

WORK MEANINGFULNESS
AND ITS IMPACT ON
STRESS APPRAISAL

by

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ABSTRACT

The Transactional Model of Stress posits that stressors are cognitively appraised and those appraised as challenges or threats are coped with to return to homeostasis (Lazarus & Folkman, 1984). This study incorporated job meaningfulness, the degree of significance one holds toward one's job, into the Transactional Model of Stress as a mediator between appraisal and coping to determine its effect on turnover intent and burnout. Results indicated support for job meaningfulness as a mediator in the Transactional Model of Stress and meaning-focused coping's significant negative relationship with turnover intent and the emotional exhaustion and cynicism facets of burnout and significant positive relationship with the professional efficacy component of burnout. An alternative model was presented and demonstrated strong, significant relationships between job meaningfulness and the outcome variables. A call is made to investigate task meaningfulness, the degree of significance held by an individual toward a piece of work. Implications and future directions are discussed.

DEDICATION

This dissertation is dedicated to my friends, family, committee, and all of the kind and generous people I've met around the world. Thank you for your guidance, love, encouragement, and wisdom.

LIST OF ABBREVIATIONS AND SYMBOLS

TPWB	Theory of Purposeful Work Behavior
EMS	Emergency Medical Services
PTSD	Posttraumatic Stress Disorder
SEM	Structural Equation Modeling
SAM	Stress Appraisal Measure
WAMI	Work as Meaning Inventory
MBI-GS	Maslach Burnout Inventory – General Survey
CFA	Confirmatory Factor Analysis
β	Standardized Regression Coefficient
χ^2	Tests Model Fit Using a Chi-Squared Distribution
p	Probability Value
JDR	Job-Demands Resources Model
COR	Conservation of Resources Theory

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INTRODUCTION

Why do we work? While the answer to that question for nearly all of human history was survival, modern scholars point to other reasons why we work. The work we do often forms and informs our identity (Pratt, Rockmann, & Kaufmann, 2013) and gives our lives meaning (Šverko & Vizek-Vidović, 1995). Scholars of yesteryear have noted that people have an essential need for a meaningful work life (Maslow, 1943, 1971; McClelland, 1965; Rogers, 1959), and scholars today propose that people are motivated to pursue meaning in their work and in their lives (Michaelson, 2005; Ryan & Deci, 2001). When placed against other job features such as promotions, income, and job security, Americans reported that they desire important and meaningful work above all else (Cascio, 2003). In fact, when employees experience meaning in their work they are happier and report higher levels of well-being (King & Napa, 1998; Zika & Chamberlain, 1992).

But what exactly is meaningful work, and what is a meaningful job? This remains an understudied cross-disciplinary topic with myriad conceptualizations such as meaning in life (Baumeister, 1991; Steger, Frazier, Oishi, & Kaler, 2006), meaning at work (Barrick, Mount, & Li, 2013; Chalofsky & Krishna, 2009; Deci & Ryan, 1985; MOW International Research Team, 1987; Rosso, Dekas, & Wrzesniewski, 2010; Steger, Dik, & Duffy, 2012), coherence (Antonovsky, 1979), calling (Dik & Duffy, 2009), and meaningfulness (Chalofsky, 2003; Chalofsky & Krishna, 2009). Though the focus here is on meaningful work, the present study draws on these myriad conceptualizations to introduce the notion of task meaningfulness by capturing the intrinsic motivation and degree of significance of work tasks for employees.

The meaning of work literature is a byproduct of decades of prior research on motivation. As management researchers began to draw on psychology, sociology, and economics research to better understand motivation, the question of why we work and what drives us to work needed to be addressed. Hackman and Oldham (1975) proposed that certain dimensions of work lead to experienced work meaningfulness and developed a survey to measure this. Self-Determination Theory (Deci & Ryan, 1985) added to our understanding of work meaningfulness by identifying the basic needs underlying intrinsic work motivation. Finally, the Theory of Purposeful Work Behavior integrated the goal-seeking behavior inherent in intrinsic motivation and purposefulness with personality (Barrick et al., 2013).

Though meaning and meaningfulness are often used interchangeably, they are different. Meaning is the resulting interpretation of what a person's work signifies within that person's own life, whereas meaningfulness helps answer the question "why am I here" by capturing the degree of significance toward something held by an individual (Pratt & Ashforth, 2003). Rosso and colleagues (2010) proposed that individuals derive meaning from their work from four main sources: the self, other persons, the work context, and spiritual life. These sources form the foundation of meaning at work, though the extent to which each source is availed varies at both the person-level and task-level.

This study integrates job meaningfulness into the Transactional Model of Stress. The Transactional Model of Stress posits that individuals make cognitive appraisals of stressors to determine their relevance and importance as well as to determine the resources and coping options available to mitigate the stressor (Lazarus & Folkman, 1984). Coping, whether through thoughts or behaviors, is done to regulate emotions and solve problems to ameliorate distress caused by stressors (Folkman & Moskowitz, 2007). This study focuses on meaning-focused

coping, which copes with discrepancies in global meaning and situational meaning; global meaning “refers to the person’s enduring values, beliefs about the self in the world and how the world works, and highest-order goals” and situational meaning “refers to the person’s appraisal of a proximal stressful encounter in relation to proximal goals and implications for the person’s well-being” (Folkman & Moskowitz, 2007, p. 198).

To date, most job meaningfulness research has focused on one’s global meaningfulness in life and one’s job-level meaningfulness. Jobs are a collection of tasks performed by an employee, and tasks are pieces of work employees complete (Griffin, 1987; Ilgen & Hollenbeck, 1991; Wong & Campion, 1991). Researchers have made fruitful connections between task significance and job meaningfulness, but task significance focuses on how one’s work impacts others (Hackman & Oldham, 1975). Task significance has a weak relationship with job performance, and task significance is rarely related to workplace outcomes (Dodd & Ganster, 1996; Fried & Ferris, 1987; Grant, 2008b; Humphrey, Nahrgang, & Morgeson, 2007). Intrinsic motivation is not considered, and accordingly the internal motivation for why employees perform tasks and derive meaning from them has gone unexplored. Thus, a call is being made to investigate task meaningfulness, the degree of significance held by an individual toward a piece of work.

The present study offers a number of theoretical and managerial contributions. First, job meaningfulness is integrated into the Transactional Model of Stress. This novel approach may help explain why, despite stressful work, employees are less likely to burnout or turnover in ways existing conceptualizations cannot capture. Second, this study introduces the concept of task meaningfulness. Developing our understanding of work meaningfulness at the task level as well as the mechanisms through which tasks acquire meaning may help to resolve the

discrepancies in the meaning of work literature. For managers, burnout and turnover are expensive costs that could be mitigated by hiring employees who find the job or the tasks embedded within the job meaningful. Likewise, jobs could be designed to reinforce tasks that employees find meaningful to buffer against the detrimental effects of stress.

Overview of Meaning and Meaningfulness at Work Development

Work is a curse; it's a necessary evil for the lower class and slaves. Such was the philosophy among the aristocratic elite in ancient Greece, where the common wisdom was that work should be avoided at all costs (Tilgher, 1962). The notion that work had inherent value and redemptive qualities came later, culminating in the Protestant work ethic. Work has taken on a central role in contemporary society, with bureaucracy and the specialization of labor (Bendix, 1963).

Maslow's (1943) seminal, though now seen as outdated, theory of motivation was based upon people's needs. These needs are organized hierarchically, with lower-order and higher-order needs occurring in succession. Physiological needs are the starting point, with the basic biological and sensory needs required to provide for individual homeostasis. "Man lives by bread alone – when there is no bread" (Maslow, 1943, p. 375) is how he describes this singular focus on those needs that must be satisfied in order to alleviate physiological deprivation and pursue higher-order needs. Safety needs emerge as the next set of needs, encompassing threats as varied as temperature extremes, wild animals, and tyranny. Next are love needs, incorporating affection and belongingness. Esteem needs encompass the desire for strength and achievement as well as reputation and prestige. Finally, when these other needs are satisfied, there is the need for self-actualization. Self-actualization represents a desire for self-fulfillment to achieve one's full potential and become what one is capable of becoming.

While Maslow's hierarchy of needs is a staple in introductory management and psychology textbooks, the preconditions for these basic needs is less discussed. These antecedents form the foundation of human motivation. Maslow described these antecedents as "not ends in themselves but they are almost so since they are so closely related to the basic needs" (Maslow, 1943, p. 383). Chief among these antecedents is the desire to know and understand the world around us, to systematize the universe and see order amidst the chaos. When we acquire facts we analyze and theorize about them in what Maslow called the *search for meaning*. He described this search for meaning as its own hierarchy, with the desire to know above the desire to understand (Chalofsky & Krishna, 2009). Maslow (1971) suggested that employees who do not find their work meaningful will not perform at their full capacity.

Early efforts to standardize and simplify tasks made for repetitive jobs often created so much dissatisfaction that the gains of systematization were negated (Oldham & Hackman, 2010). Herzberg (1966) challenged these assumptions and proposed that job enrichment and redesign would motivate employees to do better work. At the same time, Turner and Lawrence (1965) identified four core job dimensions: autonomy, feedback, variety, and task identity. Hackman and Lawler (1971) found broad support that jobs designed with more inherent meaningfulness led to higher satisfaction across these identified job dimensions. Their work demonstrated empirically that employees who desire higher-order need satisfaction are more motivated when working in jobs high in these four dimensions.

The Job Characteristics Model expanded on the expectancy theory of motivation (Porter & Lawler, 1968; Vroom, 1964). The Job Characteristics Model was built on the belief that "people would try to perform well [at work] simply because it felt good when they did – and it felt bad when they did not" (p. 464) and attempted to answer what characteristics foster internal

work motivation (Oldham & Hackman, 2010). The Job Characteristics Model incorporated the four core job dimensions already mentioned, and included task significance – how much the work impacts the lives of other people. Of these five characteristics, skill variety, task identity, and task significance contributed to what Hackman and Oldham (1976) called experienced meaningfulness. Skill variety is the degree to which different skills and talents are used to carry out the various activities at work. Task identity is the degree to which completing a whole, identifiable piece of work is required at work. Task significance is the degree to which one’s work impacts the lives or work of others, whether within or beyond the organization. These three characteristics lead to experienced meaningfulness, which is “the degree to which the individual experiences the job as one which is generally meaningful, valuable, and worthwhile (Hackman & Oldham, 1976, pp. 256–257).

The Job Characteristics Model outlined the connection between higher order needs satisfaction, which includes meaningfulness, and motivation in one’s work. In the wake of the work establishing the Job Characteristics Model emerged the foundational work underlying Self-Determination Theory. This work coincided with the changing nature of work, incorporating the social and external forces of motivation that aren’t incorporated in the Job Characteristics Model (Oldham & Hackman, 2010). Self-Determination Theory describes and explains psychological needs from a macro perspective, encompassing the regulation of behavior, and realization of psychological well-being (Ryan & Deci, 2000, 2002). Self-Determination Theory posits that people are driven by the basic needs of autonomy, relatedness, and competence. That is, individuals have a need to express themselves, feel connected to others, and have a sense of mastery in interacting with their social environment and the expression of their capacities (Ryan & Deci, 2002).

Self-Determination Theory considers both intrinsic and extrinsic sources of motivation. A subtheory of Self-Determination Theory called Cognitive Evaluation Theory explains the variability in intrinsic motivation (Deci & Ryan, 1985). Intrinsic sources of motivation come from within the individual, incorporating the need to seek out new challenges; extrinsic motivation comes from external sources (Deci, 1975; Deci & Ryan, 1985). While needs from within an individual may inform the drive characterizing intrinsic motivation, external events influence the need for competence (Deci, 1975). Events that affirm perceived competence improve intrinsic motivation, and events that reduce perceived competence decrease intrinsic motivation (Deci & Ryan, 1985). In the work context, this can take the form of feedback on work performed. When an employee completes a work task and is given positive feedback from a supervisor, his/her perceived competence is affirmed and this increases intrinsic motivation. When the three basic needs of autonomy, relatedness, and competence are met, intrinsic motivation increases (Allan, Autin, & Duffy, 2016), and intrinsic motivation is significantly correlated to meaningful work (Steger, Dik, & Duffy, 2012). Research on seeing one's work as a calling has also found evidence that intrinsic motivation and job meaningfulness are connected (Duffy, Allan, Autin, & Bott, 2013; Duffy, Allan, Bott, & Dik, 2014; Duffy & Dik, 2013; Hirschi, 2012), suggesting that intrinsic motivation satisfies workers beyond the rewards extrinsic motivation can offer (Allan et al., 2016).

Further work in the area of work meaningfulness and motivation led to the Theory of Purposeful Work Behavior (TPWB), which integrated the Five-Factor Model of personality, the Job Characteristics Model, and higher-order implicit goals to explain how work outcomes are influenced by traits and job characteristics. The theory proposes two self-regulatory processes: purposefulness, "a sense of desired end states or directedness to one's behavior," and

experienced meaningfulness, “the perceived significance or meaning an individual draws from engaging in work activities” (Barrick et al., 2013, p. 133). Employee behavior is assumed to be purposeful and aimed at attaining goals; higher-level goals explain the purpose of behavior and lower-level goals explain the plan to achieve the goals (Barrick et al., 2013). TPWB adds the implicit goal of status-striving to the striving for autonomy, achievement, and relatedness proposed by Self-Determination Theory; these four goals, which differ in degree from person to person, determine meaningfulness at work and purposefulness (Barrick et al., 2013). For example, a registered nurse may have the higher-level goal of becoming a nurse practitioner for the enhanced status, pay, autonomy, and responsibility. He or she would employ lower-level goals such as attaining the relevant training and education, culminating in the higher-level goal of attaining employment as a nurse practitioner.

TPWB proposes that personality influences intrinsic purposeful goal striving and extrinsic task and social job characteristics, which then lead to experienced meaningfulness, motivational processes, and work outcomes. Task and social characteristics interact with both one’s personality traits as well as one’s personal purposeful goal striving to create experienced meaningfulness. In so doing, TPWB acknowledges and extends relevant parts of the Job Characteristics Model (Hackman & Oldham, 1975) and job crafting (Wrzesniewski & Dutton, 2001) as they apply to the meaningfulness of work.

Meaning and Engagement

Meaningfulness is a factor in modern conceptualizations of engagement at work research. Kahn (1990) proposed that meaningfulness is an antecedent of work engagement, and that this meaningfulness was experienced when people felt worthwhile, useful, and valuable, as though they were making a difference. Likewise, Spreitzer (1995) suggested that meaning is one of four

components of psychological empowerment. Psychological empowerment is intrinsic motivation based on cognitions related to one's work roles; when a workplace offers a strong fit between an employee's expectations and his or her working conditions, then he or she will be more engaged at work (Spreitzer, 1995). In fact, researchers have found that when employees feel empowered they derive a greater sense of meaning from their work (Avolio, Zhu, Koh & Bhatia, 2004). Both of these engagement constructs consider meaningfulness as an antecedent of engagement, and extend the Job Characteristics Model. In particular, these frameworks explained the link between meaningfulness and performance through engagement (Rich, Lepine, & Crawford, 2010).

Meaning, Meaningfulness, and their Sources

Separating terms that are often used interchangeably by both scholars and practitioners has been a long-acknowledged challenge (MOW International Research Team, 1987; Super & Šverko, 1995). In part, this confusion is compounded by the multifaceted origins of meaning: individually from a person's perceptions, socially from social norms or shared social perceptions, or both (Pratt & Ashforth, 2003; Rosso et al., 2010). Organizational behavior research has tended to focus on the individual's perspective, and how an individual interprets meaning from their work and work experiences (Wrzesniewski, 2003). At the individual level, researchers have applied various definitions for meaning of work. Some scholars attribute meaning of work to the significance of the work performed (MOW International Research Team, 1987; Wrzesniewski, Dutton, & Debebe, 2003) while others have attributed beliefs, attitudes, and values about work (Molden & Dweck, 2006; Nord, Brief, Atieh, & Doherty, 1990; Roberson, 1990; Ros, Schwartz, & Surkiss, 1999). The social perspective, on the other hand, studies how individuals assign meaning to aspects of their lives in line with social or cultural perspectives and values (Geertz, 1973; Kluckhohn, 1951). For example, a doctor may derive a sense of meaning from his/her

work because of the impact he/she makes on patients by performing work tasks. This individual perspective contrasts with a social perspective if the doctor, instead, derives his/her sense of meaning from the elevated status his/her profession holds in his/her particular culture.

Pratt and Ashforth (2003) define meaning as the result of interpreting or making sense of what one's work signifies within the context of one's life. Meaning represents what work signifies to an individual (Thurgood, 2017). For some, work is just a paycheck, a necessary evil. For others it's a calling and a source of immense gratification. As mentioned earlier, meaning varies greatly due to individual differences as well as differences in environmental and social contexts (Wrzesniewski et al., 2003). Organizational behavior and psychology researchers have tended to focus on the positive meaning made their work, exacerbating the confusion between meaning and meaningfulness (Rosso et al., 2010; Wrzesniewski & Dutton, 2001).

Meaningfulness, in contrast to meaning, denotes the degree of significance held by an individual toward something (Pratt & Ashforth, 2003). The difference between meaning and meaningfulness can be understood with an example. Consider a kindergarten teacher who dreamed of being a teacher since childhood. He finds meaning in his role as an educator since students often learn the basics of reading in his class, a crucial life-long skill. However, he does not find meaning in his role as disciplinarian. Meaningfulness helps answer the question "Why am I here" (Pratt & Ashforth, 2003). For this teacher, helping students learn how to read is the most significant aspect of his job and as such infuses the most significance into his sense of work meaningfulness. Other educators may find discipline to be a great source of meaning, helping to guide students into being productive members of society. Those educators may find that discipline is a significant source of meaningfulness at work.

Further, work can have meaning but not be meaningful. For example, an employee in the oil industry may find significance in his work because it keeps his family fed and his work facilitates the transportation and production of plastics that modern society requires; however, he may also find negative significance in his work because of the environmental effects of oil consumption. These conflicting sources of significance in his work represent the conundrum all employees face given the myriad potential sources of meaning at work and the individual differences in how an employee evaluates the degrees of significance each source of meaning represents to determine “why am I here” and the job’s meaningfulness. Overall, the income and end uses of oil contribute most to this employee’s sense of job meaningfulness, answering the question of “why am I here”, but the environmental effects detract from the employee’s sense of job meaningfulness more than the income and end uses leaving the employee feeling as though his work has meaning but overall is not meaningful.

Rosso and colleagues (2010) identified four main sources of meaning of work in the literature: the self, other persons, the work context, and spiritual life. Each of these sources affects the meaning or meaningfulness individuals experience at work. Not all sources may be present at any given time, but all four serve as the foundation for individuals’ sources of meaning at work.

The self as a source of meaning looks at self-concept (Bono & Judge, 2003). This is divided into three different domains: values, motivations, and beliefs about work. Values are “the products of cultural, institutional, and personal forces acting upon the individual that in turn have consequences of their own” (Brief & Nord, 1990a, p. 24) and work values are “the end states people desire and feel they ought to be able to realize through working” (Nord et al., 1990, p. 21). Work values differ from person to person due to the varied social norms, occupational

cultures, and work experiences that people experience (Locke & Taylor, 1991; Roberson, 1990). Individuals tend to self-select into occupations that reflect their personal values, and experiences in those occupations tend to fortify those aligned values (Gandal, Roccas, Sagiv, & Wrzesniewski, 2005; Locke & Taylor, 1991). In much of the literature, values and meaning are used synonymously making it difficult to disentangle them, but their presence as a source of meaning is acknowledged (Rosso et al., 2010).

