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# Employee Coping with Organizational Change: An Examination of Alternative Theoretical Perspectives and Models

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# Employee Coping with Organizational Change: An Examination of Alternative Theoretical Perspectives and Models

This longitudinal study seeks to determine the appropriate theoretical structure for how employees cope with organizational change. A model based on the appraisal theory of emotion is compared to competing theoretical structures of coping found in the literature: stimulus-response, partial mediation, and moderated. Structural equation model results showed that coping with organizational change is a completely mediated process best represented by the stimulus-response theoretical structure, whereby negative appraisal is associated with reduced control and increased escape coping, which are positively related to positive and negative emotions, respectively. Negative emotions predicted sick time used and intentions to quit which then predicted voluntary turnover. Implications for coping theory and organizational change management are discussed.

Keywords: coping, organizational change, emotions, behavioral inhibition systems (BIS), affect systems

# Employee Coping with Organizational Change: An Examination of Alternative Theoretical Perspectives and Models

Coping is a ubiquitous, frequent, and salient element of human experience and is defined as "cognitive and behavioral efforts to deal with experiences that tax or exceed one's resources" (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986, p. 993). Researchers agree that the study of coping is fundamental to understanding how stress affects people (Skinner, Edge, Altman, & Sherwood, 2003), as the manner in which people cope can significantly amplify or reduce the effects of stress or adverse events on both individuals and organizations. Despite the importance of coping, a lack of agreement exists regarding the structure of how people cope, that is, what is the relationship between core coping constructs (i.e., cognitive appraisals, emotions, and coping strategies) at a given point in time. As a result of this lack of agreement, a lack of clarity also exists regarding precisely which coping constructs influence various coping outcomes in a given context. These issues are exacerbated by the fact that a large proportion of coping research examines concurrent relationships between coping constructs and outcomes. These factors led Folkman and Moskowitz (2004) to conclude that considerable work still is needed to understand how coping influences psychological, physiological, and behavioral outcomes over time. We endeavor to fill this void by using a cognitive phenomenological theory of coping to examine employee perceptions and reactions to organizational change. Competing conceptual structures of the coping process are examined to determine which best represents employee coping in this context.

## Conceptual Background

A cognitive phenomenological framework of coping is based on the proposition that coping is a *transactional* process between an individual and the environment and begins with an

individual's cognitive appraisal of a person-situation encounter (e.g., Cooper, Dewe, & O'Driscoll, 2001; Lazarus, 1991, 2001). According to this approach, cognitive appraisal reflects an individual's perception or evaluation of a situation or stressor (Beehr & Newman, 1998). Employees often appraise organizational changes negatively (e.g., Scheck & Kinicki, 2000), which means they appraise the changes as harmful (something has already been lost) or threatening (possibility for future loss). Moreover, individuals determine how best to cope with stressors and life events depending upon the appraisal of the situation (Lazarus & Folkman, 1984). This implies that the appraisal of a situation or an event represents the key exogenous variable or driver of coping. Finally, coping is viewed as influencing a variety of important individual and organizational outcomes, such as reemployment (Prussia, Fugate, & Kinicki, 2001), client engagement (Terry & Jimmieson, 2003), job performance (Judge, Thoresen, Pucik, & Welbourne, 1999), turnover (Begley, 1998), and psychological and physical measures of well-being (for a review see Penley, Tomaka, & Wiebe, 2002).

It is important to recognize that recent refinements of coping theory and research assert that emotions play a significant role in how people cope (e.g., Fugate, Kinicki, & Scheck, 2002). Emotions are affective responses to information or experiences that change psycho-physiologic states. Emotions are episodic and targeted, which means that they are relatively immediate and short-term reactions to particular events or experiences. These characteristics distinguish emotions from dispositional and/or more general forms of affect, such as negative affectivity and moods that are more persistent and lack a particular target or focus (Weiss & Cropanzano, 1996). In a work context, emotions are typically associated with transient events while moods are commonly associated with more stable job or work features (e.g., Zohar, Tzischinski, & Epstein, 2003).

A major focus of this study is to determine more precisely the role of emotions in employee coping reactions. To do this, we examine the relative veracity of alternative theoretical structural representations of coping. No studies to date have tested the cognitive phenomenological perspective of coping with the complete complement of core coping constructs—appraisal, emotions, coping, and outcomes. It is important to note, however, that we are not examining the changes in these constructs over time (e.g., Fugate et al., 2002). Rather, we are interested in determining how the focal constructs are related to each other at a given point in time. Beyond determining the structure of these relationships, we also examine the effect of these coping constructs on important outcomes over time. Therefore, the current study contributes to the literature by testing alternative structural models of cognitive phenomenological coping theory in the field. This is an important pursuit because the use of fit statistics to evaluate a given model does not rule out the existence of other theoretically plausible and good fitting models (Hu & Bentler, 1998). Judge, Boudreau, and Bretz (1994) commented on this issue and noted that fit is not the sole determinant of the appropriateness of a given model. Accordingly, the testing of alternative structural models is intended to test the veracity of our proposed model and to guide future research.

We also pursue two secondary goals in this study. The first relates to an examination of the psychometric properties of the central variables used to study the coping process. Previous research either ignored or failed to assess the validity of various coping process variables prior to examining substantive relationships (e.g., Skinner et al., 2003). This is a problem in comparing and cumulating results from different studies because the use of measures with unknown psychometric properties can distort and bias empirical relationships. Second, we explore the role of positive emotions related to organizational change and thus broaden the understanding of the

affective complexities associated with changes in the work context. Collectively, the goals of this study contribute to theory, research, and practice related to employee coping with and the management of organizational change.

## Model Overview and Hypothesized Relationships

Our baseline model of coping is rooted primarily in the cognitive appraisal theory of emotions (hereby referred to as the appraisal theory of emotions). This theoretical perspective delineates a structure of coping in which appraisals precipitate emotions (Roseman & Smith, 2001), and emotions in turn influence an individual's choice of coping strategies and outcomes (Lazarus, 2001). This conceptualization is supported by a long history of experimental research that links appraisal, emotions, and behaviors within larger biobehavioral systems of withdrawal and engagement. For instance, work related to the behavioral inhibition system (BIS) explicates how people withdraw from or avoid perceived threats and associated negative emotions, as such situations are either injurious or counter to one's best interests (Watson, Wiese, Vaidya, & Tellegen, 1999). Alternatively, a behavioral facilitation system (BFS) is one in which people engage situations they perceive as beneficial or desirable. These and other relationships are included in the appraisal theory of emotions model (See Figure 1), and research related to specific modeled relationships is discussed below.

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Insert Figure 1 about here

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### *Appraisal and Emotions*

An individual's appraisal of a person-situation transaction determines whether or not the encounter is perceived positively or negatively. While both positive and negative appraisals are

important, we focus on negative appraisals (threat and harm) in this study for three reasons. First, previous research showed negative employee reactions to be most common and relevant in the context of organizational change (cf. Scheck & Kinicki, 2000). Second, negative employee reactions are potentially the most detrimental not only to employees but also employers, as they are associated with deleterious outcomes, such as employee withdrawal (e.g., Armstrong-Stassen, 1994) and reduced performance (Weeks, Roberts, Chonko, & Jones, 2004). Third, our focus on the negative implications of change was motivated by the radical and pervasive nature of the changes in the focal organization (these changes are discussed in the Method section), as most employees were affected directly. These characteristics therefore made negative employee appraisals both more likely and more salient in the context of this study.

The appraisal-emotion link is consistent with various appraisal theories that contend appraisal precedes emotion (e.g., Smith, Haynes, Lazarus, & Pope, 1993). For instance, Smith and his associates (1993) asserted that appraisal is "the most proximal cognitive antecedent of emotion" (abstract). This contention is supported by the seminal stress and coping theory presented by Richard Lazarus who maintained that emotions follow from appraisals (Lazarus 1991; 1999). The appraisal-emotion link also is found in research pertaining to the structure of affect. For example, Watson et al. (1999) arranged appraisal and emotions in a hierarchy and suggested appraisals are relatively molar and bipolar assessments of situations that illuminate positive-negative implications for personal well-being, while emotions are more granular aspects of individual's affective reactions that vary in intensity. Appraisals thus represent cognitive evaluations of objective characteristics of a person-situation encounter while emotions embody estimates of the subjective meaning or significance of the encounter (Cacioppo & Gardner, 1999).

Emotions are typically categorized into negative and positive tones (Lazarus, 1991) and this distinction provides insight into the affective color of one's experience. Interestingly, organizational change research has only recently considered the influence of emotions and then typically only negative ones (e.g., Kiefer, 2005). The rationale is that change is threatening or harmful (i.e., negative) due to actual or perceived loss (e.g., job loss or job insecurity), which evokes negative emotional reactions. For example, Scheck and Kinicki's (2000) results revealed that employees who appraised changes more negatively also reported more negative emotions. That said, research also shows people often experience positive emotional reactions to negatively appraised events. Dalakas (2005) explains that this occurs when people perceive a capability to effectively cope with the undesirable situation. Folkman and Moskowitz (2000) showed that people report similar frequencies of positive and negative emotions when confronted with grave situations dominated by overriding negative implications (e.g., imminent death due to AIDS). This line of clinical research explicates that positive emotions may not only counteract or inhibit negative emotions, but they may also support coping efforts and help replenish one's resources (e.g., energy and social support). This is akin to the silver lining effect wherein positive emotions provide comfort and distract employees' attention from the negative aspects of changes (cf. Shiota, 2006). Employees may therefore experience positive emotions if they feel they can effectively cope with the myriad of change related demands.

