The Roles of Task Significance and Social Perceptions in Job Stress and Employee Engagement

Serena El-Asmar

John Molson School of Business

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By: **Serena El-Asmar**

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Signed by the final examining committee

_____ Chair
Dr. Mahesh Sharma

_____ Examiner
Dr. Kathleen Boies

_____ Examiner
Dr. Alexandra Panaccio

_____ Supervisor
Dr. Muhammad Jamal

Approved by

_____
Chair of Department or Graduate Program Director

_____
Dean of Faculty

Date _____

Abstract

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Serena El-Asmar

The present study combined literature in task significance (Hackman and Oldham, 1976; 2010) and social perceptions (Grant, 2008) in order to help explain employee engagement in its two dimensions: job and organization engagement (Saks, 2006). The study further investigated the mediating effects of challenge and hindrance stressors (Cavanaugh, Boswell, Roehling, & Boudreau, 2000) between task significance and employee engagement. A total of 337 faculty members at Concordia and McGill universities participated in this study. A moderated mediation and a multiple mediation analyses were performed which showed that task significance is a predictor of job and organization engagement. Additionally, the multiple mediation analysis showed that challenge stressors mediate the relationship between task significance and job engagement whereas hindrance stressors are negatively related to organization engagement. Moreover, the interaction between task significance and perceived social impact and worth explained the variance in hindrance stressors as demonstrated by the moderated mediation analyses. The results fill a gap in the literature when it comes to explaining the direct and indirect effects of task significance in explaining employee engagement. The major contribution of the study is that it showed that task significance on its own predicts employee engagement regardless of the other job characteristics, it also supported the dual dimension of employee engagement, and it emphasized the importance of challenge stressors in explaining job engagement. Practical implications and directions for future research are highlighted.

Keywords: task significance, perceived social impact, perceived social worth, challenge stressors, hindrance stressors, job and organization engagement

Dedication

This manuscript is dedicated to Taghrid Chamoun for all her sacrifices. Without your love and support, I wouldn't have gone so far. Thank you for believing in me. You are my inspiration.

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The Roles of Task Significance and Social Perceptions in Job Stress and Employee Engagement

The design of jobs has evolved remarkably from a century ago. While the subject was primarily investigated to create work efficiency and interchangeable employees in the Scientific Management approach (Taylor, 1911), researchers started gradually identifying the importance of motivating employees to perform their jobs better (Herzberg, 1966). For instance, researchers generated theories of work motivation highlighting the need to enrich the jobs rather than simplify them (Hackman, Oldham, Janson, & Purdy, 1975; Herzberg, 1976). Vroom (1964) created a model translating his expectancy-theory to demonstrate how employees would be more motivated to work in conjunction of an expected reward or to avoid punishment; other researchers such as Turner and Lawrence (1965) focused on job attributes that make the characteristics of the job internally motivating to the employee. Building on their research, Hackman and Oldham (1971) developed the job characteristics theory highlighting five features of a job that would make it more intrinsically motivating.

Job design and employee engagement are topics that keep on re-surfacing in academia and practice due to their importance to both the employee and organization. Job design contributes to the employee's intrinsic motivation to perform his job giving him a purpose beyond the external incentives (Barrick, Mount, & Li, 2013). Additionally, employee engagement was found to be a predictor of job satisfaction, organizational commitment, intentions to quit, and organizational citizenship behavior (Saks, 2006). Moreover, employee engagement was a contributor to the organization's financial performance (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2011). These two constructs attract management consultants' interest as they offer positive rewards to both the employee and organization (Goel, Gupta, & Rastogi, 2013). A recent study of bank employees found that the perceptions of meaningful work enhance employee engagement (Steger, Littman-Ovadia, Miller, Menger, & Rothmann, 2013).

This study aims to re-visit the relationships between the job characteristics and employee engagement focusing on task significance solely as a predictor of employee engagement. Task significance captured less of the researchers' interest compared to the other job characteristics such as task identity, skill variety, feedback, and autonomy (Grant, 2008). The latter constructs were easier to manipulate and were found to be solid predictors of job satisfaction and performance (Fried, 1991) as well as organizational commitment and turnover (Williams & Hazer, 1986). Task significance is the degree to which your job allows you to influence the lives of others inside and outside the organization (Hackman & Lawler, 1971). It is argued in this study that it could explain employee engagement through intrinsic motivation.

Furthermore, researchers disagreed on the meaning of employee engagement. The latter was explained as being the opposite of burnout (Maslach, Schaufelli, & Leiter, 2001), a state of mind (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002), or an employment of all cognitive, emotional, and physical resources at hand to perform the job (Kahn, 1990). Recently, a new definition of employee engagement emerged building on Kahn's definition suggesting two discriminantly valid constructs of employee engagement: job and organization engagement (Saks, 2006). Despite the ambiguous distinction between the two constructs, employees in Saks' (2006) study had differential scorings on job and organization engagement suggesting the need to further investigate these two constructs. Saks (2006) was a pioneer in this distinction and few studies explored the concepts since. Thus, while the relationship between task significance and employee engagement is not new in academia, this research will offer a new perspective to understand employee engagement.

On the other hand, job stressors were vastly examined in the literature aiming to help explain job satisfaction and dissatisfaction (Bratt, Broome, Kelber, & Lostocco, 2000), emotional exhaustion (Gaines & Jermier, 1983), and even depression (Tsutsumi, 2001). While job design

and employee engagement were previously studied together, differences in defining the constructs make this research's findings a contribution to the literature. For instance, Crawford, LePine, and Rich (2010) examined the relationships between job demands and engagement and burnout using the job demands-resources model; however, our study will employ a different definition of engagement that is not related to burnout and we will use task significance which is part of the job characteristics model rather than the job demands-resources model.

Researchers recognized new constructs of job stressors, challenge and hindrance stressors that were differentiated depending on their outcomes (Boswell, Olson-Buchanan, & LePine, 2004; Cavanaugh, Boswell, Roehling, & Boudreau, 2000). Although both were still harmful in nature (Zhang & Chang-Qin, 2009), challenge stressors had positive outcomes such as predicting job satisfaction and performance while hindrance stressors had opposite relations with the same outcomes (Jamal, 2007; 2011). Researchers tried to explain the differential reactions of employees to the stressors by the coping mechanisms they employ. While challenge stressors are perceived under the control of the employee urging him to employ problem-solving approaches to deal with them, hindrance stressors are perceived beyond his control which is why he employs withdrawal mechanisms and passive coping styles (Crawford, LePine, & Rich, 2010). In fact, this study attempts to explain differential perceptions in challenge and hindrance stressors based on differences in perceptions of task significance.

Finally, Hackman and Oldman's (2010) study acknowledges that jobs evolved tremendously since the 1970's, claiming that the social dimensions of work should receive greater attention in studies of job design. It is essential in this decade to closely examine social aspects of the job (Grant & Parker, 2009) as social relationships became integral to some jobs and could serve as work motivators (Oldham & Hackman, 2010). To respond to that call, the present study integrates perceived social impact and worth as moderators of the relationships

between task significance and the stressors aiming to further explain the differential effects in the perceptions of the stressors.

Literature Review

The Job Characteristics Model

Researchers have longed to identify major characteristics that would affect employees' performance and behavior. Turner and Lawrence (1965) identified six attributes that were linked to employees' satisfaction and incidence of neurosis which were the following: autonomy, variety, knowledge and skills required, responsibility, required interaction, and optional interaction. In fact, their classification of the attributes was not based on a unifying theory but on the degree to which the characteristics were related (Hackman & Lawler, 1971). Then, Hackman and Oldham (1974, 1975) built on the identified attributes to create a conceptual framework of job characteristics. Using the expectancy theory, they laid the foundation of the Job Characteristics Model we now know which explains the differences in employees' intrinsic motivation based on the design of work (Hackman & Oldham, 1976).

The Job Characteristics Model consists of five core characteristics that are linked to three psychological states which form the basis of the model and lead to various intrinsic and extrinsic outcomes (Hackman & Oldham, 1975). The maximum motivation an employee would experience was a function of the presence of three psychological states together as a result of the job attributes, which are: experienced meaningfulness, experienced responsibility, and the knowledge of results (Hackman & Oldham, 1976). Those three psychological states mediated the relationship between the core job dimensions and several outcomes, namely a high internal work motivation, high quality performance, high satisfaction with the work, and low absenteeism and performance (Hackman & Oldham, 1976). Furthermore, moderators to both the relationships

between the core characteristics and psychological states and between the psychological states and psychological and behavioral outcomes were introduced which gave the model its complexity and appeal. The moderators were the growth need strength, context satisfaction, and knowledge and skills of the employee (Hackman & Oldham, 1976).

The purpose of the model was to identify how the intrinsic characteristics of the job would have differing effects on the employee's psychological state including his motivation to perform and satisfaction with the job (Isaac, 1985). Consequently, it was a step further towards addressing the effect of the core characteristics of a job on intrinsic and extrinsic outcomes. This is a similar approach to earlier studies in work motivation. Herzberg's (1959) research in job enrichment helped explain how the design of work could be intrinsically motivating to the employee (Herzberg, Mausner, & Snyderman, 1959). The two-factor theory Herzberg and his colleagues proposed examined motivators and hygiene factors in the workplace that could cause employees' satisfaction or dissatisfaction (Herzberg et al, 1959). The study showed that satisfaction and dissatisfaction resulted from different factors and were not two ends of the same continuum, that is the opposite of satisfaction is no satisfaction rather than dissatisfaction (Herzberg, 1976; 1980). Employees would experience satisfaction if they were provided with motivators and would not be dissatisfied if they were provided with hygiene factors. However, the drawback of the theory is that it didn't take into consideration individual differences such as personality traits which could have led to different classifications of motivators and hygiene factors; it also assumed that satisfaction led to motivation (King, 1970).

On the other hand, the job characteristics model proposes that satisfaction and work motivation are separate outcomes of a well-designed job (Hackman & Oldham, 1980). In fact, experienced meaningfulness was a function of skill variety, task identity, and task significance; experienced responsibility was a function of autonomy; and knowledge of results was a function

of job feedback. Hackman and Oldham (1976) created the Job Diagnostic Survey which was the prime self-reported questionnaire used to assess the variables suggested in the Job Characteristics Model. However, two other instruments were developed to assess the job characteristics which are also self-reported questionnaires: the Yale Job Inventory (YJI) developed by Hackman and Lawler (1971) and the Job Characteristics Inventory (JCI) developed by Sims, Szilagy, and Keller (1976). Nonetheless, the JDS remains the most popular (Isaac, 1985).

Hackman and Oldham (1976) conceptualized skill variety as the degree to which a job requires several activities, skills, and talents; task identity as the degree to which a job allows an individual to complete an identifiable piece of work from beginning to end; task significance as the degree to which a job impacts the lives of others whether it is inside or outside the organization; autonomy as the degree to which the job provides the employee with discretion; and finally feedback as the degree to which the employee receives direct information from the job activities concerning the effectiveness of his performance. The five characteristics were then computed to create a Motivating Potential Score (MPS) composed of averaging the variables that affected experienced meaningfulness multiplied by the degrees of autonomy and feedback (Hackman & Oldham, 1976). It was hypothesized that a high MPS would lead to positive affect and employee behaviors as well as favorable work outcomes (Hackman & Oldham, 1976). However, given the moderators suggested in the model, it was suggested that people would differ in their performance even if they had the same MPS depending on their job-relevant knowledge and skills, growth need, and other contextual factors (Hackman & Oldham, 1976; 2010). For instance, employees who do not have the necessary knowledge and skills will find jobs with a high motivational score challenging and demanding, whereas employees with low growth need will not be as motivated to perform their jobs compared to people with high growth need, and finally employees who are not satisfied with contextual factors such as pay, supervision, and

organizational policies will not be as motivated by their jobs as employees who find the contextual factors satisfying (Johns & Saks, 2001). Despite the strong support of the Job Characteristics Model where a high motivational potential score was predictable of favorable job outcomes (Johns, Xie, & Fang, 1992), the growth need strength and contextual factors proposed in the model received weak support (Tiegs, Tetrick, & Fried, 1992).

The Job Characteristics Model was extensively researched throughout the history and it showed to be highly correlated with work satisfaction (Judge, Bono, & Locke, 2000), work satisfaction and performance (Fried, 1991), performance and motivation to work (Lawler & Hall, 1970; Wall, Clegg, & Jackson, 1978), and job satisfaction, organizational commitment and turnover (Williams & Hazer, 1986). In fact, each of the core job characteristics of the JCM was studied on its own as a predictor of outcome variables. For instance, researchers assessing job design established strong links between skill variety and job satisfaction (O'brien, 1983), task identity and organizational commitment (Lin & Hsieh, 2002), autonomy and performance (Barrick & Mount, 1993), and feedback and performance (Kluger & DeNisi, 1996). Task significance was less of a highlight for researchers who examined job characteristics. Task significance was manipulated in a study measuring learned helpness (Skinner, 1979); however, the definition adopted by the researcher varied significantly from the one we will use in this paper. He defined task significance as "the degree to which Ss perceived their competence to be reflected in low scores on the (unsolvable) Training Task" (Skinner, 1979, p. 77) whereas we will define task significance based on Hackman and Oldham's 1976 conceptualization which is the impact the job has on other people inside and outside the organization. Jobs can be high in task significance such as nursing the sick at a hospital or low in task significance such as sweeping hospital floors (Johns & Saks, 2001).

Grant (2008) examined task significance and performance in three experiments each with different subjects. However, apart from those studies, limited research was done on the relationship between task significance and other outcomes. Consequently, given the importance of task significance on employees' perceptions and behaviors and the little research done in that area, the topic sparked my interest.

Task Significance

Researchers recognized that employees' organizational behaviors and performance depended directly on their perceptions of their job (Grant, 2008). The latter was a function of how important employees thought their job was and the impact it had on others (Morgeson & Humphrey, 2006). Hackman and Oldham (1976) conceptualized task significance as the degree to which the job provides an opportunity for individuals to have a substantial impact on the lives of others, that is, to improve their welfare. Organizations are increasingly concerned with benefiting the societies with which they interact and employees are more conscious of their contributions (Porter & Kramer, 2002). Thus, task significance should gain more attention as it not only leads to experienced meaningfulness as shown in the Job Characteristics Model but also provides employees with an opportunity to realize that their work is beyond the financial benefit of the organization solely.

A minority of researchers studied task significance as a predictor of outcome variables (e.g., Grant, 2008). This is because task significance was rarely manipulated on its own without the contamination of other variables of the job characteristics (Griffin, Bateman, Wayne, & Head, 1987; Morgeson & Campion, 2002; White & Mitchell, 1979), or it was only a correlational study which does not rule out reversed causality (Mathieu, Hofmann, & Farr, 1993). However, Grant (2008) supported a causal link between task significance and job

performance in three field experiments setting the stepstone to studying task significance on its own.