Motivation, drawing heavily from the Job Characteristics Model (Hackman & Oldham, 1976) and Self-Determination Theory (Deci & Ryan, 1985), is connected to the meaning literature via intrinsic motivation and the experienced meaningfulness of work. When employees experience intrinsic motivation, they are more likely to find congruence between their self-concept and work activities, leading to more experienced meaningfulness (Carador, Pratt, & Dane, 2006; Hackman & Oldham, 1976).

Beliefs about work are further broken down into job involvement, work centrality, work orientation, and callings. Job involvement refers to how central a person feels his/her job is to his/her life and the extent to which a person believes a job can meet his/her needs (Kanungo, 1982). Similarly, work centrality examines how central work is to a person's life compared to other domains in life. Studies of work meaningfulness deploy these constructs to determine how meaningful they find their work in relation to other domains in life (MOW International Research Team, 1987). Work orientation looks at the general orientation to and beliefs about work in general (Wrzesniewski & Dutton, 2001). People generally find their work to be a job, where work is a means to an end to financially support life outside of work; a career, where meaning is built upon rewards like higher pay, prestige, self-esteem, and power associated with advancing in an occupational structure; and a calling, where meaning and fulfillment comes from

doing the work itself and not from the financial or other rewards work brings (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997).

The other people source of motivation focuses on four main areas: coworkers, leaders, groups and communities, and family. Relations with coworkers have a strong influence on how employees perceive the meaningfulness of their work, and close relationships in particular have a positive impact on perceptions of meaningfulness when they reinforce valued identities (Kahn, 1990; Wrzesniewski et al., 2003). Leaders frame the broader goals and purpose of the organization and deliver feedback about work performed, which influences the perception of the meaning in an employee's work (Podolny, Khurana, & Hill-Popper, 2004). Leadership style can also influence experienced meaningfulness at work, with transformational leadership inspiring followers to pursue organizational interests ahead of their own self-interests (Bono & Judge, 2003). Identification with the workgroups that employees belong to also has a strong influence on employees' sense of meaningfulness at work (Grant, Dutton, & Rosso, 2008; Pratt & Ashforth, 2003; Weick, 1995; Wrzesniewski, 2003). Similarly, when employees perceive that they have made a valuable contribution to the organization in which they work or their community within the organization, they experience greater meaningfulness at work (Grant, 2007; Grant et al., 2008; Kahn, 1990). Lastly, familial relationships influence the meaning of work, such as putting a strain on time and energy resources, creating higher financial demands on an individual, or by providing social support to recover from the stressors at work (Brief, Konovsky, Goodwin, & Link, 1995; Brief & Nord, 1990b).

The work context plays an important role in perceptions of meaning and meaningfulness through job design, organizational mission, non-work domains, financial circumstances, and national culture. The Job Characteristics Model proposed that experienced meaningfulness

occurs from skill variety, task identity, and task significance, and the impact one's work has on others also impacts meaningfulness of work (Grant, 2007, 2008b; Grant et al., 2008; Hackman & Lawler, 1971; Hackman & Oldham, 1975; Wrzesniewski & Dutton, 2001). When employees find that their core values and those of their employer overlap, organizational missions are a source of meaning at work (Besharov, 2008; Pratt, 2000; Thompson & Bunderson, 2003). Similarly, non-work activities can spillover into the workplace, increasing meaningfulness by lessening the gap between work and leisure (D'Abate, 2005; Sandelands, 2003). Financial rewards are a source of meaning at work, where researchers have found that one's income moderates the meaning found in work; those with lower incomes tend to focus on the economic returns of working instead of the meaning derived from one's work (Brief et al., 1995; Jahoda, 1982; Vohs, Mead, & Goode, 2006). Lastly, while national culture influences how individuals perceive meaning in their work, studies have found work to be a central, meaningful part of life across a variety of otherwise very different national cultures (England & Whitely, 1990; MOW International Research Team, 1987; Super & Šverko, 1995).

Work also derives meaning from an individual's spiritual life. Individuals often turn to spirituality to find meaning in their lives, and this also includes viewing their work through a spiritual lens (Sullivan, 2006; Šverko & Vizek-Vidović, 1995), which endows their work with a greater sense of meaning. Some employees feel that their work is a calling in which they are serving a higher power by performing their work tasks (Dik & Duffy, 2009; Steger, Pickering, Shin, & Dik, 2010).

Task Significance and Motivation

Jobs are a collection of tasks performed by an employee, and tasks are pieces of work employees complete (Griffin, 1987; Ilgen & Hollenbeck, 1991; Wong & Campion, 1991). Wong

and Campion (1991, p. 825) define a task as something that “represents certain processes in which the worker, through his or her actions, transforms inputs into outputs meaningful to the goals of the job by using tools, equipment, or work aids. The actions of the task may be physical, mental, or interpersonal.” They define a job as “an aggregation of tasks assigned to a worker.” Past research has established the connection between motivating tasks and jobs (Wong & Campion, 1991), task organization to facilitate interpersonal connections with coworkers (Stewart & Barrick, 2000; Wong & Campion, 1991), and customers (Rafaeli & Sutton, 1987; Sutton & Rafaeli, 1988). Researchers have also studied the ways in which employees exercise agency over their jobs and social environment to achieve more congruence with their personal goals (Berg, Wrzesniewski, & Dutton, 2010; Wrzesniewski, 2003; Wrzesniewski & Dutton, 2001). Scholars have investigated intrinsic motivation’s effect on identity and prosocial outcomes (Grant, 2007, 2008a).

These prosocial behaviors are a manifestation of task significance as posited in the Job Characteristics Model (Hackman & Oldham, 1976). As explained earlier, task significance is “the degree to which the job has a substantial impact on the lives or work of other people, whether in the immediate organization or in the external environment” and leads to experienced meaningfulness (Hackman & Oldham, 1976, p. 257). Thus, the conceptualization of task significance is outward-facing, whereby employees evaluate the meaningfulness of their work extrinsically based on its impact on the organization, customer, or external environment.

Stress

Stress is defined in a number of ways. As noted by Cofer and Appley (1964, p. 449) in the early days of stress research, “it is as though, when the word stress came into vogue, each investigator, who had been working with a concept he felt was closely related, substituted the

word stress and continued in his same line of investigation.” While the concept of stress is as old as time itself, the first known use of the word stress came in the 14th century and referred to hardship and adversity (Lumsden, 1981). Later, stress entered the psychology and management realm via the 17th century conceptualization of stress as the carriage of heavy load and the resistance of natural forces capable of destruction without buckling, such as a bridge; in this analogy, a load is the external force such as weight or wind gusts, stress is the force on the bridge resulting from the load, and strain is the resulting deformation of the structure resulting from the load and stress (Hinkle Jr., 1973; Lazarus, 2006). Today, the analogy still holds but we use the term stressor to represent an external stimulus and stress response to represent the outcome (Lazarus, 2006). Stress is a set of physical and psychological responses to adverse conditions or influences (Le Fevre, Matheny, & Kolt, 2003; Selye, 1964).

Stress need not be negative despite the negative connotation the word has. Selye (1976) proposed two types of stress – eustress and distress. Eustress is a constructive stress that is characterized by challenge and healthy and positive outcomes (Cavanaugh, Boswell, Roehling, & Boudreau, 2000; Lazarus, 1966; Le Fevre et al., 2003; Selye, 1964, 1976). For example, the challenge of doing physical exercise or the mental load involved in learning a new skill at work represent forms of eustress. Distress, on the other hand, is the negative response to stress often leading to adverse health and work outcomes (Cavanaugh et al., 2000; Nelson & Simmons, 2003; Quick, Wright, Adkins, Nelson, & Quick, 2013). For example, an employee who is experiencing distress may disengage from his or her work (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), or abuse alcohol to cope (Marchand, Demers, Durand, & Simard, 2003).

Job stress is a persistent problem for organizations given the negative work outcomes associated with stress (Cavanaugh et al., 2000). Researchers often study stress in conjunction

with outcome variables such as burnout, turnover, and wellbeing, and sources, outcomes, and responses to stress vary from individual to individual (Avey, Luthans, & Jensen, 2009; Halbesleben & Buckley, 2004; Leiter & Maslach, 2001; Maslach, Schaufeli, & Leiter, 2001). Although various conceptualizations and models of stress have arisen over the decades, in this dissertation the focus is on the Transaction Model of Stress.

Theoretical Background

As the understanding of stress unfolded in the psychology literature, researchers developed a growing interest in the link between stress and emotions. Many noted, from personal experience, that stress can lead to short tempers but no theory explained why this was so. Lazarus (1966) addressed this with his Transactional Theory of Stress and Coping, which became one of the most influential models of stress in the literature (Bliese, Edwards, & Sonnentag, 2017). Lazarus (1966) connected stress to emotion, and explained stress appraisal as a cognitive function.

Psychological stress is the emotional response from an environmental stimuli that is perceived to exceed a person's resources and threaten well-being (Lazarus & Folkman, 1984). Stress can arise from internal processes or perceptions, or external stimuli. Lazarus and Folkman (1984) attributed stress to two main categories: life events and daily hassles. Life events encompass unforeseen events beyond the control of an individual such as war or an earthquake. Such events also can encompass those that are beyond an individual's control and the impact is concentrated (e.g., loss of a loved one or being terminated from one's job). Daily hassles are minor compared to life events, often taken for granted, but in aggregate lead to stress. In fact, daily hassles account for nearly all psychological and physical stress given their repeated nature and one's prolonged exposure (Lazarus & Folkman, 1987). Examples of daily hassles include

arguments, family worries, and most workplace stressors such as work overload, lack of autonomy, role conflict, resource constraints, and interpersonal conflict. These psychological stressors can cause negative outcomes such as anxiety, illness, and depression (Lazarus & Folkman, 1984).

The Transactional Model of Stress

There are individual differences in the way people appraise stress; in fact, the Transactional Model of Stress posits that stress appraisal is a cognitive function (Lazarus, 1966; Lazarus & Folkman, 1984). When a stressor arises, cognitive capacity is used to evaluate the effect on the relationship between the individual and the environment; the stressor is interpreted for its implications and meaning and potential reactions are evaluated in a two-step process (Carpenter, 2016).

Primary appraisal is a process that determines relevance and seeks to answer whether the event in question is relevant to one's values, goals commitments, or beliefs about the self and the world (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Lazarus, 2006). Three outcomes can occur during primary appraisal (Lazarus & Folkman, 1984): 1.) the stimuli can be deemed irrelevant, having no impact on a person's well-being; 2.) the stimuli can be deemed benign-positive in which the outcome is perceived as positive and leads to positive emotions; or, 3.) the stimuli can be deemed stressful, in which a person perceives harm or loss, threat, or challenge associated with the event. Individual differences influence these evaluations. For example, a person high in agency, the ability to control events, or a person with a predilection toward the belief in a benevolent world are less likely to be affected by said stimuli and are more likely to perceive stimuli as challenges rather than threats (Park & Folkman, 1997).

During primary appraisal, goal commitments have a stronger impact on appraisal than values and beliefs. Goal commitments involve striving toward a goal despite adversity. In the absence of goal commitment, no adaptation is required and thus no stress reaction arises (Lazarus, 2006; Lazarus & Folkman, 1984). For example, if an employee is committed to achieving a professional certification to advance his or her career, an adverse event that threatens to derail this goal such as a layoff will arouse a stress reaction. Values and beliefs, on the other hand, are weaker influences on appraisal because they need not be acted on (Lazarus, 2006). For example, a person may believe that it is good to be esteemed and have elevated status in society, but that it is not worth taking the steps to achieve.

If a person's values and beliefs are not being threatened, or if a goal is not at stake, then there will be no stress and no further appraisal is necessary because the stimuli or event isn't relevant to the person's well-being. However, if a goal is at stake, or if a person's values and beliefs are being threatened, the result is stress. The next step involves assessing what the outcome might be: harm/loss, threat, or challenge. Harm/loss refers to damage that has already been done. A threat is the possibility of damage in the future. Finally, a challenge is similar to Selye's (1976) conceptualization of eustress in that people willingly endure obstacles and struggles to achieve something (Lazarus, 2006; Lazarus & Folkman, 1984). Once a stimulus has been evaluated and primary appraisal has determined that stress is arising, the focus shifts to coping.

Secondary appraisal is a cognitive-evaluative process that focuses on what resources a person has available and the actions that can be undertaken to ameliorate a situation or event deemed stressful; that said, secondary appraisal is neither less important than primary appraisal, nor necessarily second in the process of evaluating a stress stimulus (Folkman et al., 1986;

Lazarus, 2006; Lazarus & Folkman, 1984). Secondary appraisal is an evaluation of coping options to address concerns such as “Do I need to act? If so, when? What are the benefits of acting? Is doing nothing better?” Decisions come to be made by evaluating one’s resources and coping options independent of primary appraisal (Lazarus, 1991). For example, when a person is confident in his/her capacity to overcome an obstacle or a danger, he or she is more likely to determine that adequate resources are available and that the stressor is a challenge that can be overcome with appropriate coping. If a stress is deemed to be greater than the resources available, it is perceived as a threat. In this example, confidence is a person-level variable. It moderates the appraisal, but environmental variables do as well. For example, the predictability of a stress stimulus, the novelty or familiarity of a stress stimulus, or the timing (whether frequency or duration) all impact the evaluation of resources and coping mechanisms (Lazarus, 2006).

Stress and emotion are strongly connected. The Transaction Model of Stress posits that stress occurs when stressors are appraised as harmful in primary appraisal and it is determined that there are insufficient resources in secondary appraisal. Emotional reactions arise from how we appraise stressors; these emotional reactions are cognitively mediated by coping (Lazarus, 1966; Lazarus & Folkman, 1984). Coping is the way people manage stressful life conditions (Lazarus, 2006; Lazarus & Folkman, 1984). Specifically, it is defined as the “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). While researchers tend to focus on this sequence of events, particularly with negative stressors, alternative examples abound. For example, a promotion that entails increased status and salary leads to positive emotions, but can also lead to stress from the increased

responsibilities. Similarly, the birth of a child is cause for celebration and joy, but stress can arise due to the new work-family balance challenges. In such cases, primary appraisal may come after secondary appraisal.

Though often studied separately in a prior era, the stress and emotion literatures were united under the Transactional Model of Stress; Lazarus (2006) conceived of an emotional process as a conceptual unit whereby emotion is a superordinate system including goal motivation, appraisal, stress, emotion, and coping. During secondary appraisal, a person assesses coping options and their constraints. Individual differences explain how the same stressor results in differing emotions across a population due to the differences in motivations, appraisal, and coping options.

Researchers view coping as relatively stable. Daily stressors, for example, require daily coping that is likely to be the same over time. However, a conditional trait perspective as advocated by Wright and Mischel (1987) combined with personality-derived dispositions combine to influence coping styles (Carver & Connor-Smith, 2010). Personality dispositions such as goals, beliefs about the self and the world, and personal resources such as social support, intelligence, optimism, and education all inform coping style, though the social context can be more salient at times (Carver & Connor-Smith, 2010; Folkman et al., 1986). Given the interplay of these dispositions with the coping mechanisms and the constantly changing cognitive and behavioral efforts to manage stressors, coping is seen as a process (Folkman & Moskowitz, 2004; Lazarus & Folkman, 1984). There is no universal coping strategy. Successful coping is highly dependent on individual differences, the type of threat, and the potential outcomes. For example, denial may be a poor coping strategy in most respects, but not so for the terminally or chronically ill (Maes, Leventhal, & de Ridder, 1996).

Coping has traditionally had two major functions: dealing with problems that arise and dealing with emotions that arise. In problem-focused coping, an individual assesses possible countermeasures and deploys them to mitigate the problem existing within the self or with the environment (Lazarus & Folkman, 1984). For example, a recently laid off employee must fix his or her employment situation by assessing available job openings and applying for appropriate positions (Hamilton, Hoffman, Broman, & Rauma, 1993). Emotion-focused coping deals with mitigating the emotions that arise from stressful situations (Kühlmann, 1990). For example, if a person is anxious about an upcoming interview, he or she can mitigate it by avoiding thoughts about the interview. Similarly, a person can reappraise a threat or situation such that new meaning is drawn from a stressor. In the example of the anxious interviewee, he or she can reframe the interview as an opportunity to gain interview experience and further refine interviewing skills. Reappraisal is one of the most effective emotion-focused coping tools (Lazarus, 2006).

Stress and Meaning

Meaning is an element in the process of coping with stress (Carnelley & Janoff-Bulman, 1992; Epstein, 1991; Gillies & Neimeyer, 2006; Park, 2010; Park & Folkman, 1997). Meaning-focused coping is an iterative process focused on reconciling the discrepancy between appraised meaning and global meaning. Global meaning is a person's general orientation system toward life comprised of goals and feelings, and beliefs regarding self-views, justice, predictability, and control (Dittman-Kohli & Westerhof, 1999; Pargament, 1997; Park, 2010; Park & Folkman, 1997). A person's experiences are filtered through this schema of global meaning to interpret their experiences of the world (Janoff-Bulman & McPherson Frantz, 1997; Mischel & Morf, 2003; Park, 2010; Park & Folkman, 1997). Situational meaning, on the other hand, is meaning

within the context of a particular environmental encounter (Park, 2010). It, generally, comprises the appraisal process described earlier of primary and secondary appraisal and the meaning-making process that assigns meaning to the event as a means of coping.

The model of meaning-making proposed by Park (2010) suggests that meaning-making is an important part of stress appraisal. The model suggests that once a stressor is evaluated and primary and secondary appraisals are made, an individual determines if the appraised meaning of the stressor is discrepant with his or her global meaning. If there is no discrepancy, then there is no adjustment required. If there is discrepancy, distress occurs leading to a meaning-making process. Once meanings are made, rumination occurs (Park & Folkman, 1997) which can lead to a range of outcomes from changing one's beliefs or goals to acceptance of the stressful event. Then the stimuli may either be reappraised if one's global meaning has changed, or re-checked for discrepancy. For example, a nurse may believe that she is a valued member of a hospital's staff and has secure employment. An unforeseen stressor, being laid off due to budget cuts, arises and is appraised. In primary appraisal, she determines that the threat is relevant and detrimental to her well-being, and conflicts with her goals of maintaining her employment at the hospital and caring for her patients. In secondary appraisal, she blames the administration for financial incompetence leading to her dismissal and experiences emotions such as anger, anxiety, sadness, and embarrassment. She assesses her ability to cope. Her problem-focused coping helps alleviate some of the anxiety as she can tap into a vast network of healthcare professionals in the city and is at the forefront of her in-demand specialty. More importantly, she knows of other organizations with open positions that have goals more aligned with hers. For emotion-focused coping, she reaches out to friends and family to help her adjust to the new unemployment

situation in her life, and looks forward to a future where she can once again help patients while working for a better-run organization.

In the above example, there was a discrepancy between the nurse's global values and appraised event meaning, which caused distress. In her meaning-making process, she acknowledged the anguish, processed her emotions, and sought meaning in why this was happening to her. She mobilized her coping ability, both from a problem perspective in finding a new job, but also emotionally by seeking out social support. At the end of this process, she came to have a new perspective on the situation. First, she accepted what happened. Second, she reappraised the meaning of the stressor and realized she wasn't really happy working for that organization in the first place. Third, she changed her global beliefs such that going forward she would always ensure the organization she works for shares her professional values and has competent administrators. Lastly, she felt as though the situation "made sense" and she felt as though her global meaning had changed given the new experience of aligning her professional goals with those of her employer. Her new appraisal is one in which she sees the stressor as a blessing in disguise to help her grow and have the career that she has always wanted. Thus, there is no discrepancy after the reappraisal and successful adjustment to the stressor is achieved.

