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MODERATING ROLE OF JUSTICE PERCEPTION IN THE RELATIONSHIPS BETWEEN STRESSORS AND STRAINS

A Thesis

Presented to

The Faculty of the Department of Psychology

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

Jashaswini Rath

December 2011

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The Designated Thesis Committee Approves the Thesis Titled

MODERATING ROLE OF JUSTICE PERCEPTION IN THE RELATIONSHIPS BETWEEN STRESSORS AND STRAINS

by

Jashaswini Rath

APPROVED FOR THE DEPARTMENT OF PSYCHOLOGY

SAN JOSÉ STATE UNIVERSITY

December 2011

Dr. Megumi Hosoda Department of Psychology

Dr. Howard Tokunaga Department of Psychology

Dr. Neelam Rattan Department of Psychology

ABSTRACT

MODERATING ROLE OF JUSTICE PERCEPTION IN THE RELATIONSHIPS BETWEEN STRESSORS AND STRAINS

by Jashaswini Rath

Various studies indicate the workplace to be an important source of stress. Researchers analyzing the relationship between stressors and strains in the workplace have urged for the need to explore various moderators that influence this relationship. The purpose of the present study was to explore whether justice perception (perceived procedural justice and interactional justice) moderates the relationship of role stressors and strains. Role stressors included role overload, role conflict, and role ambiguity. Strains were measured in terms of anxiety, general health, affective commitment, intention to leave, and job satisfaction. One hundred and fifty-five employees from three government-owned organizations in India participated in this study. Results of the study show that perceived procedural justice was a significant moderator in the relationship between the role stressors and general health. Results also show a direct relationship of justice perceptions with strains. This study suggests that justice perceptions should be considered as stressors. Implications of the findings are discussed.

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Table of Contents

Sections **Page**

Introduction 1

Definitions of Occupational Stress 3

Theoretical Framework for the Study of Work Stress 4

Literature Review on Relationships between Stressors and Strains 6

Moderators in the Stressors and Strain Relationship 10

Justice Perception as a Possible Moderator in the Stressor and Strain Relationship 17

Participants 22

Procedure 23

Measures 23

Descriptive Statistics 27

Tests of Research Question 1 (Procedural Justice) 30

Tests of Research Question 2 (Interactional Justice) 38

Theoretical and Practical Implications 49

Strengths, Weaknesses, and Future Research 51

Conclusion 52

Appendix 58

Survey Items 58

List of Tables

Page

Table 1: Descriptive statistics of respondents..... 22

Table 2: Correlations of Study Variables..... 28

Table 3: Hierarchical MRC for the Moderating Effect of Procedural Justice (PJ)..... 31

Table 4: Hierarchical MRC for the Moderating Effect of Internation Justice (IJ) 40

List of Figures

Page

Figure 1: Effect of Role Overload × Procedural Justice on general health. 34

Figure 2: Effect of Role Conflict × Procedural Justice on general health. 34

Figure 3: Effect of Role Ambiguity × Procedural Justice on general health. 35

Introduction

American Psychological Association (APA) (2007) attributes a loss of $300 billion each year by organizations to stress encountered by employees in the workplace. Recent studies conducted by the National Institute for Occupational Safety and Health (NIOSH) indicate the workplace to be the single greatest source of stress (2004; 2007). In another nationwide study conducted by APA (2009), more than half of respondents expressed that they were less productive as a result of stress experienced during work. Additionally, turnover, absenteeism, worker's compensation claims, grievances, and increased medical costs have often been reported to be the consequences caused by work stress (Communications Workers of America, 2011).

In the current economic condition where layoff and budget cuts are the norm of the day in various organizations, an increasing number of employees face job uncertainty and insecurity, as well as challenging work demands (European Working Conditions Observatory, 2010). These challenges could invoke various negative reactions from employees which include physical (psychosomatic symptoms), behavioral (decreased positive health behavior), and psychological responses (anxiety, depression) (Helpguide.org, 2011). These employee reactions, in turn, could lead to both individual and organizational level consequences such as absenteeism, turnover, short and long term disability, workplace accidents, low organizational commitment, compensation, and litigation complaints (Chair in occupational health and safety management , 2010).

Reports by APA and NIOSH emphasize the importance of studying occupational stress. According to Beehr's (1998) theoretical framework of stress in the workplace,

work place stressors lead to negative consequences which could be experienced at the individual (employee) level and the organizational level. Furthermore, this relationship between stressors and strains is hypothesized to be moderated by environmental characteristics (e.g., social support, work control) and individual characteristics (e.g., personality). Beehr urged the need to pay more attention to moderators influencing the relationship between stressors and strains.

Organizational justice is defined as the extent to which people perceive organizational events as being fair (Greenberg, 1987). It has been linked to employee well- being and strains such as emotional exhaustion, reduced performance, job dissatisfaction (e.g., Moliner, Martinez-Tur, Peiro, Ramos, & Cropanzano, 2005; Tepper, 2001; Yabema, & van den Boss, 2010). Tepper has argued that employees assess the justice environment (e.g., level of procedural justice) in the organization when they encounter challenges or harmful situations (e.g., inequity in compensation) in their workplace. This evaluation of the justice environment might moderate the relationship between perceived or real threats and potential negative consequences as perceived justice might serve as a resource by which employees could use to handle perceived or real threats encountered at work place. Tepper has asserted that if employees evaluate a high level of justice within the organization then the relation between perceived or real threats and negative outcomes would be weaker than when employees perceive a low level of justice within the organization.