Previous research in job design showed that perceptions of task significance could be objectively enhanced by redesigning work (Steers & Mowday, 1977) whereas social researchers believed it was a subjective perception that could be manipulated through interactions with people (Griffin, 1983). For instance, Piccolo and Colquitt (2006) showed how transformational leaders would have positive effects on individuals' perceptions of their jobs and their behaviors while have the job characteristics (including task significance) as a mediator of that relationship. However, recent research on job design is leaning more towards explaining employees' behaviors by examining relational mechanisms (Baumeister & Leary, 1995). Employees need to know how significant their work is beyond the mere task which is in the organization as a whole and if possible their contribution to others and the society in general. Additionally, Hackman and Oldham included the *environment* (Hackman & Oldham, 1976) or *context* (Hackman & Oldham, 1980) as a moderator of job characteristics and outcome variables. By *context* they addressed the employee's relation with supervision and other variables (Johns & Saks, 2001). Although it was weakly supported in the literature, it provides a basis to assume that social perceptions might be moderators of the relationships between task significance and outcome variables. In addition to this, the JCM was first conceptualized to establish that job design enhances occupational and intrinsic motivation. Research in self-determination theory could back up the assumption that task significance would lead to higher intrinsic motivation and experienced meaningfulness and consequently have differential effects on outcome variables depending on social-contextual factors (Ryan & Deci, 2000).

Job Stressors

Stress is a response to a physical and/or psychological threat (Dewa, Thompson, & Jacobs, 2011). Researchers examined stress from different fields ranging from medecine (e.g., Miller, Chen, & Zhou, 2007) to organizational behavior (e.g., Jamal, 2010). Measures of stress ranged from hormonal tests, for example testing the cortisol levels (Brunner & Marmot, 2006), to self-administered questionnaires (Cavanaugh, Boswell, Roehling, & Boudreau, 2000).

In fact, most psychological and behavioral concepts remain subjective in nature and perceptual. Individual differences play a very important role in assessing those variables. For instance, stress depends on how a person perceives it which was recognized early by researchers in the field (Lazarus & Folkman, 1984). Similarly, job stress is also subjective in nature as it is often a self-reported measure. It is important to identify that the job stress we are referring to in this research paper is solely linked to perceptions of stress by the individuals in the workplace. Thus, it could be a reaction to the core characteristics of the job or to the organizational factors such as culture, structure, and policies. Any stressor beyond the working environment affecting the individual's behaviors is beyond the scope of this study. This is because the measures of job stressors tap into the occupational field only (Cavanaugh et al., 2000).

Job stress has been defined as the person's inability to handle the pressures and demands of the work environment either because of excessive demand or because of lacking the adequate resources to deal with them (Jamal, 1984; 2007). In the literature, job stressors were mainly hypothesized as independent variables (e.g., Jamal, 1984) or as mediators between two variables (e.g., Chang, Rand, & Strunk, 2000). Similarily, in our study, job stressors would mediate the relationship between task significance and employee engagement.

In fact, the Job Characteristics Model has been extensively studied in relation to psychological well-being such as emotional exhaustion (Jonge et al., 2001), job

satisfaction/dissatisfaction (Loher, Noe, Moeller, & Fitzgerald, 1985), depression (Hakanena, Schaufelib, & Aholaa, 2008), and other psychosomatic symptoms. Xie's (1996) study not only showed that studies of job demands and stressors were cross-culturally valid across the People's Republic of China, but it also showed that employees had differential reactions to a high demand job given the amount of control they had on the job. The amount of control on the job predicted anxiety rates, depression, and job satisfaction (Xie, 1996). Few studies indirectly investigated the job characteristics with job stress for example by focusing on role stress and mental health in the workplace (Kelloway & Barling, 1991), but not all five core characteristics of a job were researched as extensively on their own. For instance, studies mainly focused on feedback (Cooper & Cartwright, 1994), autonomy (McGrath, Reid, & Boore, 2003), and task identity (Smith & Sainfort, 1989), respectively with job stress. However, studies on task significance were limited and mainly focused on its effect on performance (Grant, 2008).

While organizational behavior researchers strived to establish causality between the job characteristics model (JCM) and psychosomatic variables (Dunham, 1976; Hackman, 1980), a new field of research emerged on job stress mainly creating a whole bi-dimensional model, thus dividing the unidimensional stressor into hindrance and challenge stressors (Cavanaugh et al., 2000; LePine, LePine, & Jackson, 2004).

Despite the saliency of the JCM, there was limited research linking task significance in particular and job stress especially with the new established dimensions of "*positive stressors*" entitled as challenge stressors and "*negative stressors*" entitled as hindrance stressors (Boswell, Olson-Buchanan, & LePine, 2004; Podsakoff, LePine, & LePine, 2007). Could that be attributed to the positive connotation of task significance and the negative connotation of stress in general? For instance, stress was interchangeably used with distress, a variable that was conceptualized to have significant negative consequences (Selye, 1975). Acute stressors were earlier recognized in

the literature as positive stressors as they activate the body's fight and flight response for a short period of time, pushing the person to perform more than he will normally do under normal conditions (Wortsman, 2002). Chronic stressors were considered as negative stressors as their long-term nature would affect stress hormones and brain functions (Olivenza, et al., 2000). Acute stress and challenge stress both result in favourable outcomes (Shors, 2001) whereas chronic stress and hindrance stress result in unfavourable ones (Garcia-Marquez & Armario, 1987). However, the intensity and duration of stress in general should not be ignored. Elevated stress was shown to have detrimental effects on the body when it comes to the memory, attention, and decision making (LeBlanc, 2009). Additionally, habituation effects result from an earlier experience with the stressor (Jean Kant, Kenion, Driver, & Meyerhoff, 1985). Future studies in the workplace should address whether individuals would reach a habituation effect when exposed to a prolonged duration of challenge stressors or whether they would experience an emotional plateau in the face of multiple stressors, similar to the studies done on daily stressors and mental health (Bolger, DeLongis, Kessler, & Schilling, 1989).

Stress triggers and stress management are topics that keep on resurfacing in the organizational behavior literature as today's pace of living adds strains to one's ability to balance between different requirements. Several studies showed that people's perceptions of being stressed increased tremendously with time (Cohen, 1997; Tillson, 1997); other studies are currently linking stress management and coping to one's leadership abilities and emotional intelligence (Houghton, Wu, Godwin, Neck, & Manz, 2012). However, if you know that your job will have a great impact on the lives of others, would you feel more or less stressed? If so, what type of stress would be positively correlated with task significance? This study aims to examine a positive relationship between task significance and challenge stressors and a negative relationship between task significance and hindrance stressors. Moreover, could the stressors

have differential effects on employee engagement? Employee engagement will be studied as a dependent variable given its increasing importance in academia and practice (e.g. Goel, Gupta, & Rastogi, 2013; Merrill, et al., 2013)

Challenge Stressors versus Hindrance Stressors

Challenge stressors, or the positive type of stress, carry positive work-related outcomes as they are considered motivating and related to favorable work experiences (LePine, lePine, & Jackson, 2004). A challenge stressor is the kind of stress that encourages the individual to work hard and perform and gives the individual an "*opportunity for personal growth*" (Jamal & Ahmed, 2012, p. 2). This is mainly because the employee perceives that he can control the work demands (Wallace, Edwards, Arnold, Frazier, & Finch, 2009).

Some researchers no longer believe that job stress in general creates negative consequences as it was previously explained solely by being an imbalance between the job demands and what a person could handle (Jamal, 1984). Recently, it was recognized that stressors could be positive and lead to desirable outcomes if they would fall under *challenge stressors*.

LePine, Podsakoff, and LePine (2005) identified that challenge stressors have distinctive characterisitics which are: job and role demands, pressure, time urgency, and workload. This distinct portion of job stress was positively associated with employee motivation (LePine, LePine, & Jackson, 2004) and performance (LePine et al., 2005), and negatively associated with intentions to quit and actual turnover (Podsakoff et al., 2007). Moreover, a longitudinal study of U.S. managers showed that challenge and hindrance stress had differential effects on job satisfaction and job search such as challenge stressors were positively correlated with the job

satisfaction and negatively correlated with job search, whereas hindrance stressors had the opposite effects (Cavanaugh et al., 2000).

On the other hand, hindrance stressors, or the negative type of stress, carry negative work-related outcomes as they could be harmful to the individual (Podsakoff et al., 2007). This could be attributed to the fact that employees perceive these stressors as beyond their control (Wallace, Edwards, Arnold, Frazier, & Finch, 2009). These stressors are "*stimuli such as organizational politics, red tape and work role conflict, ambiguity, and resource inadequacy*" (Jamal & Ahmed, 2012, p. 2).

Empirical studies showed that distinct demands of the jobs are more likely to be attributed to challenge stressors or hindrance stressors fairly consistently despite the subjects' individual differences in perceptions and experiences. Studies were conducted on executives (Cavanaugh et al., 2000), lower level employees (Boswell et al., 2004) and MBA students (LePine et al. 2005) which resulted in the classification of the job demands. The importance of the classification is assessed by the coping mechanisms that employees experience as a result of their initial assessment of the demands. For instance, challenge stressors induce problem-solving attitudes and strategizing as well as positive emotions such as eagerness and excitement mainly because of the employee's confidence in attaining results (Crawford, LePine, & Rich, 2010). On the other hand, hindrance stressors promote rationalization processes or withdrawal and negative emotions such as fear, anxiety, and anger because the individual does not believe he can meet the job's demands (Crawford et al., 2010).

This research aims to explain the processes by which task significance affects employee engagement. It proposes differential hypotheses based on the employee's perceptions of job stressors.

Employee Engagement

Employee engagement has captured the researchers' interest as it was claimed to predict favorable outcomes including organizational success (Harter, Schmidt, & Hayes, 2002). However, it was not until recently that the antecedents and consequences of employee engagement were validated in academia (Saks, 2006). Saks (2006) showed that employee engagement leads to job satisfaction, organizational commitment, and organizational citizenship behavior. The study was also the first to distinguish between the two types of employee engagement: job engagement and organizational engagement (Saks, 2006).

It is first important to identify that employee engagement as a term has been defined differently by researchers. Kahn (1990) focused on the psychological being of an employee as he performs his organizational role by employing the "*cognitive, emotional, and physical resources to perform role-related work*" (Xu & Cooper Thomas, 2011, p. 399). There was a clear distinction between engagement and disengagement as the latter refers to a withdrawal whether it be emotional or physical (Kahn, 1990). In contrast, engagement was more of an involvement in the job and organization (Macey & Schneider, 2008). Engagement was also defined as being the opposite of burnout (Maslach, Schaufelli, & Leiter, 2001) and it carried positive characteristics including "*energy, involvelement, and efficacy*" (Saks, 2006, p. 601). These dimensions were opposite to the characteristics of being burned out where an individual exhibits "*exhaustion, cynicism, and inefficacy*" (Saks, 2006, p. 601). Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002) defined engagement as a state of mind displaying "*vigor, dedication, and absorption*" (p.74).

There was mixed evidence in the literature to identify whether employee engagement is a psychological state, trait, or an observable behavior and performance (Macey & Schneider, 2008). For instance, it could be explained by loyalty (Cartwright & Holmes, 2006) , by being

involved in the job (Kahn, 1990), or by exhibiting a certain behavior such as organizational citizenship behavior (Babcock-Robersona & Stric, 2010).

In sum, Macey and Schneider (2008, p. 6) demonstrated that a proactive personality, autotelic personality, trait positive affect, and conscientiousness form the trait engagement; state engagement consists of satisfaction, involvement, commitment, and empowerment; finally, behavioral engagement consists of organizational citizenship behavior, proactive/personal initiative; role expansion, and adaptive behavior.

Regardless of the definition adopted, employee engagement carries a positive connotation by predicting desirable attitudes, behaviors, and performance. Remarkably, employee engagement has been highlighted as a source of competitive advantage to organizations in the global market (Macey & Schneider, 2008; Welbourne, 2007) especially that it was shown to relate positively to the organizational financial performance (Harter et al., 2002; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2011).

Job Engagement versus Organizational Engagement

Following the footsteps of Saks (2006), we will focus our research paper on two types of employee engagement, job and organization engagement. To recapitulate, an employee is said to be engaged when he is fully involved in his job or organization emotionally or cognitively (Harter, Schmidt, & Keyes, 2002) as well as by employing all the resources available to perform the required job (Kahn, 1990). Rothbard (2001) takes it one level further to include two essential dimensions in engagement: attention and absorption. Attention refers to the cognitive concentration on a certain job and absorption refers to the level of immersion in one's job (Rothbard, 2001). In fact, engagement has many desirable outcomes as it was found to predict

motivation and better performance (Furrer & Skinner, 2003) and has a negative relationship with turnover intentions (Saks, 2006).

Saks (2006) argues that job and organization engagement are two distinct constructs of employee engagement. However, no previous research explained the differences between the two. Saks (2006) indicated that the research is relatively new and he used similar hypotheses for both constructs in his study as the antecedents and consequences of each are not yet established. However, Saks (2006) argues that an employee is said to be engaged when he is completely invested in his job and organizational roles. This is supported by Rich, LePine, and Crawford (2010) who also derived their understanding of engagement from Kahn's (1990) conceptualization which includes the immersion of the self in the job; job engagement was referred to "as the investment of an individual's complete self into the role (p.617)." The study demonstrated that the antecedents of job engagement are value congruence, perceived organizational support, and core self-evaluations; job engagement also predicted task performance and organizational citizenship behavior (Rich, LePine, & Crawford, 2010). However, the study referred to employee engagement as a one-dimensional construct which is job engagement and it did not tackle organizational engagement. For this reason, a brief comparison between job and organization engagement will be discussed.

Job engagement includes the use of cognition, emotions and behaviors to satisfy the requirements of the job and is linked to one's self-image (May, Glison, & Harter, 2004). Although similar to job involvement, it remains a different construct. May, Glison, and Harter (2004) believe that engagement is the predictor of involvement and a high engagement with one's job would lead to an identification with it.

Organizational engagement refers to how much individuals are "*attentive and absorbed in the performance of their roles*" (Saks, 2006, p. 602). Organizational engagement should not be

confused with organizational citizenship behavior which goes beyond the formal work-role or organizational commitment which is an "*attitude and attachment to the organization* (Saks, 2006, p. 602)". While a person could be committed and loyal to an organization, he does not necessarily have to be engaged and active in his job and role.

