satisfaction continues to improve along a particular trajectory may extrapolate that his/her job satisfaction will continue to improve, and presumably he/she more than likely have intentions to stay at his/her current job. Conversely, an employee who experiences a downward, or negative, job satisfaction trajectory may anticipate that his/her job satisfaction will continue to decline, and he/she may desire to leave his/her current job in an attempt to escape the downward spiral.

**Sensemaking theory.** As the final theory integrated into Chen and colleagues' (2011) momentum model of job satisfaction, sensemaking theory (Louis, 1980) shares a

certain similarity with prospect theory (Kahneman & Tversky, 1984) and within-person spirals theory (Lindsley et al., 1995). Specifically, sensemaking theory posits that individuals possess a need to make sense of work events and experiences, and to do so they compare their current work events and experiences with their past work events and experiences. Based on discrepancies found between current and past work events and experiences, individuals make projections about the work events and experiences they will experience in the future. Consistent with this theory, an employee who finds that his/her job satisfaction (based on work events and experiences) has improved over time, will be more likely to expect that his/her job satisfaction will continue to improve moving forward, reducing the likelihood that the individual will want to leave what he/she anticipates to be a pleasant future. In contrast, an employee who finds that his/her job satisfaction has declined over time, will be more likely to expect his/her job satisfaction to continue to decline in the future, increasing the likelihood that the individual will want he/she anticipates to be an unpleasant future.

### **Empirical Support for the Momentum Model of Job Satisfaction**

In support of their momentum model of job satisfaction, Chen and colleagues (2011) found across their four independent samples that dynamic change in job satisfaction can elicit meaning for employees, and this meaning can translate into behavioral intentions (i.e., turnover intentions). That is, using prior levels of job satisfaction as a reference point, employees evaluate and compare their current levels of job satisfaction, as well as infer whether their job satisfaction change, if any, has had a positive or negative trajectory since their reference point. Further, based on the

aforementioned trajectories (or lack thereof), employees predict what their future will hold.

Based on these prior propositions, in their integrative momentum model of job satisfaction, Chen and colleagues (2011) provide two key propositions that differentiate a dynamic perspective of job satisfaction from a static one. First, they propose: “Job satisfaction at an earlier point in time provides a reference point for interpreting job satisfaction at a later point in time” (p. 163). From a dynamic perspective of job satisfaction, employees derive meaning from differences from their prior job satisfaction to their current job satisfaction. Second, they propose: “Job satisfaction is more salient to the extent that it deviates more from prior job satisfaction levels” (p. 163). This suggests that greater perceived changes in job satisfaction over time will become more apparent and receive greater attention from employees. Together, these two propositions explain why and how dynamic job satisfaction changes elicit meaning for employees, and under what circumstances employees will be likely to acknowledge and even react to such perceived changes.

As mentioned above, to test their momentum model of job satisfaction, Chen and colleagues (2011) investigated the dynamic relation between job satisfaction and turnover intentions in four independent samples. In their first sample, 725 British Army soldiers participated in surveys during their first 10 weeks of military training at three time points, separated by 1-month intervals. From this initial sample, 202 participants yielded complete data and, thus, were retained for subsequent analyses. After controlling for employees’ mean level of job satisfaction over the three time points as well as Time 1

turnover intentions, the authors found that, in this sample, changes in job satisfaction did not significantly predict Time 3 turnover intentions. They did, however, find that changes in job satisfaction negatively predicted *changes* in turnover intentions over the same three time points, even after controlling for employees' mean level of job satisfaction over the three time points and their Time 1 turnover intentions. In other words, an upshift in employees' job satisfaction over time corresponded to a simultaneous downshift in turnover intentions, even after controlling for mean level of job satisfaction and Time 1 turnover intentions. Finally, when investigating the link between turnover intentions and actual voluntary turnover data for this sample, the authors found that changes in turnover intentions, but not mean level of turnover intentions, predicted actual voluntary turnover of soldiers, such that those who quit had a larger upshift in turnover intentions over time than those who stayed. These findings suggest that changes in job satisfaction (i.e., downshifts or upshifts) influence changes in turnover intention, and that strong, positive changes in turnover intentions may ultimately lead to voluntary turnover from their organization.