Cacioppo, Gardner, and Berntsons' (1999) work on the structure of affect provided further support for why a given experience can be both positive and negative for individuals. They proposed that positive and negative emotions are not strictly bipolar and orthogonal (i.e., opposites) in cognitive-affective space, but rather they co-occur in either direct, inverse, or independent ways (see also Larsen, McGraw, & Cacioppo, 2001). In other words, emotions are

bivariate and people often respond with varying degrees of positive and negative affect to both favorable and unfavorable situations (see also Folkman & Lazarus, 1991). This work has important implications for employee's experience of organizational change, as it provides an explanation for the "mixed feelings" (positive and negative) people report when confronted with changes at work (cf. Liu & Perrewe, 2005). Consider, for example, an employee who appraises organizational change as a threat to future job opportunities. This employee may react with both fear (that job opportunities will be lost due to the changes) and hope (that such threats to job opportunities will not materialize). This reasoning is similar to the concepts of "disappointing wins" and "relieving losses" (e.g., Larsen, McGraw, Mellers, & Cacioppo, 2004), wherein positive events are not purely positive ("could have done better") and negative events are not purely negative ("could have been worse"). Accordingly, negative and positive emotions may co-occur, and negative appraisal may simultaneously increase negative emotions and reduce positive emotions, although not in a one-to-one proportion (see Cacioppo et al. 1999; Folkman & Moskowitz, 2000). Based on both organizational and biobehavioral system research, we predicted the following:

Hypothesis 1a: Negative appraisal is negatively associated with positive emotions in the context of organizational restructuring.

Hypothesis 1b: Negative appraisal is positively associated with negative emotions in the context of organizational restructuring.

*Emotions and Coping*

Lazarus (1999) proposed that people cannot determine what to do in order to cope and ameliorate the associated stress of a person-situation encounter until they first appraise the meaning of the situation, which in turn generates an emotional response. Lazarus' position

underscores the goal-oriented nature of coping (Prussia et al., 2001) and the behavior-directing function of emotions (e.g., Cacioppo et al., 1999). Conceptualized in this manner coping is a function of emotions as it is intended to reduce negative and facilitate positive emotions. It thus is important to identify individual's emotional reactions and the coping strategies they employ. Latack (1986) classified coping efforts into control- and escape-oriented strategies. Control coping consists of "both actions and cognitive reappraisals that are proactive, take-charge in tone," while escape strategies consist of "both actions and cognitive reappraisals that suggest an escapist, avoidance mode" (Latack, 1986: 378). Control coping closely aligns with the engagement function of BFS and escape coping with the withdrawal function of BIS described earlier. Laboratory research shows that BFS and BIS are not mutually exclusive, suggesting that people are simultaneously attracted to and repelled from a particular situation (Cacioppo et al., 1999). The current study builds on this and examines control and escape coping because both were found to have important relationships with emotions in organizational research (cf. Fugate et al., 2002).

Research shows that negative and positive emotions are associated with both control and escape coping strategies (e.g., Lazarus, 1999; Scheck & Kinicki, 2000). For instance, both control and escape coping strategies were associated with negative emotions in a sample of government employees undergoing change (Dewe, 2003), and in the context of a downsizing control coping was used less by employees who reported negative emotions related to the changes (Greenglass & Burke, 2000). Folkman and Lazarus (1991) also found that people routinely utilize both forms of coping to deal with negative emotions, as at any given point in time one form may be more effective than the other.

In the absence of extreme or grave threat it is evolutionarily advantageous for people to engage or explore novel situations, and not completely avoid or escape them. The rationale is that learning to cope with new environments is critical to adaptation and survival (cf. Watson et al., 1999). This implies that participants in the current study who experience negative emotional reactions may simultaneously be inclined to control and escape their emotional reactions. These findings and assertions also are consistent with affect systems research. For example, research on behavioral inhibition systems (e.g., Watson et al., 1999) underscores how employees may engage the situation in order to improve a negative person-situation transaction via control coping, or alternatively they may choose to escape or avoid the situation. That said, research suggests that negative emotions are more strongly associated with the urgency of abatement or escape coping than they are with control coping (Cacioppo et al., 1999).

Similarly, BFS predicts that positive emotions motivate people to utilize control coping to further enhance the positive aspects of the changes. However, Folkman and Moskowitz (2000) suggested that this argument does not preclude a positive emotion→escape coping relationship (e.g., Liu & Perrewe, 2005), as positive emotions may be imbued with countervailing negative tones (see Folkman & Lazarus, 1991; Larsen et al., 2004). For instance, employee hope could manifest as "view changes as an opportunity to learn and grow" (control coping), or as "convince themselves not to be concerned and that in time things will work out for the better" (escape coping). Hope spurs action in the former and avoidance in the latter. In each case, coping efforts facilitate positive affect as they either bolster or preserve the positive emotion of hope (cf. Lazarus, 2000; Folkman & Moskowitz, 2000).

In sum, the above discussion is consistent with the parallel and integrated processing functions of affect described by Cacioppo et al. (1999) and resulted in the following hypotheses:

Hypothesis 2a: Positive emotions are positively related to control coping and negatively related to escape coping in the context of an organizational restructuring.

Hypothesis 2b: Negative emotions are negatively related to control coping and positively related to escape coping in the context of an organizational restructuring.

*Coping and Adaptational Outcomes*

Research has examined numerous adaptational outcomes of coping during organizational change, such as psychological well being, organizational commitment, and job satisfaction (Jimmieson, Terry, & Callan, 2004; Judge et al., 1999). We examined both cognitive and objective outcomes in this study because the majority of coping outcomes previously studied were exclusively psychological and self-report in nature (Kinicki, McKee, & Wade 1996). Specifically, relationships between coping and employee withdrawal, both cognitive (intentions to quit) and behavioral (sick time used and voluntary turnover), were investigated in a sample of public service workers undergoing change. These outcomes reflect not only the underlying psychological impact of change, but they also have clear implications for the employing organization.

Hanisch and Hulin (1991) distinguished between work and job withdrawal. The former constitutes the avoidance or reduction in time spent engaged in a particular job or aspects thereof (e.g., absenteeism), while the latter represents an employee completely removing themselves from the employing organization (e.g., voluntary turnover). As such, withdrawal has clear implications for individual and organizational productivity and can prove very costly (Hom & Griffeth, 1995). It therefore is valuable to examine the relationship between employee coping and employee withdrawal. In the context of this study we view these forms of withdrawal in terms of degree (cf. Sagie, Birati, & Tziner, 2002). That is, some employees may cope with

organizational change by using sick time, thereby enabling them to avoid work and the challenges associated with the changes, while other employees' coping may be more extreme and result in leaving the organization. We assert that in the context of this study sick time used is symptomatic of escape coping in several ways. Of course, employees may be absent because the challenges of the changes resulted in somatic symptoms of ill-health. However, because the organization under investigation did not put any restrictions on the use of sick time, employees could use sick time to: take a break and recharge physically and/or emotionally, avoid responsibilities, or protest changes. Alternatively, their absence may serve as a means for correcting an inequity related to the changes (cf. Hackett & Bycio, 1996), such as an undesirable job assignment.[1] Such uses of sick time represent employee withdrawal and reflect avoidant behaviors consistent with escape coping and BIS. The converse applies to control coping, as sick time used manifests avoidance and is not "take-charge" or "proactive" as defined by Latack and illustrated in BFS.

Similar relationships are posited between escape and control coping and intentions to quit and voluntary turnover, which represent escape rather than control oriented cognitions and behaviors. More specifically, intentions to quit are a cognitive representation of escape coping, and previous research showed that layoff survivors who utilized escape coping reported stronger intentions to quit (Armstrong-Stassen, 1994). On the other hand, employees who engage in control coping are likely to engage rather than avoid work, consequently we expect their quit intentions to decline. The literature clearly supports the supposition that intentions to quit are a strong predictor of actual turnover (Ajzen, 1991; Hom & Griffeth, 1991), and it thus makes sense to predict that the coping-voluntary turnover relationship is mediated by intentions to quit.

Hypothesis 3a: Control coping is negatively related to sick time used in the context of an organizational restructuring.

Hypothesis 3b: Control coping is negatively associated with intentions to quit in the context of an organizational restructuring.

Hypothesis 3c: Escape coping is positively correlated with sick time used in the context of an organizational restructuring.

Hypothesis 3d: Escape coping is positively associated with intentions to quit in the context of an organizational restructuring.

Hypothesis 4: Intentions to quit is positively related to voluntary turnover in the context of an organizational restructuring.

## Alternative Models Found in the Literature

Research suggests other plausible structural representations of the coping process depicted in Figure 1. The following section explicates three alternative models derived from the literature: stimulus-response model, partial mediation process model, and a moderated model.

### *Stimulus-Response Model of Coping*

The model shown in Figure 2 is derived from the stimulus-response theory of coping (e.g., Dewe & Alvin, 1999). It too is a fully mediated model wherein appraisal of a person-situation encounter (stimulus) generates coping (responses) which are related to emotions and coping outcomes (e.g., withdrawal). A comparison of Figures 1 and 2 shows that each model is based on a different sequence of relationships among appraisal, emotions, and coping. The history of the stimulus-response perspective is found in behavioral psychology (e.g., Cronbach, 1957). The rationale underlying stimulus-response theory is that stressful encounters produce immediate unmediated coping reactions. In other words, when one appraises a person-situation

encounter as stressful (e.g., threatening or harmful), he or she then enacts coping strategies to alleviate the stress (Lazarus & Folkman, 1984) and to improve the person-situation relationship (Dewe, Cox, & Ferguson, 1993). Furthermore, volumes of coping research show that people consistently utilize multiple forms of coping (e.g., control and escape) to deal with any given encounter appraised as stressful. Lazarus and Folkman (1987) stated that research confirms "the inadequacy of simpler conceptualizations of coping as either defensive (e.g., Vigilant, 1977) or as problem-solving or decision-centered (e.g., Janis & Mann, 1977). A full description of coping requires that both functions be assessed" (p. 152).