Thus, this present study proposes that justice perception might have some role in the stressor and strain relationship. The following sections provide an overview of work

stress, including definitions of stress and its related concepts, Beehr's (1998) model as a theoretical framework of stress, a literature review on the relationship between role stressors and various forms of strains, a review on various moderators in stressor and strain relationship, and a rationale for justice perception as a moderator in the stressor and strain relationship.

Definitions of Occupational Stress

Organizational stress is commonly defined as the relationship between certain work characteristics which are construed as stressors and personal and organizational outcomes that are construed as strains (Glazer & Beehr, 2005). Stressors are often defined as stress-producing events or conditions present in the work environment (Beehr & McGrath, 1992; 1996; McGrath & Beehr 1990). Stressors can be differentiated into physical and psychological stressors.

Physical stressors are aversive physical working conditions such as noise, dirt, or heat. Physical stressors also include task-related stressors which are the conditions that appear while one is doing a task such as high time pressure, pace of work, monotonous work, or work disruptions (Landy & Conte, 2007; MacDonald, Karasek, Punnett, & Scharf, 2001).

Psychological stressors are defined as psychological demands which include lack of control (e.g., autonomy), social stressors (e.g., interpersonal conflicts, responsibility for others), and role stressors (e.g., role overload, role ambiguity) (Landy & Conte, 2007). Role stressors are stressors faced while executing one's role. Several forms of role stressors exist. Role overload is defined as having too much work in too little time,

role conflict involves irreconcilable demands between two or more requirements in a job, and role ambiguity is the lack of clear and predictable work demands (Jackson & Schuler, 1985; Glazer & Beehr, 2005). Much of the research on occupational stress has focused on psychological stressors rather than physical stressors. Among psychological stressors, role stressors are the most frequently studied ones (Jackson & Schuler, 1985; Fisher & Gitelson, 1987; Glazer & Beehr, 2005).

Strains are harmful responses or reactions to stressors (Beehr & McGrath, 1992, 1996; McGrath & Beehr, 1990). Strains are divided into (a) physiological, (b) psychological, and (c) behavioral consequences. Physiological strains include cardiovascular, biochemical, and gastrointestinal responses, and diseases (e.g., cancer, stroke, diabetes) (Jex & Beehr, 1991). Psychological strains include anxiety, depression, job dissatisfaction, boredom, fatigue, burnout, lack of confidence, lack of self esteem, and emotions such as confusion, irritation, resentment, and alienation (Jex & Beehr, 1991; Kahn & Byosiere, 1992). Behavioral strains include workplace accidents, substance abuse, vandalism, stealing, and counterproductive activities (Kahn & Byosiere, 1992). Psychological strains are the most studied strains in the occupational stress research.

Theoretical Framework for the Study of Work Stress

Beehr (1998) proposed a model to explain the process of stress in the workplace. The model states that the basic relationship is between stressors at work place and strains experienced by employees. Beehr asserted work place stressors to be events or conditions in work (e.g., role ambiguity, role conflict, role overload, interpersonal conflict) which may directly lead to strains (e.g., physical and mental illness, intention to

quit). However, the model explains that the stressors at the workplace initially lead the human psychological and physical process (e.g., physiological, biochemical processes) to invoke these negative consequences (i.e., strains). This interaction of stressors with psychological and physical processes is moderated by situational characteristics (e.g., social support, work control), personal characteristics (e.g., components of personality such as hardiness, negative affectivity), and the time duration of stressors experienced.

The underlying element of this model is the role of moderators in the stressors-human psychological and physical processes-strains relationship. Beehr (1998) proposes two types of moderators; situational characteristics and personal characteristics. Situational characteristics are the variables in the work environment such as organizational climate or social support. Personal characteristics include personality traits (e.g., hardiness, negative affectivity). Furthermore, time is also considered as a moderator in the stressor-strain relationship as prolonged exposure to stressors may intensify the strains experienced by employees. Beehr suggested that situational and personality variables can either strengthen or weaken the relationship between a stressor and a strain. For example, the relationship between role conflict and anxiety may be stronger for employees who have high levels of negative affectivity than for those who have low levels of negative affectivity. Coping and adaptive measures are any action taken by the individual or the organization to rectify the issues faced due to stressors or strains (e.g., training programs, time management).

The consequence of this interaction leads to strains at an individual level (e.g., illness, emotional distress) and organizational level (e.g., absenteeism, counter productive

work behaviors). The strains experienced at the individual and organizational level prompts the individual and the organization to undertake coping methods. For example, an individual may undertake time management or garner social support in order to address the challenge of role overload faced at his or her work. At the organization level, the organization may provide facilities like telecommuting to address role overload faced by employees. These coping efforts in turn influence the nature of the stressors and strains encountered at the work place. For instance, the provision of telecommuting may help employees better handle their workload. This subsequently has an impact on work stressor (e.g., less role overload) and also strains experienced (e.g., reduced levels of anxiety) by the employees.

Beehr (1998) urged that much of the research on occupational stress has focused on the relationship between stressors in the work environment and strains experienced at the individual and organizational level (e.g., Kelloway & Barling, 1991; Lee & Ashforth, 1996). Although several researchers (e.g., Kaufmann & Beehr, 1986; & Jones, 1993; Brotheridge, 2001; Glazer & Beehr, 2005) have examined the relationship of environmental moderators (e.g., social support) and personal moderators (e.g., hardiness) in the relationship between stressors and strains. Beehr has urged to further explore the role of various other types of situational and personality variables as moderators in the relationship because not much research has been conducted in this area.