In their second sample, Chen and colleagues (2011) surveyed 198 new employees at the London office of a large multinational consulting organization at three time points, separated by 2-month intervals. From this initial sample, 64 participants yielded complete data and, thus, were retained for subsequent analyses. Unlike their first sample, they found that job satisfaction change negatively predicted Time 3 turnover intentions, such that when an upshift in job satisfaction occurred, employees were more likely to have lower intentions to quit at a later time point; this was found even after controlling for

mean level of job satisfaction and Time 1 turnover intentions. Like the first sample, however, the authors found that job satisfaction change negatively predicted turnover intentions change, even after controlling for mean level of job satisfaction and Time 1 turnover intentions. Thus, an upshift in job satisfaction was, again, found to correspond to simultaneous downshift in turnover intentions.

In their third sample, Chen and colleagues (2011) surveyed 800 U.S. Army soldiers from ten companies, who were stationed in Europe, at three time points, separated by 3-month intervals. From this initial sample, 289 participants yielded complete data and, thus, were retained for subsequent analyses. The authors found again that an upshift in job satisfaction over time corresponded to fewer turnover intentions at Time 3, as well as a simultaneous downshift in turnover intentions. These analyses for this sample, however, differed such that, in addition to mean level of job satisfaction and Time 1 turnover intentions, the authors introduced organizational tenure as an additional control variable. Thus, regardless of how long an employee worked at the organization, an upshift in job satisfaction led to fewer turnover intentions at Time 3 and, over time, a downshift in turnover intentions.

In their fourth and final sample, Chen and colleagues (2011) surveyed 83 part-time MBA students from a large U.S. organization over four time points, separated by 2-week intervals. That is, compared to the first three samples, this sample used four time points instead of three, as well the shortest interval between time points. In corroboration of the findings from the prior three samples, the authors found that an upshift in job satisfaction corresponded to a simultaneous downshift in turnover intentions and fewer

Time 4 turnover intentions; again, the authors controlled for mean level of job satisfaction, Time 1 turnover intentions, and organizational tenure. In this final sample, the authors also investigated the role of work expectations (i.e., how much work and the work environment are expected to change) and found that work expectations partially mediate the relationship between job satisfaction change and turnover intentions change. Next, they found organizational tenure moderated the relationship between job satisfaction change and work expectations, such that the positive relation between job satisfaction and work expectations was stronger when employees had longer organizational tenure. Finally, they found that organizational tenure moderated the mediation between job satisfaction change, work expectations, and turnover intentions change, such that the mediation was significant when organizational tenure was high and nonsignificant when organizational tenure was low. These latter three findings suggest that (a) employees may make sense of their changes in job satisfaction by altering their expectations for the future of their work and their work environment, (b) employees who have worked in an organization for a longer period of time may be more likely to make changes to their work expectations based on perceived changes in job satisfaction, and (c) employees who have worked longer in an organization may be more likely to make changes to their work expectations based on perceived changes in job satisfaction, and ultimately they will adapt their turnover intentions accordingly.

### Summary

In conclusion, as demonstrated by recent research, job satisfaction trajectories—or rather, change in job satisfaction over time—hold important meaning for workers.



When workers perceive a change in their job satisfaction relative to a prior baseline level, they experience changes in affect and cognition (e.g., turnover intentions), as well as behavior (e.g., voluntary turnover). Furthermore, the momentum model contends that workers perceive larger changes (upward or downward) as more salient, and smaller changes as less salient. Such perceived changes have important implications for workers' future expectations regarding work and the work environment.

## Appendix F: Study Measures

### Job Demands (Manager Self-Report)

*Authors:* Karasek, Brisson, Kawakami, Houtman, Bongers, and Amick (1998)

*Response Format:*

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neither
- 4 = Agree
- 5 = Strongly Agree

*Scale Items:*

1. You do not have enough time to get your job done.
2. Your job requires very fast work.
3. Your job requires very hard work.

### Interpersonal Conflict (Manager Self-Report)

*Authors:* Dierdorff and Ellington (2008)

*Response Format:*

- 1 = Never
- 2 = Once in the past 6 months
- 3 = Once a month, but not every week
- 4 = Every week
- 5 = Every day

*Scale Items:*

1. How often is dealing with unpleasant, angry, or discourteous people a part of your current job? This includes both co-workers and residents.
2. How often is dealing with violent or physically aggressive people a part of your current job?