As previously highlighted, the operationalization of employee engagement remains challenging to date as researchers lack congruity to its definition and measurement as well as its distinction from other constructs. The only aspect that researchers agree about when it comes to employe engagement is the need to measure it through a survey; however, several surveys were created including an engagement survey (Council, 2004), an attitude survey (Seijts & Crim, 2006), engagement/burnout survey (Maslach, Schaufelli, & Leiter, 2001), and the Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006) to name few. One could attribute the differences in measurements to the complexity of the concept as each survey could be addressing one aspect of engagement.

Schaufeli, Bakker, and Salanova (2002; 2006) explain how engagement is the positive antipode of burnout showing that when an employee is engaged, he exhibits vigor, dedication, and absorption; however, when the employee is burned out, he exhibits exhaustion, cynicism, and professional inefficacy. The researchers further indicate that these dimensions are not completely the opposites of each others as while vigor and dedication are opposites to exhaustion and cynicism respectively, absorption is not related to professional efficacy (Schaufeli, Bakker, & Salanova, 2006). Another study showed that while the dimensions are negatively correlated they share 20% to 38% of their variances (Schaufeli, Salanova, González-Romá, & Bakker, 2002). Despite the saliency of the burnout/engagement model, this study will adopt Kahn's (1990) conceptualization of engagement as a guideline for the research. It refers to a psychological and physical engagement whether it be at the job or organizational level

acknowledging that an employee performs two roles, one related to performing his formal job and the other as being a member of the organization (Saks, 2006). This is crucial to identify so that the measurement of the construct matches its content. Accordingly, the questionnaire will be adopted from Saks (2006) and will measure the two dimensions of work engagement: job and organization engagement.

Overview and Hypotheses

Task Significance and Employee Engagement

Hackman and Oldham's (1980) study demonstrated that experienced meaningfulness and responsibility due to the job characteristics would lead the employee to make more contributions in his job and organization. Task significance establishes a perception that the employee is actually able to make a difference in his job to contribute to the lives of others. Thus, when the employee is high on task significance and he wants and has the skills to contribute, his drive is intrinsic by nature (Hackman & Oldham, 1980).

Kahn (1990) explained that engagement refers to the employment of all the available resources at the disposition of the employee to serve the job at hand and be involved in the organization. Additionally, the job characteristics would provide the employee with an opportunity to use several skills, have more feedback and discretion in his job, and be more intrinsically challenged (Kahn, 1992). Thus, it is expected that he be more intrigued to be engaged in his job, especially that engagement predicts valuable consequences such as job satisfaction (Saks, 2006). Similarly, Rothbard's (2001) study showed that when an employee is absorbed and attentive in his job, it is more likely that he be engaged. Given that task significance provides the employee with an opportunity to impact others inside and outside the organization thus providing him with enough challenge, responsibility, and a reason to be

attentive and absorbed, it is hypothesized that task significance would be positively related to employee engagement. This hypothesis aims to validate Saks' (2006) hypothesis especially that he used task significance as part of the job characteristics model. Using Hackman and Oldham's (1980) five-item measure, Saks (2006) measured task significance using only one measure. Our aim is to re-investigate the relationship between task significance and employee engagement using a different questionnaire – Work Design Questionnaire – with several measures of task significance (Morgeson & Humphrey, 2006).

Saks' (2006) study predicted that the job characteristics are antecedents to employee engagement where job and organization engagement showed to be "*related but distinct constructs*" (p. 613). Saks (2006) argues that the two forms of engagement have dissimilar psychological conditions and consequences given the differential scores the participants of his study had on both dimensions. In fact, the scores were higher for job engagement compared to organizational engagement. However, the differentiation between job engagement and organization engagement is relatively new, and it was Saks (2006) who created his own measures for these two constructs. Therefore, following in his footsteps, similar hypotheses will be proposed for both types of engagement aiming to validate his findings.

H_1: Task significance will be positively related to (a) job engagement and (b) organization engagement.

The Mediating Effect of the Stressors

Task significance was first conceptualized as a characteristic of the job that enhances intrinsic motivation and explains the motives behind the employee's performance (Hackman & Oldham, 1976). Being a component of experienced meaningfulness, task significance played an important role in explaining an employee's motivation. An employee has to believe that his job

provides him with an opportunity to make a difference and create a certain impact on others to be considered high in task significance.

Trends in the organizational literature focused on the job characteristics as a theory of job design that aims at reducing stress (Smith & Sainfort, 1989) and enhancing desired organizational outcomes. Nevertheless, that was before the job stressors were divided into two discriminately valid constructs: challenge stressors, *positive stressors* that result in desirable outcomes such as personal growth, mastery, or future gains (Cavanaugh, Boswell, Roehling, & Boudreau, 2000) and hindrance stressors, *negative stressors* that deter an employee's effective performance and engagement on the job (Crawford, LePine, & Rich, 2010).

The higher the job is perceived as significant and provides an employee with an opportunity to impact others, the higher the responsibility and the intrinsic motivation of the employee (Oldham & Hackman, 2010), and the more emphasis will be placed on challenge stressors that provide the employee with an opportunity to reach his goals and attain personal and professional fulfillment.

Moreover, when a job is high on task significance, the employee is expected to be more focused on his job and less concerned with stressors that obstruct his performance because he is motivated to impact others and perform his job well. Thus, it is expected that he will be less concerned with organizational politics and red tape as well as other external factors. Consequently, the higher the employee's perceptions of task significance, the less focus he will attribute to hindrance stressors because the latter are considered barriers that obstruct his goal attainment and his receiving of desired rewards (Crawford, LePine, & Rich, 2010).

For instance, consider the job of a social worker who is expected to be high on task significance due to the job's importance in affecting the lives of others. The more the task at hand provides an opportunity to influence others, the more the social worker will put effort in

achieving his goals and the less he will be concerned with aspects outside his job that would obstruct his goal-attainment.

Then, it could be suggested that the higher the employee's perceptions of task significance, the higher the emphasis is put on challenge stressors in comparison to hindrance stressors.

H_{2a}: Task significance is positively related to perceptions of challenge stressors

H_{2b}: Task significance is negatively related to perceptions of hindrance stressors

On the other hand, Van Beek, Taris, and Schaufeli (2011) showed that engaged employees were driven by autonomous motivation. Autonoumous motivation is when the person believes in the value of his job, identifies with it, and experiences an intrinsic motivation to do it that is not controlled by external reward or punishment (Deci & Ryan, 2008). Despite the lack of research on the effects of challenge stressors on engagement as explained by autonomous motivation in an organizational setting, we could deduce from the medicinal and sports literature that the ability to experience challenge and meaningfulness in one's personal pursuits would create autonomous motivation and consequently more engagement (Silva et al., 2011).

Thus, it is hypothesized that challenge stressors will mediate the relationship between task significance and job engagement. Challenge stressors involve job and role demands, pressure, time urgency and workload which should be intrinsically motivating to the employee making him put more effort in the job. This is based on the assumption that the employee is able to meet the job demands and requirements (Wallace, Edwards, Arnold, Frazier, & Finch, 2009). In fact, a recent meta-analysis showed that challenge stressors led to increased engagement due to the experienced positive emotions and cognitions, and the problem-solving coping style he will adopt (Crawford, LePine, & Rich, 2010). However, in that study, employee engagement was

defined as the opposite of burnout rather than being divided into two distinct constructs: job engagement and organization engagement. Similarly, it is hypothesized that challenge stressors will positively correlate with employee engagement in its two dimensions.

Thus, as the employee's perceptions of task significance increases, it is expected that he would place more emphasis on challenge stressors and less on hindrance ones. Consequently, the greater the focus on challenge stressors and the attainment of the goal, the more the employee will be engaged in his job. Given that the distinction between job and organization engagement is relatively new, it is also expected that an employee who wants to perform his job well to be engaged in the organization putting all his efforts in achieving his role. Similarly, challenge stressors will mediate the relationship between task significance and organization engagement.

H_{3a}: Challenge stressors are positively related to (a) job engagement and (b) organization engagement

Alternatively, despite the fact that task significance could lead to less perceptions of hindrance stressors, it is expected that an employee who experiences hindrance stressors will gradually withdraw from his job and organizational role reflecting a negative effect on his overall engagement (Crawford, LePine, & Rich, 2010). Regardless of the types of stressors, they were still found harmful for the human being (Zhang & Chang-Qin, 2009). The difference between challenge and hindrance stressors is that the former have positive attributes that could balance any negative pressures providing the employee with personal gains that could be worth the experienced stress. For instance, the job demands that were considered as hindrances or obstacles led to decreased engagement due to their promotion of "*passive and emotion-focused coping styles*" (Crawford et al., 2010, p. 843). Hindrance stressors include ambiguity, role conflicts, and resource inadequacy (Jamal & Ahmed, 2012). These stressors would lead to less

employee engagement whether it is in the job or organizational levels because they are beyond the employee's control (Wallace et al., 2009) and they promote coping mechanisms that make the employee passive rather than active (Crawford et al., 2010); thus, he will be less engaged in the job or organization.

H_{3b}: Hindrance stressors will be negatively related to (a) job engagement and (b) organization engagement

H_4: Challenge stressors will mediate the relationships between task significance and (a) job engagement and (b) organization engagement, respectively.

H_5: Hindrance stressors will mediate the relationships between task significance and (a) job engagement and (b) organization engagement, respectively.

Social Perceptions

Recently, Oldham and Hackman (2010) suggested the need to consider social relations as contributors to organizational behavior. Individuals are social beings and organizations are societies of their own. An increasing number of jobs rely extensively on social relationships such as customer service and teaching. Today, there is an increasing emphasis on the roles of motivation and communication among researchers and consultants (e.g., Jacobsen, Hvidtved, & Andersen, 2013; Weninger & Kan, 2013). Research is also focusing on enhancing the relationships between managers and employees (e.g., Brower, Lester, Korsgaard, & Dineen, 2009) and between employees and their coworkers (e.g., Tepper, Duffy, Hoobler, & Ensley, 2004). Following the necessity to consider social relationships, this study will incorporate perceptions of social impact and worth in the analysis.

Grant (2007; 2008) stressed the link between individual efforts and enhancing the well-being of others by focusing on a particular job characteristic: task significance. In his paper,

Grant (2008) also examined the mediating effects of perceived social impact and perceived social worth on the relationship between task significance and performance. Other studies suggested that the employees' behaviors are affected by their impact on others and that employees' motives change as a function of their interaction with others (Baumeister & Leary, 1995). Similarly, I will consider perceptions of social impact and worth in my research model in order to integrate the effects of social factors on how people react, explicitly whether or not they experience the stressors. Would individuals have different attitudes – experience the job stressors more - if their jobs had a greater impact on the lives of others or if others perceived it as important? A field study demonstrated that people are more willing to contribute and help other families in need if they could identify them beforehand (Small & Lowewenstein, 2003), while another laboratory study showed that people are generally more caring to others when there is identifiability of subject even if the latter is weak (Small & Lowewenstein, 2003). This shows that when individuals recognize that their jobs are public, their willingness to put efforts increases. Moreover, studies in organizational politics demonstrate how people had different attitudes and behaviors when their jobs were visible to others (Randall, Cropanzano, Bormann, & Birjulin, 1999).

Grant (2007) identified that perceived social impact refers to the extent to which employees feel that their own actions improve the welfare of others whereas perceived social worth is the degree to which employees feel that their "*personal contributions are valued by others*" (Grant, 2008, p. 110).

Perceived social impact

Perceived social impact is more of an internal belief that you can make a difference and influence others; it could be a function of a perceived ability to perform. It is different from task

significance which is whether the job provides the employee with an opportunity to make a difference (Hackman & Oldham, 1976). Perceived social impact is a belief that the individual is able to translate the opportunity into concrete action. According to the expectancy theory, if the individual's efforts are instrumental, that is, if there is a high probability that his efforts will allow him to achieve the required results, he will exert more effort (Vroom, 1964).

On the other hand, the self-determination theory shows that people are intrinsically motivated to perform a certain task or behave in a certain way because it is of interest or joy to them (Deci & Ryan, 2008). Thus, when people believe that the task is significant and find significance as something of interest to them and intrinsically motivating, they will be willing to exert more efforts in their jobs. Moreover, competence was a psychological need identified by the self-determination theory. It postulates that feelings of effectiveness nourish individuals' behaviors (Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010).

Consequently, the higher the perceived social impact the stronger is the relationship between task significance and the stressors as it increases the individual's intrinsic motivation to exert effort. It is expected that task significance enhances the perceptions of challenge stressors, positive stressors, and further reduces that of hindrance stressors, or negative stressors, when the perception of social impact is high. When the perception of social impact is low, task significance will lead to less focus on challenge stressors and more on hindrance stressors.

H_6: Perceived social impact will lead to stronger relationships between task significance and (a) challenge stressors and (b) hindrance stressors.

Perceived social worth

Perceived social worth is more of a perceived societal judgement where a person considers the appreciation of others and how important the latter believes his job to be - how

much the person believes that others appreciate his job (Grant, 2008). For example, a janitor's job could be perceived as high on social impact yet low on social worth.

Using the self-determination theory, one could argue that individuals are in search of relatedness, which is "*feeling loved and cared for*" (Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010, p. 981). Acceptance is a subset of relatedness (Ryan & Lynch, 1989) and appreciation was a form of expressing relatedness (La Guardia & Patrick, 2008).

This extrinsic motivation to perform well would become integrated in the self and is central to why people behave in certain ways (Ryan, Huta, & Deci, 2008). This process is called internalization (Deci & Ryan, 1985). Then, the higher the perceived social worth and its internalization, the more people are willing to exert efforts in order to gain societal approval or external rewards, thus it is pedicted that the stronger would be the relationships between task significance and the stressors as the individual's intrinsic motivation to exert efforts increases.

Consequently, task significance enhances the perceptions of challenge stressors, or positive stressors, and reduces further the perceptions of hindrance stressors, or negative stressors, when social worth is perceived as high. When the perception of social worth is low, task significance will lead to less focus on challenge stressors and more focus on hindrance stressors.

H_7: Perceived social worth will lead to stronger relationships between task significance and (a) challenge stressors and (b) hindrance stressors.

Proposed Model

In sum, the following hypotheses have been proposed as the model that will be tested in the following chapters:

H_1: Task significance will be positively related to (a) job engagement and (b) organization engagement.

H_{2a}: Task significance is positively related to perceptions of challenge stressors

H_{2b}: Task significance is negatively related to perceptions of hindrance stressors

H_{3a}: Challenge stressors are positively related to (a) job engagement and (b) organization engagement

H_{3b}: Hindrance stressors will be negatively related to (a) job engagement and (b) organization engagement

H_4: Challenge stressors will mediate the relationships between task significance and (a) job engagment and (b) organization engagement, respectively.