Literature Review on Relationships between Stressors and Strains

Studies have consistently shown stressors, especially role stressors, are indeed related to many different strains. For example, Chen, Chen, Tsai, and Lo (2007)

conducted a study on 129 nurses in Southern Taiwan. They examined role stressors (i.e., role ambiguity, role conflict, role overload, and role incompetence), personality traits (e.g., conscientiousness, openness to experience, agreeableness, neuroticism, and extraversion), personal characteristics (e.g., education, nurse training, years of nursing experience), and job satisfaction. Results demonstrated that these role stressors, not the personality traits and the personal characteristics, were the strongest predictors of job dissatisfaction for these Taiwanese nurses. Among these role stressors, role ambiguity had the highest association with job dissatisfaction levels. Similarly, Kelloway and Barling (1991) conducted a study on 720 employees in Canada. They analyzed the relationship among the role stressors (role ambiguity and role conflict), job characteristics (autonomy, task variety, task identity, feedback from job, and feedback from co workers), job-related affective well- being (work satisfaction, emotional exhaustion, and depersonalization), and subjective competence (personal accomplishments at work). Results showed that although the components of job characteristics predicted personal accomplishments, and both work characteristics and role stressors predicted work satisfaction. Role ambiguity and role conflict predicted all three measures of job-related affective well-being.

In view of various studies exploring relationship between work stressors and strains, Lee and Ashforth (1996) conducted a meta-analysis examining relationships among the three dimensions of burnout (emotional exhaustion, depersonalization, and diminished personal accomplishment), demands of work (role ambiguity, role conflict, stressful events, heavy workload, role stress, physical comfort, and work pressure) and

resources (social support, job enhancement opportunities, participation in decision making, and autonomy). Results showed that employees were more sensitive to the demands placed on them than the resources they received. They found that while role conflict and work overload had a strong positive relationship with emotional exhaustion, role ambiguity had a weak relationship with emotional exhaustion. Among all the components of the demands of work, workload, role conflict, and role stress had the strongest relationship with emotional exhaustion. Depersonalization had a weak positive relationship with role ambiguity, role conflict, and role overload. On the other hand, there was negative relationship of role conflict and role overload with personal accomplishment. The study unexpectedly found a positive relationship between role ambiguity and personal accomplishment. Within the components of work demands, role conflict and stressful events had the strongest relationship with personal accomplishment.

More recently, Ortqvist and Wincent (2006) conducted a meta-analysis on the relationship between role stressors and various outcomes. They found that role stressors were related to various psychological and organizational consequences. More specifically, role ambiguity, role conflict, and role overload were found to have positive relationships with depersonalization, emotional exhaustion, and tension, and have negative relationships with job satisfaction. Results also revealed that role ambiguity had the strongest negative relationship with organizational commitment, while role conflict and role ambiguity had strongest relationship with propensity to quit. Finally, role ambiguity had the strongest relationship with job performance. The authors concluded that role conflict, role ambiguity, and role overload all had similar relationships with

various forms of consequences except for emotional exhaustion and organizational commitment.

Stressors also have been shown to be related to organizational behavior. For example, Eatlough, Chang, Miloslavic, and Johnson (2011) conducted meta-analysis of 42 existing studies and found that role ambiguity and role conflict were negatively related to organizational citizenship behavior (OCB) and job performance.

Although much of the research on occupational stress focuses on psychological and organizational strains, only a few studies show the effects of stressors on physical strains. Davis, Davis, Pan, and Daraiseh (2011) analyzed the effect of long working hours on cardiac health of 145 nurses working in a mid-western community hospital. Results showed that nurses working on 12 hour shifts had elevated heart rates. Furthermore, results showed that among those nurses having long working hours and few rest breaks, one third of them suffered from moderate cardiac stress. Furthermore, Sparks, Cooper, Freid, and Shirom (1997) conducted a meta-analysis of 19 studies in which they analyzed the effects of the hours of work on health. Results suggested that long working hours were positively linked with detrimental health conditions (e.g., headaches, migraines, tiredness, poor sleep). Specifically, the number of hours of work had the strongest relationship with complaints pertaining to coronary ailments.

In sum, a review of the research on stressors and strains clearly shows a consistent relationship between role conflict, role overload, role ambiguity, and various types of strains. In general, research has found positive and negative relationships between role stressors and psychological, physical, and behavioral outcomes.

Moderators in the Stressors and Strain Relationship

As mentioned earlier, Beehr (1998), in his model, suggested the role of moderators in the stressors and strains relationship. He argued that work environment, employee personality characteristics, and time duration moderate the relationship between stressors and strains. Various studies have analyzed environmental (e.g., social support, work autonomy) and personality variables (e.g., hardiness, negative affectivity) as moderators in such relationship.

Social support. Social support is the comfort, assistance or information an individual receives through formal or informal contacts with individuals or groups (Landy & Conte, 2007). Research examining the moderating effects of social support has been found to have mixed results. As a moderator, social support is hypothesized to interact with stressors to influence strains such that when exposed to stressors, those with more social support experience less strains compared to those with less social support. For example, Fusilier, Ganster, and Mayes (1987) found that employees receiving high levels of social support when exposed to role conflict reported fewer somatic complains than those receiving low levels of social support. Additionally, they found main effects of social support on somatic complaints and depression such that social support had a negative relationship with somatic complaints and depression. Similarly, Fried and Tiegs (1993) analyzed the relationship of social support, role ambiguity, role conflict, and strains (e.g., psychosomatic complaints, burnout) in a sample of 220 workers in American auto industry. Although the results did not indicate the moderating role of social support in role stressor and strain relationship, the results interestingly indicated a three way

interaction effect. Results showed that when social support was low, a simultaneous increase in role conflict and role ambiguity was more strongly associated with more job dissatisfaction and increased psychosomatic complaints, than when social support was high.