Support for a stimulus-response model of coping is found in numerous empirical studies in organizations that examined the direct relationship between the appraisal of a stressor and coping. Scheck and Kinicki's (2000) study of organizational merger survivors, for example, found a negative relationship between negative appraisals and employees' use of problem focused coping. Similarly, layoff survivors who appraised threats of potential job loss reported both control and escape coping behaviors (Armstrong-Stassen, 1994). Dewe et al.'s (1993) review of coping and work stress found empirical evidence that employees routinely utilize a variety of engagement and avoidant coping strategies to deal with negatively appraised situations. It thus seems that organizational research supports an equifinality of effective coping, such that different people use different combinations of coping strategies to mitigate negative appraisals associated with stress. We concur with this argument and expect employees to enact both control and escape strategies in relation to their negative appraisals of organizational change.

Besides the appraisal→coping relationship, still others tested a coping→emotions model (e.g., Bolger, 1990; Holahan, Moos, Holahan, & Brennan, 1997). The coping-emotions

relationship also fits in the behavioral psychology tradition in that it represents an example of response-response or correlational psychology (for an excellent explanation and integration of experimental and correlational streams see Kimble, 2000). Specifically, an individual's coping is a response to a stressful encounter and emotions are a response to this response. This suggests that it is not only what happens that matters but also what one does to cope. Thus, one's coping influences emotions, which echoes an argument consistently made by Lazarus (e.g., 1991, 1999, and 2000). This proposition is well supported in the health literature that investigates the relationship between coping strategies and subsequent psycho-emotional outcomes. For example, Holahan et al.'s (1997) results revealed that combinations of control and escape coping strategies predicted cardiac patient's negative emotions. In a work context, escape coping (e.g., take the day off or avoid the work) was positively related to negative emotions (e.g., tension and anxiety) for employees of an insurance company (Dewe, 1991).

Far less research exists that examines the coping-positive emotion relationships, however like that for coping and negative emotions, this research consistently shows that both control and escape coping are associated with positive emotions. For example, Folkman and Lazarus (1988) found that distancing (a form of escape coping) was negatively related to positive emotions and positively related to negative emotions. Carver and Scheier (1994) showed that students that utilized problem focused coping after an exam were more likely to report positive emotions. This notwithstanding, other more current research is equivocal on the directions of the relationships between various forms of coping and emotions (e.g., Folkman & Moskowitz, 2004). We predict that control coping is positively associated with positive emotions and negatively with negative emotions, which is the converse of our predictions for escape coping.

Conceptualized this way emotions function as classic mediators in the process of coping with change; they are generated in the encounter and change the relationship between coping (the antecedent) and withdrawal behaviors (the outcomes) (Folkman & Lazarus, 1988). In this study, we contend that positive emotions are related to both sick time used (behavioral withdrawal) and intentions to quit (cognitive withdrawal). Affective events theory (Weiss & Cropanzano, 1996) supports this supposition and explains that affective reactions to work events generate both behavioral and cognitive reactions, and moreover, some relationships manifest immediately and others over time. This was supported by Kiefer (2005) who found that negative emotions associated with ongoing change were related to employee withdrawal, both immediate cognitions (intentions to quit) and subsequent behaviors (reduced motivation and effort). Positive and negative emotions also were found to uniquely influence job satisfaction (Fisher & Ashkanasy, 2000). Accordingly, we expect positive emotions to mediate withdrawal cognitions and behaviors in the context of this study.

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Insert Figure 2 about here

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*Partial Mediation Process Model*

According to Cacioppo and his colleagues (Cacioppo et al., 1999), appraisals trigger and direct behavior. It therefore is possible that negative appraisals directly affect employee withdrawal outcomes (see Figures 3 and 4). The models in Figures 3 and 4 portray these effects in partially mediated appraisal-outcome relationships. Such models are predicated on the notion that appraisal is associated with employee withdrawal via multiple, simultaneous, and complex mechanisms (cf. Mathieu & Taylor, 2006). Appraisal and stress outcomes clearly are related if

one conceptualizes cognitive appraisal in terms of its impact on the attainment of desired goals/outcomes and the personal satisfaction with those outcomes (cf. Lazarus & Folkman, 1984). In other words, thwarted goals have negative consequences (Bandura, 1989) and may lead to employee withdrawal. For instance, employee stress appraisals during a merger were associated with increased avoidant behaviors (cf. Terry, Callan, & Sartori, 1996). The conceptual rationale behind such research is that problems at work are associated with negative appraisals, and in turn, one's well-being is negatively affected because work is such an important part of an individual's life. This argument also aligns with the concept of "shocks" described in turnover research (e.g., Lee & Mitchell, 1994; Holtom, Mitchell, Lee, & Inderrieden, 2005). Shocks are described as internal or external events that motivate corrective behavior (e.g., voluntary turnover), and for an event (e.g., organizational change) to be considered a shock it must be *interpreted* as such. For example, Holtom et al. (2005) found that shocks were the primary driver of voluntary turnover across multiple samples, beyond the conventional predictor of job satisfaction. Consistent with this argument, we view shocks as negative appraisals as they are evaluations of negative person-situation relationships that motivate corrective efforts (e.g., sick time used and voluntary turnover). It thus is reasonable to interpret employees' negative appraisals in terms of their impact on goal attainment and to propose that negative appraisals have a negative direct effect on stress outcomes, such as sick time used and voluntary turnover.

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Insert Figures 3 and 4 about here

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*Moderated Model*

Although the literature strongly supports coping as a mediator of the appraisal-emotion relationship (Cooper et al., 2001; Lazarus, 1991), it is quite possible that this relationship is moderated by an individual's coping efforts. Consistent with the appraisal theory of emotions, if we assume that employee appraisals are related to their emotional reactions, then it is reasonable to assume that the intensity and/or sign of such reactions may be influenced by coping as it interacts with appraisals (cf. O'Connor & O'Connor, 2003). For example, research showed layoff survivors who appraised a high threat of job loss reported lower intentions to quit when they utilized more control coping, whereas a greater use of escape coping under these conditions increased intentions to quit (Armstrong-Stassen, 1994). This research suggests that escape coping interacts with threat appraisal to increase employee withdrawal while control coping has an opposite effect under the same conditions.

Despite the volume of stressor-strain research that posits coping as a moderator it is worth noting important criticisms. Cooper and his associates (2001) contend that typically very little conceptual justification is provided in coping as a moderator research, which undermines the value of its ultimate contribution. They continue and explain that moderators are typically stable dispositional or environmental factors that are *brought to* the person-situation transaction and buffer the stressor-strain relationship, whereas mediators are *generated within* the transaction and are critical to a given relationship (see also Folkman & Lazarus, 1988). As such, they argue that when coping is hypothesized as a moderator researchers are actually addressing stable *coping styles* (i.e., dispositions), and in contrast when coping is presented as a mediator researchers are investigating context dependent *coping strategies*.

Although ample theoretical and empirical support for these competing models exists, we concur with the previous criticism and believe that the weight of evidence supports the

conceptualization of coping as a fully mediated process depicted in Figures 1 and 2. This assertion is based on the rationale that the current study investigates the *complete* and current cognitive phenomenological theory of coping, whereas all of the alternatives cited examine only subsets, fractions, or earlier manifestations of this theory. Moreover, many of the structural alternatives are somewhat lacking in regard to their conceptual moorings in light of more recent theory and research. Consequently, the evolution of coping theory provides a more thorough explanation of the relationships between *all* of the central constructs, including emotions, and thus fully mediated process models are both more comprehensive and more precise representations of employee coping with organizational change.

## Methods

### *Sample and Procedure*

Data were obtained from 163 out of 191 employees of a department in a public services organization in the southwestern United States. Complete data for 141 employees was used for analyses, which represents a 74% response rate. The department was in the midst of major organizational changes over the period of 12 months in which we collected data. The changes included hiring a new top administrator who was employed in part to dramatically improve an inefficient and critically important department. Her background and management philosophy strongly reflected an orientation of continuous improvement, which starkly contrasted with the previous top administrator who did little besides preserve the status quo. Changes were communicated via many channels over time, such as meetings, emails, and internal mail notices. The changes included restructuring of the supervisory team (expanding two junior administrator positions into four) and the creation of seventeen new supervisor positions. Roles and responsibilities also were reorganized to include different reporting relationships and new

deliverables for many jobs. Schedules were reconfigured and physical work spaces were modified and moved to improve workflow and communication. Such changes were necessary to support the numerous process changes that occurred during the time of this study. The evaluation and change of many work processes reflected efforts to improve efficiency and better serve multiple internal and external stakeholders. Most employees were directly affected, and for those who were not, the surrounding changes were so pervasive as to create significant indirect effects as significant. Despite the radical nature of the changes, no jobs were eliminated

Web surveys measuring appraisals, emotions, and coping were administered to all department employees one month after the initial management changes whereas sick time used and voluntary turnover data were gathered from company records 12 months later. The theory and models outlined above require the central constructs (appraisal, emotions, and coping) to be measured at the same point in time because these constructs operate in the same cognitive and temporal space. Emotions are immediate reactions to appraisals, and coping is a more or less immediate reaction to emotions according to the appraisal theory of emotions (e.g., Smith & Lazarus, 1993).