Stress Appraisal, Meaningfulness at Work, and Coping

Studying stress at work and the means by which employees cope with it is not a new phenomenon; in fact, stress at work is a persistent focus of scholarship, particularly its impact on organizational productivity and economic output (Bliese et al., 2017; Latack & Havlovic, 1992). The interdisciplinary and cross-domain nature of stress, appraisal, coping, and meaningfulness has led to piecemeal studies with mixed foci. For example, many studies have focused on the stress of an illness and the meaning in life as a coping mechanism (c.f. Downe-Wamboldt,

Butler, & Coulter, 2006; Park, Malone, Suresh, Bliss, & Rosen, 2008; Thuné-Boyle, Stygall, Keshtgar, & Newman, 2006). Those studies that have looked at the Transactional Model of Stress in the workplace have tended to do so within very narrow occupational bands with occupation-focused measures such as education (Chang, 2009; Griffith, Steptoe, & Cropley, 1999; Mostert, Rothmann, Mostert, & Nell, 2008; Salo, 2002), sport (Anshel, Jamieson, & Raviv, 2001; Anshel, 2001; Didymus & Fletcher, 2012; Fletcher, Hanton, Mellalieu, Hanton, & Mellalieu, 2008; Hanton, Wagstaff, & Fletcher, 2012), first responders and military (Anshel, 2000; Britt, Adler, & Bartone, 2001; Dolan & Ender, 2008; Patterson, 2003; Prati, Pietrantonio, & Cicognani, 2010; Zohar, 1999), nursing (Dewe, 1993; Gibbons, 2010; Gibbons, Dempster, & Moutray, 2011; Healy & McKay, 2000; Lowe & Bennett, 2003), and government service (Dewe & Ng, 1999; Kühlmann, 1990). Similarly, researchers have applied the Transactional Model of Stress to narrow parts of the work experience such as onboarding (Nelson & Sutton, 1990), work-life balance (Trenberth & Dewe, 2002), entrepreneurial failure (Jenkins, Wiklund, & Brundin, 2014), organizational change (Fugate, Kinicki, & Prussia, 2008; Rafferty & Griffin, 2006), and layoffs and unemployment (Armstrong-Stassen, 1994; Hamilton et al., 1993).

Despite the numerous studies of stress in the workplace using the transactional model, few have incorporated meaningfulness. Meaning has been proposed and tested as a mediating mechanism of coping (Park & Folkman, 1997), but one's global meaning in life has been used as opposed to job meaningfulness (Halama & Bakosova, 2009; Steger et al., 2012). Job meaningfulness is more salient to the workplace and more situationally appropriate to study.

Embedded within appraisal is primary and secondary appraisal. Recall that primary appraisal assesses an event's threat or opportunity to one's goals or well-being. Secondary appraisal determines whether there are sufficient resources to deal with the event or stimuli and

what coping strategies exist (Dewe & Ng, 1999; Lazarus, 2006; Lazarus & Folkman, 1984, 1987). As it pertains to job meaningfulness, primary appraisal would raise questions such as “Does this event affect my job, goals, beliefs, or tasks?” and “Does this stressor challenge me to learn or grow professionally?” For secondary appraisal, questions such as “Can I solve this problem?” and “Do I have the knowledge, skills, abilities, and resources to overcome this challenge?” are raised, and coping mechanisms are evaluated.

The relationship between job meaningfulness and the primary and secondary appraisal to coping relationship has not been explored in the literature. However, existing theory suggests that job meaningfulness mediates these two relationships. TPWB posits that employees are motivated to pursue goals at work, and strive for purposefulness and meaningfulness through four implicit goals: communion striving, status striving, autonomy striving, and achievement striving (Barrick et al., 2013).

Autonomy striving and achievement striving are particularly salient in explaining the mediating effect of job meaningfulness in this context. Autonomy striving suggests that “individuals are motivated to gain control and understanding of important aspects of the work environment and to pursue personal growth opportunities” (Barrick et al., 2013, p. 136). Similarly, achievement striving refers to the need to demonstrate competence and a sense of accomplishment. TPWB suggests that purposeful behaviors, such as goal pursuit, lead to more experienced meaningfulness at work. Here, primary appraisal is being analyzed via its challenge facet. When an event occurs at work and is appraised as a challenge, individuals will be intrinsically motivated to pursue growth opportunities as well as demonstrate competence and achieve accomplishments, increasing job meaningfulness. Similarly, secondary appraisal is being studied via its controllable-by-self facet. This facet assesses one’s evaluation of situational

control in order to assess coping resources to meet situational demands (Peacock & Wong, 1990). As such, TPWB suggests that stressors appraised to be within one's purview increase job meaningfulness through autonomy striving.

Hypothesis 1a: The primary appraisal facet of challenge is positively related to job meaningfulness

Hypothesis 1b: The secondary appraisal facet of controllable by self is positively related to job meaningfulness

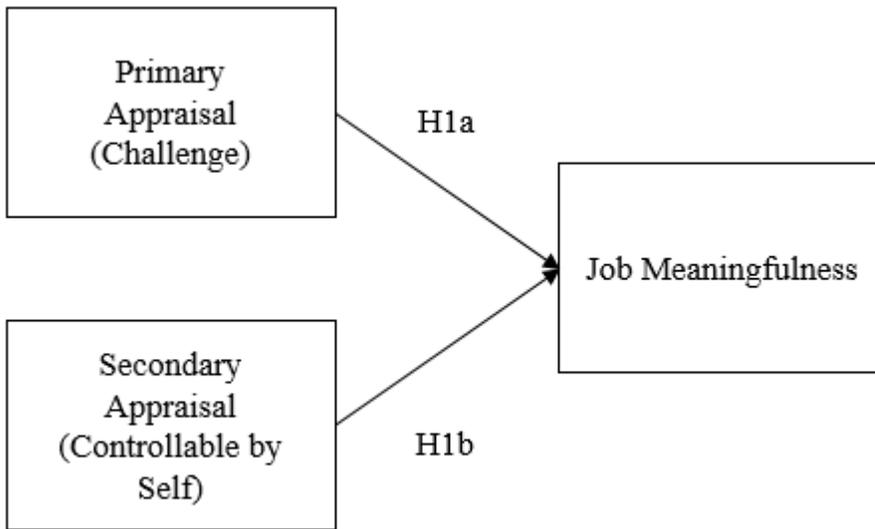


Figure 1. Primary and secondary appraisal relation to job meaningfulness

Individuals use coping as a strategy to manage stressful life conditions (Lazarus, 2006; Lazarus & Folkman, 1984). As previously discussed, the Meaning-Making Model of Coping (Park, 2010) explains how people make meaning from stressors and their subsequent appraisal. It posits that distress occurs until meaning is made of the stressor, which can then eliminate the discrepancy between appraised meaning and global beliefs (Park, 2010). Meaning-focused coping can lead to several outcomes such as acceptance, reappraised meaning of the stressor, perceptions of growth, perceptions of positive life change, reattribution, or changed global

beliefs or goals. For example, an employee may believe that his employment is secure and his position is valued by the organization, which are global meanings. He then gets laid off, which is a stressor. In primary appraisal the employee appraises this stressor as a threat to his wellbeing and standard of living, and in secondary appraisal he assesses his resources and coping options. Through meaning-focused coping, the individual will make meaning of the discrepancy between global and situational beliefs – in this case, the global beliefs that the employment was secure and that his position was valued needed to be brought into alignment with the situational beliefs, hypothetically that there are better opportunities for employment available and that his skills would be better utilized by a different employer. The individual may come to see the layoff as a blessing, positive reappraisal, because he found a new job that is more enjoyable and amenable to his skills. In this case, the individual comes to accept the layoff and his global meaning changes to reflect the fact that his employment is never truly secure, but that his skills are valued and many employers require individuals with those skills. Central to the notion of job meaningfulness is meaning making through work (Steger et al., 2012). Meaningful work deepens an employee's understanding of themselves and the world around them, informing the situational and global beliefs inherent in coping (Steger & Dik, 2010). If an employee feels his or her job is meaningful, then that meaningfulness will change the relationship between appraisal and coping making it more likely that he or she will pursue meaning-focused coping as seen in Figure 2.

Hypothesis 2: Job meaningfulness is positively related to meaning-focused coping

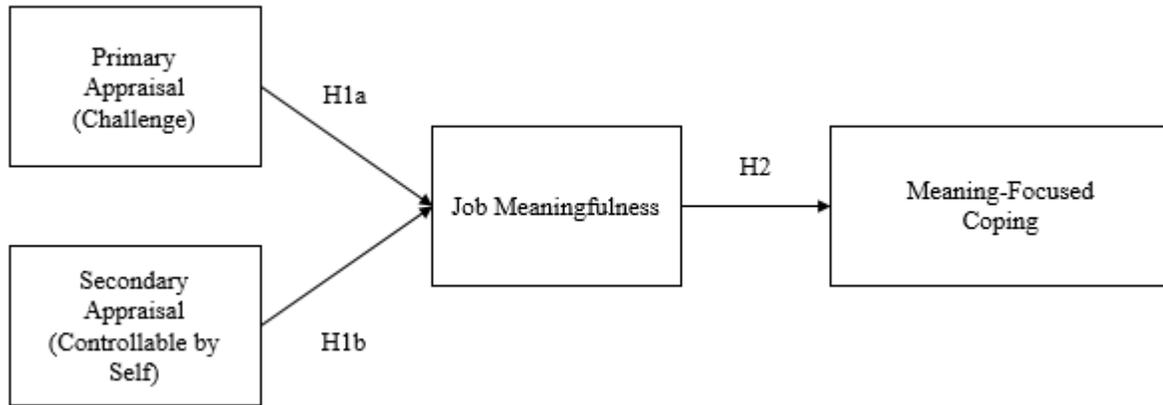


Figure 2. Job meaningfulness as a mediator of appraisal and meaning-focused coping

Successful adjustment to, and acceptance of, a stressor eliminates distress and returns an individual to homeostasis (Riley & Park, 2014). Past studies have examined meaning- and problem-focused coping as they apply to adjustment (Park & Adler, 2003; Park, Folkman, & Bostrom, 2001), though these studies focused on coping with terminal illness and adjustment for students to the stresses of medical school and the outcomes focused on health issues. Both meaning- and problem-focused coping have been found to buffer stress in the appraisal-adjustment process (Park & Adler, 2003; Riley & Park, 2014), but this has not been tested in the workplace. TPWB assumes that employees behave in purposeful ways to achieve goals (Barrick et al., 2013). While employees may not be fully conscious of their higher-level goals which explain the “why” or purpose of behavior (DeShon & Gillespie, 2005), striving for competence, autonomy, relatedness, and status lead to experienced meaningfulness (Barrick et al., 2013). Thus, job meaningfulness and the embedded goals within should inform coping styles.

Prior studies have found job meaningfulness is negatively related to turnover intent (Leiter, Harvie, & Frizzell, 1998; Leunissen, Sedikides, Wildschut, & Cohen, 2018; Sollie, Kop, & Euwema, 2017) and that positive reappraisal, a core tenant of meaning-focused coping (Riley & Park, 2014), leads to long-term benefits when stress arises during meaningful work (Britt et

al., 2001). Burnout, too, has been intimately connected with meaning. In fact, Maslach and Leiter (1997) defined burnout as an erosion of engagement of the job. Specifically, they later described burnout as “what started out as important, meaningful, and challenging work becomes unpleasant, unfulfilling, and meaningless” (Maslach et al., 2001, p. 416). However, the relationship between meaning-focused coping and burnout has yet to be tested. Given the underpinnings of meaning-focused coping wherein individuals seek to reappraise situations, to grow as a result of stressors, and to be flexible in their situational and global beliefs, burnout should be reduced as a result of meaning-focused coping. Therefore, job meaningfulness should influence turnover intent (Johns, Xie, & Fang, 1992) and burnout (Gilbar, 1998) through meaning-focused coping (see Figure 3).

Hypothesis 3: Job meaningfulness is negatively related to turnover intent through meaning-focused coping

Hypothesis 4a: Job meaningfulness is negatively related to the emotional exhaustion facet of burnout through meaning-focused coping

Hypothesis 4b: Job meaningfulness is positively related to the professional efficacy facet of burnout through meaning-focused coping

Hypothesis 4c: Job meaningfulness is negatively related to the cynicism facet of burnout through meaning-focused coping

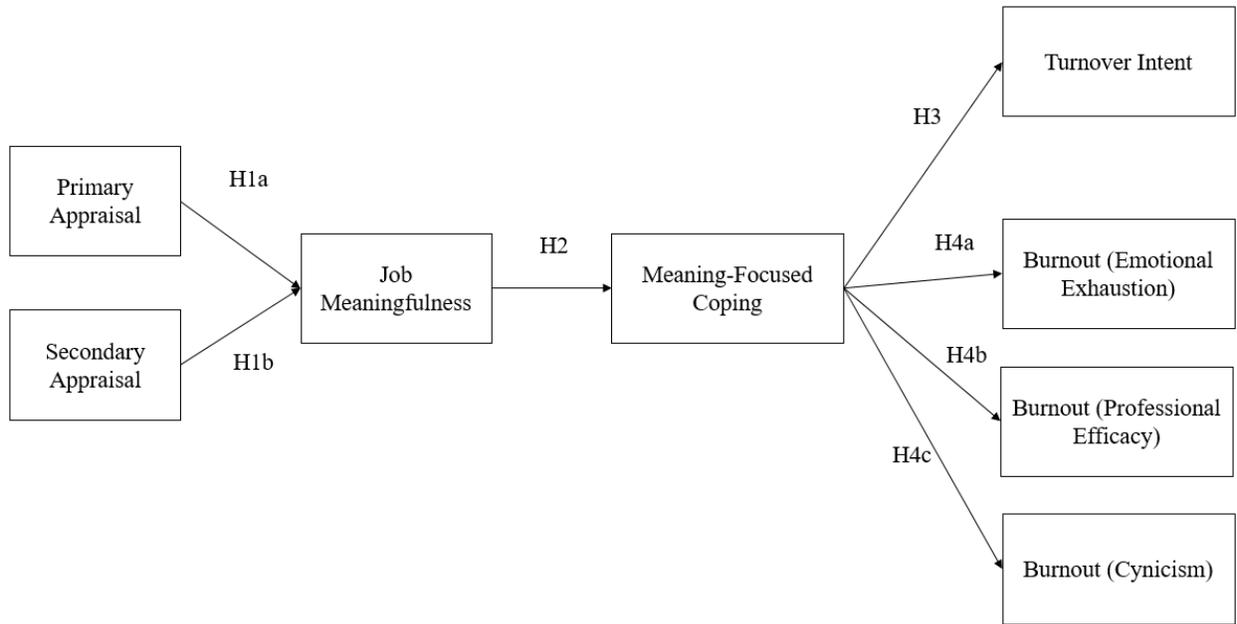


Figure 3. Full model with work outcomes

METHOD

Sample Characteristics

Participants in this study were active Emergency Medical Services (EMS) workers employed in a southern state in the United States. An electronic survey was created assessing stress appraisal, job meaningfulness, coping, turnover intent, and burnout. EMS workers were chosen as a sample given the stressful and important nature of their jobs.

EMS workers protect and preserve life in the early stages of an accident or disaster (Prati & Pietrantonio, 2010). They fall under the umbrella of “first responders” and are often the first point of contact for those in need of medical care. Prior studies have found that there are approximately 900,000 EMS personnel in the U.S., 200,000 of which are full-time employees, who treat 22 million patients each year (Maguire & Smith, 2013).

An EMS worker’s daily experience varies widely. Their “runs,” or call outs in an ambulance, could be to stabilize and transport a child after a severe car accident, or it could be to transport an elderly patient to his/her dialysis appointment at a clinic. There is much uncertainty in their day-to-day tasks, and workers have the added fear of contracting communicable diseases (Neale, 1991). EMS workers arrive on scene and must remain calm and professional regardless of the circumstances. The job itself is dangerous, with on-the-job injuries common and far higher than those reported in other industries (Maguire & Smith, 2013; Suyama, Rittenberger, Patterson, & Hostler, 2009). The work also takes its toll on the emotional well-being of EMS workers. The experiences EMS workers have at work can lead to persistent worry (Aasa, Brulin, Ängquist, & Barnekow-Bergkvist, 2005) and fatigue (Patterson, Suffoletto, Kupas, Weaver, & Hostler, 2010).

EMS work is a high stress profession (Bentley, Crawford, Wilkins, Fernandez, & Studnek, 2013; Mildenhall, 2012; Moran & Britton, 1994; Neale, 1991; Prati & Pietrantonio, 2010). Work hours are long, and some workers must work 24-hour shifts or switch between day and night shifts causing fatigue (Maguire & Waltz, 2004; van der Ploeg, 2003). There is also potential exposure to traumatic events at any time. Common “worst incidents” reported by EMS workers include witnessing pain, suffering, and death, particularly involving children, or knowing the patient at the scene (Bentley et al., 2013). EMS workers, particularly those who have responded to disasters, are more likely to experience stress, posttraumatic stress disorder (PTSD), anxiety, and depression (Benedek, Fullerton, & Ursano, 2007; Fullerton, Ursano, & Wang, 2004; van der Ploeg, 2003). Accordingly, burnout is common among EMS workers (Grigsby & Knew, 1988; Maunder, Halpern, Schwartz, & Gurevich, 2012; Neale, 1991; van der Ploeg, 2003).

Procedure

Institutional Review Board approval was granted by the University of Alabama (Protocol #18-03-1052; see Appendix B). The survey was sent to a statewide list of EMS workers maintained by the university’s director of emergency medical services and administered via an online questionnaire hosted by Qualtrics. Participation was encouraged through an incentive which offered the first 200 participants who completed the survey a \$15 gift card. Participants were assured their responses would remain confidential and it was emphasized that participation was voluntary. Participants were asked to reflect on stressful events they have experienced at work. Then, each survey instrument was asked in relation to that incurred stress. This reflective technique is common in stress appraisal research (Folkman et al., 1986), and Appendix A lists the instructions and survey instruments.

Consent was acquired from participants by attaching the informed consent form to the email recruiting them to the study in addition to presenting it to the participant at the start of the survey. Of the 11,496 solicitation requests, 1085 responded for an overall response rate of 9.44%. Of the 1085 responses, 208 were dropped from the analysis due to incomplete data. Responses in the survey were forced to ensure completeness except for an optional qualitative prompt allowing the participant to recount the stresses of his/her job and what makes his/her job meaningful. Demographic information such as age, tenure, education, marital status, and gender were collected.

Analysis

Data were collected in October 2018 and analyzed using SPSS and MPlus software.

Variable Measures

The variables used in this study were measured using well-established measures from the management literature.

Stress Appraisal Measure.