In contrast to the above studies, several studies did not show the role of social support as moderator in the stressor and strain relationship. For example, Ganster, Fusilier, and Mayes, (1986) analyzed the moderator role of social support in the relationship of role conflict and role ambiguity with depression, job dissatisfaction, life dissatisfaction, and somatic complaints for 326 employees working in a construction firm. The results did not support the moderating role of social support but rather found main effects of social support on strains. Results showed a significant negative relationship between social support and somatic complaints and depression. Similarly, although Brotheridge (2001) hypothesized the moderating role of coworker support in the relationship between work overload and emotional exhaustion among 680 Canadian government employees, results showed only a main effect of social support on emotional exhaustion.

In view of these conflicting results with respect to the role of social support from various studies, Viswesvaran, Sanchez, and Fischer (1999) conducted a meta-analysis of the role of social support in the stressor and strain relationship. They found a negative correlation between social support and strains (e.g., job dissatisfaction, life dissatisfaction, burnout, withdrawal intentions). Additionally, the meta- analysis demonstrated the moderating role of social support in the relationship between stressors

and strains in the workplace. In sum, the results of the meta- analysis indicate that social support exerts direct impact as well as a buffering effect on the relationship between stressors and strains.

Interestingly, some studies (e.g., Kaufmann & Beehr, 1986; Glaser, Tatum, Nebeker, Sorenson, & Aiello, 1999) demonstrated reverse buffering effects of social support in which high levels of social support strengthened the relationship between stressor and strain. For example, Kaufmann and Beehr (1986) analyzed the relationship of job stressors (workload, job future ambiguity, underutilization), social support (supervisor support, coworker support), and strains (e.g., boredom, workload dissatisfaction, absenteeism, work performance). Social support made the relationship between the stressors and strains stronger, not weaker. The researchers explained that such a relationship would be possible in the situation where one's supervisor is causing the stress (i.e., stressor) and at the same time providing support to the subordinate, and then any support attempt may be taken as stressful by the subordinate. Secondly, the authors suggested that supportive communications between an employee and his/her coworker may convince that current situation is terrible, thus exacerbating the relationship between stressors and strains.

Autonomy of work/ role of control. Researchers (e.g., Karasek & Theorell, 1996) have also suggested that control or autonomy of work that employees have in their workplace serves as a moderator in the stressor and strain relationship. Karasek (1979) has developed job demands-decision latitude model which suggests that job control (degree of decision authority, degree of task variety, and skill discretion) moderates the

relationship between job demand (time pressure, work pace, and physical work load) and employee strain. Karasek has argued that jobs with high work demands and low control increase the risk of harmful psychological and physiological responses (e.g., cardiovascular disease, anxiety) as compared to jobs with low work demands and high control. Although some studies have supported the above propositions (Theorell & Karasek, 1996), other studies (e.g., Fletcher & Jones, 1993) have not supported.

More specifically, Fletcher and Jones (1993) did not find an interactive effect of skill discretion and decision authority with job demands (job overload, conflicting demands) on strains (anxiety and depression) but found main effects of job demands and job discretion on anxiety and depression. Interestingly, some studies (e.g., Schaubroeck & Merritt, 1997; Xie & Schaubroeck, 2008) reported that both personality traits and situations together play a role in the relationship between the stressor and strain relationship. For example, Schaubroeck and Merritt (1997) analyzed the interaction effect of perceived job demands, perceived job control, self efficacy, and strain (diastolic and systolic blood pressure). They found that for employees high in self efficacy, perceived job control mitigated the negative effects of job demands on blood pressure, however, for those low in self efficacy, high job control combined with high job demands was associated with negative health consequences. The authors explained that for individuals who were confident in their abilities, having job control mitigates the relationship of perceived job demand and strain. Furthermore, in the situation of low job control, individuals having high levels of self- efficacy when facing a demanding work

circumstance might blame themselves for the inability to cope with these demands. This self-blame may further be associated with harmful consequences (strains) for employees.

Likewise, Xie and Schaubroeck (2008) demonstrated individual differences playing a key role in the interaction effects of job demand and control on ill health. For instance, they found for efficacious respondents, there was an interaction of job demand and job control on employee health. Job demands were positively related to ill health among efficacious workers who perceived little control. However, for inefficacious respondents who perceived high control, there was a positive relationship between job demands and ill health. The authors explained that these findings were due to the fact that inefficacious individuals would find job control as debilitating as they would not be able to effectively use it to cope it with demands. In sum, these two studies suggest that individual characteristics (i.e. personality traits) seem to interact with situational characteristics to influence stressor-strain relationships.

Hardiness. Various researchers (e.g., Funk , 1992; Heinisch & Jex, 1997) have explored the role of personality variables as moderators of the relationship between stressors and strains. For example, Kobasa (1979) proposed the personality variable of hardiness as a possible moderator for the stressor and strain relationship. She characterized hardiness as the ability to have control over events in one's life, being committed to one's activities, and viewing change as positive and challenging Kobasa found that hardiness did moderate the relationship between stressors (stressful life events) and a strain (illness). For hardy individuals, the relationship between stressful events and illness was weaker than for non-hardy individuals. Topf (1989) conducted a study on

100 nurses to analyze the relationship among variables of occupational stress (e.g., conflict, work load), hardiness, and emotional burnout. Results showed that out of all the components of hardiness (e.g., commitment, control, challenge), only one of component (commitment to work) accounted for significant variance in burnout. Furthermore, the study reported that hardiness did not buffer the relationship between occupational stress and emotional burnout.

Funk (1992) conducted a review of the buffering role of hardiness. After reviewing various studies, the author refuted the moderating role of hardiness in stressors and strains relationship. The author concluded that hardiness exhibited only main effects. In other words, there exists a negative relationship between hardiness and strains. Predominantly, the review suggests main effects of hardiness on psychological distress and health.