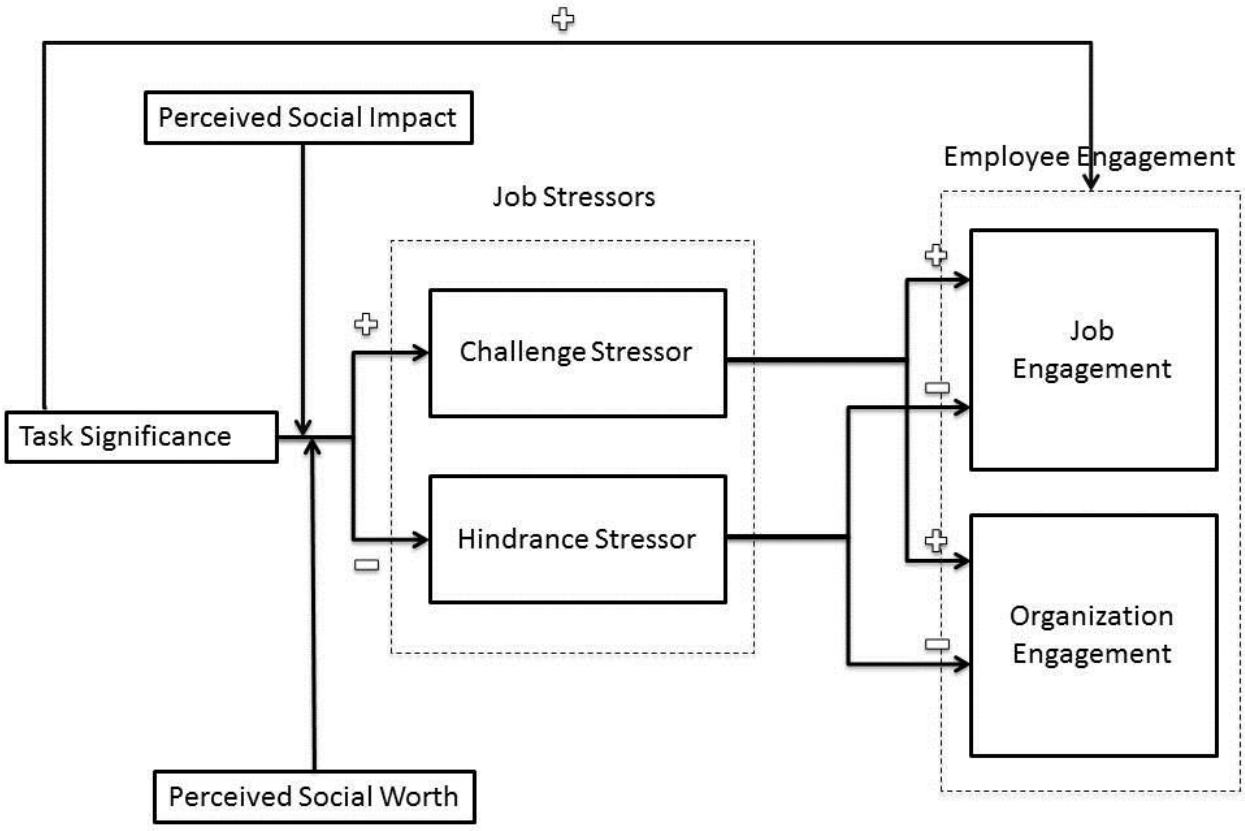
H_5: Hindrance stressors will mediate the relationships between task significance and (a) job engagement and (b) organization engagement, respectively.

H_6: Perceived social impact will lead to stronger relationships between task significance and (a) challenge stressors and (b) hindrance stressors.

H_7: Perceived social worth will lead to stronger relationships between task significance and (a) challenge stressors and (b) hindrance stressors.

All the previously argued hypotheses are shown in the conceptual model provided in Figure 1.

Figure 1 *Theoretical Model for the Present Study*



Methodology

In order to investigate the relationship between task significance, job stressors (challenge and hindrance), perceived social factors (impact and worth), and employee engagement (job and organization), the following methodology was implemented. The participants, procedures, measures, data preparation and analytical strategy utilized in this study are described below.

Participants

The present study implemented a cross-sectional quantitative research design over a period of three weeks from February 16th to March 6th, 2013. Data were collected from 337 participants (N = 178 males and N = 141 females) recruited from McGill and Concordia Universities. Eighteen participants did not indicate their gender. The mean age of participants was 50 years with a standard deviation of 11.98 years (M = 50, Max = 82, Min = 25, SD = 11.98, N = 337). The participants of this study were faculty members at McGill (N = 155) and Concordia (N = 140) Universities, and included chairpersons (N = 11), professors (N = 60), associate professors (N = 107), assistant professors (N = 60), senior lecturers (N = 7), lecturer assistant professors (N = 2), full-time lecturers (N = 18), part-time lecturers (N = 31), and post-doctoral fellows (N = 1). This sample was chosen in particular due to the nature of the participants' work as they are in constant social interactions with others which would allow us to measure their task significance and social perceptions.

Procedures

Faculty members were recruited through the university's website. E-mails were sent to each faculty member requiring him to complete a survey by following an anonymous link

provided by *Qualtrics* (www.qualtrics.com). *Qualtrics* is a web-based program licensed by Concordia University where all the data are securely stored on a server and password-protected.

Participants cannot be identified individually as they were sent an anonymous link, and the data were recorded according to a system-generated series of numbers. Participants were assured anonymity and confidentiality and were briefly informed about the study by explaining that it taps into organizational behavior and assesses social perceptions. Faculty members completed the questionnaire in one sitting; they took approximately 10 minutes to complete it.

The cover page of the questionnaire is the consent form where the faculty members were informed of the purpose, procedures, risks, and benefits of the study and consequently whether they would agree or not to participate in the study (see Appendix A). Potential participants were informed that the study would measure their social perceptions and each subsequent heading gave them a general idea of what the coming questions would measure and how to proceed.

Participants were also informed of their right to withdraw from the study at any time without any negative consequences. Participants proceeded through the questionnaire by hitting the "next" button. At the end of the questionnaire, participants were debriefed and thanked for their participation. They were also provided with addresses to consult if they would like to know more about the study.

Measures

A total of five scales and sixty items were used. They are described below.

Task Significance (Morgeson & Humphrey, 2006; see Appendix C). This 4-items scale was adapted from an existing measure of task significance to assess the perceptions of the employee's task significance in their job, that is, the degree to which they believe that their job influences the lives of others, whether inside or outside the organization. The items were the

following: “The results of my work are likely to significantly affect the lives of other people,” “The job itself is very significant and important in the broader scheme of things,” “The job has a large impact on people outside the organization,” and “The work performed on the job has a significant impact on people outside the organization.” Participants indicated their response on a 7-point Likert-type scale with anchors (1) strongly disagree to (7) strongly agree. The scale previously demonstrated very good reliability, α = .87, *M* = 3.95, *SD* = .81 (Morgeson & Humphrey, 2006). The reliability coefficient for this scale in the present study was α = .86, *M* = 5.46, *SD* = .91. The mean for this scale was tabulated to create the test variable.

Job and Organization Engagement (Saks, 2006; see Appendix D).

Measures of job engagement and organization engagement were adapted from a previous measure designed by Saks (2006) to assess the participants’ psychological presence in their job and organization. Job engagement was a five-item scale with sample item, “Sometimes I am so into my job that I lose track of time.” The scale demonstrated very good reliability, α = .82, *M* = 3.06, *SD* = .82 (Saks, 2006). The reliability coefficient for this scale in this study was α = .74, *M* = 3.96, *SD* = .57. The mean for this scale was tabulated to create the test variable.

Organization engagement was a six-item scale with sample item, “One of the most exciting things for me is getting involved with things happening in this organization.” Participants indicated their response on a five-point Likert-type scale with anchors (1) strongly agree to (5) strongly disagree. The scale also previously demonstrated very good reliability, α = .90, *M* = 2.88, *SD* = .85 (Saks, 2006). The reliability coefficient for this scale in the present study was α = .85, *M* = 3.39, *SD* = .67. The mean for this scale was tabulated to create the test variable.

Challenge and Hindrance Stressors (Cavanaugh *et al*., 2000; see Appendix E)

Challenge and Hindrance stressors were assessed via Cavanaugh et al.'s (2000) measure. Employees indicated the amount of stress experienced from every statement. The scale consisted of 11 items, six challenge-related items (e.g., "Time pressures I experience") and five hindrance-related items (e.g., "The lack of job security I have"). Participants indicated their response on a five-point Likert-type scale with anchors (1) no stress to (5) a great deal of stress. The scale demonstrated good reliabilities, α = .87 for challenge stressors and α = .75 for hindrance stressors (Cavanaugh, Boswell, Roehling, & Boudreau, 2000). The reliability coefficient for the challenge stressors scale in this study was α = .91, *M* = 3.20, *SD* = .88. The reliability coefficient for the hindrance stressors scale in the present study was α = .63, *M* = 2.32, *SD* = .74. The mean for each subscale was tabulated to create the test variables.

Cronbach's alpha for hindrance stressors was found to be slightly lower that the accepted limit of α = .70, so a Varimax rotated factor analysis was performed. However, it was found that no item could be removed to increase the reliability of the scale (Appendix G). In the original study of Cavanaugh et al. (2000), hindrance stressors demonstrated a reliability coefficient of α = .75 whereas challenge stressors had a reliability of α = .87. When we examine Lepine et al. (2004), we also notice that the reliability coefficient for challenge stressors (α = .85) was also higher than that of the hindrance stressors (α = .70). We can deduce that the reliability coefficient for hindrance stressors usually tends to be lower than that of challenge stressors. However, these results could be further explained in light of the sample characteristics at hand. It will be discussed in more detail in the results section.

Perceived Social Impact and Perceived Social Worth (Grant, 2008; see Appendix F)

Perceived Social Impact was assessed through three items following Grant (2008): "I am very conscious of the positive impact that my work has on others," "I am very aware of the ways in which my work is benefiting others," and "I feel that I can have a positive impact on others through my work." The scale previously demonstrated marginal reliability, $\alpha = .67$ (Grant, 2008). In this study, the scale demonstrated high reliability $\alpha = .86$, $M = 5.74$, $SD = .75$.

Perceived Social Worth was assessed through two items following Grant (2008): "I feel that others appreciate my work" and "I feel that other people value my contributions." The scale demonstrated very good reliability, $\alpha = .90$ (Grant, 2008). The reliability of the scale in this study was $\alpha = .87$, $M = 5.62$, $SD = .89$.

Participants indicated their responses for both measures on a seven-point likert scale with anchors (1) strongly disagree to (7) strongly agree. The mean for each subscale was tabulated to create the test variables.

Table 1

Measure Descriptives

	α	*M*	*SD*
Task Significance	0.86	5.46	.91
Job Engagement	0.74	3.96	.57
Organization Engagement	0.85	3.40	.67
Challenge Stressors	0.91	3.20	.88
Hindrance Stressors	0.63	2.31	.74
Perceived Social Impact	0.86	5.74	.75
Perceived Social Worth	0.87	5.62	.89

N=241

Data Preparation

The data was cleaned and prepared before analysis using the steps outlined by Tabachnick and Fidell (2007). First, a missing data analysis was conducted and 85 participants having 50% or more of the data missing were removed from the sample (Tabachnick & Fidell, 2007). Then, a missing data pattern analysis was performed which demonstrated that the remaining missing data (3%) was at complete random; therefore, the Monte Carlo Expectation Maximization Algorithm was used to replace the missing data (Allison, 2010; Tabachnick & Fidell, 2007). Following this step, the scales were tested for univariate outliers using standardized z-scores. Univariate outliers were any z-scores above or below 3.29 (Tabachnick

& Fidell, 2007). This process identified 7 outliers[1] that were removed: 2 outliers in the task significance scale, 1 outlier in the job engagement scale, 2 outliers in the perceived social impact scale, and 2 outliers in the perceived social worth scale. The scales were then tested for multivariate outliers using Mahalanobis distance (D^2) which is a popular approach to detect multivariate outliers (Johnson & Wichern, 2002; Tabachnick & Fidell, 2007). The Mahalanobis distance is evaluated using a Chi-square distribution (χ^2) and any value above 18.467 is considered a multivariate outlier (Meyers, Gamst, & Guarino, 2013). Results of this analysis identified 4 outliers and they were removed.

Following this, the variables were tested for multicollinearity to avoid using variables that are highly correlated and could hinder the analysis. The variance inflation factors (VIF) were checked and were found to be less than the maximum value of 10 (Amiot & Sansfaçon, 2011; Kleinbaum, Kupper, & Muller, 2007). This concluded the data preparation section. The final sample size consisted of 241 participants.

Analytical Strategy

The mediation and moderation hypotheses were tested using the steps outlined by Preacher and Hayes (2012) in a technique for computing mediation, moderation, and conditional process modeling. A macro, called PROCESS, was downloaded from Hayes' professional

[1] If the outliers were included in the study (N=253), there would be no evidence that challenge stressors mediate the relationship between task significance and job engagement in the multiple mediation analysis as there was not a statistically significant relationship between task significance and challenge stressors. However, the results of the other analyses were similar with and without the outliers.

website (Hayes, A. (2012). Retrieved from http://afhayes.com/spss-sas-and-mplus-macros-and-code.html) and it was added to SPSS 20 to test the hypotheses. The macro allows the simultaneous testing of multiple mediators and moderators with one independent and dependent variables as well as the use of the bootstrap method. In addition to that, it allows testing for a direct effect between the independent and dependent variables, as well as for an indirect effect between the independent and dependent variables taking into consideration the mediators and moderators used in the model.

Bootstrapping is a statistical technique that tests for indirect relationships among the variables by resampling the data so that the sample in the study is more representative of the population (Preacher & Hayes, 2008). This study utilized 10,000 bootstrap samples with a confidence interval (*CI*) of 95% which gives more representative results of the population. This method is superior to other methods because of its flexibility in incorporating more than one mediator and its ability to infer power calculations based on a small sample size and regardless of the shape or distribution of the sample (Hayes, 2009).

To illustrate better the process of this moderated mediation analysis, I will first explain each of the mediation and moderation technique in itself, and then I will present both the mediators and moderators in a comprehensive model.