The Stress Appraisal Measure (SAM; Peacock & Wong, 1990) is a 24-item scale measuring stress appraisal on a 5-point Likert scale. It consists of six subscales: controllable by self, controllable by others, threat, centrality, uncontrollable, and challenge. The purpose of the scale is to measure how individuals interpret stressful events, which was adapted to reflect stress in general. Higher overall scores indicate higher appraised stress. The centrality dimension assesses primary appraisal, determining whether a stressor is relevant to oneself and one's wellbeing. Threat assesses future harms or losses, while challenge assesses anticipated gains in the future. Secondary appraisal is assessed by controllable-by-self, controllable-by-others, and uncontrollable. The controllable-by-self dimension determines whether the individual thinks he

or she can cope with the situation. The controllable-by-others dimension determines whether the person can seek help and support from others to deal with the situation. Finally, the uncontrollable dimension determines whether the individual thinks the situation is beyond his or her control (Nicholls, Polman, & Levy, 2012).

Participants answered questions in relation to their stress at work in general. Cronbach alpha coefficients range from .74 to .90 (Peacock & Wong, 1990).

Work as Meaning Inventory.

The Work as Meaning Inventory (WAMI; Steger et al., 2012) is a ten-item scale measuring the meaning of work on a 5-point Likert scale ranging from 1=absolutely untrue to 5=absolutely true. The scale has three subdimensions: positive meaning, meaning making through work, and greater good motivations. Positive meaning reflects the judgement people make about the meaning of their work. An example item is “I understand how my work contributes to my life’s meaning.” Meaning making through work captures how the work people do informs the meaning in their lives. An example item is “My work helps me make sense of the world around me.” Finally, greater good motivations captures the desire people have to make a positive impact through their work as well as calling motivations. An example item is “I know my work makes a positive difference in the world.” Higher scores indicate a higher presence of perceived meaningful work.

Brief COPE.

The Brief COPE scale (Carver, 1997) is a 28-item scale measuring 14 different coping reactions. The scale is rated on a 4-point Likert scale, with 1=I haven’t been doing this at all to 4=I’ve been doing this a lot. Coping reactions of particular relevance to this study include active coping, a proxy for problem-focused coping, and positive reframing, a proxy for meaning-

focused coping (Riley & Park, 2014). An example active coping item is “I’ve been concentrating my efforts on doing something about the situation I’m in.” and an example positive reframing item is “I’ve been trying to see it in a different light, to make it seem more positive.” Other coping reactions include, for example, acceptance, venting, denial, and self-blame. Higher dimension scores indicate a higher prevalence of a particular coping reaction. This scale was used to assess meaning-focused coping. Reliabilities range from .50 to .90 on the scale; the reliability of active coping is .68 and positive reframing is .64 (Carver, 1997).

Turnover Intent.

Intention to leave was measured with a single item derived from the work of Hom and Griffeth (1991) and deployed by other scholars (Dawley, Houghton, & Bucklew, 2010; Mitchel, Holtom, Lee, Sablynski, & Erez, 2001; Powell & Meyer, 2004). The item is rated on a 5-point Likert scale from 1=strongly disagree to 5=strongly agree. The item is “I will likely look for another job in the next twelve months.”

Burnout.

Burnout was assessed using the Maslach Burnout Inventory – General Survey (MBI-GS; Schaufeli, Leiter, Maslach, & Jackson, 1996) using a 5-point Likert scale from 1=strongly disagree to 5=strongly agree. The MBI-GS has three subscales. The first subscale has five items and measures emotional exhaustion; an example item is “I feel burned out from my work.” The second subscale has five items and measures cynicism; an example item is “I have become less enthusiastic about my work.” The third subscale has six items and measures professional efficacy; an example item is “I feel I am making an effective contribution to what this organization does.” Internal consistency for exhaustion has ranged between .84 and .90, cynicism .74 and .84, and professional efficacy .70 and .78 (Leiter & Schaufeli, 1996).

RESULTS

Most of the EMS workers were men ($n=674$, 76.85%) with a mean age of 39.79 (range 18-66 years). The average tenure as an EMS worker was 15.36 years. The tenure breakdown is as follows: 0-5 years 21.78%, 6-10 years 19.04%, 11-15 years 15.39%, 16-20 years 13.45%, 21-25 years 12.20%, 25+ years 18.13%. The participants were mostly married (66.48%), with 17.1% reported as single, 8.21% divorced, and 8.21% as some other relationship status. Slightly over 97% of the participants had at least some college experience with 16.76% holding a 4-year degree, 27.14% holding a 2-year degree, 14.82% holding a technical degree, 6.96% holding a graduate degree, and 31.47% reporting some college without obtaining a degree.

Mean, standard deviation, and Cronbach alpha values are reported in Table 1. The dimensions of burnout had varied means. The internal consistencies of each variable is good, as shown by the reported Cronbach alpha values. Table 1 also provides an overview of the bivariate correlations between the variables in the path model and with control variables. Job meaningfulness is significantly related to all the latent variables. Of note, job meaningfulness is highly correlated with primary appraisal the outcome variables of turnover intent and burnout. The weakest correlation found with job meaningfulness was that of coping at .24.

Table 1

Descriptives Statistics, Correlations, and Reliability

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	39.79	11.46												
2. Gender	1.77	0.42	.08*											
3. Tenure	15.36	10.57	.78**	.19**										
4. Education	4.45	1.36	.11**	-.04	.10**									
5. Job Meaningfulness	3.39	0.70	.01	-.05	-.05	-.05	(.92)							
6. Primary Appraisal	2.96	0.84	-.04	-.08*	-.08*	-0	.63**	(.77)						
7. Secondary Appraisal	3.71	0.74	-.03	.02	-.03	-.05	.45**	.52**	(.79)					
8. Coping	2.31	0.83	-.08*	-.09*	-.10**	.01	.24**	.27**	.15**	(.73)				
9. Turnover Intent	2.29	1.24	-.07*	-.02	-.03	.08*	-.49**	-.33**	-.30**	-.03	(.89)			
10. Burnout (Emotional Exhaustion)	3.31	0.89	-.01	-.03	.05	-.07*	-.48**	-.41**	-.36**	0	.60**	(.88)		
11. Burnout (Professional Efficacy)	4.09	0.51	-.01	-.02	0	-.04	.60**	.44**	.43**	.17**	-.31**	-.28**	(.72)	
12. Burnout (Cynicism)	2.75	0.88	0	.03	.08*	.08*	-.65**	-.50**	-.37**	-.09**	.68**	.68**	-.47**	(.85)

Notes: $N = 877$, * denotes $p < .05$ and ** denotes $p < .01$ (2-tailed), Cronbach's Alpha along diagonal in parentheses

A Confirmatory Factor Analysis (CFA) was done to determine how well the model fits the data. Missing data were not an issue since forced response was used during the survey. The CFA was performed using the best practices from Anderson and Gerbing (1988). The measurement model was fitted by constructing each latent variable from its constituent items. The resulting fit was $\chi^2 [674] = 2669$, TLI = .882, CFI = .892, RMSEA = .058, RMSEA 90% confidence interval = .056 - .060.

The structural model was created by regressing the latent variables according to the hypothesized model. The resulting fit was $\chi^2 [688] = 3457$, TLI = .851, CFI = .839, RMSEA = .066, RMSEA confidence interval = .066 - .070. Given the sensitivity of the chi-square statistic to sample size (Bagozzi & Yi, 1988), this model is deemed adequate given the RMSEA value of .066. Though the RMSEA is higher than the recommended .05 cutoff and the TLI and CFI are lower than the recommended .95 cutoff, the RMSEA is adequate (Hu & Bentler, 1999).

Figure 4 shows the standardized path coefficients for the hypothesized relations among latent variables in the model.

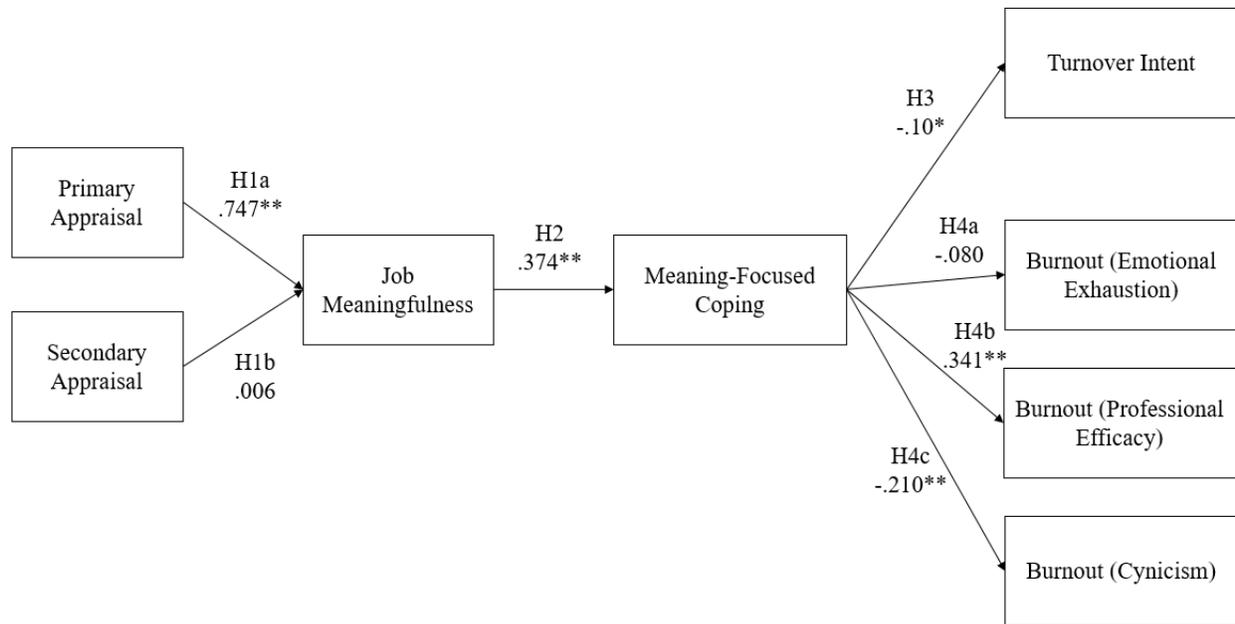


Figure 4. Model 1 (* denotes $p < .05$ and ** denotes $p < .01$)

Hypothesis 1a, which proposed that primary appraisal is positively related to job meaningfulness, was supported: $\beta = .747$, $p < .001$. Hypothesis 1b, which proposed that secondary appraisal is positively related to job meaningfulness, was not supported: $\beta = .006$, $p = .895$. Hypothesis 2, which proposed that job meaningfulness is positively related to meaning-focused coping, was supported: $\beta = .374$, $p < .001$. This suggests that the cognitive appraisal of one's job meaningfulness is related to meaning-focused coping.

Hypotheses 3 and 4 were tested by calculating the fully mediated path between job meaningfulness and the outcome variable through meaning-focused coping. Hypothesis 3, which proposed that job meaningfulness negatively related to turnover intent through meaning-focused coping, was not supported: $\beta = -.041$, $p = .753$. Hypothesis 4 was concerned with the relationship between the three facets of burnout and how job meaningfulness affects them through meaning-focused coping. Hypothesis 4a, which proposed that job meaningfulness is negatively related to the emotional exhaustion facet of burnout through meaning-focused coping, was not supported: β

= -.033, $p = .820$. Hypothesis 4b, which proposed that job meaningfulness is positively related to the professional efficacy facet of burnout through meaning-focused coping, was not supported: $\beta = .072$, $p = .360$. Hypothesis 4c, which proposed that job meaningfulness is negatively related to the cynicism facet of burnout through meaning-focused coping, was not supported: $\beta = -.098$, $p = .620$.

Alternative models were considered and tested for model fit. First, the relationship between appraisal and coping was hypothesized to be fully mediated by job meaningfulness. However, partial mediation is worth considering given the established appraisal to coping relationship in extant literature. The results of this alternative model, shown in Figure 5, are $\chi^2 [686] = 3436$, TLI = .840, CFI = .852, RMSEA = .068, RMSEA confidence interval = .065 - .070. A chi-square difference test indicated minor model improvement compared to the hypothesized model, $\chi^2 [2] = 15$, $p < .001$.

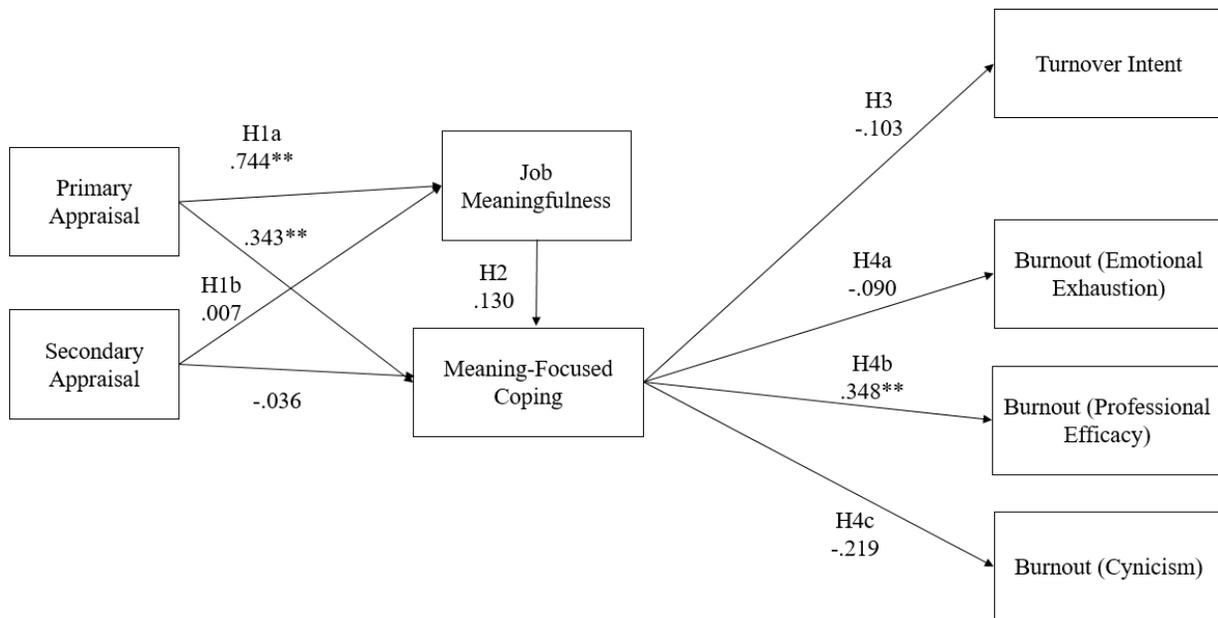


Figure 5. Model 2 (* denotes $p < .05$ and ** denotes $p < .01$)

Job meaningfulness had very high correlations with the outcome variables of turnover intent and the three facets of burnout. This, along with prior empirical work, warranted further exploration of another alternative model incorporating potential direct effects between job meaningfulness and the outcome variables. Job meaningfulness is related to lower turnover intent (Leiter et al., 1998; Leunissen et al., 2018; Sollie et al., 2017; Steger et al., 2012) and lower burnout (Allan, Owens, & Douglass, 2017; Fouché, Rothmann, & Van der Vyver, 2017; Rasmussen et al., 2016). Thus, a plausible alternative model emerged whereby meaning-focused coping partially mediates the relationship between job meaningfulness and the outcome variables. Fit statistics for this alternative model reflect an overall better fit. These fit statistics are $\chi^2 [684] = 2764$, TLI = .879, CFI = .888, RMSEA = .059, RMSEA confidence interval = .057 - .061. Using this model, Hypothesis 1a was supported ($\beta = .741$, $p < .001$) and Hypothesis 2 was supported ($\beta = .296$, $p = .001$) as seen in Figure 6. Of note are the significant relationships between job meaningfulness and the outcome variables. A chi-square difference test indicated substantial model improvement compared to the hypothesized model, $\chi^2 [4] = 547$, $p < .001$.

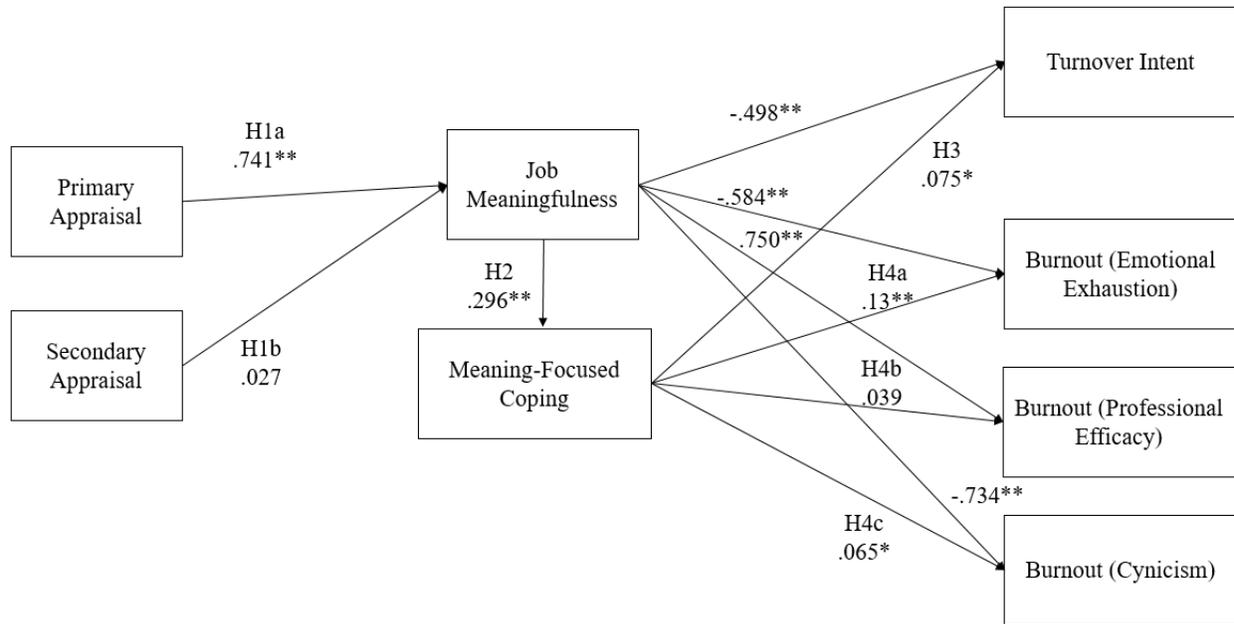


Figure 6. Model 3 (* denotes $p < .05$ and ** denotes $p < .01$)

Finally, an alternative model incorporating the previous two models was tested as seen in Figure 7. This involved job meaningfulness partially mediating the relationship between appraisal and coping, and meaning-focused coping partially mediating the relationship between job meaningfulness and the outcome variables. The fit statistics for this model are $\chi^2 [682] = 2745$, TLI = .879, CFI = .889, RMSEA = .059, RMSEA confidence interval = .056 - .061. A chi-square difference test indicated substantial model improvement compared to the hypothesized model, $\chi^2 [6] = 589$, $p < .001$.