Such immediate reactions parallel what Wong and Law (1999) refer to as "synchronous effects," wherein one construct for all intents and purposes immediately influences another. To clarify, they do not suggest that such effects are literally simultaneous, rather that the exact time lags between constructs are either unknown, too short to capture, or impractical in terms of measurement. In such situations they argue that cross-sectional data may offer a reasonable means for making causal inferences. Moreover, because emotions are episodic and targeted, it makes sense to measure emotions very close in time to measures of their associated appraisals and coping. Consistent with stimulus-response theory, our three central constructs had the same

reference (i.e., organizational changes), and emotions and coping also were anchored to the same period of time (i.e., the month prior to the survey). Furthermore, intentions to quit are likely to occur in a relatively proximal space and time to the associated appraisals, emotions, and coping strategies. In the context of this study, it was not possible to determine exactly when participants appraised changes, nor was it possible to predict a priori the length of time between appraisals and resultant emotions and coping reactions. In contrast, it was necessary to allow sufficient time to pass in order to capture relevant study outcomes—sick time used and voluntary turnover. The 12-month lag was chosen because it coincided with markers of key change initiatives (e.g., restructuring, job redefinitions, and job reassignments), and it also was consistent with the expected relationships between the constructs measured within this context. Lange, Taris, Kompier, Houtman, and Bongers (2003) cautioned against uniform time lags in stressor-strain research and concluded that an appropriate time lag depends on many elements, such as the "outcome being measured and whether changes in work characteristics or job changes have taken place" (p. 302).

Participants represented employees at every level and shift (days, afternoons, and nights) within the department. Employees completed surveys on a voluntary basis during company time and were assured of their confidentiality. Eighty-six percent of the respondents were female, average age was 40, average job tenure was 8.6 years, 44% had some college education, and 20% had a bachelor's or graduate degree.

*Measures*

In accordance with covariance structure modeling techniques, we used multiple observed indicators to assess appraisal, emotions, and coping constructs. To conserve degrees of freedom, items were aggregated to create composite indicators for these central constructs (see explanation

under Negative Appraisal below**)**. Quit intentions, sick time used, and voluntary turnover constructs were measured with single-item indicators, and the procedure recommended by Williams and Hazer (1986) was used to correct for measurement error (see Quit Intentions below).

*Negative appraisal*. Perceptions of threat and harm formed the basis of the Negative Appraisal construct and were measured with instruments designed for this study. Four survey items assessed perceived threat and four items assessed perceived harm. Threat was measured by asking respondents, "Due to the changes, to what extent do you feel that each of the following is *threatened* – a possibility that it will get worse in the future?" followed by four distinct descriptors: pay and benefits, general working conditions, job security, and personal job opportunities. Responses were obtained on a five-point Likert-type scale anchored from 1 (not at all threatened) to 5 (threatened to a great extent). We created two threat indicators from the four items based on a procedure described by Landis, Beal, and Tesluk (2000). We first examined exploratory factor analysis and determined that all four items loaded on a single factor. We averaged the two items with the highest and lowest loadings and then averaged the items with the second and third highest loadings. This technique for creating composite indicators is regarded as an appropriate way to preserve the conceptual integrity of a measure, while at the same time conserve degrees of freedom (see also Takeuchi, Yun, & Tesluk, 2002).

Harm appraisal was measured in a similar manner by asking respondents, "Due to the changes, to what extent do you feel that the following aspects of your work life were *harmed* – got worse than they were?" followed by four descriptors: relationship with your supervisor, ability to perform your job, relationships with coworkers, and desirability of your job. Responses ranged from 1 (not at all harmed) to 5 (harmed to a great extent), and the items were combined to

create two composite harm indicators (Takeuchi et al., 2002). We expected the harm items to differ from those used for threat in part due to the difference in temporal reference (i.e., harm focuses on past losses and threat on concerns for the potential of future loss). Using different items also alleviated concerns of response bias between the two dimensions. In sum, four indicators comprised of two items each were used to assess the Negative Appraisal construct. The alpha reliability for the Negative Appraisal construct was .79.

*Positive and negative emotions*. Six items taken from Folkman and Lazarus (1988) were used to create three composite indicators of the Positive Emotions construct, and the same was done for the Negative Emotions construct. Participants were asked: "How often in the past month have you experienced the following emotions related to the changes at work?" Positive Emotions included confidence, security, exhilaration, hopefulness, eagerness, and relief while Negative Emotions included frustration, helplessness, disappointment, fear, anxiety, and depression. Responses ranged from 1 (hardly ever) to 5 (almost always). Alpha reliabilities were .88 and .90 for Positive and Negative Emotions, respectively.

*Control and escape coping*. Twelve items from Latack's (1986) coping at work scale measured the coping constructs. Six items assessed the Control Coping construct including, "see the situation as an opportunity to learn and develop new skills" and "work faster and more efficiently." Similarly, six items assessed the Escape Coping construct including, "try not to get concerned about it" and "remind myself that work isn't everything." For both Control and Escape Coping items employees indicated how frequently in the past month they used each particular coping strategy in relation to the changes at work. Responses ranged from 1 (hardly ever do) to 5 (almost always do), and reliabilities were .83 for Control and .71 for Escape

Coping. As before, we created three composite indicators for each coping construct (Takeuchi et al., 2002).

*Quit intentions*. Quit intentions were assessed with a single item in a manner similar to that used by Mitchell, Holtom, Lee, Sablynski, and Erez (2001).[2] Respondents were asked, "What are the chances you'll quit in the next 12 months?" Responses were obtained on a scale ranging from 1 (no chance) to 5 (100% chance) in twenty-five percent increments. This item formed the sole indicator of the latent quit intentions construct. Because this construct was assessed using a single indicator, we corrected for measurement error using reliability information (Williams and Hazer, 1986).[3] This procedure is common in covariance structure analysis research (e.g., Prussia & Kinicki, 1996).

*Voluntary turnover.* This behavioral outcome was measured with objective data collected from the focal organization. They closely tracked participant turnover for the 12 months following the survey. Study participants that voluntarily quit were coded (1) and those that remained were coded (0). We assumed this measure to be perfectly reliable and without error.

*Sick time used.* We measured the Sick Time Used construct with data collected from the organization's records. Sick time used was measured in sick hours compiled for the 12 months following the survey. We assumed this measure to be perfectly reliable and without error.

*Covariance Structure Analyses*

EQS 6.1 was used to analyze the proposed models. Mardia's coefficient (18.35) revealed that the data were kurtotic, which may result in underestimation of variances and violate assumptions of normality. Tabachnick and Fidell (1996) argue that the literature is equivocal on the substantive effects of such violations of normality and caution researchers about corrective efforts. Nevertheless, because the kurtosis was in large part due to the sick time used variable it

was rescaled to reduce these effects. Beyond this, we also utilized an elliptical estimation procedure to correct for such violations (Bentler, 1995; Tabachnick & Fidell, 1996). Overall model fit was evaluated using three fit indices: the non-normed fit index (NNFI; Bentler & Bonett, 1980), the comparative fit index (CFI; Bentler, 1990), and the incremental fit index (IFI; Bollen, 1989). Both the CFI and NNFI are resistant to sampling errors, and the IFI has less sampling error than the chi-square to degrees of freedom ratio. In addition to these fit indexes, The Root Mean Square Error of Approximation (RMSEA; Browne & Cudeck, 1992) was used to assess model lack of fit. RMSEA values of .05 or less indicate close fit while values of .08 or less indicate a reasonable error of approximation relative to model degrees of freedom.

Both non-nested and nested models were involved in model comparisons. Non-nested comparisons involve models wherein one model cannot be expressed as a constrained version of the other (Rust, Lee, & Valente Jr., 1995). One category of non-nested comparison involves contrasting models that are comprised of the same variables as well as the same number of free parameters. Comparing the appraisal theory of emotion model to the stimulus response model represents such a non-nested comparison that was evaluated using three recommended criteria. First, the models were compared by computing chi-square to degrees of freedom ratios. Higher values suggest worse fitting models by penalizing poor chi-square fit adjusting for model size (Rust et al., 1995). The two non-nested models were also assessed using Akaike's (1987) information criterion (AIC). This statistic is provided in EQS output, and according to Bentler (1995) the model that produces the minimum AIC is potentially more useful than a model with larger AIC values. Finally, the two models were evaluated by comparing model chi-square values. Rust et al. (1995) noted that "if two models have the same numbers of parameters, the Akaike comparison amounts to picking the model with the better chi-square" (p. 282-283). We

used this particular approach to compare these two models because they involved the same number of parameters.

Nested model comparisons involve contrasting two similar models, one of which is less constrained than the other. A simple example is when the free parameters of one model are a subset of the free parameters in another model (Bollen, 1989). In the current study, comparing a full mediation model to a partial mediation model represents such a nested comparison. The sequential chi-square difference test (SCDT; James, Mulaik, & Brett, 1982) together with model CFI differences (Widaman, 1985) provided bases for nested model comparisons. An insignificant SCDT suggests acceptance of the more parsimonious of the nested models. Alternatively, a significant value indicates acceptance of the less constrained model. Model CFI differences greater than .01 indicated a practical difference in model fit (Widaman, 1985).

*Measurement model analyses.* Anderson and Gerbing (1988) recommended a two step process in which measurement model analyses precede those of structural models. Accordingly, the latent variable baseline measurement model was initially fitted to the data using confirmatory factor analysis. To examine construct independence, or discriminant validity, the baseline measurement model was compared with a series of alternative nested models hypothesizing equality between two of the central coping constructs. Each of the nested models constrained theoretically independent constructs to be perfectly correlated and equally correlated with other coping process constructs (Prussia & Kinicki, 1996). It was important to empirically analyze the independence of the appraisal, emotions, and coping constructs as this had not been established in previous research.

*Structural model analyses.* The model based on the appraisal theory of emotions (Figure 1) was fitted to the data first, and then compared to the stimulus-response model (Figure 2). The

best fitting of these two models was then compared to alternative partial mediation and direct effects models. Comparison to these alternative models enabled assessment of the full mediating properties proposed in the appraisal theory of emotions and stimulus-response models. The partial mediation models are similar to the full mediation models but each includes an additional path from negative appraisal to either sick time used or voluntary turnover (see Figures 3 and 4). These model comparisons provided additional evidence concerning the structure of the relationships between the central constructs and withdrawal outcomes.