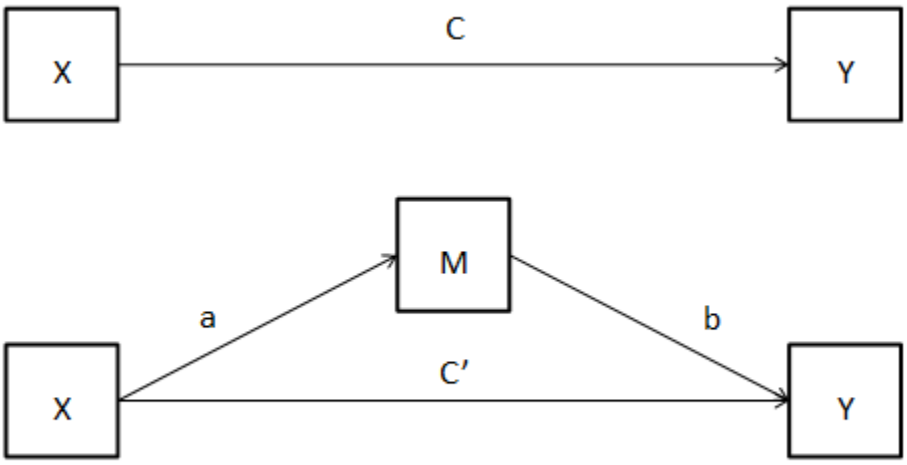
Mediation Analysis

Mediation analysis explains *how* the independent variable affects the dependent variable. Each mediation analysis performed by this process includes three relationships: (a) the effect of the independent variable on the mediator, (b) the effect of the mediator on the dependent variable, and (ab) the indirect effect of the independent variable on the dependent variable through the mediators (Preacher & Hayes, 2004; 2008). Path (c') represents the direct effect of

the independent variable on the dependent variable when the mediators are present in the model and path (c) represents the total effect of the independent variable on the dependent variable which is the sum of the direct and indirect effects, that is c = c' + ab (Preacher & Hayes, 2008). Figure 2 illustrates a simple mediation where x denotes the independent variable, y denotes the dependent variable, and M denotes the mediator.

When more then one mediator is present in the model, it is assumed that a_k relationships link the independent (X) to the different mediators (M_j), and b_k relationships link the mediators (M_j), to the dependent variable (Y) (Hayes, 2012). Typically, a model would have two or three mediators and similarily to the simple mediation, the total effect (c) of the independent variable on the dependent variable would be the sum of direct (c') and indirect relationships ($a_k b_k$). For instance, $c=c'+a_1b_1+a_2b_2$ in case of the presence of two mediators.

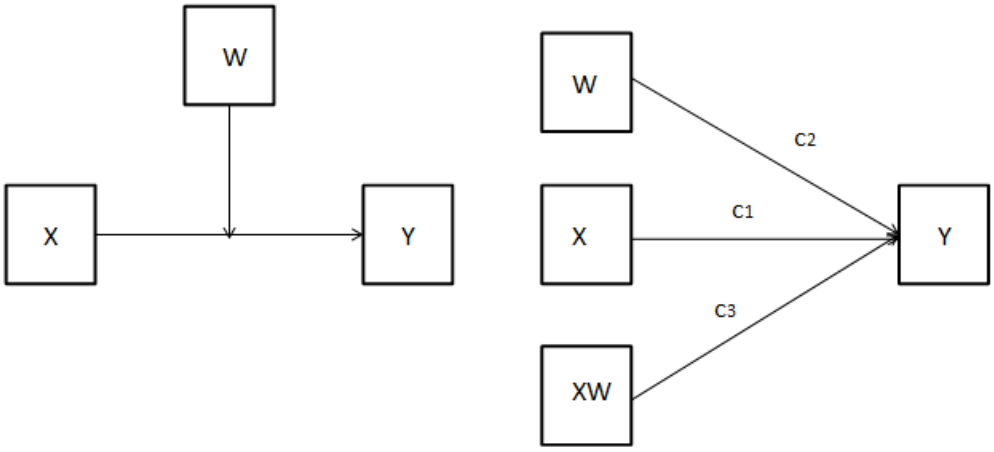
Figure 2 *Simple Mediation*



Moderation Analysis

Moderation analysis explains *when* the independent variable affects the dependent variable (or outcome variable) and whether the strength of the relationship is dependent on a third variable (Hayes, 2012). As such, the moderation technique highlighted by this process shows three relationships: (c_1) represents the effect of the independent variable on the outcome variable, (c_2) represents the effect of the moderator on the outcome variable, and (c_3) represents the interaction between the independent variable and the moderator and their effect on the outcome variable. Figure 3 shows the moderation analysis where (X) denotes the independent variable, (Y) denotes the dependent variable (outcome variable), (W) denotes the moderator, and (XW) denotes the interaction among the independent variable and the moderator. Similarly to the mediation process, when multiple moderators are present, more interaction terms are found and additional relationships are tested.

Figure 3 *Simple Moderation*



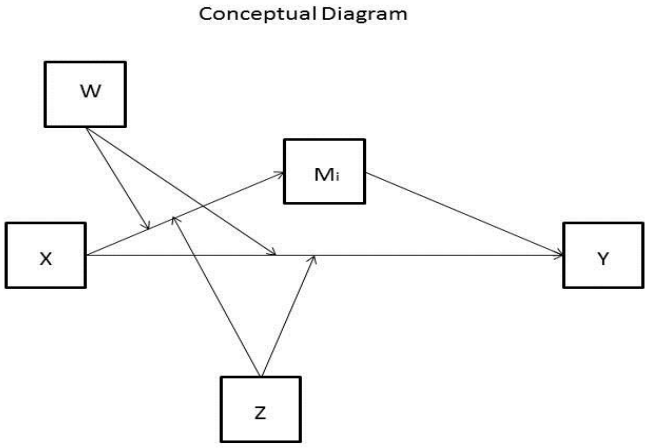
Moderated Mediation

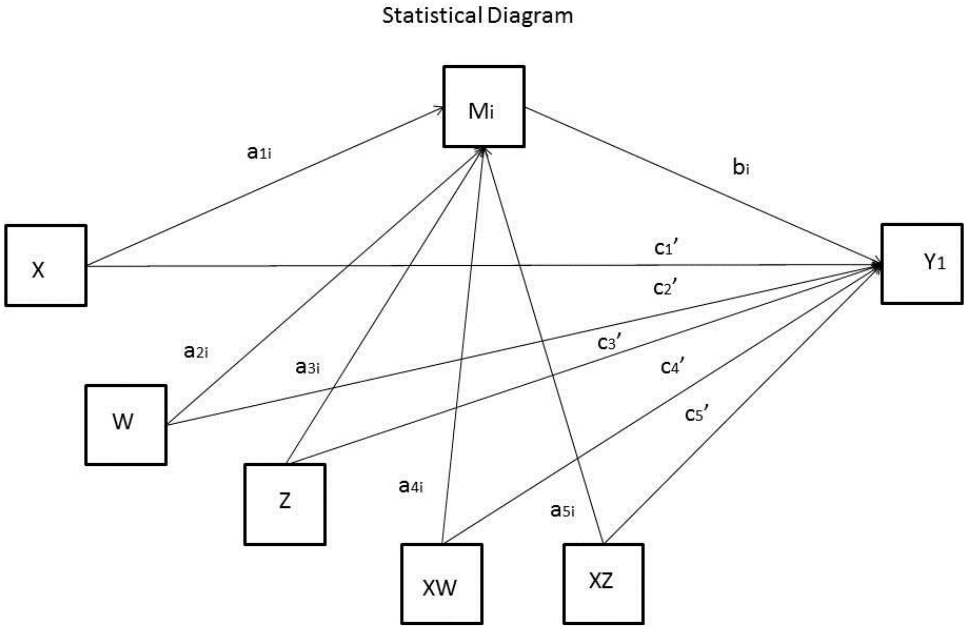
A moderated mediation occurs when the researcher is trying to explain the indirect effect (ab) of the independent variable (X) on the dependent variable (Y) through a mediator (M) which

is dependent on the presence of a moderator (W) (Preacher, Rucker, & Hayes, 2007). A moderated mediation using the macro now at hand can only assume one dependent variable which is one of its limitations (Hayes, 2012). This is why in order to test the hypotheses, two models should be tested, each with a different dependent variable given that there is no hypothesized relationship between the dependent variables. This model allows up to ten moderators to operate in parallel (Hayes, 2013). It also allows testing for direct and indirect relationships in order to infer a total relationship which is the sum of both (Hayes, 2012).

For the purposes of simplification, the tested variables were labeled in the figures below, (X) denotes the independent variable which is task significance, (Y) denotes the dependent variable (either job engagement or organization engagement), (M_i) denotes a mediator (either challenge stressors or hindrance stressors), (W) denotes a moderator which is perceived social impact, (XW) denotes the interaction between task significance and perceived social impact, (Z) denotes the second moderator which is perceived social worth, and (XZ) denotes the interaction between task significance and perceived social worth.

Figure 4 *Conceptual and Statistical Model 10* (Hayes, 2013, p. 12)





Note. Conditional indirect effect of X on Y through $M_i = (a_{1i} + a_{4i}W + a_{5i}Z)\ b_i$

Conditional direct effect of X on $Y_1 = c_1' + c_4'W + c_5'Z$

This model allows up to 10 mediators operating in parallel

Results

Correlational Results

Pearson's correlation coefficients were computed in order to investigate the relationships among the variables (Appendix H). The correlation coefficients showed that task significance is positively correlated with job engagement (r= .21, p <.01), organization engagement (r= .23, p<.01), challenge stressors (r= .13, p= .05), perceived social impact (r= .51, p< .01), and perceived social worth (r= .21, p< .01). Challenge stressors were positively correlated with job engagement (r= .29, p< .01). Hindrance stressors were negatively related to organization engagement (r= -.14, p= .05) and perceived social worth (r= -.34, p< .01). These preliminary results suggest the mediation effect of the challenge stressors between task significance and job engagement.

Two regression analyses were performed using the conditional process modeling discussed above. For the sake of simplifying the model, the variables are denoted by the following: task significance (X), challenge stressors (M_1), hindrance stressors (M_2), perceived social impact (W), perceived social worth (Z), job engagement (Y_1), organization engagement (Y_2). In addition, (XW) is the interaction variable between task significance and perceived social impact and (XZ) is the interaction variable between task significance and perceived social worth. It is important to note that the mediators were used in conjunction in the same analyses; however, for the sake of simplification, the results of the analyses are shown in separate consecutive diagrams.

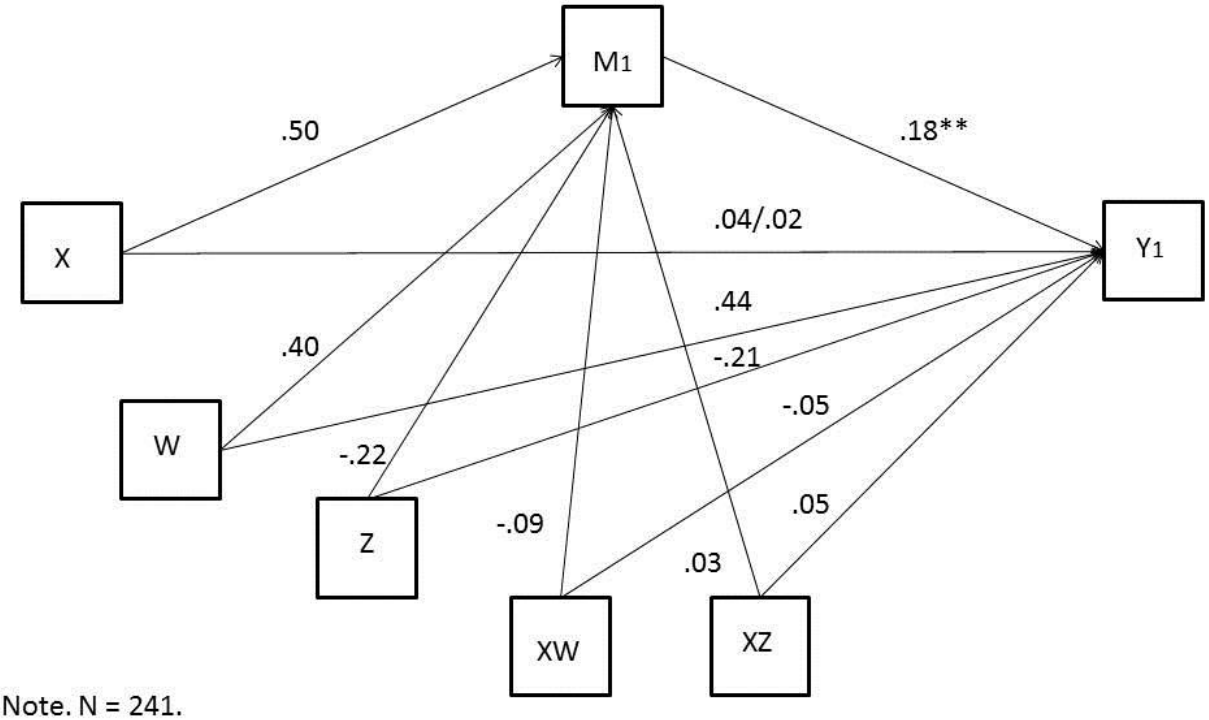
Task Significance and Job Engagement

The relationship between task significance and challenge stressors was investigated using the conditional process analysis. Results demonstrated no support for the relationship between

these two constructs when the moderated mediation was present, $R^2_{adj} = .03$, F (5,235) = 1.44, $p = .21$. The relationship between task significance and hindrance stressors demonstrated statistical significance when the moderators were present $R^2_{adj} = .15$, F (5,235) = 8.39, $p < .001$. This means that task significance was able to explain 15 percent of the variance in hindrance stressors when perceived social impact and worth moderated the relationship between these constructs. However, perceived social impact and worth did not result in any statistically significant relationships between task significance and the challenge stressors.