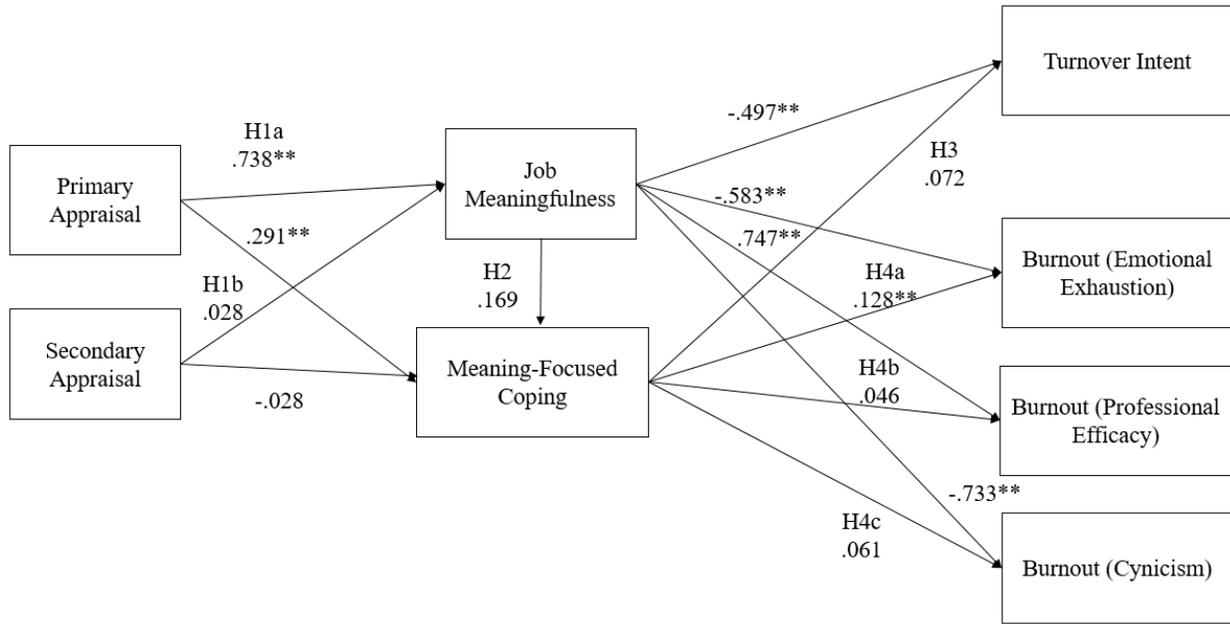


Figure 7. Model 4 (* denotes $p < .05$ and ** denotes $p < .01$)

DISCUSSION

This study sought to establish relationships among variables infrequently studied together to better explicate the impact of job meaningfulness in the Transactional Model of Stress and work outcomes. EMS workers were sampled given the importance of their work, the high stress of their profession, and their generalizability to the healthcare industry.

Appraisal and Job Meaningfulness

This study found that stressors appraised as challenges are positively related to job meaningfulness. This is consistent with the TPWB, which suggests that employees are motivated to pursue higher-order implicit goals; most relevant here is the higher-order implicit goal of achievement striving, which is a need to demonstrate competence and achievement at work (Barrick et al., 2013). It is also consistent with prior work on engagement at work (Kahn, 1990). However, there was not a significant relationship between secondary appraisal and job meaningfulness. In secondary appraisal, an individual assesses coping options and knowledge, skills, abilities, and resources to adapt to the stressor. These relationships had not been previously explored, so demonstrating the link between primary appraisal and job meaningfulness is a novel contribution the literature.

Job Meaningfulness Mediating the Appraisal-Coping Process

Support for job meaningfulness as a mediator between primary appraisal and meaning-focused coping was established in this study, extending the Transactional Model of Stress. Meaning-focused coping involves changing the appraised meaning of a situational stressor to be more aligned with one's global beliefs and goals (Riley & Park, 2014).

However, Models 2 and 4 show the outsized influence of the relationship between job meaningfulness with the outcome variables as opposed to the influence of job meaningfulness through meaning-focused coping with the outcome variables. While many of the hypotheses were supported, these mixed results are worth exploring. Theories such as TPWB and the Job Characteristics Model propose that meaningfulness leads to job satisfaction (Barrick et al., 2013; Hackman & Oldham, 1976). Prior research has found a correlation of .56 between meaningful work and job satisfaction (Steger et al., 2012) and job satisfaction is negatively related to the outcome variables in this study (Coomber & Barriball, 2007; Lu, While, & Barriball, 2005). Thus, there are certainly other factors that explain the relationship between job meaningfulness and the outcome variables besides meaning-focused coping.

Additionally, meaning-focused coping has been found to reduce negative outcomes such as the deterioration of physical or psychological wellbeing (Lepore & Greenberg, 2002; Riley & Park, 2014). Culver and colleagues (2002) noted that coming to terms with a stressful event leads to long-term adjustment. Model 1 shows meaning-focused coping's negative relationship with turnover intent and cynicism and positive relationship with professional efficacy. Given the nature of this cross-sectional study, causality is undeterminable. The results here suggest that further studies can incorporate longitudinal designs and other coping styles to better explain meaning-focused coping's role in adjusting to stressors over time. Likewise, a longitudinal study would better explicate the causal impact of job meaningfulness on coping and the outcome variables, and extend understanding of the Transactional Model of Stress.

Job Meaningfulness as a Resource

Similarly, the concept of job meaningfulness as a resource has not gotten much attention in the literature. The Job Demands-Resources Model (JDR) and Conservation of Resources

Theory (COR) both seek to explain how stressors become strains, and how resources buffer demands at work. The results suggest that secondary appraisal, the process by which individuals ascertain their resources and determine actions that can be undertaken to ameliorate the stressor, was not positively related to job meaningfulness as hypothesized. However, Models 2 and 4 suggest that in the presence of stressors, job meaningfulness has a significant and negative relationship with undesirable workplace outcomes such as turnover intent and burnout. From a theoretical standpoint, positive reframing has been found to reduce distress caused by stressors and hasten adjustment (Folkman & Moskowitz, 2007; Park, 2010; Riley & Park, 2014). This study found the same results, but secondary appraisal was not positively related to job meaningfulness as hypothesized and job meaningfulness was found to have a larger direct impact than meaning-focused coping on the outcome variables. From a theoretical perspective, job meaningfulness has not been classified as a resource in the literature, but the mixed results in this study suggest it could be a resource and is worth studying further.

Implication for Practice

This study offers insights for practitioners. First, burnout and turnover are very costly for organizations, and burnout can have detrimental effects on employee wellbeing. This study demonstrated the strong relationship job meaningfulness has on these detrimental outcomes, namely that job meaningfulness reduces turnover intent and the emotional exhaustion and cynicism components of burnout while increasing the professional efficacy component of burnout.

These results highlight the importance of job meaningfulness on the wellbeing of employees. Human resources practitioners may incorporate job meaningfulness into their process for screening applicants. Hiring employees who find their work meaningful may lead to lower

turnover and burnout for the organization. Employers may also incorporate elements of job design to reinforce elements of a job, or the tasks embedded within the job, that the employee is most likely to find meaningful. For example, a call center employee may focus on the many angry calls he or she receives each day, and the emotional labor involved in providing good customer service may be emotionally exhausting. However, the employer could incorporate some sort of feedback to the employee, whether through surveys from customers this employee has helped or statistics showing how many customers this person has helped on a daily, monthly, or yearly basis. If this employee derives a lot of meaning from helping others, answering the “why am I here” question meaningfulness engenders, then these reminders can help buffer the negative effects of emotional labor by reminding the employee of the impact he or she is having on the organization’s customers.

Limitations

This study contributes to our understanding of job meaningfulness in relation to the Transactional Model of Stress and salient workplace outcomes. However, there were limitations in the study. The Transactional Model of Stress is a process, which makes it difficult to study and can make causality challenging. To combat this, I asked respondents to think of their stresses in general at work as opposed to one particular incident. This technique has been used in prior cross-sectional studies involving stress appraisal (Bartholomew, Arnold, Hampson, & Fletcher, 2017; Nicholls et al., 2012). Another common approach in the literature is to ask respondents to think of the most stressful experience at work and answer accordingly (Folkman et al., 1986; Folkman, Lazarus, Gruen, & DeLongis, 1986), while others aim to choose events that are common in life and work and respondents answer accordingly (Currier et al., 2013). The most common technique is to study the appraisal and coping in relation to a specific onset of a stressor

such as the diagnosis of a disease or a job layoff. Each method has advantages and disadvantages, but for a cross-sectional study with outcome variables tied to stress, the approach taken here was to consider stress in general as opposed to one focal stressful event.

This study was conducted using a self-report survey. As such, it could be subjected to systematic error variance that could lead to misleading conclusions (Campbell & Fiske, 1959). Sometimes, by virtue of asking questions in a survey, a respondent's behavior can change (Cook, Campbell, & Shadish, 2002). Given the constraints our respondents' work schedule had on their ability to complete the survey, I prioritized additional measures over duplicating measurement via a second method or adding controls such as social desirability. Prior researchers have found minimal social desirability impact when testing more contentious variables than those in this study (Moorman & Podsakoff, 1992; Ones, Viswesvaran, & Reiss, 1996). Likewise, researchers have called into question the impact of common method variance on cross-sectional, self-report surveys (Spector, 1994, 2006). However, self-report measures have been found to be veridical and similar to other-reports (Goffin & Gellatly, 2001). Likewise, a Harman Single-Factor Test was run and no common method variance was detected (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Another limitation of the study is the sample I studied. EMS workers are more likely to experience traumatic events at work (Neale, 1991). While this boded well for a study investigating stress, coping, and burnout, the sample may not be as generalizable to the overall working population as it is to those working in the healthcare industry. EMS workers are commonly sampled in research related to stressors, post-traumatic stress, and shift work given the mental demands of their job and their generalizability to the healthcare industry (Aasa et al.,

2005; Moran, 1998; Moran & Britton, 1994; Neale, 1991; Patterson et al., 2010; Suyama et al., 2009).

Future Research: A Call to Investigate Task Meaningfulness

To date, research on the meaningfulness of work has been at the job-level. Scholars across disciplines have endeavored to understand sources of meaning at work and the mechanisms by which work becomes meaningful (Rosso et al., 2010). What has been missing in the discussion thus far is consideration of meaningfulness at the task-level, and the disconnect between intrinsic motivation, meaningfulness, and task significance is ripe for exploration. In the aforementioned definition of task put forth by Wong and Campion (1991), the worker transforms inputs into outputs “meaningful to the goals of the job.” Nowhere in the standard definitions of task or task significance are intrinsic motivations considered. This may, in part, be why the link between task significance and job performance is weak, at best, and rarely found to be a strong predictor of job outcomes (Dodd & Ganster, 1996; Fried & Ferris, 1987; Grant, 2008b; Humphrey et al., 2007).

The Job Characteristics Model proposes that task significance leads to experienced meaningfulness, but it can easily be argued that significant tasks that have a significant impact on the lives of other people can have no meaningfulness for an employee. For example, an obstetrician’s tasks unquestionably have an immeasurable impact on the lives of his or her patients and the external environment. Despite the undeniable task significance of coaching families through pregnancy and delivering babies, it does not mean that an obstetrician finds his or her tasks meaningful. Task significance, as argued here, is extrinsic and outward-focused and fails to capture the intrinsic motivation inherent in meaningful work.

Prior scholarship has studied task-level motivation. For example, Grant (2008a) explained the intersection of prosocial motivation, the desire to benefit other people, and intrinsic motivation using a self-determination theory framework. Intrinsic motivation stems from an enjoyment of doing one's work from purely autonomous, self-determined, and fully volitional sources (Kehr, 2004) whereas prosocial motivation is based on conscious self-regulation and self-control to avoid guilt and protect self-esteem (Gagné & Deci, 2005; Ryan & Deci, 2000). Intrinsic motivation is process-focused, whereas prosocial motivation is outcome-focused (Bono & Judge, 2003; Grant, 2008a). When intrinsic motivation is low, introjected regulation is the term used to describe the pressure employees put on themselves to help others (Grant, 2008a). When intrinsic motivation is high, prosocial motivation will increase the outcome goal of helping others and employees will be more likely to engage in tasks to facilitate that outcome (Gagné & Deci, 2005; Grant, 2008a). While prosocial motivation is outcomes-focused, intrinsic motivation is a process within which meaningfulness of individual tasks has largely been absent.

Thus, a call is being made to investigate the meaningfulness of work at the task level to capture the inward, intrinsic characteristics of individuals and their relationship to work. Nursing is a meaningful job (Clarke, 2006; Fagermoen, 1997; Hinds et al., 2015; Pavlish & Hunt, 2012), and will serve as an example. A recent study found that nurses found tasks related to connecting with patients and contributing to their recovery contributed most to their sense of meaningfulness; in particular, acting as an advocate for their patients, acting as a catalyst for their recovery by building bridges between the patient and doctor, and being a caring presence in the lives of their patients create the most meaningfulness (Pavlish & Hunt, 2012). None of these are outcomes, and many of these tasks wouldn't be explicitly covered in a job description. Instead, these are the tasks that the nurses in this study found contributed the most meaning to

their sense of meaningfulness at work. However, nurses certainly must perform tasks that detract from their sense of meaningful work. Though it would vary at the individual level, tasks such as paperwork or cleaning may detract from a nurse's overall sense of his or her meaning at work because he or she does not find those tasks meaningful.

There are mechanisms by which sources of meaning are transformed into meaningful work. Specifically, authenticity, self-efficacy, self-esteem, and purpose relate to this call for task meaningfulness (see Rosso et al., 2010 for others). Mechanisms are the means by which one variable influences another (Stinchcombe, 1991). Scholars have identified mechanisms leading to meaningful work, but the mechanisms are generally conceptualized at the job-level. This paper investigates these mechanisms at the task level.

Researchers have demonstrated the detrimental effects of jobs that require persistent inauthenticity. In many occupations requiring interaction with customers or patients, such as sales, social work, medicine, dining, or aviation, employees must suppress their authentic feelings to facilitate a pleasant experience for the customer or patient. This regulation of emotions when dealing with customers, patients, and co-workers is emotional labor (Hochschild, 1983). The inauthenticity of suppressing emotions has detrimental effects on employees, chief among them is burnout (Brotheridge & Grandey, 2002; Erickson & Ritter, 2001; Ghanizadeh & Royaei, 2015; Henderson, 2001). Despite this, research has shown that even among occupations that require emotional labor, expressions of authenticity can mitigate the effects of burnout and promote job meaningfulness.

Authenticity is a mechanism by which work becomes meaningful; it is a sense of alignment between one's behavior and one's perception of the true self (Markus, 1977; Ryan, Deci, & Grolnick, 1995; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997). Work experiences can

help illuminate an employee's true self, which can then shape work meaningfulness as an employee can further align his or her values and identity with his or her work (Shamir, 1991). This is called self-concordance in the literature, defined as the extent to which job tasks or goals reflect individuals' authentic values and interests (Bono & Judge, 2003; Sheldon & Elliot, 1999). Self-concordance leads to greater feelings of experienced meaningfulness at work (Rosso et al., 2010). Similarly, scholars have identified that engagement at work is a mechanism by which employees experience meaningfulness; work activities for such employees feel more important, expression of the authentic self occurs, and employees feel immersed and alive at work (Csikszentmihalyi, 1990; Deci & Ryan, 1985; Kahn, 1990; Spreitzer, 1996). Tasks, I propose, are entrenched with the concept of authenticity and self-concordance. Imagine a religious leader who feels a calling for her work. She finds delivering sermons, marrying couples, and providing comfort during funerals meaningful as they are important tasks and allow her to further understand and express her true self; however, tasks such as managing employees, dealing with city and state bureaucracy, and managing the day-to-day maintenance of the facilities are necessary tasks but do not in any way align with her identity or values.

Proposition 1: Tasks in which employees experience authenticity lead to experienced meaningfulness at work.

Self-efficacy is also a driving mechanism in the meaningfulness of work. It is defined as "judgments of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p. 122). Employees feel motivated when they believe they have the ability to make a difference or pursue a particular outcome (Baumeister & Vohs, 2002). This manifests via autonomy, competence, and relatedness, the basic needs embedded within Self-Determination Theory (Deci & Ryan, 1985; Ryan et al., 1995). Individuals have a need for

agency at work, allowing themselves to see themselves as the managers of their own activities, environments, and making their own free choices; this leads to meaningfulness because these employees feel a sense of control and agency over their work (Baumeister, 1998; Deci, 1975; Gecas, 1991; Wrzesniewski & Dutton, 2001). Competence resulting from surmounting work challenges leads to experienced meaningfulness; this often manifests through learning and growing, which informs the feeling of competency and efficacy at work (Gecas, 1991; Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005). Lastly, the need for relatedness connects to meaningfulness via employees' perceived impact on their organization, coworkers, and customers (Grant, 2008b). Prosocial behavior, actions performed by employees that supersede work requirements for the benefit of others, encapsulates this need for relatedness; this perceived impact on others beyond the self or self-interest drives the feeling of experienced meaningfulness at work (Cardador, 2009; Grant, 2007; Grant et al., 2007).

Proposition 2: Tasks that promote and reinforce self-efficacy lead to greater experienced meaningfulness at work

Self-esteem is also an important mechanism for meaningfulness at work. It differs from self-efficacy in that it focuses on an individual's assessment of self-worth whereas self-efficacy focuses on the perception of ability to deal with a situation or achieve a goal (Baumeister, 1998; Judge, Erez, Bono, & Thoresen, 2002; Lane, Lane, & Kyprianou, 2004). Self-esteem arises by assessing oneself as worthwhile and seeing oneself as valuable and worthy (Baumeister & Vohs, 2002; Gecas, 1991; Judge, Locke, & Durham, 1997). Although self-esteem is generally seen as a trait, it is also flexible and the result of experiences and achievements (Crocker & Park, 2004; Heatherton & Polivy, 1991; Kernis, Cornell, Sun, Berry, & Harlow, 1993; Markus & Kunda, 1986). Past research has suggested a link between increased self-esteem and an intense focus on

work tasks (Brown & Ryan, 2003; Csikszentmihalyi, 1990). The perception of meaningfulness of work is increased by affirmations and accomplishments, which fosters improved views of oneself and fulfils the motivation for believing in self-value and self-worth (Baumeister & Vohs, 2002; Gecas, 1991; Rosso et al., 2010). This can also occur at the group level by belonging to valued in-groups at work that accomplish tasks and thereby enhance affirmations of value and success, which fuel perceptions of meaningfulness of work (Ashforth & Mael, 1989; Tajfel & Turner, 1979). Where self-esteem differs from self-efficacy, given both are centered on achievement and accomplishment, is the means by which meaningfulness is manifested. Self-efficacy's path to meaningfulness passes through the realization that one is in control of his or her environment, and competent and connected to others, while self-esteem is focused on the sense that one is valued and worthy (Rosso et al., 2010).

Proposition 3: Tasks that promote self-esteem lead to greater experienced meaningfulness at work

Finally, purpose serves as a mechanism for meaningful work. Purpose, one's directedness and intentionality in life (Ryff, 1989), is central to meaning in life (Baumeister, 1991; Ryff & Singer, 1998; Steger et al., 2006) and is foundational to human existence and survival (Frankl, 1959). Employees derive purpose through their perception of the significance of their work, whether serving society, a higher purpose, or a higher power (Davidson & Caddell, 1994; Grant, 2008b; Pratt & Ashforth, 2003; Wrzesniewski, 2003). For example, a policewoman may perceive her work as meaningful because her purpose is to protect her community. Similarly, for those who perceive spiritual significance in their work, tasks, even mundane ones, are imbued with more meaning since they are seen as serving a higher purpose (Davidson & Caddell, 1994).

Value systems also promote purpose by providing employees with a consistent set of values shared by a group of people with similar goals (Baumeister, 1991; Schwartz, 1992; Wiener, 1988). When employees act in concordance with these shared values, such as acting in concordance with an organization's mission statement, it gives them a sense of purpose and leads to greater feelings of job meaningfulness (Baumeister & Vohs, 2002; Besharov, 2008; Rosso et al., 2010; Wiener, 1988). Concordance with these group value systems leads to a sense of purpose, while self-concordance, as mentioned earlier via the mechanism of authenticity, is more focused behavior consistent with one's personal values and beliefs.