*Moderated Regression*

Our final analysis concerned the moderating effects of control and escape coping on the relationships between negative appraisal and positive and negative emotions. Moderation can be examined using structural modeling procedures, but this often requires the sample to be split in half based on the moderator variable. Such a procedure could violate sample size to free parameter ratio recommendations (Bentler, 1995), so we chose to use moderated regression for this analysis.

To do this, we first created single item measures for the appraisal, emotions, and coping constructs by averaging the scores of the relevant construct indicators. After forming these new variables, we created two interaction terms by multiplying negative appraisal first by control and then by escape coping. Each newly created measure underwent mean centering (Aiken & West, 1991) prior to their entry into regression equations. We then created two hierarchical multiple regression equation sets in which positive emotions were regressed on the newly mean centered measures. In the first set, negative appraisal and control coping were entered in step one of the equation and their respective interaction term was entered in step two. In the second equation set, negative appraisal and escape coping were entered in step one followed by their cross product

interaction term. The identical procedure was followed using negative emotions as the dependent variable.

## Results

Means, standard deviations, and indicator correlations are provided in Table 1. Of immediate note are the significant correlations between the vast majority of the appraisal and coping indicators, which are also significantly related to most of the emotions indicators. Regarding study outcomes, all four appraisal indicators are positively related to quit intentions and three of them are significantly related to sick time used. Table 2 presents correlations between theoretical constructs and further supports our conceptual arguments. Specifically, the Negative Appraisal construct is significantly related to all of the Coping and Emotions constructs. These significant relationships are perhaps not surprising given that appraisal represents the cornerstone of the cognitive phenomenological approach to coping (e.g., Cooper et al., 2001; Lazarus, 1999). Moreover, all of the withdrawal outcomes are significantly and positively related to each other.

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Insert Tables 1 and 2 about here

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While these empirical relationships are conceptually sound, it is possible that they could in part be attributed to common method variance. Researchers have often suggested that method bias may affect results, but recent research suggests the effect may be overstated (Spector, 2006). Just the same, we assessed method effects using a procedure recommended by Williams, Cote, and Buckley (1989). The goal of this procedure is to evaluate the relative effects of the factors or traits presented in our hypothesized model to those in a model that also includes a method factor

(i.e., a multifactor trait model versus a multifactor trait plus method effects model). The trait model fit the data well: $\chi^2$ (127, N = 141) = 147.73, $p < .10$; CFI = .99; NNFI = .99; IFI = .99; and RMSEA = .03. However, inclusion of method factor improved model fit, $\chi^2$ (110, N = 141) = 108.31, $p < .53$, and the SCDT provided evidence of a significantly better fitting model: $\chi^2$ (17, N = 141) = 39.42, $p < .05$. Though these results attest to the existence of method effects, it is important to note that the amount of variance accounted for by method effects was very small—it averaged only 8% and the median was 2%. Not only is the variance accounted for very small, it also is low compared to other studies that reported such statistics: 25% by Williams et al. (1989) and 11% by Carlson and Kacmar (2000). We thus concluded that common method variance was not a material problem in this study.

Subsequent confirmatory factor analysis results indicated the baseline measurement model fit accurately reproduced the sample data (see Table 3): $\chi^2$ (127, N = 141) = 147.73, $p < .10$; NNFI = .99; CFI = .99; IFI = .99; AIC = -106.27; and RMSEA = .03. Furthermore, results in Figure 5 support the convergent validity of construct indicators, as all estimated factor loadings were significant and the average loading was .78.

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Insert Table 3 and Figure 5 about here

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Despite some high latent construct intercorrelations (e.g. .80 between Negative appraisal and Sick time used), all alternative measurement models that specified equality between two model constructs exhibited reduced model fit compared to the baseline model, according to SCDT and CFI differences. Furthermore, increases in RMSEA values in the alternative measurement models also indicated none of these models exhibited the fit achieved by the

baseline measurement model. These results support the convergent and discriminant validity (independence) of the constructs that constitute the coping process. Subsequent structural model tests were based on this baseline measurement configuration (see Figure 5).

Structural model results demonstrated that the model based on the appraisal theory of emotions (Model 1 in Table 3) fit the sample data very well: $\chi^2$ (144, N = 141) = 191.49, $p <$ .001; NNFI = .97; CFI = .98; IFI = .98; AIC = -96.51; and RMSEA = .05. Seven out of eleven structural path estimates were significant and in the predicted direction (see Figure 1). The stimulus-response model (Model 2 in Table 3) also fit the sample data very well: $\chi^2$ (144, N = 141) = 184.43, $p <$ .01; NNFI = .98; CFI = .98; IFI = .97; AIC = -103.57; and RMSEA = .04. Similarly, seven out of the eleven paths were significant Figure 2. Comparing these two non-nested models using the three aforementioned criteria suggested that the stimulus model yielded a better overall fit. Specifically, lower values associated with the chi-square to degrees of freedom ratio, AIC statistic, and model chi-square demonstrated support for the stimulus response model. Due to the statistically better fit the stimulus response model was used for subsequent model comparisons.

The main focus of alternative model analyses was to determine if the relationship between employee's appraisals of change and their subsequent withdrawal behaviors is completely mediated by the coping process. The first comparison involved the fully-mediated stimulus-response model and two partial mediation models. The first partial mediation model was identical to the stimulus-response model but included an additional path from negative appraisal to voluntary turnover (see Model 3 in Table 3 and Figure 3). This model did not result in an improved fit relative to the fully mediated stimulus-response model and the added structural path was non-significant. Similar results were found for the second partial mediation

model (Model 4 in Table 3 and Figure 4), which included an additional path from negative appraisal to sick time used.

The final alternative model analyses involved assessment of the extent to which coping moderates the relationship between negative appraisal and emotions. All equations were significant, but neither interaction term achieved significance, and adding them into their respective equations did not result in a significant $R^2$ change. Together, these results support the fully-mediated structure specified by the stimulus-response model. This demonstrates that the effect of appraisal on outcomes is fully mediated by employees' coping and emotions.

## Discussion

A cognitive phenomenological approach to coping was used to propose and test a model of coping. This model was based on the premise that the relationship between the appraisal of organizational change and subsequent withdrawal behavior is completely mediated. The first phase of the current analysis examined the operational measures used to assess the coping process. Our confirmatory analyses support the discriminant and convergent validity of these constructs, whereas earlier research simply assumed the validity of these variables which was noted as a persistent criticism of past coping research (cf. Coyne & Racioppo, 2000; Skinner et al., 2003).

The second phase of the analysis investigated the accuracy with which alternative theoretical models represented employee coping with organizational change. Covariance structure analysis best supported the stimulus-response model (Figure 2). This is an important finding because it represents the first complete test of alternative processes that individuals go through when coping with organizational change. Moreover, it is the first to do so using the

complete complement of constructs in the cognitive phenomenological approach to coping (i.e., appraisal, coping, emotions, and outcomes).

The third phase of our analysis examined whether the relationship between employee appraisals of changes and employee withdrawal is fully mediated by emotions and coping. Alternative model results support our hypothesis that coping with change is a fully-mediated process, which also supports theoretical propositions derived from previous research arguing that coping efforts mediate emotions (e.g., Holahan, Moos, & Holahan, 2005). This finding has both theoretical importance and practical implications for how employers might implement and manage organizational change. The following discussion addresses study findings, limitations, future research, and managerial implications of the results.

*What is the Appropriate Theoretical Structure of how Employees Cope with Organizational Change?*

Results indicate that the stimulus-response model (Figure 2) is the most accurate structural representation of how employees cope with organizational change. This finding aligns with arguments that emotions are a consequence of the appraisal-coping relationship and reinforces propositions derived from behavioral psychology. It also supports research wherein coping was found to mediate the appraisal-emotion relationship (e.g., Folkman& Lazarus, 1988). This is precisely the argument depicted in the stimulus-response model. Given that this is the first study to examine the veracity of the appraisal theory of emotions model of coping by comparing it to a stimulus-response model of coping, the current results need to be replicated in another context. Specifically, it is possible that our results are affected by the time period in which the surveys were administered. For example, if employees' emotions are salient at certain points in the change process (e.g., immediately after the notification or implementation of

targeted elements of change), then it is possible that the structure of the coping process might vary over time. We therefore encourage future researchers to employ appropriate designs (e.g., within-person) to test the veracity of these suppositions. Such research could include multiple repeated measures to capture more precisely the unfolding nature of the process, and it could demarcate the timing and possibe reciprocal nature of construct relationships. Doing so will illuminate the causal relationships between the central coping constructs and may suggest an integration of theoretical perspectives, without pitching one against another in better-worse scenarios.

Besides implications for coping theory, results of the current study also have implications for research related to organizational change. Armenakis and Bedeian's (1999) nearly ten year review of organizational change research notes that research illuminating employee's experiences with change is relatively lacking. Our research helps fill this void in the management literature and provides keen insight into *how* individuals experience organizational change. Employee experience is critically important because employees are ultimately responsible for executing change initiatives, and change succeeds or fails depending on employee behavior (Armenakis & Bedeian, 1999). The current study shows that negative appraisals influence employee withdrawal via a mediated process involving coping and emotions. The degree of such withdrawal (sick time used versus quitting) has serious implications for change effectiveness and organizational competitiveness (cf. Spreitzer & Mishra, 2002). Notably, a lack of employee commitment and engagement (e.g., withdrawal) erodes the competitive advantages that presumably motivated the changes. This is especially salient in knowledge-based organizations and industries. Voluntary turnover of key personnel not only costs an employer organizational knowledge, skills, and abilities, but their competitive position is further eroded if such employees

then join competitors. This study shows that managing employee appraisals and subsequent coping strategies and emotions is paramount to reducing employee withdrawal during organizational change. We thus encourage future change research to explicitly consider and integrate the underlying cognitive coping process of employees affected by and responsible for organizational change initiatives.