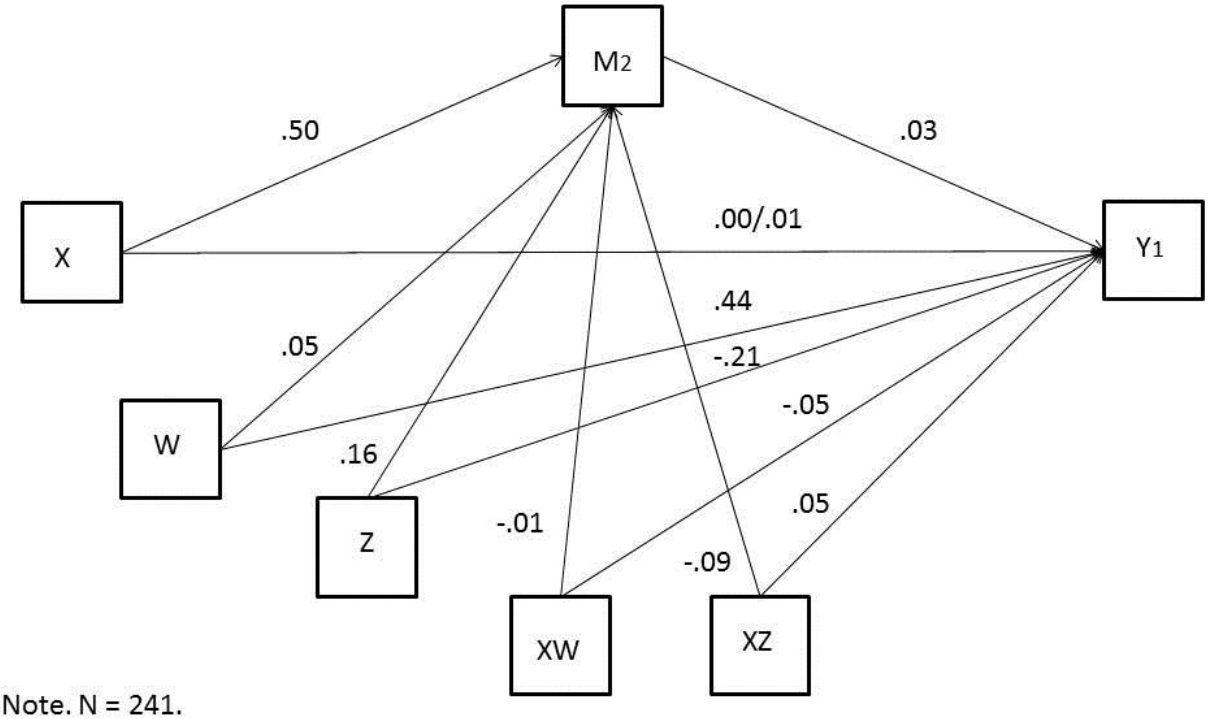
Finally, the relationship between task significance and job engagement was statistically significant when the moderated mediation was present $R^2_{adj} = .19$, F (7,233) = 7.89, $p < .001$; however, none of the relationships were significant on their own except for challenge stressors that were positively related to job engagement ($\beta = .18$, $p < .001$). This means that task significance was able to explain 19 percent of the variance in job engagement when both the mediators and moderators were present. Additionally, given the overall model, the relationship between challenge stressors and job engagement was statistically significant.

Figure 5 *Standardized Betas: Moderated Mediation with Job Engagement as dependent variable*



Note. N = 241.
* p<.05, **p<.001. Indirect effects are on the left while direct effects are on the right of the slash

(X) denotes task significance, (Y_1) denotes job engagement, (M_1) denotes challenge stressors, (W) denotes perceived social impact, and (XW) denotes the interaction between task significance and perceived social impact, (Z) denotes perceived social worth, and (XZ) denotes the interaction between task significance and perceived social worth.



Note. N = 241.
* p<.05, **p<.001. Indirect effects are on the left while direct effects are on the right of the slash

(X) denotes task significance, (Y_1) denotes job engagement, (M_2) denotes hindrance stressors, (W) denotes perceived social impact, and (XW) denotes the interaction between task significance and perceived social impact, (Z) denotes perceived social worth, and (XZ) denotes the interaction between task significance and perceived social worth.

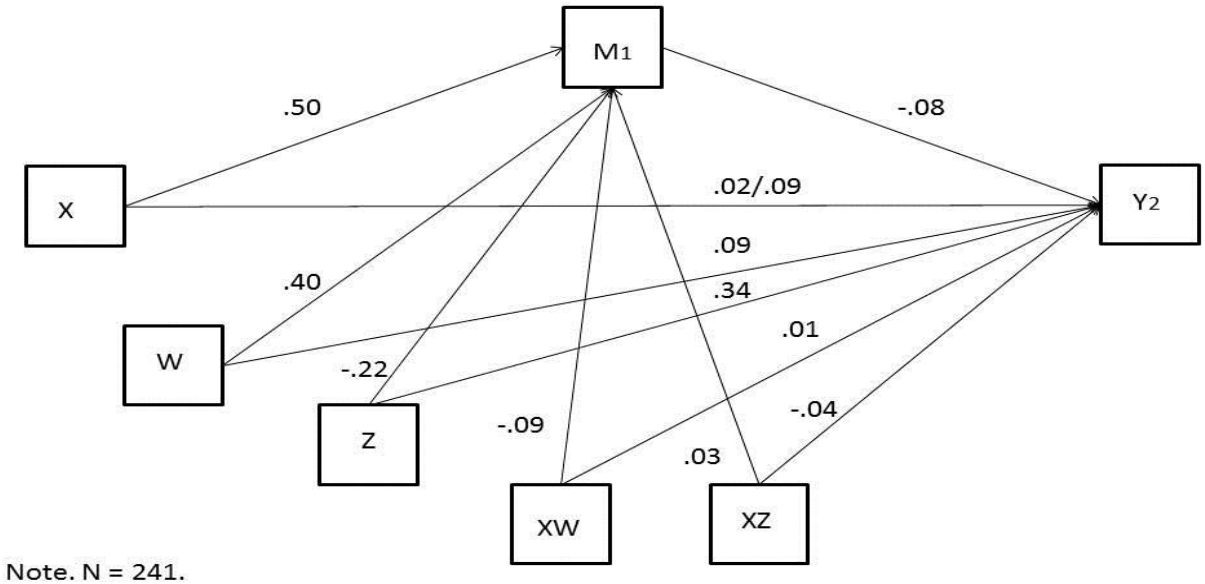
Task significance and Organization engagement

Similarly, when organization engagement was used as the dependent variable, the relationship between task significance and challenge stressors showed no statistical significance when the moderated mediation was present, $R^2_{adj} = .03$, $F\,(5,235) = 1.44$, $p = .21$. The summary model representing the relationships between task significance and hindrance stressors was statistically significant when the moderated mediation was present, $R^2_{adj} = .15$, $F\,(5,235) = 8.40$, $p < .001$; however, none of the relationships between task significance and hindrance stressors

were significant on their own. This means that the moderators and task significance jointly explain 15 percent of the variation in hindrance stressors.

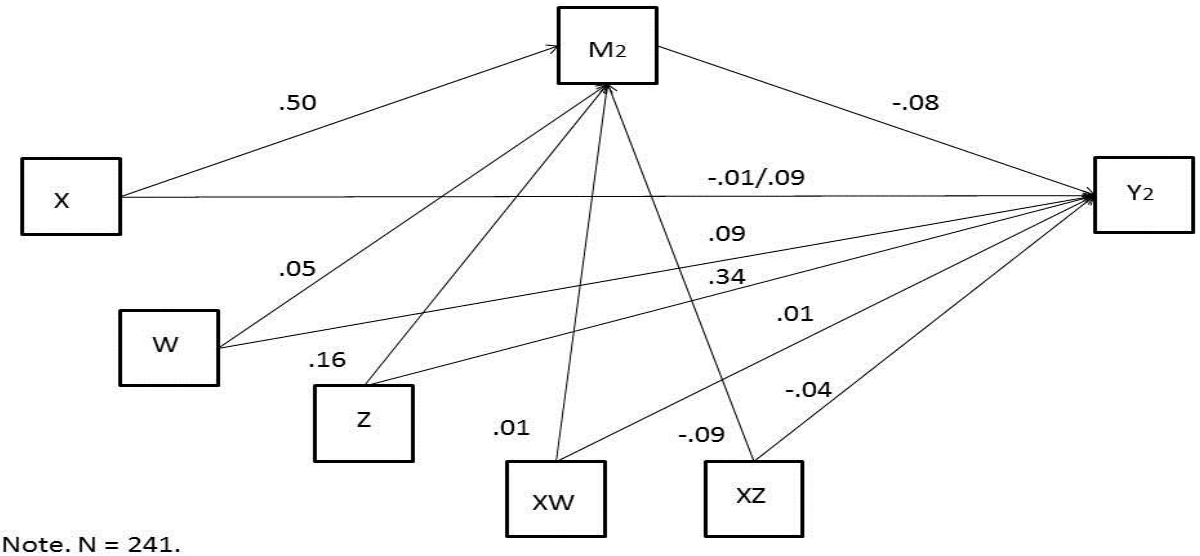
Finally, the summary model representing the relationships between task significance and organization engagement was statistically significant, $R^2_{adj} = .16$, $F\ (7,233) = 6.38$, $p < .001$; however, none of the individual relationships were statistically significant. This means that task significance along with the mediators and moderators was able to explain 16 percent of the variance in organization engagement.

Figure 6 *Standardized Betas: Moderated mediation with Organization Engagement as dependent variable*



Note. N = 241.
* p<.05, **p<.001. Indirect effects are on the left while direct effects are on the right of the slash

(X) denotes task significance, (Y_2) denotes organization engagement, (M_1) denotes challenge stressors, (W) denotes perceived social impact, and (XW) denotes the interaction between task significance and perceived social impact, (Z) denotes perceived social worth, and (XZ) denotes the interaction between task significance and perceived social worth.



Note. N = 241.
* p<.05, **p<.001. Indirect effects are on the left while direct effects are on the right of the slash

(X) denotes task significance, (Y_2) denotes organization engagement, (M_2) denotes hindrance stressors, (W) denotes perceived social impact, and (XW) denotes the interaction between task significance and perceived social impact, (Z) denotes perceived social worth, and (XZ) denotes the interaction between task significance and perceived social worth.

In sum, the overall model shows that there is a statistically significant relationship between task significance and job and organization engagement, respectively; challenge stressors are significantly related to job engagement; and the overall model between task significance and hindrance stressors is statistically significant when both moderators are present.

Table 2 shows some hypotheses that were partially supported with explanations. However, this analysis was not able to support a relationship between task significance and challenge stressors (H_{2a}) or a relationship between hindrance stressors and job and organization engagement (H_{3b}). Challenge stressors were not related to organization engagement ($H_{3a(b)}$). The moderated mediation also did not yield any statistically significant results for the individual effects of the moderators and could not support the mediation hypotheses of challenge (H_4) and hindrance stressors (H_5) between task significance and employee engagement.

Table 2 *Supported hypotheses using the moderated mediation model*

Hypotheses	Supported/ Not supported/Explanation
H_1: Task significance will be positively related to (a) job engagement and (b) organization engagement.	A positive relationship is not supported; task significance explains the variance in both job and organization engagement when the moderators and mediators are present in the model
H_{2b}: Task significance is negatively related to perceptions of hindrance stressors	A negative relationship is not supported; task significance explains the variance in hindrance stressors when the moderators are present in the model
H_{3a}: Challenge stressors are positively related to (a) job engagement and (b) organization engagement	$H_{3a(a)}$ is supported $H_{3a(b)}$ not supported
H_6: Perceived social impact will lead to stronger relationships between task significance and (a) challenge stressors and (b) hindrance stressors H_7: Perceived social worth will lead to stronger relationships between task significance and (a) challenge stressors and (b) hindrance stressors	Perceived social impact, perceived social worth, and task significance and the interaction effects between task significance and each of the moderators are jointly significant in explaining the variations in hindrance stressors only; there was no statistically significant relationships between the predictors and challenge stressors

The mediation effect of the stressors

Despite not finding any evidence of the mediation effects of the stressors between task significance and employee engagement in the moderated mediation model, the previously examined correlations and the statistically significant results that were found between challenge stressors and job engagement as well as task significance and hindrance stressors justified the additional investigation of the mediation effects of the stressors. In fact, task significance and challenge stressors were positively correlated (r= .13, p < .05) as well as challenge stressors and job engagement (r= .29, p < .01). In addition to this, the previous analysis showed that there was a statistically significant relationship between challenge stressors and job engagement (β=.18, p < .001) and a significant overall relationship between task significance and hindrance stressors in the presence of the mediators and moderators (R^2_{adj} = .15, F (5,235) = 8.40, p < .001).

Additionally, the moderated mediation analysis relied on the fact that task significance, perceived social impact, and perceived social worth formed three distinct factors; however, an exploratory factor analysis demonstrated that the items only merged into two factors rather than three ($\chi^2_{(19)}$ =191.54, p<.001): the four items of task significance loaded on one factor (except for item number two which showed equal loading on the other factor). On the other hand, the five items of perceived social impact and worth loaded solely on the other factor (Appendix H). Apparently the measures for the moderators did not discriminate well between perceived social impact and perceived social worth. This could be because the measures are relatively new and were only used by Grant (2008). The results show that despite the acceptable levels of the value inflation factor (VIF), the high correlations between perceived social impact and perceived social worth could have caused the lack of results for moderation. Perceived social impact and perceived social worth were highly and positively correlated (r= .52, p < .01).

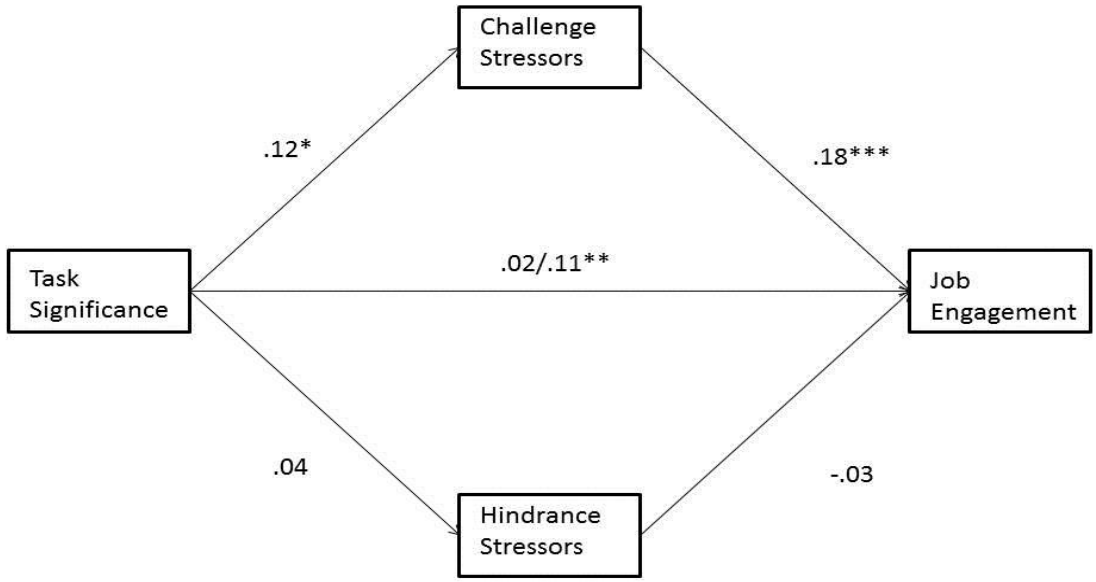
Given the inability to draw any conclusions about the role of the mediators without the inclusion of the moderators in the moderated mediation analysis, an additional analysis was proposed which excluded the moderators from the analysis. Two multiple mediation analyses were performed where the mediators were considered to be operating in parallel, without an interaction between the two. This method is similar to the mediation process explained previously where the total effect is the sum of the direct effect between task significance on each component of employee engagement and the indirect effect of task significance on the components of employee engagement through the mediators (Hayes, 2012). Similarly to the moderated mediation, there were 10,000 bootstraps and a confidence interval of 95% was assumed.