Proposition 4: Tasks that promote purpose lead to greater experienced meaningfulness at work.

CONCLUSION

This study integrated theories of motivation and hypothesized that job meaningfulness impacts stressor appraisal and coping among employees. It assessed job meaningfulness in relation to stressors and the chronic work outcomes of turnover intent and burnout. The findings suggest that the challenge dimension of primary appraisal is strongly connected to job meaningfulness, and job meaningfulness has a strong relationship with turnover intent and the three facets of burnout. More study is required to understand causality and the role of meaning-focused coping. Organizations that select for employees who find their work meaningful, or who design work to accentuate tasks employees find meaningful, may be more likely to mitigate turnover and burnout among employees.

Additionally, task meaningfulness was introduced and the mechanisms by which tasks become meaningful were elucidated. This proposed construct helps explain why there are currently discrepancies between task significance and experienced meaningfulness, namely that tasks can be significant for others but not intrinsically motivating or satisfying. This conceptualization will add a new dimension to the study of work and motivation.

REFERENCES

- Aasa, U., Brulin, C., Ängquist, K. A., & Barnekow-Bergkvist, M. (2005). Work-related psychosocial factors, worry about work conditions and health complaints among female and male ambulance personnel. *Scandinavian Journal of Caring Sciences, 19*(3), 251–258. <https://doi.org/10.1111/j.1471-6712.2005.00333.x>
- Allan, B. A., Autin, K. L., & Duffy, R. D. (2016). Self-determination and meaningful work: Exploring socioeconomic constraints. *Frontiers in Psychology, 7*(February), 1–9. <https://doi.org/10.3389/fpsyg.2016.00071>
- Allan, B. A., Owens, R. L., & Douglass, R. P. (2017). Character strengths in counselors. *Journal of Career Assessment, 106907271774866*. <https://doi.org/10.1177/1069072717748666>
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411–423. <https://doi.org/10.1037/0033-2909.103.3.411>
- Anshel, M. H. (2000). A conceptual model and implications for coping with stressful events in police work. *Criminal Justice and Behavior, 27*(3), 375–400. <https://doi.org/10.1177/0093854800027003006>
- Anshel, M. H. (2001). Qualitative validation of a model for coping with acute stress in sport. *Journal of Sport Behaviour, 24*(3), 223–246.
- Anshel, M. H., Jamieson, J., & Raviv, S. (2001). Cognitive appraisals and coping strategies following acute stress among skilled competitive male and female athletes. *Journal of Sport Behavior, 24*(2), 128–143.
- Antonovsky, A. (1979). *Health, stress, and coping*. Jossey-Bass.
- Armstrong-Stassen, M. (1994). Coping with Transition: A study of layoff survivors. *Journal of Organizational Behavior, 15*(7), 597–621.
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organisation. *Academy of Management Review, 14*(1), 20–39.
- Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management, 48*(5), 677–693. <https://doi.org/10.1002/hrm.20294>
- Avolio, B. J., Zhu, W., Koh, W., & Bhatia, P. (2004). Transformational leadership and organizational commitment: Mediating role of psychological empowerment and moderating role of structural distance. *Journal of Organizational Behavior, 25*(8), 951–968. <https://doi.org/10.1002/job.283>

- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, *16*(1), 74–94. <https://doi.org/10.1007/BF02723327>
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*(2), 122–147. <https://doi.org/10.1037/0003-066X.37.2.122>
- Barrick, M. R., Mount, M. K., & Li, N. (2013). The theory of purposeful work behavior: The role of personality, job characteristics, and experienced meaningfulness. *Academy of Management Review*, *38*(1), 132–153. <https://doi.org/10.5465/amr.2010.0479>
- Bartholomew, K. J., Arnold, R., Hampson, R. J., & Fletcher, D. (2017). Organizational stressors and basic psychological needs: The mediating role of athletes' appraisal mechanisms. *Scandinavian Journal of Medicine and Science in Sports*, *27*(12), 2127–2139. <https://doi.org/10.1111/sms.12851>
- Baumeister, R. F. (1991). *Meanings of life*. New York, NY: Guilford Press.
- Baumeister, R. F. (1998). The self. In D. T. Gilbert & S. T. Fiske (Eds.), *Handbook of Social Psychology*. Vol. 1 (pp. 680–740). New York: McGraw-Hill.
- Baumeister, R. F., & Vohs, K. D. (2002). The pursuit of meaningfulness in life. In *Handbook of positive psychology*. (pp. 608–618). New York, NY, US: Oxford University Press.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1985). *Habits of the heart: Individualism and commitment in american life*. Berkeley: University of California Press. <https://doi.org/10.1086/228469>
- Bendix, R. (1963). *Work and authority in industry: Managerial ideologies in the course of industrialization*. Transaction Publishers.
- Benedek, D. M., Fullerton, C., & Ursano, R. J. (2007). First responders: Mental health consequences of natural and human-made disasters for public health and public safety workers. *Annual Review of Public Health*, *28*(1), 55–68. <https://doi.org/10.1146/annurev.publhealth.28.021406.144037>
- Bentley, M. A., Crawford, J. Mac, Wilkins, J. R., Fernandez, A. R., & Studnek, J. R. (2013). An assessment of depression, anxiety, and stress among nationally certified EMS professionals. *Prehospital Emergency Care*, *17*(3), 330–338. <https://doi.org/10.3109/10903127.2012.761307>
- Berg, J. M., Wrzesniewski, A., & Dutton, J. E. (2010). Perceiving and responding to challenges in job crafting at different ranks: When proactivity requires adaptivity. *Journal of Organizational Behavior*, *31*(2–3), 158–186. <https://doi.org/10.1002/job.645>
- Besharov, M. L. (2008). *Mission goes corporate: Employee behavior in a mission-driven business*. Doctoral Dissertation, Harvard University.
- Bliese, P. D., Edwards, J. R., & Sonnentag, S. (2017). Stress and well-being at work: A century of empirical trends reflecting theoretical and societal influences. *Journal of Applied Psychology*, *102*(3), 389–402. <https://doi.org/10.1037/apl0000109>
- Bono, J. E., & Judge, T. A. (2003). Self-concordance at work: Toward understanding the

- motivational effects of transformational leaders. *Academy of Management Journal*, 46(5), 554–571. <https://doi.org/10.5465/30040649>
- Brief, A. P., Konovsky, M. A., Goodwin, R., & Link, K. (1995). Inferring the meaning of work from the effects of unemployment. *Journal of Applied Social Psychology*, 25(8), 693–711. <https://doi.org/10.1111/j.1559-1816.1995.tb01769.x>
- Brief, A. P., & Nord, W. R. (1990a). Work and meaning: Definitions and interpretations. In A. P. Brief & W. R. Nord (Eds.), *Meanings of occupational work: A collection of essays*. (pp. 1–19). Lexington, MA, England: Lexington Books/D. C. Heath and Com.
- Brief, A. P., & Nord, W. R. (1990b). Work and the family. In A. P. Brief & W. R. Nord (Eds.), *Meanings of occupational work: A collection of essays*. (pp. 203–232). Lexington, MA, England: Lexington Books/D. C. Heath and Com.
- Britt, T. W., Adler, A. B., & Bartone, P. T. (2001). Deriving benefits from stressful events: The role of engagement in meaningful work and hardiness. *Journal of Occupational Health Psychology*, 6(1), 53–63. <https://doi.org/10.1037/1076-8998.6.1.53>
- Brotheridge, C. M., & Grandey, A. A. (2002). Emotional labor and burnout: Comparing two perspectives of “people work.” *Journal of Vocational Behavior*, 60(1), 17–39. <https://doi.org/10.1006/jvbe.2001.1815>
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84(4), 822–848. <https://doi.org/10.1037/0022-3514.84.4.822>
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validity by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81–105. <https://doi.org/10.1037/h0046016>
- Carador, M. T., Pratt, M. G., & Dane, E. I. (2006). Do callings matter in medicine? The influence of callings versus careers on domain specific work outcomes. In *Positive Organizational Scholarship Conference*. Ann Arbor, MI.
- Cardador, M. T. (2009). *Banking on meaningful work: How organizations and recipients shape the meaning of helping others through work*. University of Illinois.
- Carnelley, K. B., & Janoff-Bulman, R. (1992). Optimism about love relationships: General vs specific lessons from ones personal experiences. *Journal of Social and Personal Relationships*, 9(1), 5–20. <https://doi.org/10.1177/0265407592091001>
- Carpenter, R. (2016). A review of instruments on cognitive appraisal of stress. *Archives of Psychiatric Nursing*, 30(2), 271–279. <https://doi.org/10.1016/j.apnu.2015.07.002>
- Carver, C. S. (1997). You want to measure coping but your protocol’s too long: Consider the brief cope. *International Journal of Behavioral Medicine*, 4(1), 92–100. https://doi.org/10.1207/s15327558ijbm0401_6
- Carver, C. S., & Connor-Smith, J. (2010). Personality and coping. *Annual Review of Psychology*, 61(1), 679–704. <https://doi.org/10.1146/annurev.psych.093008.100352>

- Cascio, W. F. (2003). Changes in workers, work, and organizations. In W. C. Borman, R. J. Klimoski, & D. R. Ilgen (Eds.), *Handbook of Psychology* (Vol. 12: Indust, pp. 401–422). New York: Wiley. <https://doi.org/10.1037/12171-000>
- Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., & Boudreau, J. W. (2000). An empirical examination of self-reported work stress among U.S. managers. *Journal of Applied Psychology, 85*(1), 65–74. <https://doi.org/10.1037//0021-9010.85.1.65>
- Chalofsky, N. (2003). An emerging construct for meaningful work An emerging construct for meaningful work. *Human Resource Development International, 6*(1), 69–83. <https://doi.org/10.1080/1367886022000016785>
- Chalofsky, N., & Krishna, V. (2009). Meaningfulness, commitment, and engagement: The intersection of a deeper level of intrinsic motivation. *Advances in Developing Human Resources, 11*(2), 189–203. <https://doi.org/10.1177/1523422309333147>
- Chang, M. L. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychology Review, 21*(3), 193–218. <https://doi.org/10.1007/s10648-009-9106-y>
- Clarke, J. (2006). A discussion paper about “meaning” in the nursing literature on spirituality: An interpretation of meaning as ‘ultimate concern’ using the work of Paul Tillich. *International Journal of Nursing Studies, 43*(7), 915–921. <https://doi.org/10.1016/j.ijnurstu.2006.05.005>
- Cofer, C. N., & Appley, M. H. (1964). *Motivation: Theory and research. Motivation: Theory and research*. Oxford, England: John Wiley.
- Cook, T. D., Campbell, D. T., & Shadish, W. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin. <https://doi.org/10.1198/jasa.2005.s22>
- Coomber, B., & Barriball, K. L. (2007). Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: A review of the research literature. *International Journal of Nursing Studies, 44*(2), 297–314. <https://doi.org/10.1016/j.ijnurstu.2006.02.004>
- Crocker, J., & Park, L. E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin, 130*(3), 392–414. <https://doi.org/10.1037/0033-2909.130.3.392>
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal performance*. New York: Harper & Row.
- Culver, J. L., Arena, P. L., Antoni, M. H., & Carver, C. S. (2002). Coping and distress among women under treatment for early stage breast cancer: Comparing African-Americans, Hispanics and non-Hispanic whites. *Psycho-Oncology, 11*(6), 495–504. <https://doi.org/10.1002/pon.615>
- Currier, J. M., Holland, J. M., Rozalski, V., Thompson, K. L., Rojas-Flores, L., & Herrera, S. (2013). Teaching in violent communities: The contribution of meaning made of stress on psychiatric distress and burnout. *International Journal of Stress Management, 20*(3), 254–277. <https://doi.org/10.1037/a0033985>

- D'Abate, C. P. (2005). Working hard or hardly working: A study of individuals engaging in personal business on the job. *Human Relations*, 58(8), 1009–1032. <https://doi.org/10.1177/0018726705058501>
- Davidson, J. C., & Caddell, D. P. (1994). Religion and the meaning of work. *Journal for the Scientific Study of Religion*, 33(2), 135–147.
- Dawley, D., Houghton, J., & Bucklew, N. (2010). Perceived organizational support and turnover intention: The mediating effects of personal sacrifice and job fit. *Journal of Social Psychology*, 150(3), 238–257. <https://doi.org/10.1080/00224540903365463>
- Deci, E. L. (1975). *Intrinsic motivation*. New York, NY: Plenum Press. <https://doi.org/10.1007/978-1-4613-4446-9>
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Boston, MA: Springer US. <https://doi.org/10.1007/978-1-4899-2271-7>
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>
- DeShon, R. P., & Gillespie, J. Z. (2005). A motivated action theory account of goal orientation. *Journal of Applied Psychology*, 90(6), 1096–1127. <https://doi.org/10.1037/0021-9010.90.6.1096>
- Dewe, P. (1993). Coping and the intensity of nursing stressors. *Journal of Community & Applied Social Psychology*, 3(4), 299–311. <https://doi.org/10.1002/casp.2450030407>
- Dewe, P. J., & Ng, H. A. (1999). Exploring the relationship between primary appraisal and coping using a work setting. *Journal of Social Behavior and Personality*, 14(3), 397–418.
- Didymus, F. F., & Fletcher, D. (2012). Getting to the heart of the matter: A diary study of swimmers' appraisals of organisational stressors. *Journal of Sports Sciences*, 30(13), 1375–1385. <https://doi.org/10.1080/02640414.2012.709263>
- Dik, B. J., & Duffy, R. D. (2009). Calling and vocation at work: Definitions and prospects for research and practice. *The Counseling Psychologist*, 37(3), 424–450. <https://doi.org/10.1177/0011000008316430>
- Dittman-Kohli, F., & Westerhof, G. J. (1999). The personal meaning system in a life-span perspective. In G. T. Reker & K. Chamberlain (Eds.), *Exploring existential meaning: Optimizing human development across the life span* (pp. 107–122). Thousand Oaks, CA: Sage.
- Dodd, N. G., & Ganster, D. C. (1996). The interactive effects of variety, autonomy, and feedback on attitudes and performance. *Journal of Organizational Behavior*, 17(4), 329–347.
- Dolan, C. A., & Ender, M. G. (2008). The coping paradox: Work, stress, and coping in the U.S. Army. *Military Psychology*, 20(3), 151–169. <https://doi.org/10.1080/08995600802115987>
- Downe-Wamboldt, B., Butler, L., & Coulter, L. (2006). The relationship between meaning of illness, social support, coping strategies, and quality of life for lung cancer patients and their

- family members. *Cancer Nursing*, 29(2), 111–119. <https://doi.org/10.1097/00002820-200603000-00006>
- Duffy, R. D., Allan, B. A., Autin, K. L., & Bott, E. M. (2013). Calling and life satisfaction: It's not about having it, it's about living it. *Journal of Counseling Psychology*, 60(1), 42–52. <https://doi.org/10.1037/a0030635>
- Duffy, R. D., Allan, B. A., Bott, E. M., & Dik, B. J. (2014). Does the source of a calling matter? External Summons, Destiny, and Perfect Fit. *Journal of Career Assessment*, 22(4), 562–574. <https://doi.org/10.1177/1069072713514812>
- Duffy, R. D., & Dik, B. J. (2013). Research on calling: What have we learned and where are we going? *Journal of Vocational Behavior*, 83(3), 428–436. <https://doi.org/10.1016/j.jvb.2013.06.006>
- England, G. W., & Whitely, W. T. (1990). Cross-national meanings of work. In A. P. Brief & W. R. Nord (Eds.), *Meanings of occupational work: A collection of essays*. (pp. 65–106). Lexington, MA, England: Lexington Books/D. C. Heath and Com.
- Epstein, S. (1991). The self-concept, the traumatic neurosis, and the structure of personality. In *Perspectives in personality, Vol. 3: Part A: Self and emotion; Part B: Approaches to understanding lives*. (pp. 63–98). London, England: Jessica Kingsley Publishers.
- Erickson, R. J., & Ritter, C. (2001). Emotional labor, burnout, and inauthenticity: Does gender matter? *Social Psychology Quarterly*, 64(2), 146. <https://doi.org/10.2307/3090130>
- Fagermoen, M. S. (1997). Professional identity: Values embedded in meaningful nursing practice. *Journal of Advanced Nursing*, 25(3), 434–441. <https://doi.org/10.1046/j.1365-2648.1997.1997025434.x>
- Fletcher, D., Hanton, S., Mellalieu, S. D., Hanton, S., & Mellalieu, S. D. (2008). An organizational stress review: Conceptual and theoretical issues in competitive sport. In S. Hanton & S. D. Mellalieu (Eds.), *Literature Reviews in Sport Psychology* (pp. 321–374). Nova Science Publishers, Inc.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter. Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50(5), 992–1003. <https://doi.org/10.1037/0022-3514.50.5.992>
- Folkman, S., Lazarus, R. S., Gruen, R. J., & DeLongis, A. (1986). Appraisal, coping, health status, and psychological symptoms. *Journal of Personality and Social Psychology*, 50(3), 571–579.
- Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology*, 55(1), 745–774. <https://doi.org/10.1146/annurev.psych.55.090902.141456>
- Folkman, S., & Moskowitz, J. T. (2007). Positive affect and meaning-focused coping during significant psychological stress. In M. Hewstone, H. A. W. Schut, J. B. F. de Wit, K. van den Bos, & M. S. Stroebe (Eds.), *The scope of social psychology* (pp. 193–208). New York, NY: Psychology Press.

- Fouché, E., Rothmann, S., & Van der Vyver, C. (2017). Antecedents and outcomes of meaningful work among school teachers. *SA Journal of Industrial Psychology*, 43(0), 1–10. <https://doi.org/10.4102/sajip.v43i0.1398>
- Frankl, V. E. (1959). *Man's Search for Meaning*. Boston, MA: Beacon Press.
- Fried, Y., & Ferris, G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, 40(2), 287–322. <https://doi.org/10.1111/j.1744-6570.1987.tb00605.x>
- Fugate, M., Kinicki, A. J. ., & Prussia, G. E. (2008). Employee coping with organizational change: An examination of alternative theoretical perspectives and models. *Personnel Psychology*, 61(1), 1–36. <https://doi.org/10.1111/j.1744-6570.2008.00104.x>
- Fullerton, C. S., Ursano, R. J., & Wang, L. (2004). Acute stress disorder, posttraumatic stress disorder, and depression in disaster or rescue workers. *American Journal of Psychiatry*, 161(8), 1370–1376. <https://doi.org/10.1176/appi.ajp.161.8.1370>
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331–362. <https://doi.org/10.1002/job.322>
- Gandal, N., Roccas, S., Sagiv, L., & Wrzesniewski, A. (2005). Personal value priorities of economists. *Human Relations*, 58(10), 1227–1252. <https://doi.org/10.1177/0018726705058911>
- Gecas, V. (1991). The self-concept as a basis for a theory of motivation. In J. A. Howard & L. Callero (Eds.), *The self-society dynamic: Cognition, emotion, and action* (pp. 171–187). New York: Cambridge University Press.
- Geertz, C. (1973). *The Interpretation of cultures*. New York, NY: Basic Books.
- Ghanizadeh, A., & Royaei, N. (2015). Emotional facet of language teaching: Emotion regulation and emotional labor strategies as predictors of teacher burnout. *International Journal of Pedagogies and Learning*, 10(2), 139–150. <https://doi.org/10.1080/22040552.2015.1113847>
- Gibbons, C. (2010). Stress, coping and burn-out in nursing students. *International Journal of Nursing Studies*, 47(10), 1299–1309. <https://doi.org/10.1016/j.ijnurstu.2010.02.015>
- Gibbons, C., Dempster, M., & Moutray, M. (2011). Stress, coping and satisfaction in nursing students. *Journal of Advanced Nursing*, 67(3), 621–632. <https://doi.org/10.1111/j.1365-2648.2010.05495.x>
- Gillies, J., & Neimeyer, R. A. (2006). Loss, grief, and the search for significance: Toward a model of meaning reconstruction in bereavement. *Journal of Constructivist Psychology*, 19(1), 31–65. <https://doi.org/10.1080/10720530500311182>
- Goffin, R. D., & Gellatly, I. R. (2001). A multi-rater assessment of organizational commitment: Are self-report measures biased? *Journal of Organizational Behavior*, 22(4), 437–451. <https://doi.org/10.1002/job.94>
- Grant, A. M. (2007). Relational job design and the motivation to make a prosocial difference. *Academy of Management. The Academy of Management Review*, 32(2), 393–417.