*Is the Appraisal-Outcome Relationship Fully-Mediated?*

We examined partial mediation and moderated models to answer this question. None of these alternatives reproduced the sample covariances as well as the fully-mediated model. Results thus reveal that the relationship between negative appraisal and withdrawal cognitions and behaviors is completely mediated by coping and emotions. Accordingly, our results suggest that appraisals of change are an underlying mechanism that drives employee withdrawal during organizational change. This is an important finding because it reinforces the untested idea that an employee's coping outcomes (withdrawal) are influenced by a cognitively based coping process that is triggered by the appraisal of organizational changes. More specifically, our results show that while employees' appraisals of organizational changes are important, they do not directly influence sick time used or voluntary turnover, and thus have valuable implications for turnover theory and research. It is not simply one's appraisal of changes that influences turnover, but also how one copes with and reacts emotionally to these changes. The current study therefore advances the turnover literature as it demonstrates that the coping process is a mechanism of employee withdrawal in the context of organizational change. As such, this study illustrates that cognitive coping theory complements existing turnover theories that posit other determinants of withdrawal, such as employee attitudes (e.g., Hom & Griffeth, 1995), events or shocks (Lee & Mitchell, 1994), or employee embeddedness (Mitchell, Holtom, Lee, & Sablynski, 2001). We

suspect that coping strategies and emotions may augment the role of attitudes, while cognitive appraisal may act as a precursor to perceived shocks in employee withdrawal. Future research is needed to determine the processes associated with these relationships, to examine the utility of these various turnover perspectives in the context of organizational change, and to explicitly consider the implications for employee coping.

Results from our research also offer important insights for affect research, especially as it relates to employee coping with organizational change. For instance, findings clearly support the inhibition function of the BIS in that employee's negative appraisals were related to cognitive and behavioral withdrawal. These results reinforce the *function* of affect and show that it serves to protect individuals from organizational changes appraised negatively (cf. Watson et al., 1999). The current study also provides detail related to the cognitive and emotion *forms* of affect, in that participant's negative appraisals of organizational change were significantly related to positive and negative emotions. This is consistent with clinical (Folkman & Moskowitz, 2000), experimental (Larsen et al., 2004), and organizational (Liu & Perrewe, 2005) emotions research demonstrating that people react to seemingly negative events with both positive and negative emotions. Current findings, however, were inconclusive or equivocal on the precise *structure* of the affect system. The stimulus-response model was the best fitting, however, it was less than certain whether coping or appraisal was the most proximal predictor of employees' emotional reactions. Moreover, positive emotions had no effect on employee withdrawal. This begs the question, "What is the role of positive emotion in coping with organizational change?" Our results show no support for the espoused value of positive emotions for coping with negative person-situation encounters noted in other research (e.g., Folkman & Moskowitz, 2000). Our findings also cast doubt on the benefits of simply "emphasizing the positive" when attempting to

manage organizational change. This study therefore shows a disconnect between the form and function of affect in the context of organizational change, and it seems to support Cacioppo et al's (1999) contention that "it is useful to think of the affect system as an entity intimately related to yet distinguishable from the cognitive system" (p. 840). Future researchers are encouraged to utilize other designs and measures to ascertain more precisely the relationships between various forms of affect and in particular, the function of positive emotions in the context of organizational change.

*Limitations*

Despite the contributions of this study, some limitations must be noted. First, we examined a limited subset of employee withdrawal cognitions and behaviors, and a broader selection of outcomes (e.g. performance, organizational commitment) would allow for a more fine-grained analysis of consequences associated with the implementation of organizational change. The second limitation involves the fact that we did not examine other antecedents of emotions and coping beyond those presented in Figure 1. For example, Lazarus (1991) suggests that coping resources (e.g., self-esteem, locus of control, human and social capital) and coping efficacy directly influence coping constructs. Such omissions in the current study highlight a potential unmeasured variables problem (James, 1991), whereby variables not included in our models may account for a portion of the variance between constructs. James stated that such effects apply to all non-experimental data and noted that, "It is impossible to avoid an unmeasured variables problem because in all probability at least some of the unmeasured variables are unknown" (1991; p. 278). We concur with this statement and concede potential effects of unmeasured variables in our study.

The third limitation of our study is that the design and measures used lack the precision to make definitive conclusions of causality. However, the use of cross-sectional data for portions of our analyses is not without merit. Wong and Law (1999) make a compelling argument for the use of cross-sectional data, particularly with synchronous effects, when the exact time lags between constructs are either unknown, too short to be captured, or impractical in terms of measurement. Nevertheless, we encourage future field research in this area to utilize different designs and repeated measures to help capture the inherent causal complexity among constructs. A fourth limitation is that pre-change sick time used data was unavailable and thus prevented us from directly analyzing its effects on post-change sick time used. Such data would allow for empirical verification of anecdotal complaints regarding the misuse and abuse of sick time used in reaction to the changes (see Footnote 1). We encourage future researchers to acquire such data thereby effectively controlling for pre-change sick time usage.

Lastly, the current study focuses only on negative appraisals of organizational change, and it is likely that some employees appraised changes positively. We therefore recommend that future research examine the effects and consequences of positive appraisals on both detrimental (e.g., employee withdrawal behaviors) and desirable outcomes (e.g., commitment to change and performance). For instance, it would be useful for both research and practice to know if positive appraisals have the opposite effect or a different pattern of relationships with employee emotions, coping, and withdrawal than do negative appraisals. If so, this would further highlight the importance of managing employee appraisals of change. It also would be useful to know how various appraisals influence each other over time. For example, we suspect that appraisals are similar to emotions in that they will demonstrate bivariate rather than bipolar relationships. That is, appraisals may operate in a concerted rather than bipolar fashion to influence employee

coping and emotions. Such results would augment the suppositions and findings of Cacioppo and his colleagues' (1999) regarding the form and function of affect systems, as they would more clearly articulate the role of the cognitive (appraisal) component.

*Managerial Implications*

Two key managerial implications can be derived from our results. The first involves the process by which managers might impact an employee's appraisal of organizational changes. Because negative appraisals (harm and threat) are the key exogenous variables within the cognitive phenomenological approach to coping, managers are encouraged to mitigate perceptions of harm/threat and to enhance a sense of challenge**.** In general, this can be done by having management communicate organizational change information in a manner that reduces concerns related to important work elements, such as job security, undesirable job changes, and jeopardized advancement opportunities. Uncertainty about change might also be reduced by involving employees in the change process, articulating a clear vision for the changes, and delineating employee roles in the new changed environment. Such interventions (actions) allow employees to "see" and influence the process, assert a measure of control over their futures, and understand their roles in the new changed environment.

The second implication for managers relates to interventions to mitigate employee withdrawal during a large scale organizational change. The current results reveal that an individual's withdrawal is more proximally contingent upon escape coping strategies and associated negative emotions than it is upon the negative appraisal of organizational changes. Managers thus need to consider alternative ways in which they might directly influence employee's propensity to engage in escape coping and the associated negative emotions. For a start, managers are encouraged to act as role models and demonstrate more productive non-

escape oriented coping strategies. For instance, rather than not discussing the changes or only responding to questions, they themselves can initiate discussions and share their own concerns and experiences. Doing so will cast organizational changes in a more positive light and help reduce the use of escape coping, as negative appraisals and escape coping are strongly and positively related. This goes beyond simply emphasizing the positive elements of the changes for the larger organization and the individual employees. As suggested by Kotter (1996), we recommend that managers purposefully build in and recognize small victories during the change process. Doing so is likely to yield not only positive emotions and thus reduce withdrawal, but it may also increase commitment.

Alternatively, our results further suggest that interventions encouraging control coping are not effective means for decreasing negative emotions or reducing employee withdrawal. It is true that previous research showed benefits for control coping during organizational change (e.g., Fugate et al., 2002; Jimmieson et al., 2004), however, in the context of this study any employer resources/initiatives to encourage or facilitate employee control coping would be fruitless and perhaps even counter productive if the intent was to reduce withdrawal. Future research should include and test a variety of coping strategies in order to increase confidence in the conclusions of this study and recommendations for practice. For instance, control coping might improve other outcomes not tested in the current context. Being attentive to and influencing employee coping strategies is an important pursuit because other research showed that positive emotions are associated with a broader set of outcomes (Tugade & Fredrickson, 2004), such as increases in psychological well-being and health.

Finally, this study presents a more detailed explication of *how* employees experience organizational change. Results show that it is important not only to know how employees

appraise organizational changes, but also to know which coping strategies they employ and how they react emotionally. Knowledge of each of these factors provides critical and more detailed insights into employee withdrawal cognitions and behaviors in the context of change. This research thus shows that a cognitive phenomenological approach to coping, one that includes emotions, is a valuable tool for researchers and practitioners alike to examine and manage employee reactions to organizational change.

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## Footnotes

[1] Management of the focal organization directly raised the issue of sick time being abused, widely and intensively. They complained that employees routinely used sick time to extend weekends and also complained that sick time often coincided with meetings and other assigned responsibilities. In their own words, sick time was used to avoid and to show passive-aggressive resistance to the changes. For example, the organization reported instances where 20-30% of employees were absent on days in which meetings related to change planning and implementation were scheduled. The focal organization hoped to take corrective actions and modify policies to mitigate these abuses in the future.

[2] We used two items initially: 1) "How often do you think of quitting?" and 2) "What are the chances you'll quit in the next 12 months?" Measurement model analyses revealed a non-significant loading for the first item which was excluded from subsequent analyses.

[3] Debate exists as to the appropriate reliability estimate for single item indicators. Some researchers argue that even estimates for objective measures (e.g., sick time used and voluntary turnover) are often set too high. We therefore ran a series of models using three different estimates (.75, .85, and .95) for each of the following constructs: intentions to quit, sick time used, and voluntary turnover. Estimates of 1.0 were also run for sick time used and voluntary turnover, as a substantial proportion of past research assumes that such measures are perfectly reliable and without error. No significant changes were found in model fit or other parameter estimates. As a result, we chose to use a moderately conservative reliability estimate for intentions to quit (.85), as it is self-report, and used 1.0 for sick time used and voluntary turnover.