### Job Satisfaction (Manager Self-Report)

*Authors:* Cammann, Fichman, Jenkins, and Klesh (1983)

*Response Format:*

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neither
- 4 = Agree
- 5 = Strongly Agree

*Scale Items:*

1. In general, you like working at your job.
2. In general, you are satisfied with your job.
3. You are generally satisfied with the kind of work you do in this job.

### Turnover Intentions (Manager Self-Report)

*Authors:* Boroff and Lewin (1997)

*Response Format:*

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neither
- 4 = Agree
- 5 = Strongly Agree

*Scale Items:*

1. You are seriously considering quitting [insert company name] for another employer.
2. During the next 12 months, you will probably look for a new job outside [insert company name].

### **Organizational Citizenship Behavior (Manager Self-Report)**

*Authors:* Lambert (2000) [based on Organ and Konovsky (1989) and Smith, Organ, and Near (1983)]

*Response Format:*

- 1 = Never
- 2 = Rarely
- 3 = Some of the time
- 4 = Most of the time
- 5 = All of the time

*Scale Items:*

1. To what extent do you help other employees with their work when they have been absent?
2. To what extent do you help your coworkers when they have too much to do?
3. To what extent do you help coworkers with questions they have about their work?
4. To what extent are you willing to work harder in order to help your employer succeed?

### **Family-Supportive Supervisor Behavior (Employee-Report of Manager)**

*Authors:* Hammer, Kossek, Bodner, and Crain (2013)

*Response Format:*

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neither
- 4 = Agree
- 5 = Strongly Agree

*Scale Items:*

1. Your supervisor makes you feel comfortable talking to him/her about your conflicts between work and non-work.

2. Your supervisor works effectively with employees to creatively solve conflicts between work and non-work.
3. Your supervisor demonstrates effective behaviors in how to juggle work and non-worker issues.
4. Your supervisor organizes the work in your department or unit to jointly benefit employees and the company.

**Job Satisfaction (Employee Self-Report)**

*Authors:* Cammann, Fichman, Jenkins, and Klesh (1983)

*Response Format:*

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neither
- 4 = Agree
- 5 = Strongly Agree

*Scale Items:*

1. In general, you like working at your job.
2. In general, you are satisfied with your job.
3. You are generally satisfied with the kind of work you do in this job.

### Appendix G: Change Scores and Polynomial Regression

Using algebraic change (or difference) scores represents somewhat of a contentious issue (e.g., Cronbach & Furby, 1970; Edwards, 1994a; Johns, 1981; Rogosa & Willett, 1983; Tisak & Smith, 1994). On the one hand, some critics assert that change scores tend to have lower reliability than either of their component measures (e.g., Lord, 1956), while on the other hand, some supporters counter this assertion by stating that change scores can have respectable reliabilities when there are substantive individual differences in underlying true change (e.g., Rogosa & Willett, 1983). In the case of this dissertation, I expected appreciable individual differences in true scores for the focal variables, and accordingly, algebraic change scores suited hypothesis testing. For further discussion of change scores and other related approaches, see Appendix G.

As an alternative to algebraic change scores, some scholars contend that polynomial regression constitutes a more appropriate method for assessing change (e.g., Edwards, 1994a; Edwards, 1994b, 2007; Edwards & Parry, 1993). More specifically, such opponents contend that the algebraic change (or difference) score represents a constraint imposed on a two-component model (where each component represents a measured variable used to calculate the change score), wherein the regression weights for the two components are constrained as  $b_1 = -b_2$ , or in other words, constrained to be equal in magnitude yet opposite in sign (i.e.,  $Y = b_0 + b_1[X - Z]$  vs.  $Y = b_0 + b_1[X] - b_2[Z]$ ). As an advantage, opponents suggest that polynomial regression permits direct hypothesis testing pertaining to such constraints, thereby providing a test of whether such a constraint is tenable in a given model.

With respect to *difference* scores, polynomial regression represents a preferable methodology for assessing differences between component variables; however, with respect to *change* scores, polynomial regression may not be appropriate for designs with two time points or for assessing change some forms of change. Indeed polynomial regression can be used to assess change in predictors, but it is not appropriate for assessing change in outcomes (Edwards, 2002). Because I plan to model change in the outcomes as well, polynomial regression does not represent an appropriate approach.