<https://doi.org/10.5465/AMR.2007.24351328>

- Grant, A. M. (2008a). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of Applied Psychology*, 93(1), 48–58. <https://doi.org/10.1037/0021-9010.93.1.48>
- Grant, A. M. (2008b). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *The Journal of Applied Psychology*, 93(1), 108–124. <https://doi.org/10.1037/0021-9010.93.1.108>
- Grant, A. M., Campbell, E. M., Chen, G., Cottone, K., Lapedis, D., & Lee, K. (2007). Impact and the art of motivation maintenance: The effects of contact with beneficiaries on persistence behavior. *Organizational Behavior and Human Decision Processes*, 103(1), 53–67. <https://doi.org/10.1016/j.obhdp.2006.05.004>
- Grant, A. M., Dutton, J. E., & Rosso, B. D. (2008). Giving commitment: Employee support programs and the prosocial sensemaking process. *Academy of Management Journal*, 51(5), 898–918. <https://doi.org/10.5465/AMJ.2008.34789652>
- Griffin, R. W. (1987). Toward an integrated theory of task design. *Research in Organizational Behavior*, 9, 79–120.
- Griffith, J., Steptoe, A., & Cropley, M. (1999). An investigation of coping strategies associated with job stress in teachers. *British Journal of Educational Psychology*, 69(4), 517–531. <https://doi.org/10.1348/000709999157879>
- Grigsby, D. W., & Knew, M. A. M. (1988). Work-stress burnout among paramedics. *Psychological Reports*, 63(1), 55–64. <https://doi.org/10.2466/pr0.1988.63.1.55>
- Hackman, J. R., & Lawler, E. E. (1971). Employee reactions to job characteristics. *Journal of Applied Psychology*, 55(3), 259–286. <https://doi.org/10.1037/h0031152>
- Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, 60(2), 159–170. <https://doi.org/10.1037/h0076546>
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16(2), 250–279. [https://doi.org/10.1016/0030-5073\(76\)90016-7](https://doi.org/10.1016/0030-5073(76)90016-7)
- Halama, P., & Bakosova, K. (2009). Meaning in life as a moderator of the relationship between perceived stress and coping. *Studia Psychologica*, 51(2–3), 143–148.
- Halbesleben, J. R. B., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of Management*, 30(6), 859–879. <https://doi.org/10.1016/j.jm.2004.06.004>
- Hamilton, V. L., Hoffman, W. S., Broman, C. L., & Rauma, D. (1993). Unemployment, distress, and coping: A panel study of autoworkers. *Journal of Personality and Social Psychology*, 65(2), 234–247. <https://doi.org/10.1037/0022-3514.65.2.234>
- Hanton, S., Wagstaff, C. R. D., & Fletcher, D. (2012). Cognitive appraisals of stressors encountered in sport organizations. *International Journal of Sport and Exercise Psychology*, 10(4), 276–289. <https://doi.org/10.1080/1612197X.2012.682376>

- Healy, C. M., & McKay, M. F. (2000). Nursing stress: The effects of coping strategies and job satisfaction in a sample of Australian nurses. *Journal of Advanced Nursing*, *31*(3), 681–688. <https://doi.org/10.1046/j.1365-2648.2000.01323.x>
- Heatherton, T. F., & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology*, *60*(6), 895–910. <https://doi.org/10.1037/0022-3514.60.6.895>
- Henderson, A. (2001). Emotional labor and nursing: An under-appreciated aspect of caring work. *Nursing Inquiry*, *8*(2), 130–138. <https://doi.org/10.1046/j.1440-1800.2001.00097.x>
- Herzberg, F. I. (1966). *Work and the nature of man*. Oxford, England: World.
- Hinds, P. S., Britton, D. R., Coleman, L., Engh, E., Humbel, T. K., Keller, S., ... Walczak, D. (2015). Creating a career legacy map to help assure meaningful work in nursing. *Nursing Outlook*, *63*(2), 211–218. <https://doi.org/10.1016/j.outlook.2014.08.002>
- Hinkle Jr., L. E. (1973). The concept of “stress” in the biological and social sciences. *Science, Medicine and Man*, *1*(1), 31–48.
- Hirschi, A. (2012). Callings and work engagement: Moderated mediation model of work meaningfulness, occupational identity, and occupational self-efficacy. *Journal of Counseling Psychology*, *59*(3), 479–485. <https://doi.org/10.1037/a0028949>
- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press.
- Hom, P. W., & Griffeth, R. W. (1991). Structural equations modeling test of a turnover theory: Cross-sectional and longitudinal analyses. *Journal of Applied Psychology*, *76*(3), 350–366. <https://doi.org/10.1037/0021-9010.76.3.350>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. (2007). Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, *92*(5), 1332–1356. <https://doi.org/10.1037/0021-9010.92.5.1332>
- Ilgen, D. R., & Hollenbeck, J. R. (1991). The structure of work: Job design and roles. In M. Dunnette & H. L. (Eds.), *Handbook of industrial and organizational psychology* (2nd Edition, Vol. 2, pp. 165–207). Palo Alto, CA: Consulting Psychologists Press.
- Jahoda, M. (1982). *Employment and unemployment: A social-psychological analysis* (Vol 1). Cambridge: Cambridge University Press.
- Janoff-Bulman, R., & McPherson Frantz, C. (1997). The impact of trauma on meaning: From meaningless world to meaningful life. In *The transformation of meaning in psychological therapies: Integrating theory and practice*. (pp. 91–106). Hoboken, NJ, US: John Wiley & Sons Inc.

- Jenkins, A. S., Wiklund, J., & Brundin, E. (2014). Individual responses to firm failure: Appraisals, grief, and the influence of prior failure experience. *Journal of Business Venturing*, 29(1), 17–33. <https://doi.org/10.1016/j.jbusvent.2012.10.006>
- Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, 83(3), 693–710. <https://doi.org/10.1037/0022-3514.83.3.693>
- Judge, T. A., Locke, E. A., & Durham, C. C. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior*, 19, 151–188.
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724. <https://doi.org/10.2307/256287>
- Kanungo, R. N. (1982). Measurement of job and work involvement. *Journal of Applied Psychology*, 67(3), 341–349. <https://doi.org/10.1037/0021-9010.67.3.341>
- Kehr, H. M. (2004). Integrating implicit motives, explicit motives, and perceived abilities: The compensatory model of work motivation and volition. *Academy of Management Review*, 29(3), 479–499. <https://doi.org/10.5465/amr.2004.13670963>
- Kernis, M. H., Cornell, D. P., Sun, C., Berry, A., & Harlow, T. (1993). There's more to self-esteem than whether it is high or low: The importance of stability of self-esteem. *Journal of Personality and Social Psychology*, 65(6), 1190–1204. <https://doi.org/10.1037/0022-3514.65.6.1190>
- King, L. A., & Napa, C. K. (1998). What makes a life good? *Journal of Personality and Social Psychology*, 75(1), 156–165. <https://doi.org/10.1037/0022-3514.75.1.156>
- Kluckhohn, F. R. (1951). Cultural factors in social work practice and education. *Social Service Review*, 25(1), 38–47. <https://doi.org/10.1086/638125>
- Kühlmann, T. M. (1990). Coping with occupational stress among urban bus and tram drivers. *Journal of Occupational Psychology*, 63(1), 89–96. <https://doi.org/10.1111/j.2044-8325.1990.tb00512.x>
- Lane, J., Lane, A. M., & Kyprianou, A. (2004). Self-efficacy, self-esteem and their impact on academic performance. *Social Behavior and Personality: An International Journal*, 32(3), 247–256. <https://doi.org/10.2224/sbp.2004.32.3.247>
- Latack, J. C., & Havlovic, S. J. (1992). Coping with job stress: A conceptual evaluation framework for coping measures. *Journal of Organizational Behavior*, 13(5), 479–508.
- Lazarus, R. S. (1966). *Psychological stress and the coping process*. New York, NY, US: McGraw-Hill.
- Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, 46(8), 819–834. <https://doi.org/10.1037/0003-066X.46.8.819>
- Lazarus, R. S. (2006). *Stress and emotion: A new synthesis*. Springer Publishing Company.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, coping and appraisal*. New York, NY: Springer.

- Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*. <https://doi.org/10.1002/per.2410010304>
- Le Fevre, M., Matheny, J., & Kolt, G. S. (2003). Eustress, distress, and interpretation in occupational stress. *Journal of Managerial Psychology*, *18*(7), 726–744. <https://doi.org/10.1108/02683940310502412>
- Leiter, M., & Maslach, C. (2001). *Burnout and health. Handbook of health psychology*. American Psychological Association.
- Leiter, M. P., Harvie, P., & Frizzell, C. (1998). The correspondence of patient satisfaction and nurse burnout. *Social Science & Medicine*, *47*(10), 1611–1617. [https://doi.org/10.1016/S0277-9536\(98\)00207-X](https://doi.org/10.1016/S0277-9536(98)00207-X)
- Leiter, M. P., & Schaufeli, W. B. (1996). Consistency of the burnout construct across occupations. *Anxiety, Stress and Coping*, *9*(3), 229–243. <https://doi.org/10.1080/10615809608249404>
- Lepore, S. J., & Greenberg, M. A. (2002). Mending broken hearts: Effects of expressive writing on mood, cognitive processing, social adjustment and health following a relationship breakup. *Psychology and Health*, *17*(5), 547–560. <https://doi.org/10.1080/08870440290025768>
- Leunissen, J. M., Sedikides, C., Wildschut, T., & Cohen, T. R. (2018). Organizational nostalgia lowers turnover intentions by increasing work meaning: The moderating role of burnout. *Journal of Occupational Health Psychology*, *23*(1), 44–57. <https://doi.org/10.1037/ocp0000059>
- Locke, E. A., & Taylor, M. S. (1991). Stress, coping, and the meaning of work. In A. Monat & R. S. Lazarus (Eds.), *Stress and coping: An anthology* (pp. 140–157). New York, NY: Columbia University Press.
- Lowe, R., & Bennett, P. (2003). Exploring coping reactions to work-stress: Application of an appraisal theory. *Journal of Occupational and Organizational Psychology*, *76*(3), 393–400. <https://doi.org/10.1348/096317903769647247>
- Lu, H., While, A. E., & Barriball, K. L. (2005). Job satisfaction among nurses: A literature review. *International Journal of Nursing Studies*, *42*(2), 211–227. <https://doi.org/10.1016/j.ijnurstu.2004.09.003>
- Lumsden, D. P. (1981). Is the concept of “stress” of any use, anymore. In D. Randall (Ed.), *Contributions to primary prevention in mental health: Working papers*, Toronto: Toronto Natl. Off. Can. Mental Health Assoc.
- Maes, S., Leventhal, H., & de Ridder, D. T. D. (1996). Coping with chronic diseases. In *Handbook of coping: Theory, research, applications*. (pp. 221–251). Oxford, England: John Wiley & Sons.
- Maguire, B. J., & Smith, S. (2013). Injuries and fatalities among emergency medical technicians and paramedics in the United States. *Prehospital and Disaster Medicine*, *28*(4), 376–382. <https://doi.org/10.1017/S1049023X13003555>

- Maguire, B. J., & Waltz, B. (2004). Current emergency medical services workforce issues in the United States. *Journal of Emergency Management*, 2(3), 17–26.
- Marchand, A., Demers, A., Durand, P., & Simard, M. (2003). The moderating effect of alcohol intake on the relationship between work strains and psychological distress. *Journal of Studies on Alcohol*, 64(3), 419–427. <https://doi.org/10.15288/jsa.2003.64.419>
- Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, 35(2), 63–78. <https://doi.org/10.1037//0022-3514.35.2.63>
- Markus, H., & Kunda, Z. (1986). Stability and malleability of the self-concept. *Journal of Personality and Social Psychology*, 51(4), 858–866. <https://doi.org/10.1037/0022-3514.51.4.858>
- Maslach, C., & Leiter, M. P. (1997). *The truth about burnout: How organizations cause personal stress and what to do about it*. San Francisco, CA: Jossey-Bass.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52(1), 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396. <https://doi.org/10.1037/h0054346>
- Maslow, A. H. (1971). *The farther reaches of human nature*. Arkana/Penguin Books.
- Maunder, R. G., Halpern, J., Schwartz, B., & Gurevich, M. (2012). Symptoms and responses to critical incidents in paramedics who have experienced childhood abuse and neglect. *Emergency Medicine Journal*, 29(3), 222–227. <https://doi.org/10.1136/emj.2010.099838>
- McClelland, D. C. (1965). Achievement motivation can be developed. *Harvard Business Review*, 43(6), 6–178. <https://doi.org/z>
- Michaelson, C. (2005). Meaningful motivation for work motivation theory. *Academy of Management Review*, 30(2), 235–238. <https://doi.org/10.5465/amr.2005.16387881>
- Mildenhall, J. (2012). Occupational stress, paramedic informal coping strategies: A review of the literature. *Journal of Paramedic Practice*, 4(6), 318–328. <https://doi.org/10.12968/jpar.2012.4.6.318>
- Mischel, W., & Morf, C. C. (2003). The self as a psycho-social dynamic processing system: A meta-perspective on a century of the self in psychology. In *Handbook of self and identity*. (pp. 15–43). New York, NY: Guilford Press.
- Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablinski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of management journal*, 44(6), 1102–1121.
- Molden, D. C., & Dweck, C. S. (2006). Finding “meaning” in psychology: A lay theories approach to self-regulation, social perception, and social development. *American Psychologist*, 61(3), 192–203. <https://doi.org/10.1037/0003-066X.61.3.192>
- Moorman, R. H., & Podsakoff, P. M. (1992). A meta-analytic review and empirical test of the

- potential confounding effects of social desirability response sets in organizational behaviour research. *Journal of Occupational and Organizational Psychology*, 65(2), 131–149. <https://doi.org/10.1111/j.2044-8325.1992.tb00490.x>
- Moran, C. (1998). Stress and emergency work experience: A non-linear relationship. *Disaster Prevention and Management*, 7(1), 38–46. <https://doi.org/10.1108/09653569810206271>
- Moran, C., & Britton, N. R. (1994). Emergency work experience and reactions to traumatic incidents. *Journal of Traumatic Stress*, 7(4), 575–585. <https://doi.org/10.1007/BF02103008>
- Mostert, F., Rothmann, S., Mostert, K., & Nell, K. (2008). Outcomes of occupational stress in a higher education institution. *Southern African Business Review*, 12(3), 102–126.
- MOW International Research Team. (1987). *The meaning of working*. New York: Academic Press.
- Neale, A. V. (1991). Work stress in emergency medical technicians. *Journal of Occupational Medicine*, 33(9), 991–997.
- Nelson, D. L., & Simmons, B. L. (2003). Eustress: An elusive construct, an engaging pursuit. *Research in Occupational Stress and Well Being*, 3, 265–322. [https://doi.org/10.1016/S1479-3555\(03\)03007-5](https://doi.org/10.1016/S1479-3555(03)03007-5)
- Nelson, D. L., & Sutton, C. D. (1990). Chronic work stress and coping: A longitudinal study and suggested new directions. *The Academy of Management Journal*, 33(4), 859–869.
- Nicholls, A. R., Polman, R. C. J., & Levy, A. R. (2012). A path analysis of stress appraisals, emotions, coping, and performance satisfaction among athletes. *Psychology of Sport and Exercise*, 13(3), 263–270. <https://doi.org/10.1016/j.psychsport.2011.12.003>
- Nord, W. R., Brief, A. P., Atieh, J. M., & Doherty, E. M. (1990). Studying meanings of work: The case of work values. In A. P. Brief & W. R. Nord (Eds.), *Meanings of occupational work: A collection of essays*. Lexington, MA, England: Lexington Books/D. C. Heath and Com.
- Oldham, G. R., & Hackman, J. R. (2010). Not what it was and not what it will be: The future of job design research. *Journal of Organizational Behavior*, 31(2–3), 463–479. <https://doi.org/10.1002/job.678>
- Ones, D. S., Viswesvaran, C., & Reiss, A. D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology*, 81(6), 660–679. <https://doi.org/10.1037/0021-9010.81.6.660>
- Pargament, K. I. (1997). *The psychology of religion and coping: Theory, research, practice*. New York, NY: Guilford Press.
- Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*, 136(2), 257–301. <https://doi.org/10.1037/a0018301>
- Park, C. L., & Adler, N. E. (2003). Coping style as a predictor of health and well-being across the first year of medical school. *Health Psychology*, 22(6), 627–631.