The analyses show that task significance on its own affects job engagement (β=.11, p<.01) which gives support to H_{1a}. It also shows that challenge stressors mediate the relationship between task significance and job engagement which supports hypothesis H_{4a}. In fact, task significance and challenge stressors are positively related (β=.12, p<.05) and challenge stressors and job engagement are also positively related (β=.18, p<.001) which further support hypotheses H_{2a} and $H_{3a(a)}$. The total effect of task significance on job engagement is significant (β=.13, p<.001).

Furthermore, the analyses shows that task significance is positively related to organization engagement H_{1b} (β=.17, p<.001). In addition, hindrance stressors are negatively related to organization engagement (β=-.16, p<.001) which supports hypotheses $H_{3b(b)}$. The total effect of task significance on organization engagement is significant (β=.17, p<.001).

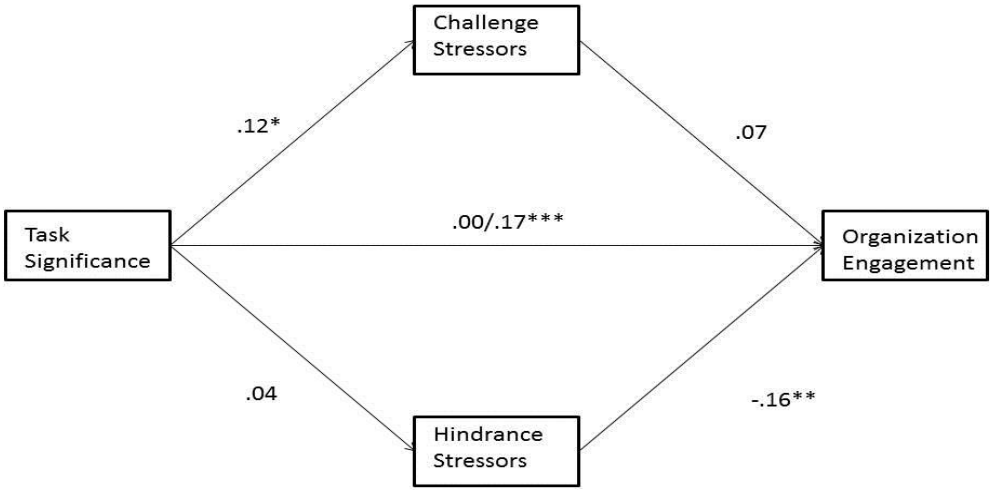
In sum, table 3 shows the supported hypotheses using the multiple mediation models and excluding the moderators.

Figure 7 *Multiple mediation with job engagement as dependent variable*



Note. *N*=241. *p<.05, **p<.01, ***p<.001. Indirect effects are identified on the left while direct effects are on the right of the slash

Figure 8 *Multiple mediation with organization engagement as dependent variable*



Note. *N*=241. *p<.05, **p<.01, ***p<.001. Indirect effects are identified on the left while direct effects are on the right of the slash

Table 3 *Supported hypotheses using the multiple mediation model*

Hypotheses	Supported/Not supported/Not tested
H_1: Task significance will be positively related to (a) job engagement and (b) organization engagement.	H_{1a} and H_{2a} are both supported
H_{2a}: Task significance is positively related to perceptions of challenge stressors	Supported
H_{2b}: Task significance is negatively related to perceptions of hindrance stressors	Not supported
H_{3a}: Challenge stressors are positively related to (a) job engagement and (b) organization engagement	$H_{3a(a)}$ is supported $H_{3a(b)}$ is not supported
H_{3b}: Hindrance stressors will be negatively related to (a) job engagement and (b)organization engagement	$H_{3b(a)}$ is not supported $H_{3b(b)}$ is supported
H_4: Challenge stressors will mediate the relationships between task significance and (a) job engagement and (b) organization engagement, respectively.	H_{4a} is supported H_{4b} is not supported
H_5: Hindrance stressors will mediate the relationships between task significance and (a) job engagement and (b) organization engagement, respectively.	H_{5a} and H_{5b} are not supported
H_6: Perceived social impact will lead to stronger relationships between task significance and (a) challenge stressors and (b) hindrance stressors.	Not tested
H_7: Perceived social worth will lead to stronger relationships between task significance and (a) challenge stressors and (b) hindrance stressors.	Not tested

Discussion

The present study aimed at combining the theories of job design, job stress, and social perceptions in explaining employee engagement in its two new dimensions, job and organizational engagement (Saks, 2006). The analysis used both a moderated mediation as well as a multiple mediation process; results among both were consistent for almost all the supported hypotheses. The multiple mediation analysis confirmed the previously supported hypotheses in the moderated mediation between task significance and employee engagement, job and organizational engagement. However, the multiple mediation did not prove any relationship between task significance and hindrance stressors which brings us to the conclusion that a relationship between these two constructs depends on the presence of the moderators. Additionally, the multiple mediation analysis also showed a positive relationship between task significance and challenge stressors as well as a positive relationship between challenge stressors and job engagement; hence, the hypothesized mediation effect of challenge stressors between task significance and job engagement was found. Finally, the multiple mediation analyses also demonstrated a negative relationship between hindrance stressors and organization engagement that the moderated mediation did not show.

Consistent with prior research on the job characteristics and employee engagement, this study confirms a positive relationship between the two, highlighting the need for exploring task significance as a construct on its own. The job characteristics were previously found to affect employees' level of work engagement; however, work engagement was conceptualized as the opposite of burnout which is not the case in this study (Maslach et al., 2001; Van den Broeck et al., 2010). This study aimed at explaining employee engagement from a new perspective that is not related to burnout. It provides support to the research done by Saks (2006) where employee engagement was divided into job and organization engagement. Job and organization

engagement are both psychological and physical where an employee has one role which is performing his job and another role which is being a member of the organization (Kahn, 1990). Saks (2006) also demonstrated that the job characteristics are antecedents of employee engagement; however, his research did not use task significance as a predictor of its own rather it was computed along the other job characteristics. This study shows that when a person's job gives him an opportunity to affect the lives of others inside or outside the organization, that is, when it is high on task significance, he will be more engaged in his job and organization. The faculty members who participated in the study hold a highly significant job where they do not only work for a university (organization) and are supposed to perform a certain role but also have a job of conducting research and delivering knowledge to students among other roles.

Moreover, task significance was positively related to challenge stressors which could be explained by the importance associated with the job of the employee. The higher the perceptions of significance, the more the employee experiences responsibility and intrinsic motivation (Oldham & Hackman, 2010) and the more challenge stressors he would experience, as the latter are considered under the control of an individual and would allow him to reach his goals personally and professionally (Cavanaugh et al., 2000).

In addition, challenge stressors were strong predictors of job engagement in both the moderated mediation and the multiple mediation analyses. Previous research showed that challenge stressors led to increased employee engagement as they require a problem-solving coping style (Crawford et al., 2010). When employees have to be actively working to cope with challenge stressors that are characterized with demands, pressure, time urgency, and workload (LePine et al., 2004), they are expected to be more engaged in their job. This study supported these hypotheses and showed that the faculty members who experienced more challenge

stressors were more engaged in their job. However, the moderated mediation and the multiple mediation showed a strong significant relationship between challenge stressors and job engagement but not with organization engagement. Based on both analyses, we can conclude that challenge stressors are not related to organization engagement. That is, when an employee experiences challenge stressors, he will be engaged in his job but it will not have any statistically significant relationship with his role in the organization.

Challenge stressors mediated the relationship between task significance and job engagement in the multiple mediation analyses. This suggests that task significance also explains job engagement through challenge stress. As the job provides an employee with task significance, he would experience more challenge stressors, and consequently would be more engaged. The multiple mediation shows that the direct effect (c'=.11) of task significance on job engagement is stronger than the indirect effect (ab=.12x.18) of task significance through challenge stressors. However, the mediation effect of the challenge stressor is still statistically significant ($p<.05$) and merits consideration.

Furthermore, hindrance stressors showed a negative relationship with organization engagement in the multiple mediation analysis. As hindrance stressors are aspects beyond the employee's control (Wallace et al., 2009) and are related to resource inadequacy, organizational politics, red tape, and role ambiguity (Jamal & Ahmed, 2012), this would explain the withdrawal of the employee from the organization engagement (Crawford et al, , 2010). No statistical significance was shown between task significance and hindrance stressors in the multiple mediation analysis. However, the moderated mediation showed that task significance explains 15 percent of the variance in hindrance stressors when both perceived social impact and perceived social worth were present in the model. This suggests that there is a relationship between task

significance and hindrance stressors although no directional hypothesis could be inferred. Additionally, we cannot make any conclusions as to whether perceived social impact, worth, or the interaction between the two along with task significance led to the statistically significant results. However, the results suggest that when an employee, whose job has elements of task significance, perceives that he can actually make a difference in the lives of others (perceived social impact) and that he believes that his job is highly regarded in society (perceieved social worth), his perceptions of hindrance stressors would differ.

When analyzing the moderated mediation model, we can conclude that perceived social impact and worth only helped explain the relationship between task significance and hindrance stressors; however, they did not moderate the relationship between task significance and challenge stressors. Additionally, given that the variables are jointly significant, but none on their own, in explaining the variation in hindrance stressors, it is not possible to infer which predictor had stronger effects in explaining hindrance stressors. In conclusion, social perceptions might alter employees' perceptions of hindrance stressors, which are those that are beyond their control (Wallace et al., 2009), and future research should further investigate their contribution to the field of organizational behavior.

Limitations

This study has several limitations. First, it is cross-sectional in nature and no causality or direction between the variables could be inferred. Moreover, the measurements are made at a single time therefore the study does not explain any potential changes over time (Mook, 2001). In addition, while this study aimed to be context-specific, the results cannot be generalizable since a faculty member's profession is in its essence highly interactive with the students and the university, and not all professions are highly interactive in nature. This high interaction was a

key in determining that faculty members would be a good sample when studying task significance. Moreover, the results of the study might be at risk of common method bias (method biases) as the data were measured through questionnaires (Meade, Watson, & Kroustalis, 2007).

Furthermore, the reliability coefficient for the hindrance stressors scale in this study had a Cronbach's alpha value ($\alpha = .63$) slightly lower than the conventional acceptable limit of $\alpha = .70$ (George & Mallery, 2003). It is known that the higher the Cronbach's alpha and the closer it is to 1, the more the items of the scale demonstrate an internal consistency (Gliem & Gliem, 2003); however, the Varimax rotated factor analysis did not reveal that the reliability of the scale could be enhanced by deleting certain items (Appendix G). Previous studies using both stressors also showed that the Cronbach's alpha for hindrance stressors is usually below that of challenge stressors (Cavanaugh et al., 2000; LePine et al., 2004). One drawback of having lower reliability in one of the measures is its attenuating effect[2] on the correlation between the measured variable and other variables (Aiken & West, 1996). This could explain the nonsignificant and inconsistent results when this variable was used as an outcome variable or a mediator. One way to improve the reliability of a scale is to increase the number of items it includes (DeVellis, 1991). Future researchers might want to improve this scale's Cronbach's alpha.

It is important to note that despite the fact that the sample was context-specific, it was still a random selection as the faculty members from Concordia and McGill Universities taught courses ranging from physics to arts among others. This could explain their different perceptions of hindrance stressors. One could suggest that faculty members do not perceive hindrance stressors the same as other employees. It also asserts that challenge and hindrance stressors have differential effects on outcome variables as demonstrated by this study. However, these notions should be further investigated in future research.

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[2] The correction for attenuation formula: rxy / sqrt(rxx * ryy)
The disattenuated correlation is the raw correlation between x and y (rxy) divided by the square root of the product of the reliability of x (rxx) and the reliability of y (ryy) (Murphy & Davidshofer, 1988, p. 130)

Finally, the macro that was used in the analysis of both the moderated mediation and the multiple mediation is limited to one dependent variable at the time. This is why two regression analyses had to be done for each case (Hayes, 2012). If both job and organization engagement were analyzed simultaneously, it is possible that we could have had different results.

Despite all the limitations, this study was able to show that task significance could solely predict job and organization engagement, challenge stressors mediate the relationship between task significance and job engagement, and hindrance stressors are negatively related to organization engagement, and this warrants further study in these areas.

Future Directions

Research on task significance as a construct on its own is still limited. At this point, more empirical research should consider this variable due to its importance inside and outside the organization. Employees will feel more engaged in their job and organization if they know that their work will influence the lives of others whether it is inside the organization or in society. Task significance should be studied with more outcome variables such as intrinsic and extrinsic motivation, work satisfaction, burnout, etc. This would allow researchers to better understand task significance and how to use it to serve employees, organizations, and societies as a whole.

Future research should also investigate the relationships between the stressors and outcome variables. This study shows that challenge stressors lead to more job engagement and hindrance stressors lead to less organizational engagement. Additional research is required to assess the relationships between hindrance stressors and employee engagement. More importantly, more research should test the differential effects of the stressors on outcome variables. It is no longer assumed that stress in general is negative as it could carry positive work outcomes as demonstrated by the positive relationship between challenge stressors and job

engagement. Moreover, future studies in organizational behavior should test the sole role of hindrance stressors in explaining outcome variables especially given that it was shown to be negatively related to organizational engagement.

Finally, additional research is required to understand the contributions of perceived social impact and perceived social worth as it is important to consider how an employee's societal perceptions could affect his behaviors, perceptions, or performance. Until today, limited research was done on these constructs and further empirical testing is called for to better understand their contribution to organizational behavior.

Practical Contributions

This study is the first to show that task significance on its own could result in employee engagement, directly and indirectly through the challenge stressors. This urges organizations to make the jobs of employees more significant and make sure that they understand their contribution inside and outside the organization which in turn would make them more engaged. Organizations would want their employees to be engaged because engagement was a predictor of their job satisfaction, organizational commitment, and organizational citizenship behavior (Saks, 2006).

This study expands the literature on the dual dimension of employee engagement. It proposes that the new model of job and organization engagement is valid and deserves future consideration. Additionally, it supports the measurement of employee engagement using a new scale that is far from the popular scale of engagement/burnout (Maslach et al., 2001). The scale demonstrated high internal consistency reliability in its two dimensions, job and organization.

Finally, this study expands the literature on job stress as it shows how challenge stressors are positively related to job engagement. Both the moderated mediation and the multiple

mediation models showed a strong positive relationship between challenge stressors and job engagement. In practice, organizations should realize the importance of challenge stressors and should incorporate them in their employees' jobs as they were shown to lead to several positive work outcomes (Jamal & Ahmed, 2012). The study also demonstrated that hindrance stressors are negatively related to organizational engagement. This is why organizations should address these stressors and try to limit them because they are barriers to effective performance (Jamal, 2010) and lead employees to withdraw from the organization as demonstrated by less organizational engagement.