Further, in polynomial regression, support for a change model must satisfy several conditions, including the condition that introducing higher-order terms (i.e., quadratic terms) into the model does not significantly increase the variance explained over the original model (Edwards, 1994a)—this latter condition implies that if the model with quadratic terms significantly increases the variance explained, then the response surface may hold a curvilinear form. A curvilinear form, however, does not make conceptual sense where only two time points are available, as only linear change can be detected in such a design. As such, in the context of this dissertation and its two-time point design, polynomial regression does not constitute a conceptually appropriate method for assessing change in focal predictor variables. Therefore, it is my intention to use algebraic change scores to operationalize change.

**Appendix H: Mplus Syntax for a 1-1 Path Model (Hypotheses 1-3)****Single-Level Path Model**

Title: Single-level 1-1 path model for Hypotheses 1-3.  
 Data: FILE is datafile.dat;  
 VARIABLE: NAMES ARE condition x y;  
           USEVARIABLES ARE condition x y;  
           MISSING = .;  
 ANALYSIS: ESTIMATOR = ML;  
           BOOTSTRAP = 5000;  
 MODEL: y ON x condition; !regress outcome on predictor and control  
 OUTPUT: CINTERVAL; !compute confidence intervals  
           TECH1 TECH8; !parameter specifications, start values

**Two-Level Path Model**

Title: Two-level 1-1 path model for Hypotheses 1-3.  
 Data: FILE is datafile.dat;  
 VARIABLE: NAMES ARE condition x y facility;  
           USEVARIABLES ARE condition x y;  
           BETWEEN = condition;  
           MISSING = .;  
           CLUSTER = facility;  
 ANALYSIS: TYPE = TWOLEVEL RANDOM;  
           ESTIMATOR = ML;  
 MODEL: %WITHIN% !model for within effects below  
           y ON x; !regress outcome on predictor  
           %BETWEEN% !model for between effects below  
           y ON x condition; !regress outcome on predictor and control  
 OUTPUT: CINTERVAL; !compute confidence intervals  
           TECH1 TECH8; !parameter specifications, start values

**Appendix I: Mplus Syntax for a Moderation Path Model (Hypotheses 4-5)****Single-Level Path Model**

Title: Single-level moderation path analysis for Hypotheses 4-5.  
 Data: FILE is datafile.dat;  
 VARIABLE: NAMES ARE condition meanx meanw x w y;  
 USEVARIABLES ARE condition meanx meanw x w y;  
 MISSING = .;  
 DEFINE:  $xw = x*w$ ; !create predictor-moderator interaction term  
 ANALYSIS: ESTIMATOR = ML;  
 BOOTSTRAP = 5000;  
 MODEL: y ON meanx meanw x w condition; !regress outcome on predictors  
 OUTPUT: CINTERVAL; !compute confidence intervals  
 TECH1 TECH8; !parameter specifications, start values

**Two-Level Path Model**

Title: Two-level moderation path analysis for Hypotheses 4-5.  
 Data: FILE is datafile.dat;  
 VARIABLE: NAMES ARE facility condition meanx meanw x w y;  
 USEVARIABLES ARE condition meanx meanw x w y;  
 BETWEEN = condition;  
 MISSING = .;  
 CLUSTER = facility;  
 DEFINE:  $xw = x*w$ ; !create predictor-moderator interaction term  
 ANALYSIS: TYPE = TWOLEVEL RANDOM;  
 ESTIMATOR = ML;;  
 MODEL:  
 %WITHIN% !model for within effects below  
 y ON meanx meanw x w; !regress outcome on pred, mod, and int. term  
 %BETWEEN% !model for between effects below  
 y ON meanx meanw x w condition; !regress outcome on predictors  
 OUTPUT: CINTERVAL; !compute confidence intervals  
 TECH1 TECH8; !parameter specifications, start values



**Appendix J: Mplus Syntax for a 2-1 Cross-Level Path Model (Hypotheses 6 and 8)****Two-Level Path Model**

Title: Two-level 2-1 cross-level model for Hypotheses 6 & 8.  
 Data: FILE is datafile.dat;  
 VARIABLE: NAMES ARE condition x y manager;  
 USEVARIABLES ARE x y;  
 MISSING = .;  
 BETWEEN = condition x; !variables with only Between variance;  
 !variables that are not identified as  
 !BETWEEN = or WITHIN = can have both  
 !Within and Between variance  
 CLUSTER = manager;  
 ANALYSIS: TYPE = TWOLEVEL RANDOM;  
 ESTIMATOR = ML;  
 MODEL:  
 %WITHIN%  
 y; !estimate L1 variance  
 %BETWEEN% !model for between effects below  
 y; !estimate L2 (residual) variance  
 y ON x condition; !regress outcome on predictor and control  
 OUTPUT: CINTERVAL; !compute confidence intervals  
 TECH1 TECH8; !parameter specifications, start values