Negative affectivity. The personality trait of negative affectivity has also been studied as moderator of a relationship between stressors and strains (e.g., Moyle, 1995; Heinisch & Jex, 1997). Negative affectivity refers to the dispositional tendency to experience a variety of negative mood states (Watson & Clark, 1984). Individuals high in negative affectivity are sensitive to minor frustrations and irritations, and are more likely to experience negative emotions such as anxiety, distress, rejection, sadness, frustration, and sadness (Penney & Spector, 2005).

Heinisch and Jex (1997) analyzed the moderating effect of negative affectivity on the relationship between job stressors (i.e., role ambiguity, work load, role conflict, and interpersonal conflict) and work-related depression. Analyses on 442 employees

revealed that negative affectivity moderated the relationship between two role stressors (work load and role ambiguity) and work-related depression for female employees. For female employees who exhibited higher levels of negative affectivity, the relationship of work load and role ambiguity with work related depression was stronger than for those who reported lower levels of negative affectivity. However for male employees, the results did not support interactive effect of negative affectivity with role stressors on strains.

Likewise, Moyle (1995) analyzed responses of 143 respondents from three work groups on relationship involving perceived workload, fluctuations in workload, well-being, job satisfaction, and negative affectivity. The results revealed a moderating role of negative affectivity in the relationship between work load and well-being. More specifically, results showed that fluctuation in work load was associated with decreased levels of well-being for individuals reporting high levels of negative affectivity than those reporting low levels of negative affectivity.

However findings assessing the moderating role of negative affectivity on the stressor and strain relationship are not consistent. For example, Mak and Mueller (2001) conducted a study on 157 Australian public servants in organizations undergoing restructuring. The authors hypothesized the moderating role of negative affectivity in the relationship between occupational stress (role overload, role ambiguity, role conflict, and role boundary) and strains (job insecurity, depression, and somatic complaints). Results did not reveal the moderating role of negative affectivity in occupational stressors and physical and mental strain relationship. Instead they found main effects of negative

affectivity on strains such that those with higher level of negative affectively experienced more strains.

In sum, the above research indicates mixed results in the moderating role of various environmental conditions and personality characteristics in the relationship between role stressors and strains. These inconclusive findings call for further research on those variables which might interact with work stressors to influence strains. Furthermore, several researchers (e.g., Shirom, Gilboa, Fried & Cooper, 2008), in an attempt to further explain the process of an interaction between stressors and strains, have also urged the need to investigate possible moderators which might influence the relationship between stressors and strains. The current study is an attempt to further explore the different type of moderators which might buffer the negative effects of stressors on strains. In this study, justice perception is proposed to be a moderator of the relationship between role stressors and psychological strains.

Justice Perception as a Possible Moderator in the Stressor and Strain Relationship

Organizational justice is defined as the extent to which people perceive organizational events as being fair (Greenberg, 1987). There are different types of perceived organizational justice; distributive, procedural, and interactional justice. Distributive justice involves perceived fairness of the allocation of resources and rewards to employees (Deutsch, 1975). Procedural justice pertains to perceived fairness to procedures and policies that determine allocation decisions. Finally, interactional justice deals with fairness in interpersonal treatment (e.g., treating employees with respect) in organizations (Cohen- Charash & Spector, 2001).

Although, little attention has been paid to justice perceptions as a moderator role for the relationship between stressors and strains, a few studies show support for the moderating role of justice. For example, Tepper (2001) examined main effects and interaction effects of distributive and procedural justice on psychological distress (e.g., depression, anxiety, emotional exhaustion). Results supported main effects and interactive effects of distributive justice and procedural justice on the components of psychological distress. More specifically, results showed the relationship between perceived procedural injustice and anxiety, emotional exhaustion, and depression to be stronger for employees who perceived low levels of distributive justice than for those who reported high levels of distributive justice. According to Tepper when distributive justice is low in an organization, employees probably look for procedural justice as a coping resource to deal with negative outcomes or threats. When employees subsequently perceive low procedural justice, the employees are prompted to perceive negative outcomes as stressful and consequently have higher levels of strains. However, when employees perceive a high level of procedural justice, they label negative outcomes as less negative and thus report lower levels of psychological distress. Tepper asserts that employees evaluate their justice environment and subsequently, their justice assessment influences the relationship between the perceived threats encountered at work and the strains experienced subsequently.

Furthermore, justice perception as a moderator in stressor and strain relationship was also indicated in a study by Xie, Schaubroeck, and Lam (2008). They explored the relationship between traditionalism (respect for authority, submission) and justice

perception, and their subsequent impact on the relationship of the job demands and employee health in Chinese organizations. The authors hypothesized that high traditionalism is characterized by a sense of submission and powerlessness, thus high traditionalists would also be more appreciative of the provisions of justice within the organization. Furthermore, because of the sensitivity towards justice, traditionalists who perceive high level of injustice would have a stronger relationship between job demands (stressor) and lack of health (strain) than low traditionalists. Consistent with their hypothesis, results showed that traditionalism was positively related with perceptions of distributive justice. Also, organizational justice was more important moderator in the relationship between job demands and health for those high on traditionalism than for employees low on traditionalism. Perceived injustice intensified the effect of monitoring pressure (job demand) on emotional exhaustion (health) among high traditionalist but not among low traditionalists. This study thus supports the assertion that justice perception would moderate the relationship between stressors and strains.