Table 1
*Correlations among Indicator Variables*

| | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Threat appraisal #1 | 1.62 | .88 | | | | | | | | | | | | | | | | | | |
| 2. Threat appraisal #2 | 1.69 | .82 | 58* | | | | | | | | | | | | | | | | | |
| 3. Harm appraisal #1 | 1.75 | .84 | 71* | 68* | | | | | | | | | | | | | | | | |
| 4. Harm appraisal #2 | 1.60 | .87 | 57* | 55* | 66* | | | | | | | | | | | | | | | |
| 5. Positive emotion #1 | 3.42 | 1.04 | -22* | -21* | -26* | -21* | | | | | | | | | | | | | | |
| 6. Positive emotion #2 | 2.56 | 1.06 | -35* | -36* | -41* | -33* | 54* | | | | | | | | | | | | | |
| 7. Positive emotion #3 | 2.67 | 1.04 | -33* | -32* | -38* | -31* | 51* | 81* | | | | | | | | | | | | |
| 8. Negative emotion #1 | 2.67 | 1.17 | 56* | 54* | 65* | 53* | -25* | -40* | -37* | | | | | | | | | | | |
| 9. Negative emotion #2 | 2.13 | 1.04 | 56* | 53* | 65* | 52* | -25* | 35* | 80* | 81* | | | | | | | | | | |
| 10. Negative emotion #3 | 2.05 | 1.13 | 53* | 51* | 62* | 50* | -24* | -38* | -37* | 77* | 76* | | | | | | | | | |
| 11. Control Coping #1 | 3.72 | .88 | -31* | -30* | -34* | -29* | 26* | 42* | 39* | -25* | -25* | -24* | | | | | | | | |
| 12. Control Coping #2 | 3.36 | .98 | -38* | -36* | -47* | -36* | 32* | 51* | 48* | -30* | -30* | -29* | 65* | | | | | | | |
| 13. Control Coping #3 | 3.01 | .98 | -23* | -22* | -15 | -22 | 19* | 31* | 29 | -18* | -18* | -17* | 39* | 47* | | | | | | |
| 14. Escape Coping #1 | 2.43 | .90 | 25* | 24* | 29* | 24* | -07 | -12 | -11 | 28* | 28* | 26* | -06 | -07 | -04 | | | | | |
| 15. Escape Coping #2 | 3.10 | .98 | 31* | 30* | 36* | 29* | -09* | -14 | -14 | 34* | 34* | 32* | -07 | -08 | -05 | 33* | | | | |
| 16. Escape Coping #3 | 3.26 | .93 | 21* | 20* | 24* | 20* | -06 | -10 | -09 | 23* | 23* | 22* | -05 | -06 | -03 | 23* | 28* | | | |
| 17. Quit intentions | 1.94 | 1.17 | 36* | 35* | 42* | 34* | -18* | -30* | -28* | 35* | 34* | 33* | -15* | -18* | -11 | 10 | 12 | 08 | | |
| 18. Sick time used | 5.04 | 5.54 | 16* | 16* | 19* | 15 | -10 | -16* | -15* | 22* | 22* | 21* | -03 | -03 | -02 | 07 | 09 | 06 | 24* | |
| 19. Voluntary turnover | .05 | .21 | -03 | -01 | -02 | -01 | -04 | -07 | -07 | -04 | -04 | -04 | -04 | -05 | -03 | -03 | 20* | 26* | 21* | 27* |

* $p < .05$

Table 2
*Correlations among Latent Constructs*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Negative appraisal | | | | | | | |
| 2. Positive emotions | -.49* | | | | | | |
| 3. Negative emotions | .21* | -.48* | | | | | |
| 4. Control coping | -.55* | .62* | -.38* | | | | |
| 5. Escape coping | .62* | -.24 | .59* | -.15 | | | |
| 6. Sick time used | .80* | -.17 | .24* | -.03 | .14 | | |
| 7. Intentions to quit | .47* | -.32* | .39* | -.21* | .19 | .24* | |
| 8. Voluntary turnover | -.02 | -.07 | -.04 | -.06 | -.10 | .27* | .21* |

* $p < .05$

Table 3
*Fit Indices for Alternative Structural Models*

| Model | $\chi^2$ | *df* | NNFI | CFI | IFI | AIC | RMSEA | $\chi^2_{diff}$ | *df* |
|---|---|---|---|---|---|---|---|---|---|
| Measurement model | 147.73* | 127 | .99 | .99 | .99 | -106.27 | .03 | | |
| 1. Appraisal theory of emotions (full mediation model) | 191.49* | 144 | .97 | .98 | .98 | -96.51 | .05 | | |
| 2. Stimulus Response (full mediation model) | 184.43* | 144 | .98 | .98 | .98 | -103.57 | .04 | | |
| 3. Partial mediation process model (includes path from Negative Appraisal to Turnover) | 182.49* | 143 | .98 | .98 | .98 | -103.51 | .04 | | |
| Difference between Model 3 and Model 2 | | | | | | | | 1.94 | 1 |

Table 3 Continued

| Model | $\chi^2$ | *df* | NNFI | CFI | IFI | AIC | RMSEA | $\chi^2_{diff}$ | *df* |
|---|---|---|---|---|---|---|---|---|---|
| 4. Partial mediation process model (includes path from Negative Appraisal to Sick) | *184.44* | 143 | .98 | .98 | .98 | -187.92 | .05 | | |
| Difference between Model 4 and Model 2 | | | | | | | | .01 . | 1 |
| 5. Direct Effects on Sick Time Used | 365.78* | 115 | .85 | .88 | .88 | 135.78 | 13 | | |
| Difference between Model 5 and Model 2 | | | | | | | | 181.35* | 29 |
| 6. Direct effects on Voluntary Turnover | 372.35* | 133 | .87 | .89 | .89 | 145 | 11 | | |
| Difference between Model 6 and Model 2 | | | | | | | | 187.92* | 11 |

*Note*. NNFI = Non-normed Fit Index; CFI = Comparative Fit Index; IFI = Incremental Fit Index; RMSEA = Root Mean Square Error of Approximation.

* $p < .05$

Figure Captions

*Figure 1.* Fully mediated model of coping with organizational change based on appraisal theory of emotions.

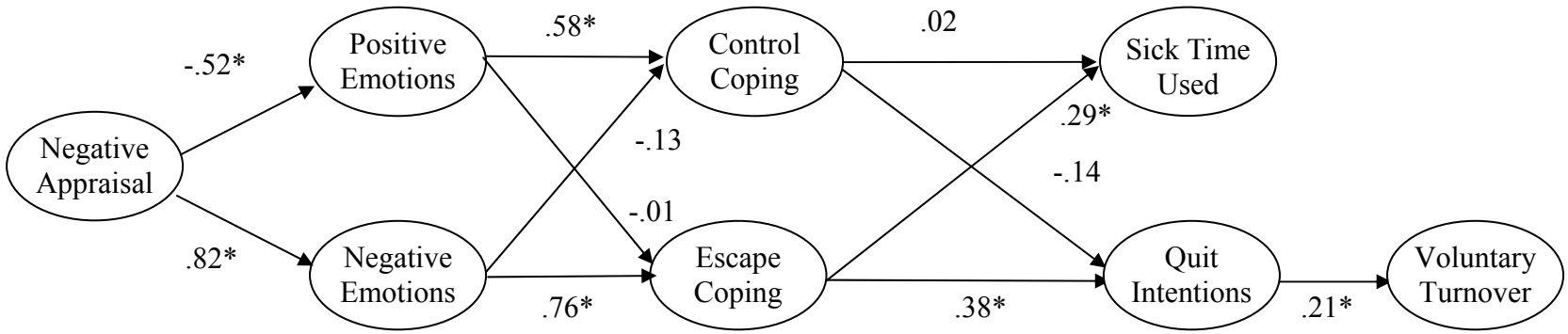
*Figure 2*. Fully mediated model of coping with organizational change based on the stimulus-response theory of coping.

*Figure 3*. Partially mediated model of coping with organizational change (direct path to voluntary turnover).

*Figure 4.* Partially mediated model of coping with organizational change (direct path to sick time used).

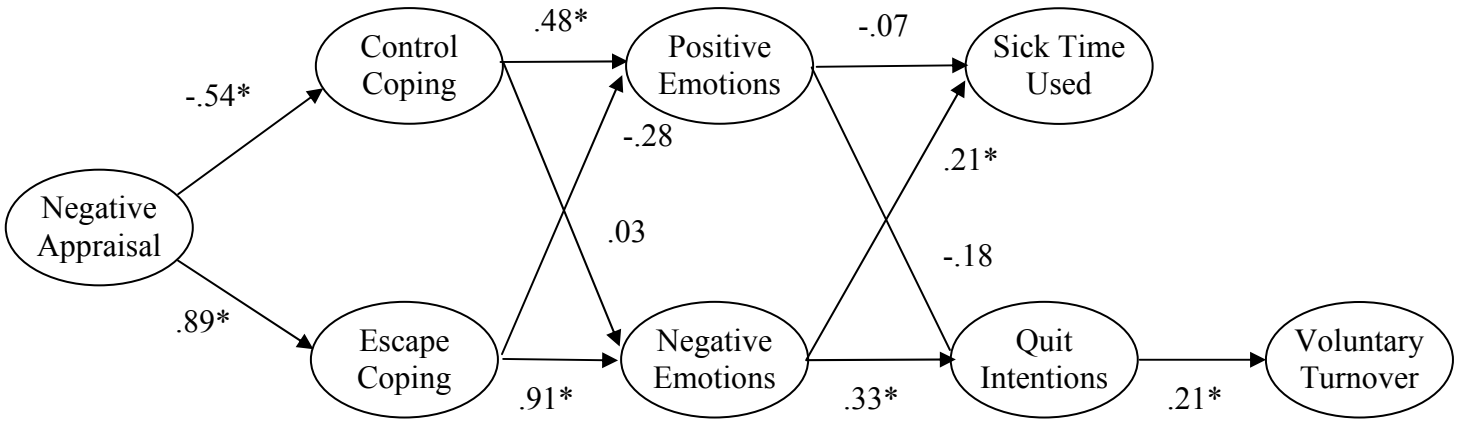
*Figure 5*. Measurement model results.