**Three-Level Path Model**

Title: Three-level 2-1 cross-level model for Hypotheses 6 & 8.  
 Data: FILE is datafile.dat;  
 VARIABLE: NAMES ARE condition x y manager facility;  
 USEVARIABLES ARE condition x y;  
 CLUSTER = facility manager;  
 BETWEEN = x (facility) condition; !variables w/ only Between variance  
 MISSING = .;  
 ANALYSIS: TYPE = THREELEVEL RANDOM;  
 MODEL: %WITHIN%  
 y; !estimate L1 variance  
 %BETWEEN manager% !model for between (manager) effects below  
 y; !estimate L2 (residual) variance  
 y ON x; !regress outcome on predictor  
 %BETWEEN facility% !model for between (facility) effects below  
 y x; !estimate L3 (residual) variance  
 y ON x condition; !regress outcome on predictor  
 OUTPUT: CINTERVAL; !compute confidence intervals

TECH1 TECH8;

!parameter specifications, start values

**Appendix K: Mplus Syntax for a 2-2-1 Multilevel Mediation Path Model****(Hypotheses 7 and 9)****Two-Level Path Model**

Title: Two-level 2-2-1 mediation model for Hypotheses 7 & 9.  
 Data: FILE is datafile.dat;  
 VARIABLE: NAMES ARE condition x m y manager;  
 USEVARIABLES ARE condition x m y;  
 MISSING = .;  
 BETWEEN = condition x m; !variables with only Between variance;  
 !variables that are not identified as  
 !BETWEEN = or WITHIN = can have both  
 !Within and Between variance  
 CLUSTER = manager;  
 ANALYSIS: TYPE = TWOLEVEL RANDOM;  
 ESTIMATOR = ML;  
 MODEL:  
 %WITHIN%  
 y; !estimate L1 variance  
 %BETWEEN%  
 y; !model for between effects below  
 !estimate L2 (residual) variance  
 m ON x(a); !regress mediator on predictor  
 y ON m(b); !regress outcome on mediator  
 y ON x(c); !regress outcome on predictor  
 y m ON condition; !regress med and outcome on control  
 MODEL CONSTRAINT:  
 NEW(indb); !name between-level indirect effects  
 indb=a\*b; !compute the indirect effect  
 OUTPUT: CINTERVAL; !compute confidence intervals  
 TECH1 TECH8; !parameter specifications, start values

**Three-Level Path Model**

Title: Three-level 2-2-1 mediation model for Hypotheses 7 & 9.  
 Data: FILE is datafile.dat;  
 VARIABLE: NAMES ARE condition x m y manager facility;  
 USEVARIABLES ARE condition x m y;  
 CLUSTER = facility manager;  
 BETWEEN = x m (facility) condition; !variables w/ only Between var  
 MISSING = .;  
 ANALYSIS: Type = THREELEVEL RANDOM;  
 MODEL:

```

%WITHIN%
y;
%BETWEEN manager%
y;
m ON x(am);
y ON m(bm);
y ON x(cm);
%BETWEEN facility%
y m x;
m ON x(af);
y ON m(bf);
y ON x(cf);
y m ON condition;
MODEL CONSTRAINT:
NEW(indm indf);
indm=am*bm;
indf=af*bf;
OUTPUT: CINTERVAL;
TECH1 TECH8;
!estimate L1 variance
!model for between effects below
!estimate L2 (residual) variance
!regress mediator on predictor
!regress outcome on mediator
!regress outcome on predictor
!model for between (facility) effects below
!estimate L3 (residual) variance
!regress mediator on predictor
!regress outcome on mediator
!regress outcome on predictor
!regress med and outcome on control
!name indirect effects
!compute the indirect effect
!compute the indirect effect
!compute confidence intervals
!parameter specifications, start values

```

\**Mplus* syntax adapted from Preacher et al. (2010), Preacher et al. (2011), and Preacher (2011)