In sum, to the author's knowledge, no study has directly examined the role of justice perception in the relationship between stressors and strains. The scarcity of such studies calls for further research exploring the role of justice in the stressor and strain relationship. Additionally, Beehr (1998), in his model, urged to explore various variables which might moderate the relationship between stressors and strains. In view of conflicting support on the role of various moderators (e.g., negative affectivity, hardiness) in the stressors and strain relationship and dearth of studies exploring the

moderator role of justice perception, this study is an attempt to explore the role of justice perception in the stressor and strain relationship.

Furthermore, the above studies also suggest that employees may evaluate justice when they encounter challenges or perceived threats in their workplace. Similarly, role stressors (e.g., role overload, role ambiguity, role conflict) are potential threats within the work environment which may prompt the employees to evaluate justice (procedural justice, interactional justice) within the organization. For example, when employees face role ambiguity, they may evaluate various platforms or procedures within the organization where they can voice their grievance or provide input, or where they can be a part of decision making process which can help address role ambiguity encountered at work. Moreover, the quality of interaction (e.g., being treated with respect, being heard by others) they have with their supervisors and coworkers may also help them clarify their role and thus enable them to tackle role ambiguity. As a result of this, employees may experience less physical or psychological strains (e.g., anxiety, depression, illness). Thus, the levels of procedural and interactional justice within the organization help employees address perceived challenges at work (e.g., role ambiguity, role overload, role conflict) and consequently this might mitigate the influence of stressors on strains.

Therefore, the current study examines the possible moderator role of procedural justice and interactive justice in the stressor and strain relationship. This research examines whether the level of perceived justice moderates the relationship of role stressors and strains. More specifically, the current study focuses on exploring the relationship of role stressors (role overload, role ambiguity, and role conflict) and strains

(anxiety, affective commitment, satisfaction, intention to leave, general health) in relation to the level of perceived procedural and interactional justice in an organization. The following research questions are tested.

Research Question 1. Will procedural justice moderate the relationship between role stressors (role overload, role conflict, and role ambiguity) and strains (anxiety, general health, intention to leave, affective commitment, and job satisfaction)?

Research Question 2. Will interactional justice moderate the relationship between role stressors (role overload, role conflict, and role ambiguity) and strains (anxiety, general health, intention to leave affective commitment, and job satisfaction)?

Method

Participants

One hundred and fifty-five executives from three government-owned companies in India participated in the study. The sample comprised engineers, banking and finance professionals, human resource professionals, and accountants. A majority of the respondents were men (94%, *n* = 143) and worked full time (96%, *n* = 150). The ages of the respondents ranged from 23 years to 59 years, with a mean age of 41.51 years (*SD* = 9.97). Most of the respondents were married (76.1%, *n* = 118) and had a masters' degree (46%, *n* = 72) or a bachelors' degree (41.0%, *n* = 57). The average years spent in the current service was 16. 81 years (*SD* = 10.62). Table 1 lists the demographic information of the respondents.

Table 1

Descriptive statistics of respondents

Variable		*n*	%
Sex			
	Male	143	92.3
	Female	9	5.8
Marital status			
	Single	29	18.7
	Married	118	76.1
	With a partner	1	0.6
	Widowed	1	0.6
Education			
	High school diploma	2	1.3
	Bachelor's degree	57	36.8
	Master's degree	72	46.5
	Doctorate	1	0.6
	Others	7	4.5

Procedure

The researcher contacted senior executives from three Indian government organizations. The purpose of the study was explained to them as the exploration of the role of justice perception in the relationship between stressors encountered by employees in their work and the strains experienced by them as a result of these stressors. The executives then allowed the researcher to conduct the present survey within their organizations. Within the various departments of these organizations, the purpose of the survey was explained to employees. Subsequently, the employees voluntarily agreed to participate in the survey. Informed consent and questionnaires were distributed individually to these employees. Respondents were asked to review the informed consent form and survey instructions before filling out the questionnaires. The employees who agreed to participate in the study signed the consent form. The questionnaire contained an explanation of the purpose of the survey and questions regarding role stressors, job strains, and perceived justice in the workplace, and demographic information of respondents. The respondents were encouraged to seek clarification in case they found the questions difficult to understand. The researcher provided contact information in case they wanted any clarification for future questions.

Measures

All the items in the questionnaire were measured with a 7-point Likert type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Role stressors. All the role stressors were measured by the inventory used in previous research (Glazer & Beehr, 2005). In total, 15 items (five items each) were used to measure role overload, role conflict, and role ambiguity.

Role overload was measured by the inventory developed by Beehr, Walsh, and Taber (1976) and was also used in previous research by Glazer & Beehr (2005). Sample items are "I am given enough time to do what is expected of me on my job" and " It seems like I have too much work of one person to do." The scores were summed and averaged. Higher scores indicate more role overload. Cronbach's alpha was .72 for these items.

Role conflict was measured by the inventory developed by Rizzo, House, and Lirtzman, (1970) and was also used in research by Glazer & Beehr (2005). Sample items are "I receive incompatible requests from two or more people" and "I work with two or more groups which operate quite differently." The items were summed and averaged. Higher scores indicate more role conflict. Cronbach's alpha was .80.

Role ambiguity was measured by the inventory developed by Rizzo et al. (1970) and was also used in research by Glazer & Beehr (2005). Sample items are "I have clear, planned, goals and objectives for my job" and "I know exactly what is expected of me." The items were summed and averaged. Higher score indicate more role ambiguity. Cronbach's alpha was .81.

Justice perceptions. Justice perceptions were measured in terms of perceived procedural and interactional justice. These justice perceptions were measured by a 12 item questionnaire developed by Moorman, Blakely, and Niehoff (1998).