*Figure 1.* Fully mediated model of coping with organizational change based on appraisal theory of emotions.



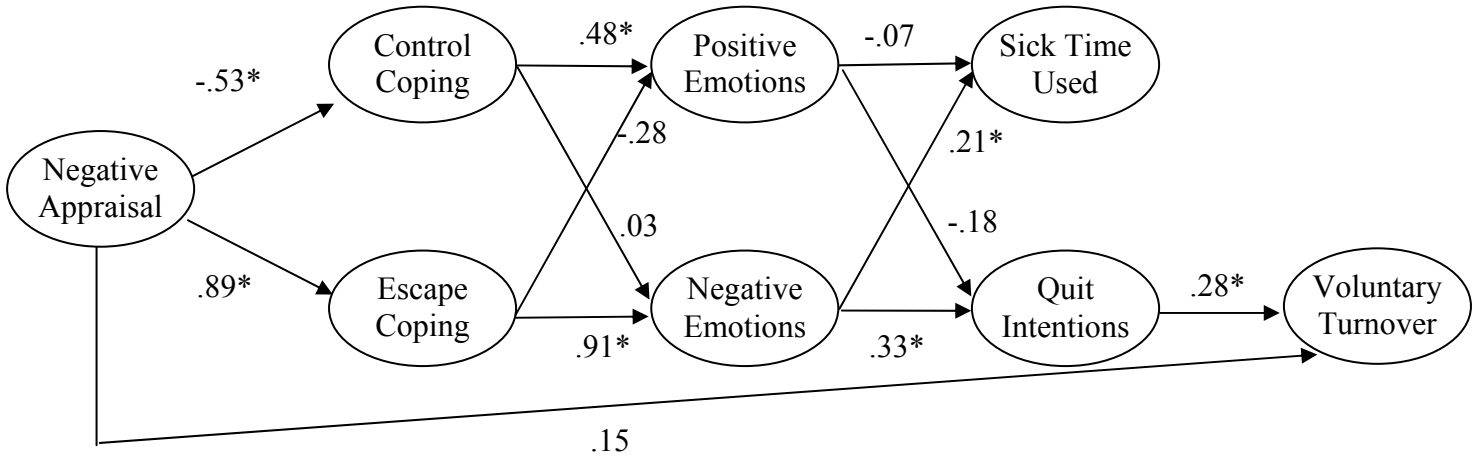

*Note:* All estimates are standardized * $p < .05$

*Figure 2.* Fully mediated model of coping with organizational change based on the stimulus-response theory of coping.



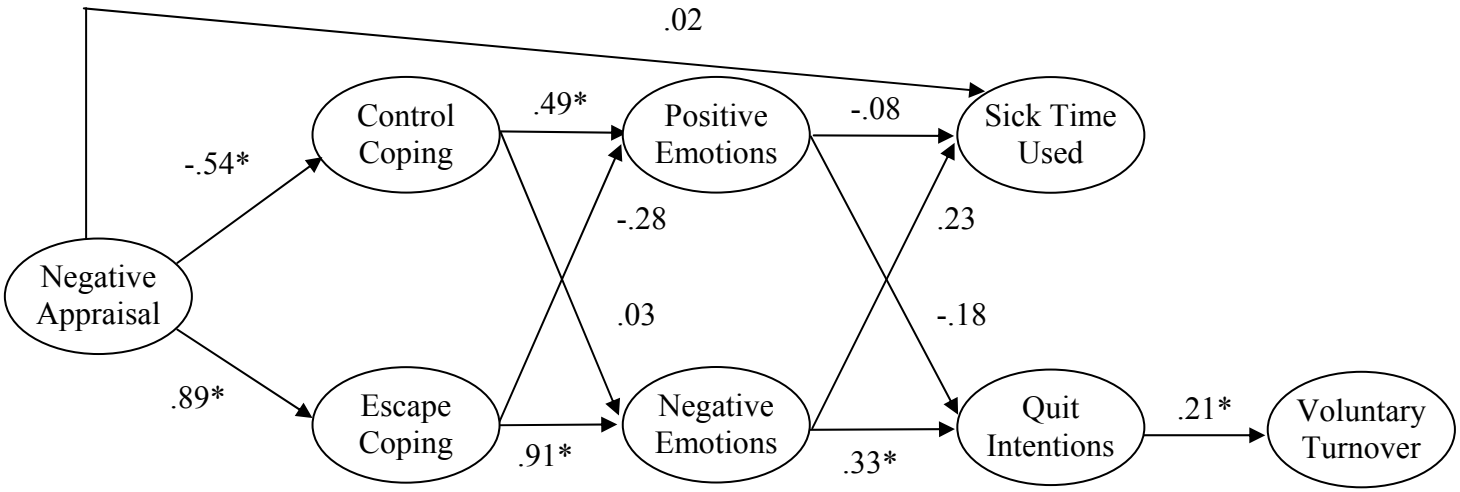

*Note:* All estimates are standardized * $p < .05$

*Figure 3*. Partially mediated model of coping with organizational change (direct path to voluntary turnover).



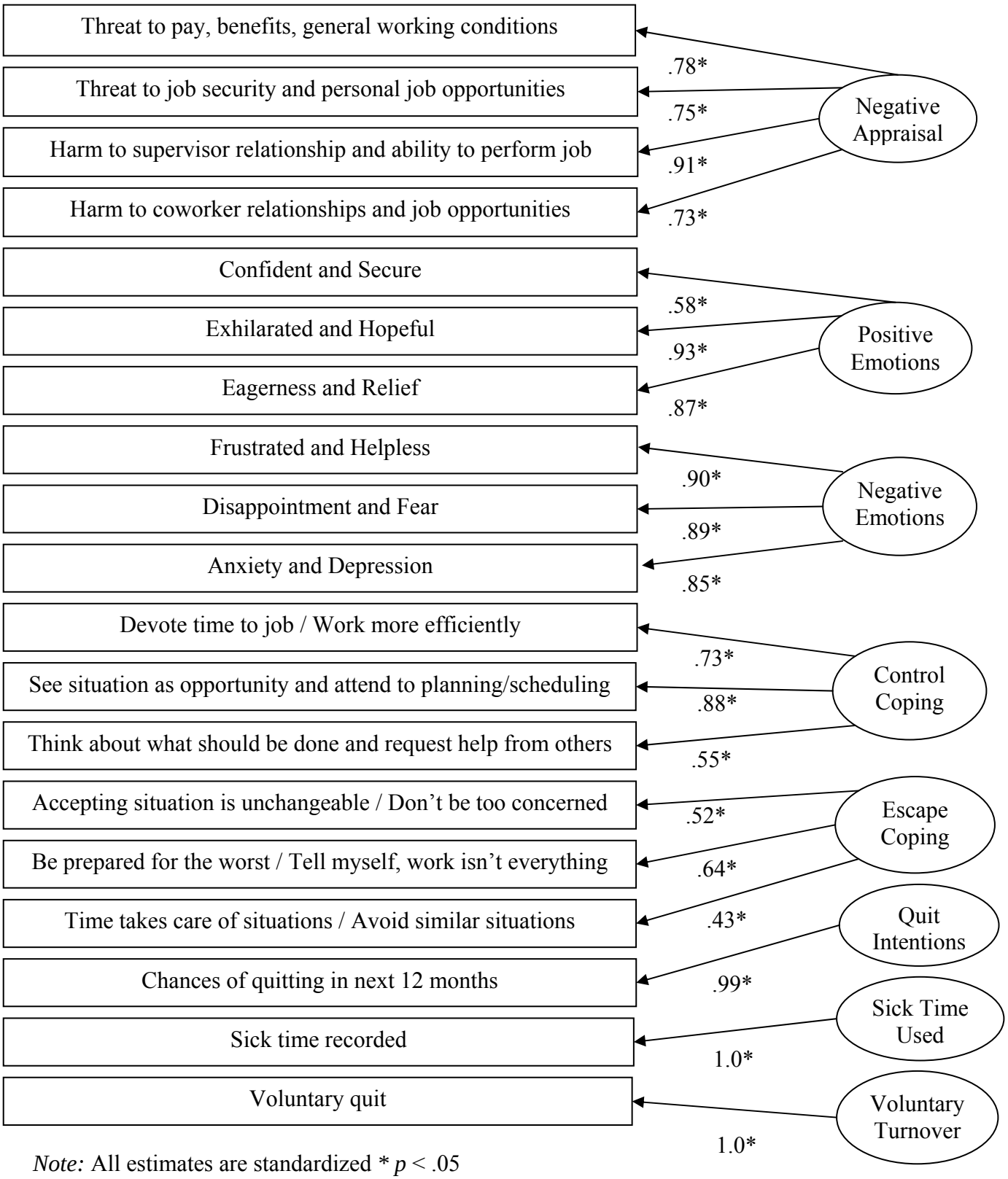

*Note:* All estimates are standardized * $p < .05$

*Figure 4*. Partially mediated model of coping with organizational change (direct path to sick time used).




*Note:* All estimates are standardized * $p < .05$

*Figure 5*. Measurement model results.




*Note:* All estimates are standardized * $p < .05$