<https://doi.org/10.1037/0278-6133.22.6.627>

- Park, C. L., & Folkman, S. (1997). Meaning in the context of stress and coping. *Review of General Psychology, 1*(2), 115–144. <https://doi.org/10.1037/1089-2680.1.2.115>
- Park, C. L., Folkman, S., & Bostrom, A. (2001). Appraisals of controllability and coping in caregivers and HIV+ men: Testing the goodness-of-fit hypothesis. *Journal of Consulting and Clinical Psychology, 69*(3), 481–488. <https://doi.org/10.1037//0022-006X.69.3.481>
- Park, C. L., Malone, M. R., Suresh, D. P., Bliss, D., & Rosen, R. I. (2008). Coping, meaning in life, and quality of life in congestive heart failure patients. *Quality of Life Research, 17*(1), 21–26.
- Patterson, G. T. (2003). Examining the effects of coping and social support on work and life stress among police officers. *Journal of Criminal Justice, 31*(3), 215–226. [https://doi.org/10.1016/S0047-2352\(03\)00003-5](https://doi.org/10.1016/S0047-2352(03)00003-5)
- Patterson, P. D., Suffoletto, B. P., Kupas, D. F., Weaver, M. D., & Hostler, D. (2010). Sleep quality and fatigue among prehospital providers. *Prehospital Emergency Care, 14*(2), 187–193. <https://doi.org/10.3109/10903120903524971>
- Pavlish, C., & Hunt, R. (2012). An exploratory study about meaningful work in acute care nursing. *Nursing Forum, 47*(2), 113–122. <https://doi.org/10.1111/j.1744-6198.2012.00261.x>
- Peacock, E. J., & Wong, P. T. P. (1990). The stress appraisal measure (SAM): A multidimensional approach to cognitive appraisal. *Stress Medicine, 6*(3), 227–236. <https://doi.org/10.1002/smi.2460060308>
- Podolny, J. M., Khurana, R., & Hill-Popper, M. (2004). Revisiting the meaning of leadership. *Research in Organizational Behavior, 26*, 1–36. [https://doi.org/10.1016/S0191-3085\(04\)26001-4](https://doi.org/10.1016/S0191-3085(04)26001-4)
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Porter, L. W., & Lawler, E. E. (1968). *Managerial attitudes and performance*. Homewood, Ill: R.D. Irwin.
- Powell, D. M., & Meyer, J. P. (2004). Side-bet theory and the three-component model of organizational commitment. *Journal of Vocational Behavior, 65*(1), 157–177. [https://doi.org/10.1016/S0001-8791\(03\)00050-2](https://doi.org/10.1016/S0001-8791(03)00050-2)
- Prati, G., & Pietrantonio, L. (2010). The relation of perceived and received social support to mental health among first responders: A meta-analytic review. *Journal of Community Psychology, 38*(3), 403–417. <https://doi.org/10.1002/jcop.20371>
- Prati, G., Pietrantonio, L., & Cicognani, E. (2010). Self-efficacy moderates the relationship between stress appraisal and quality of life among rescue workers. *Anxiety, Stress and Coping, 23*(4), 463–470. <https://doi.org/10.1080/10615800903431699>
- Pratt, M. G. (2000). The good, the bad, and the ambivalent: Managing identification among

- amway distributors. *Administrative Science Quarterly*, 45(3), 456.
<https://doi.org/10.2307/2667106>
- Pratt, M. G., & Ashforth, B. E. (2003). Fostering meaningfulness in working and at work. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline* (pp. 309–327). San Francisco: Berrett-Koehler Publishers, Inc.
- Pratt, M. G., Rockmann, K. W., & Kaufmann, J. B. (2013). Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. *The Academy of Management Journal*, 49(2), 235–262.
- Quick, J. C., Wright, T. A., Adkins, J. A., Nelson, D. L., & Quick, J. D. (2013). *Preventive stress management in organizations, 2nd ed.* Washington, DC, US: American Psychological Association. <https://doi.org/10.1037/13942-000>
- Rafaeli, A., & Sutton, R. I. (1987). Expression of emotion as part of the work role. *Academy of Management Review*, 12(1), 23–37.
- Rafferty, A. E., & Griffin, M. A. (2006). Perceptions of organizational change: A stress and coping perspective. *Journal of Applied Psychology*, 91(5), 1154–1162.
<https://doi.org/10.1037/0021-9010.91.5.1154>
- Rasmussen, V., Turnell, A., Butow, P., Juraskova, I., Kirsten, L., Wiener, L., ... Grassi, L. (2016). Burnout among psychosocial oncologists: An application and extension of the effort-reward imbalance model. *Psycho-Oncology*, 25(2), 194–202.
<https://doi.org/10.1002/pon.3902>
- Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*, 53(3), 617–635.
<https://doi.org/10.5465/amj.2010.51468988>
- Riley, K. E., & Park, C. L. (2014). Problem-focused vs. meaning-focused coping as mediators of the appraisal-adjustment relationship in chronic stressors. *Journal of Social and Clinical Psychology*, 33(7), 587–611. <https://doi.org/10.1521/jscp.2014.33.7.587>
- Roberson, L. (1990). Functions of work meanings in organizations: Work meanings and work motivation. In *Meanings of occupational work: A collection of essays*. (pp. 107–134). Lexington, MA, England: Lexington Books/D. C. Heath and Com.
- Rogers, C. R. (1959). A theory of therapy, personality and interpersonal relationships, as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A Study of Science* (pp. 184–256). New York: McGraw-Hill.
<https://doi.org/10.1017/CBO9781107415324.004>
- Ros, M., Schwartz, S. H., & Surkiss, S. (1999). Basic individual values, work values, and the meaning of work. *Applied Psychology*, 48(1), 49–71. <https://doi.org/10.1111/j.1464-0597.1999.tb00048.x>
- Rosso, B. D., Dekas, K. H., & Wrzesniewski, A. (2010). On the meaning of work: A theoretical integration and review. *Research in Organizational Behavior*, 30(C), 91–127.
<https://doi.org/10.1016/j.riob.2010.09.001>

- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *The American Psychologist*, *55*(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, *52*(1), 141–166. <https://doi.org/10.1146/annurev.psych.52.1.141>
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic dialectical perspective. In R. M. Ryan & E. L. Deci (Eds.), *Handbook of Self-determination Research* (pp. 3–33). Rochester, NY: University of Rochester. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Ryan, R. M., Deci, E. L., & Grolnick, W. S. (1995). Autonomy, relatedness, and the self: Their relation to development and psychopathology. In *Developmental psychopathology, Vol. 1: Theory and methods*. (pp. 618–655). Oxford, England: John Wiley & Sons.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6), 1069–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>
- Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, *9*(1), 1–28.
- Salo, K. (2002). *Teacher stress as a longitudinal process*. University of Jyväskylä.
- Sandelands, L. (2003). *Thinking about social life*. Lanham, MD: University Press of America.
- Schaufeli, W. B., Leiter, M. P., Maslach, C., & Jackson, S. E. (1996). The MBI-general survey. In C. Maslach, S. E. Jackson, & M. P. Leiter (Eds.), *Maslach burnout inventory*. (pp. 19–26). Palo Alto, CA: Consulting Psychologists Press.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, *25*, 1–65. [https://doi.org/10.1016/S0065-2601\(08\)60281-6](https://doi.org/10.1016/S0065-2601(08)60281-6)
- Selye, H. (1964). *On being a scientist: From dream to discovery*. Oxford, England: Mcgraw.
- Selye, H. (1976). Stress without distress. In G. Serban (Ed.), *Psychopathology of human adaptation* (pp. 137–146). Boston, MA: Springer US. https://doi.org/10.1007/978-1-4684-2238-2_9
- Shamir, B. (1991). Meaning, self and motivation in organizations. *Organization Studies*, *12*(3), 405–424. <https://doi.org/10.1177/017084069101200304>
- Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology*, *76*(3), 482–497. <https://doi.org/10.1037/0022-3514.76.3.482>
- Sheldon, K. M., Ryan, R. M., Rawsthorne, L. J., & Ilardi, B. (1997). Trait self and true self: Cross-role variation in the Big-Five personality traits and its relations with psychological authenticity and subjective well-being. *Journal of Personality and Social Psychology*,

73(6), 1380–1393. <https://doi.org/10.1037/0022-3514.73.6.1380>

- Sollie, H., Kop, N., & Euwema, M. C. (2017). Mental resilience of crime scene investigators: How police officers perceive and cope with the impact of demanding work situations. *Criminal Justice and Behavior, 44*(12), 1580–1603. <https://doi.org/10.1177/0093854817716959>
- Spector, P. E. (1994). Using self-report questionnaires in OB research: A comment on the use of a controversial method. *Journal of Organizational Behavior, 15*(5), 385–392. <https://doi.org/10.1002/job.4030150503>
- Spector, P. E. (2006). Method variance in organizational research. *Organizational Research Methods, 9*(2), 221–232. <https://doi.org/10.1177/1094428105284955>
- Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validity. *The Academy of Management Journal, 38*(5), 1442–1465. <https://doi.org/10.5465/256865>
- Spreitzer, G. M. (1996). Social structural characteristics of psychological empowerment. *The Academy of Management Journal, 39*(2), 483–504. <https://doi.org/10.2307/256789>
- Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A socially embedded model of thriving at work. *Organization Science, 16*(5), 537–549. <https://doi.org/10.1287/orsc.1050.0153>
- Steger, M. F., & Dik, B. J. (2010). Work as meaning: Individual and organizational benefits of engaging in meaningful work. In P. A. Linley, S. Harrington, & N. Page (Eds.), *Oxford handbook of positive psychology and work* (pp. 131–142). Oxford, England: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780195335446.013.0011>
- Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). *Journal of Career Assessment, 20*(3), 322–337. <https://doi.org/10.1177/1069072711436160>
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*(1), 80–93. <https://doi.org/10.1037/0022-0167.53.1.80>
- Steger, M. F., Pickering, N. K., Shin, J. Y., & Dik, B. J. (2010). Calling in work: Secular or sacred? *Journal of Career Assessment, 18*(1), 82–96. <https://doi.org/10.1177/1069072709350905>
- Stewart, G. L., & Barrick, M. R. (2000). Team structure and performance: Assessing the mediating role of intrateam process and the moderating role of task type. *The Academy of Management Journal, 43*(2), 135–148.
- Stinchcombe, A. L. (1991). The conditions of fruitfulness of theorizing about mechanisms in social science. *Philosophy of the Social Sciences, 21*(3), 367–388. <https://doi.org/10.1177/004839319102100305>
- Sullivan, S. C. (2006). The work-faith connection for low-income mothers: A research note. *Sociology of Religion, 67*(1), 99–108. <https://doi.org/10.1093/socrel/67.1.99>

- Super, D. E., & Šverko, B. E. (1995). *Life roles, values, and careers: International findings of the Work Importance Study*. Jossey-Bass.
- Sutton, R. I., & Rafaeli, A. (1988). Untangling the relationship between displayed emotions and organizational sales: The case of convenience stores. *The Academy of Management Journal*, *31*(3), 461–487.
- Suyama, J., Rittenberger, J. C., Patterson, P. D., & Hostler, D. (2009). Comparison of public safety provider injury rates. *Prehospital Emergency Care*, *13*(4), 451–455. <https://doi.org/10.1080/10903120903144908>
- Šverko, B., & Vizek-Vidović, V. (1995). Studies of the meaning of work: Approaches, models, and some of the findings. In D. E. Super (Ed.), *Life roles, values, and careers* (pp. 3–21). San Francisco, CA: Jossey-Bass.
- Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Brooks/Cole Pub. Co. [https://doi.org/10.1016/S0065-2601\(05\)37005-5](https://doi.org/10.1016/S0065-2601(05)37005-5)
- Thompson, J. A., & Bunderson, J. S. (2003). Violations of principle: Ideological currency in the psychological contract. *Academy of Management Review*, *28*(4), 571–586.
- Thuné-Boyle, I. C., Stygall, J. A., Keshtgar, M. R., & Newman, S. P. (2006). Do religious/spiritual coping strategies affect illness adjustment in patients with cancer? A systematic review of the literature. *Social Science and Medicine*, *63*(1), 151–164. <https://doi.org/10.1016/j.socscimed.2005.11.055>
- Thurgood, G. (2017). All roads lead to Rome? Understanding the different ways job design leads to meaningful work. In *2017 Annual Meeting, Academy of Management*. Atlanta, GA.
- Tilgher, A. (1962). Work: What it has meant to men through the ages. In S. Nosov & W. H. Form (Eds.), *Man, work, and society*. New York: Basic Books.
- Trenberth, L., & Dewe, P. (2002). The importance of leisure as a means of coping with work related stress: An exploratory study. *Counselling Psychology Quarterly*, *15*(1), 59–72. <https://doi.org/10.1080/09515070110103999>
- Turner, A. N., & Lawrence, P. R. (1965). *Industrial jobs and the worker*. Harvard University.
- van der Ploeg, E. (2003). Acute and chronic job stressors among ambulance personnel: predictors of health symptoms. *Occupational and Environmental Medicine*, *60*(suppl 1), i40–i46. https://doi.org/10.1136/oem.60.suppl_1.i40
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science*, *314*(5802), 1154–1156. <https://doi.org/10.1126/science.1132491>
- Vroom, V. H. (1964). *Work and motivation*. Oxford, England: Wiley.
- Weick, K. E. (1995). The nature of sensemaking. In *Sensemaking In Organizations* (pp. 1–16). Thousand Oaks, CA: Sage. <https://doi.org/10.1017/CBO9781107415324.004>
- Wiener, Y. (1988). Forms of value systems: Focus on organizational effectiveness and cultural change and maintenance. *Academy of Management Review*, *13*(4), 534–545.

<https://doi.org/10.5465/amr.1988.4307410>

- Wong, C., & Campion, M. A. (1991). Development and test of a task level model of motivational job design. *Journal of Applied Psychology, 76*(6), 825–837.
<https://doi.org/10.1037/0021-9010.76.6.825>
- Wright, J. C., & Mischel, W. (1987). A conditional approach to dispositional constructs: The local predictability of social behavior. *Journal of Personality and Social Psychology, 53*(6), 1159–1177. <https://doi.org/10.1037/0022-3514.53.6.1159>
- Wrzesniewski, A. (2003). Finding positive meaning in work. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline* (pp. 296–308). San Francisco: Berrett-Koehler Publishers, Inc.
- Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review, 26*(2), 179–201.
- Wrzesniewski, A., Dutton, J. E., & Debebe, G. (2003). Interpersonal sensemaking and the meaning of work. *Research in Organizational Behavior, 25*(03), 93–135.
[https://doi.org/10.1016/S0191-3085\(03\)25003-6](https://doi.org/10.1016/S0191-3085(03)25003-6)
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality, 31*(1), 21–33.
<https://doi.org/10.1006/jrpe.1997.2162>
- Zika, S., & Chamberlain, K. (1992). On the relation between meaning in life and psychological well. *British Journal of Psychology*. <https://doi.org/10.1111/j.2044-8295.1992.tb02429.x>
- Zohar, D. (1999). When things go wrong: The effect of daily work hassles on effort, exertion and negative mood. *Journal of Occupational and Organizational Psychology, 72*, 265–283.

APPENDIX A

Questionnaire Instructions

You will be presented with a variety of questions. There will be no right or wrong answer. Be as honest as possible and go with your gut instinct. Don't let answers to one question influence answers to other questions.

Maslach Burnout Inventory – General Survey (Schaufeli, Leiter, Maslach, & Jackson, 1996)

Please read each statement carefully and mark how much you agree with each statement.

Items:

Items are not shared since they are copyrighted.

Turnover Intent (Hom & Griffeth, 1991)

Please indicate your level of agreement with the following statements.

Items:

I often think about quitting this job

I will probably look for a new job during the next year

I am actively looking for another job

Work as Meaning Inventory (Steger, Dik, & Duffy, 2012)

Please rate your agreement with the following statements:

Items:

I have found a meaningful career.

I view my work as contributing to my personal growth.

My work really makes no difference to the world.

I understand how my work contributes to my life's meaning.

I have a good sense of what makes my job meaningful.

I know my work makes a positive difference in the world.

My work helps me better understand myself.

I have discovered work that has a satisfying purpose.

My work helps me make sense of the world around me.

The work I do serves a greater purpose.

Stress Appraisal Measure (Peacock & Wong, 1990)

This questionnaire is concerned with your thoughts about your stress at work. There are no right or wrong answers. Please think about the situations that cause you stress at work and respond according with how you feel in general about those stressful situations right now.

Items:

- Are these totally helpless situations?
- Do these situations create tension in me?
- Are the outcome of these situations uncontrollable by anyone?
- Is there someone or some agency I can turn to for help if I need it?
- Do these situations make me feel anxious?
- Do these situations have important consequences for me?
- Are these situations going to have a positive impact on me?
- How eager am I to tackle these problems?
- How much will I be affected by the outcome of these situations?
- To what extent can I become a stronger person because of these problems?
- Will the outcomes of these situations be negative?
- Do I have the ability to do well in these situations?
- Do these situations have serious implications for me?
- Do I have what it takes to do well in these situations?
- Is there help available to me for dealing with these problems?
- Do these situations tax or exceed my coping resources?
- Are there sufficient resources available to help me in dealing with these situations?
- Is it beyond anyone's power to do anything about these situations?
- To what extent am I excited thinking about the outcome of these situations?
- How threatening are these situations?
- Are the problems unresolvable by anyone?
- Will I be able to overcome the problems?
- Is there anyone who can help me to manage these problems?
- To what extent do I perceive these situations as stressful?
- Do I have the skills necessary to achieve a successful outcome to these situations?
- To what extent do these events require coping efforts on my part?
- Do these situations have long-term consequences for me?
- Are these situations going to have a negative impact on me?

Brief COPE (Carver, 1997)

These items deal with ways you've been coping with the work stress in your life. There are many ways to try to deal with problems. These items ask what you've been doing to cope with the stress. Don't answer on the basis of whether the statement below seems to be working or not—just whether or not you're doing it. Try to rate each item separately in your mind from the others. Make your answers as true for you as you can.

Items:

- I've been turning to work or other activities to take my mind off things.

I've been concentrating my efforts on doing something about the situation I'm in.
I've been saying to myself "this isn't real."
I've been using alcohol or other drugs to make myself feel better.
I've been getting emotional support from others.
I've been giving up trying to deal with it.
I've been taking action to try to make the situation better.
I've been refusing to believe that it has happened.
I've been saying things to let my unpleasant feelings escape.
I've been getting help and advice from other people.
I've been using alcohol or other drugs to help me get through it.
I've been trying to see it in a different light, to make it seem more positive.
I've been criticizing myself.
I've been trying to come up with a strategy about what to do.
I've been getting comfort and understanding from someone.
I've been giving up the attempt to cope.
I've been looking for something good in what is happening.
I've been making jokes about it.
I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
I've been accepting the reality of the fact that it has happened.
I've been expressing my negative feelings.
I've been trying to find comfort in my religion or spiritual beliefs.
I've been trying to get advice or help from other people about what to do.
I've been learning to live with it.
I've been thinking hard about what steps to take.
I've been blaming myself for things that happened.
I've been praying or meditating.
I've been making fun of the situation.

Demographics

Items:

What is your gender?

What is your current marital status?

How old are you?

How many years of experience do you have as a first responder?

Please mark your educational background.

APPENDIX B

THE UNIVERSITY OF
ALABAMA | Office of the Vice President for
Research & Economic Development
Office for Research Compliance

May 21, 2018

Adam Pervez
Management
CCC
Box 870225

Re: IRB#: 18-OR-192 "Investigating the Meaning of Work"

Dear Adam Pervez:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. You have also been granted the requested waiver of written documentation of informed consent. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies

Your application will expire on May 20, 2019. If your research will continue beyond this date, complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, complete the appropriate portions of the IRB Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent form to provide to your participants.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,



358 Rose Administration Building | Box 870127 | Tuscaloosa, AL 35487-0127
205-348-8461 | Fax 205-348-7189 | Toll Free 1-877-820-3066

August 21, 2018

Adam Pervez
Department of Management & Marketing
Culverhouse College of Commerce
The University of Alabama
Box 870225

Re: IRB # 18-OR-192-A "Investigating the Meaning of Work"

Dear Mr. Pervez:

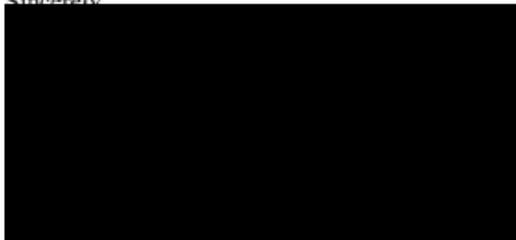
The University of Alabama Institutional Review Board has reviewed the revision to your previously approved expedited protocol. The board has approved the change in your protocol.

Please remember that your protocol will expire on May 20, 2019.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants.

Good luck with your research.

Sincerely,



September 18, 2018

Adam Pervez
Department of Management & Marketing
Culverhouse College of Commerce
The University of Alabama
Box 870225

Re: IRB # 18-OR-192-B "Investigating the Meaning of Work"

Dear Mr. Pervez:

The University of Alabama Institutional Review Board has reviewed the revision to your previously approved expedited protocol. The board has approved the change in your protocol.

Please remember that your protocol will expire on May 20, 2019.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants.

Good luck with your research.

Sincerely,