Perceived procedural justice was measured by six items. Sample items are "When decisions about other employees in general or you in particular are made in this company all the sides affected by decisions are represented" and "Opportunities are provided to appeal or challenge the decisions." The items were summed and averaged. The higher the score, the more procedural justice was perceived. Cronbach's alpha was .89. Perceived interactional justice was measured by another six items. Sample items are "You are treated with kindness and consideration" and "You are treated with respect and dignity." The items were summed and averaged. The higher the score, the more interactional justice was perceived. Cronbach's alpha was .87.

Anxiety. Anxiety was measured by four items developed by Parker and DeCotiis (1983) and was used in previous research by Glazer & Beehr (2005). A sample item is "I felt fidgety or nervous as a result of my job." The items were summed and averaged. The higher the score, the more anxious respondents felt. Cronbach's alpha was .72.

General health. Nine items from General Health Inventory (Goldberg, 1972; Vieweg & Hedlund, 1983) were used to measure general health. Sample items are "I have been able to enjoy my normal day to day activities" and "I have been feeling reasonably happy all things considered." The items were summed and averaged. The higher the score, the healthier respondents felt. The scale had Cronbach's alpha of .79.

Intention to leave. An intention to leave was measured by three items from the Michigan Organizational Assessment Questionnaire (Seashore, Lawler, Mirvis, & Cammann, 1982) adapted by Glazer & Beehr (2005). A sample item is "I will actively look for a new job next year." The items were summed and averaged. The higher the

score, the stronger was the intention to leave the organization. The scale had Cranach's alpha of .83.

Affective commitment. Affective commitment was measured by seven items from Allen and Myer (1990) and used in previous research by Glazer & Beehr (2005). Sample items are "I would be happy to spend the rest of my career in this organization" and "This organization has a great deal of personal meaning to me." The items were summed and averaged. The higher the score, the more affectively committed respondents were towards their organizations. The scale had Cronbach'a alpha of .70.

Job satisfaction. Job satisfaction was measured by a single item, which is "Overall, I am satisfied working at this organization" (personal communication, Glazer, March, 2008).

Demographic variables. Respondents were also asked to provide demographic information with regards to their age, sex, marital status, education, employment status, years spent in organization, and their job title.

Results

Descriptive Statistics

Table 2 shows the correlations of the measured variables. A closer look at the table shows that the respondents experienced role overload (*M* = 3.85, *SD* = 1.60) and role conflict (*M* = 3.39, *SD* = 1.7) somewhat and a relatively low level of role ambiguity (*M* = 2.55, *SD* = 1.24) in their workplaces. The respondents perceived a moderate level of organizational justice but they reported a higher level interactional justice (*M* = 4.85, *SD* = 1.35) than procedural justice (*M* = 4.26, *SD* = 1.87). Furthermore, the respondents did not report the high level of anxiety (*M* = 3.27, *SD* = 1.58). The general health of the respondents was of a good level (*M* = 4.65, *SD* = 1.93). The respondents had a low level of intention to leave the company (*M* = 2.91, *SD* = 1.69), were affectively committed to their organizations (*M* = 4.97, *SD* = 1.50), and were satisfied with their jobs (*M* = 5.21, *SD* = 1.67).

Correlations Among the Measured Variables

Table 2 shows there were many significant correlations among the variables in this study. The role stressors were positively related among themselves, ranging from .29 to .34. However, these correlations were small in nature, indicating that these three role stressors are distinct constructs.

Table 2

Correlations of Study Variables

Variables	1	2	3	4	5	6	7	8	9
1. Role overload									
2. Role conflict	.32*								
3. Role ambiguity	.29**	.34**							
4. Procedural justice	-.12	-.14	.01						
5. Interactional justice	-.25**	-.20*	-.07	.69**					
6. Anxiety	.37**	.30**	.32**	.08	-.08				
7. General health	.02	.11	.00	.33**	.27**	-.08			
8. Intention to leave	.22**	.30**	.19*	-.20**	-.37**	.31	-.15		
9. Affective commitment	-.21*	-.08	-.19*	.27**	.25**	-.20*	.28**	-.49**	
10. Job satisfaction	-.16**	-.18*	-.17*	.28**	.35**	-.22**	.23**	-.37**	-.37**

Note: *p < .05, ** p < .01

Both role overload (r = -.25, p < .01) and role conflict (r = -.20, p < .05), but not role ambiguity, were related to interactional justice. These findings indicate that the more role overload and role conflict one experienced, the less interactional justice employees perceived. Interestingly, none of the role stressors was found to be related to perceived procedural justice. Both procedural and interactional justice perceptions were highly correlated with each other (r = .69, p < .01).

Correlations among the strain variables ranged from -.08 to .49, indicating that these strain variables were not highly related to each other. As can be seen in the table, all of the role stressors were negatively related to job satisfaction (r = -.16 with role overload, r = -.18 with role conflict, r = -.17 with role ambiguity, p < .05), and positively related to anxiety (r = .37 with role overload, r = .30 with role conflict, r = .32 with role ambiguity, p < .01) and intention to leave (r = .22 with role overload, r = .30 with role conflict, r = .19 with role ambiguity, p < .05). Only role overload (r = -.21) and role ambiguity (r = -.19) were negatively related to affective commitment. However, none of the role stressors were statistically related to general health. These correlations indicate that the more role stressors the employees experienced, the more they reported negative attitudes (i.e., less of job satisfaction and affective commitment, and higher intention to leave) and negative emotion (more anxiety). Finally, both procedural justice and interactional justice perceptions were related to general health (r = .33 for procedural justice, r = .27 for interactional justice, p < .01), intention to leave (r = -.20 for procedural justice, r = -.37 for interactional justice, p < .01), affective commitment (r = -.27 for procedural justice, r = .25 for interactional justice, p < .01), and job satisfaction (r = .28

for procedural justice, $r = .35$ for interactional justice, $p < .01$), but not to anxiety. These correlations indicate that the more procedural and interactional justice the employees experienced, they experienced better general health, less intention to leave, and more affective commitment, and job satisfaction.