Conclusion

The present study sought to contribute to the literature in job design, job stress, employee engagement, and social perceptions. The findings supported strong relationships between task significance and job and organization engagement, respectively; challenge stressors and job engagement; and hindrance stressors and organization engagement. Additionally, challenge stressors were found to mediate the relationship between task significance and job engagement in the multiple mediation model but they did not mediate the relationship between task significance and organization engagement. On the other hand, hindrance stressors did not mediate the relationship between task significance and employee engagement in its two dimensions. Furthermore, perceived social impact and worth only helped in explaining the relationship between task significance and hindrance stressors in the moderated mediation analysis. This study filled a gap in literature as it is the first to examine the relationships between task significance on its own and employee engagement (job and organization), directly and indirectly through the mediation effect of the stressors. This study demonstrates a theoretical framework for future research.

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Appendix A

Participant Consent Form, Cover Letter, & Thank You Letter

Participant Consent Agreement for On-Line Survey

This form states that I understand that I am being asked to participate in a research project conducted by Serena El-Asmar, Master of Science (MSc) student at the John Molson School of Business, Concordia University under the supervision of Dr. Muhammad Jamal of the John Molson School of Business.
Phone: 438-393-3438 E-mail: s_elasm@jmsb.concordia.ca

A. Purpose

The purpose of this questionnaire is to obtain data about the roles of job design, job stressors, and social perceptions in explaining organizational behavior.

B. Procedures

Questionnaires will be disseminated online through *Qualtrics* faculty members of several universities in Montreal, namely Concordia University and McGill University. The total number of questions is about 60 questions. Instructions for completing the questionnaire are available before each section. The answers will be held strictly confidential and anonymous and no single person could be identified from the study.

Please answer all questions before submitting the survey. In some instances questions may appear redundant; however they are designed to ensure validity and reliability. Therefore, I appreciate if you answer ALL questions so that you may help contribute to this research project.

C. Risks and Benefits

There are no potential risks associated with the participation in the present study. Your participation will yield many benefits and further the research being conducted in the fields of job design, social perceptions, job stressors, and employee engagement.

D. Conditions of Participation

- I understand that I have the right to withdraw my consent and discontinue my participation at any time without negative consequences.
- I understand that my participation in this study is confidential and fully anonymous. (My identity cannot be identified).
- I understand that the data from the study may be published in academic journals and conferences, without disclosing my identity.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT.

I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

If at any time you have questions about your rights as a research participant, please contact the Research Ethics and Compliance Advisor of Concordia University, at 514.848.2424 x 7481 or ethics@alcor.concordia.ca.

In order to participate in this study, please choose one of the following:

I agree to participate in the study

- ☐

I don't agree to participate in the study

- ☐

Cover Letter

Dear Participant,

The purpose of this questionnaire is to obtain data about the roles of job design, job stressors, and social perceptions in explaining organizational behavior. It will take about 10 minutes of your time to be completed. If it is to be useful, it is important that you answer each question honestly and independently.

There are no potential risks associated with the participation in the present study. Your participation will yield many benefits and further the research in organizational behavior.

I understand that my participation in this study is confidential, and that while the data from this study may be published, all results will be compiled and analyzed as an aggregate, therefore I cannot be identified by my answers. I understand that the researcher cannot guarantee that my responses will not come under the scrutiny of third party law enforcement officials where U.S. legislation applies.

· I understand that I have the right to withdraw my consent and discontinue my participation at any time without negative consequences.
· I understand that my participation in this study is confidential and fully anonymous. (My identity cannot be identified).
· I understand that the data from the study may be published in academic journals and conferences, without disclosing my identity.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

If at any time you have questions about your rights as a research participant, please contact the Research Ethics and Compliance Advisor of Concordia University, at 514.848.2424 x 7481 or ethics@alcor.concordia.ca.

I agree to participate in the study

- ☐

I don't agree to participate in the study

- ☐

Thank You Letter

Dear Faculty Member,

Thank you for participating in this research project.

The purpose of the present study is to assess the relationships between job design, job stressors, and employee engagement.

Please remember that the data collected will remain confidential and no single individual can be identified from the study. The aggregate data will be analyzed in order to further the research in organizational behavior.

If you would like to know more about the present study, we can be reached at the address listed below.

Sincerely,

Serena El-Asmar
M.Sc. (Administration) student
JMSB, Concordia University
Montreal, Quebec
S_elasm@jmsb.concordia.ca

Dr. Muhammad Jamal
Professor of Management
JMSB, Concordia University
Montreal, Quebec
Jamal@jmsb.concordia.ca
Phone: 514.848.2424 x 2935

John Molson School of Business
1455 De Maisonneuve Blvd. West,
Suite GM 503-53
Montreal, Quebec
H3G 1M8

Appendix B

Demographics

This section covers your demographic information.

1. Gender
   - o Male
   - o Female

2. Please indicate your age (years)

3. Please indicate the university you strongly associate yourself with
   - o Concordia University
   - o McGill University

4. Please indicate the academic unit you strongly identify with (Concordia University)

- Faculty of Arts and Science
- Faculty of Engineering and Computer Science
- Faculty of Fine Arts
- John Molson School of Business
- School of Graduate Studies
- School of Extended Learning

5. Please indicate the academic unit you strongly identify with (McGill University)

- Faculty of Agricultural and Environmental Sciences
- Faculty of Arts
- School of Continuing Studies
- Faculty of Dentistry
- Faculty of Education
- Faculty of Engineering
- Graduate and Postdoctoral studies
- Faculty of Law
- Desautels Faculty of Management
- Faculty of Medecine
- Schulich School of Music
- Faculty of Religious Studies
- Faculty of Science

6. Please indicate the academic rank you belong to

- Chair
- Professor
- Associate Professor
- Assistant Professor
- Senior Lecturer
- Lecturer Assistant Professor
- Full-time Lecturer
- Part-time Lecturer
- Post-Doctoral Fellow

7. Are you currently working full-time or part-time at the university?

- Full-time
- Part-time

8. Are you currently a tenured teacher?

- Yes
- No

9. Please indicate the course level(s) you currently teach

- Graduate
- Undergraduate
- Other

10. Please indicate the number of courses you are teaching this semester

Appendix C

The Work Design Questionnaire (Morgeson & Humphrey, 2006)

The following statements assess the job design and nature of work. Please indicate the extent to which you agree or disagree with each statement using the 7-point scale provided.

1. Strongly Disagree	2. Disagree	3. Somewhat Disagree	4. Neutral	5. Somewhat Agree	6. Agree	7. Strongly Agree

1. The job itself provides me with information about my performance	_____
2. The job allows me to make a lot of decisions on my own	_____
3. The job involves performing a variety of tasks	_____
4. The job has a large impact on people outside the organization	_____
5. The job involves a great deal of task variety	_____
6. The job involves completing a piece of work that has an obvious beginning and end	_____
7. The job involves doing a number of different things	_____
8. The job is arranged so that I can do an entire piece of work from beginning to end	_____
9. The job itself is very significant and important in the broader scheme of things	_____
10. The job itself provides feedback on my performance	_____
11. The job provides me the chance to completely finish the pieces of work I begin	_____
12. The job provides me with significant autonomy in making decisions	_____
13. The job requires the performance of a wide range of tasks	_____
14. The results of my work are likely to significantly affect the lives of other people	_____
15. The work activities themselves provide direct and clear information about the effectiveness (e.g. quality and quantity) of my job performance	_____
16. The work performed on the job has a significant impact on people outside the organization	_____
17. The job gives me a chance to use my personal initiative or judgment in carrying out the work	_____

Scoring Keys: The Work Design Questionnaire

Items	Construct
# 2, 12, 17	Autonomy
# 3, 5, 7, 13	Skill Variety
# 4, 9 , 14, 16	Task Significance
# 6, 8, 11	Task Identity
# 1, 10, 15	Feedback from the job

Note. Each construct is scored by averaging the number of items.

Appendix D

Job and Organization Engagement (Saks, 2006)

These questions involve your feelings towards the job and organization. Remember, your answers are completely confidential and your boss will never know how you responded to these questions. Please indicate the extent to which you agree with each statement using the five-point scale provided.

1. Strongly Disagree	2. Disagree	3. Neither Agree nor Disagree	4. Agree	5. Strongly Agree

1. Being a member of this organization is very captivating	_____
2. I really "throw" myself into my job	_____
3. One of the most exciting things for me is getting involved with things happening in this organization	_____
4. Sometimes I am so into my job that I lose track of time	_____
5. I am really not into the "goings-on" in this organization *	_____
6. This job is all consuming; I am totally into it	_____
7. Being a member of this organization make me come "alive"	_____
8. My mind often wanders and I think of other things when doing my job *	_____
9. Being a member of this organization is exhilarating for me	_____
10. I am highly engaged in this organization	_____
11. I am highly engaged in this job	_____

*This item is reverse scored.

Scoring Keys: Job Engagement and Organization Engagement

Items	Construct
# 2, 4, 6, 8*, 11	Job Engagement
# 1, 3, 5*, 7, 9, 10	Organization Engagement

Note. The original scale was published with subscale items clustered one after the other. In order to avoid biases, items were randomized. The current item numbers represent the order in which items were presented in the study.

Appendix E

Challenge and Hindrance Stressors (Cavanaugh *et al*., 2000)

Listed below are some items which relate to your level of stress at work. Please indicate the level of that stress that you experience due to these circumstances using the five-point scale provided with anchors (1) No Stress and (5) A great deal of stress

1. The number of projects or assignments I have	1	2	3	4	5
2. The amount of time I spend at work	1	2	3	4	5
3. The lack of job security I have	1	2	3	4	5
4. The volume of work that must be accomplished in the allotted time	1	2	3	4	5
5. The degree to which politics rather than performance affects organizational decisions	1	2	3	4	5
6. The inability to clearly understand what is expected of me on the job	1	2	3	4	5
7. The amount of red tape I need to go through to get my job done	1	2	3	4	5
8. Time pressures I experience	1	2	3	4	5
9. The scope of responsibility my position entails	1	2	3	4	5
10. The amount of responsibility I have	1	2	3	4	5
11. The degree to which my career seems “stalled”	1	2	3	4	5
12. The amount of time I spend in meetings	1	2	3	4	5
13. The number of phone calls and office visits I have during the day	1	2	3	4	5
14. The extent to which my position presents me with conflicting demands	1	2	3	4	5
15. The opportunities for career development I have had	1	2	3	4	5
16. The amount of traveling I must do	1	2	3	4	5

Scoring keys: Challenge and Hindrance Stressors

Items	Construct
# 1, 2, 4, 8, 9, 10	Challenge Stressors
# 3, 5, 6, 7, 11	Hindrance Stressors
# 12, 13, 14, 15, 16	Other Stressors

Note. The original scale was published with subscale items clustered one after the other. In order to avoid biases, items were randomized. The current item numbers represent the order in which items were presented in the study.

Appendix F

Perceived Social Impact and Perceived Social Worth (Grant, 2008)

Please indicate the extent you agree with each statement using the seven-point scale provided

1. Strongly Disagree	2. Disagree	3. Somewhat Disagree	4. Neutral	5. Somewhat Agree	6. Agree	7. Strongly Agree

1. I am very conscious of the positive impact that my work has on others	_____
2. I feel that others appreciate my work	_____
3. I am very aware of the ways in which my work is benefiting others	_____
4. I feel that other people value my contributions at work	_____
5. I feel that I can have a positive impact on others through my work	_____

Items	**Construct**
# 1, 3, 5	Perceived Social Impact
# 2, 4	Perceived Social Worth

Note. The original scale was published with subscale items clustered one after the other. In order to avoid biases, items were randomized. The current item numbers represent the order in which items were presented in the study.

Appendix G

Hindrance Stressors: Reliability Statistics

Reliability Statistics

Cronbach's Alpha	*N of Items*
.626	5

Item-Total Statistics

	Scale Mean if Item Deleted	*Scale Variance if Item Deleted*	*Corrected Item-Total Correlation*	*Cronbach's Alpha if Item Deleted*
The lack of job security I have	9.73	10.256	.282	.627
The degree to which politics rather than performance affects organizational decisions	8.75	9.388	.445	.537
The inability to clearly understand what is expected of me on the job	9.89	10.441	.472	.537
The amount of red tape I need to go through to get my job done	9.04	10.525	.311	.606
The degree to which my career seems “stalled”	9.66	10.068	.424	.551

Appendix H

Exploratory Factor Analysis

Goodness-of-fit Test

Chi-Square	*df*	*Sig.*
191.543	19	.000

Rotated Factor Matrix[a]

	Factor	
	1	2
The job has a large impact on people outside the organization		.843
The job itself is very significant and important in the broader scheme of things	.461	.418
The results of my work are likely to significantly affect the lives of other people	.390	.702
The work performed on the job has a significant impact on people outside the organization		.935
I am very conscious of the positive impact that my work has on others	.763	
I am very aware of the ways in which my work is benefiting others	.795	
I feel that I can have a positive impact on others through my work	.746	
I feel that others appreciate my work	.673	
I feel that other people value my contributions at work	.589	

Extraction Method: Maximum Likelihood.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Appendix I

Correlation Matrix

Correlations

		TaskSignificance	JobEngagement	OrganizationEngagement	ChallengeStressors	HindranceStressors	PSImpact	PSWorth
TaskSignificance	Pearson Correlation	1	.214**	.226**	.127*	.050	.506**	.208**
	Sig. (2-tailed)		.001	.000	.049	.439	.000	.001
	N	241	241	241	241	241	241	241
JobEngagement	Pearson Correlation	.214**	1	.429**	.286**	.066	.304**	.225**
	Sig. (2-tailed)	.001		.000	.000	.308	.000	.000
	N	241	241	241	241	241	241	241
OrganizationEngagement	Pearson Correlation	.226**	.429**	1	.064	-.133*	.325**	.329**
	Sig. (2-tailed)	.000	.000		.322	.039	.000	.000
	N	241	241	241	241	241	241	241
ChallengeStressors	Pearson Correlation	.127*	.286**	.064	1	.327**	-.007	-.059
	Sig. (2-tailed)	.049	.000	.322		.000	.909	.360
	N	241	241	241	241	241	241	241
HindranceStressors	Pearson Correlation	.050	.066	-.133*	.327**	1	-.052	-.343**
	Sig. (2-tailed)	.439	.308	.039	.000		.420	.000
	N	241	241	241	241	241	241	241
PSImpact	Pearson Correlation	.506**	.304**	.325**	-.007	-.052	1	.515**
	Sig. (2-tailed)	.000	.000	.000	.909	.420		.000
	N	241	241	241	241	241	241	241
PSWorth	Pearson Correlation	.208**	.225**	.329**	-.059	-.343**	.515**	1
	Sig. (2-tailed)	.001	.000	.000	.360	.000	.000	
	N	241	241	241	241	241	241	241

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).