Tests of Research Question 1 (Procedural Justice)

Research question 1 stated that procedural justice would moderate the relationship between role stressors and strains. This research question was tested using hierarchical regression analysis (MRC). In step 1 of the hierarchical regression we entered role stressors (i.e., role overload, role conflict, and role ambiguity) and each one of the strains was regressed on these stressors. In step 2, we entered perceived procedural justice. In step 3, the cross products of each of the role stressors and perceived procedural justice were entered as interaction terms between the role stressors and perceived procedural justice. R^2, ΔR^2 and regression coefficients (beta weights) were examined at each step. Results of five MRCs are presented in Table 3.

Table 3

Hierarchical MRC for the Moderating Effect of Procedural Justice (PJ)

		Anxiety			General Health		
		β	R^2	Δ R^2	β	R^2	Δ R^2
Step:1	Role Stressors		.21**	.21**		.01	.01
	RO	.26**			.00		
	RC	.15			.12		
	RA	.19*			-.03		
Step:2	PJ	.13	.22**	.01	.36**	.14**	.13**
Step3	Interaction		.24**	.02		.27**	.13**
	RO×PJ	-.09			.42*		
	RC×PJ	-.14			-.73**		
	RA×PJ	-.17			-.54*		

		Intention to Leave			Affective Commitment		
		β	R^2	Δ R^2	β	R^2	Δ R^2
Step:1	Role Stressors		.11**	.11**		.06*	.06*
	RO	.12			-.17*		
	RC	.23**			.02		
	RA	.07			-.15		
Step:2	PJ	-.16*	.14**	.03**	.27**	.13**	.07**
Step: 3	Interaction		.17**	.03		.15**	.02
	RO×PJ	-.37			.12		
	RC×PJ	.00			-.29		
	RA×PJ	.48			-.05		

		Job Satisfaction		
		β	R^2	Δ R^2
Step:1	Role Stressors		.05*	.05*
	RO	-.09		
	RC	-.12		
	RA	-.10		
Step:2	PJ	-.16**	.12**	.07**
Step: 3	Interaction		.14**	.02
	RO×PJ	-.15		
	RC×PJ	.40		
	RA×PJ	-.33		

Notes. PJ = Procedural Justice, RO = Role Overload, RC = Role Conflict, RA = Role Ambiguity,*p < .05, ** p < .01.

Anxiety. At step 1, role overload, role conflict, and role ambiguity together explained 21% of the variance in anxiety, $R^2 = .21$, $F(3,150) = 13.00$, $p < .01$. The examination of the beta weights of the role stressors shows that only role overload ($\beta = .26$, $p < .01$), and role ambiguity, ($\beta = .19$, $p < .05$), uniquely contributed to the prediction of anxiety. That is, the more role overload and role ambiguity the participants encountered, the more anxiety they experienced. At step 2, perceived procedural justice and the role stressors together explained 22% of the variance in anxiety, $R^2 = .22$, $F(4,149) = 10.81$, $p < .01$. Although perceived procedural justice explained additional 1% of the variance in anxiety above and beyond that was explained by the role stressors, the change in the amount of the variance was not statistically significant, $\Delta R^2 = .01$, $F = (1,149) = 3.52$, $p = .06$. At step 3, role stressors, perceived procedural justice, and their interaction terms together explained 24% of the variance in anxiety, $R^2 = .24$, $F(7,146) = 6.54$, $p < .01$. Although the interaction terms explained additional 2% of the variance in anxiety above and beyond that was explained by the role stressors and perceived procedural justice, the change in the amount of the variance was not statistically significant, $\Delta R^2 = .02$, $F\ (3,146) = .89$, $p = .44$. These results indicate that perceived procedural justice did not moderate the relationship between the role stressors and anxiety.

General health. At step 1, role overload, role conflict, and role ambiguity together explained just 1% of the variance in general health, $R^2 = .01$, $F\ (3,151) = .67$, $p = .57$. At step 2, perceived procedural justice and the role stressors explained 14% of the variance in general health, $R^2 = .14$, F (4,150) = 6.28, $p < .01$. Perceived procedural

justice accounted for a significant change in the variance in general health above and beyond the variance explained by the role stressors, $\Delta R^2 = .13$, $F(1,150) = 22.82$, $p < .01$. At step 3, role stressors, perceived procedural justice, and their interaction terms together explained 27% of the variance in general health, $R^2 = .27$, $F(7,147) = 7.61$, $p < .01$. The interaction terms explained additional 13% of the variance in general health above and beyond that was explained by the roles stressors and perceived procedural justice, $\Delta R^2 = .13$, $F(3,147) = 8.18$, $p < .01$. These results indicate that perceived procedural justice moderated the relationship between role stressors and general health. The examination of the beta weights of the interaction terms between role overload and procedural justice, ($\beta = .42$, $p < .05$), role ambiguity and procedural justice ($\beta = -.73$, $p < .01$), and role conflict and procedural justice ($\beta = -.54$, $p < .05$). All showed that they uniquely contributed to the prediction of general health.

In order to examine the nature of the interaction between each role stressor and procedural justice perception, we split the procedural justice perception scores at the median in order to create the low and high levels of procedural justice. Then we conducted a regression analysis for each procedural justice group and computed a regression line by regressing general health on each role stressor.

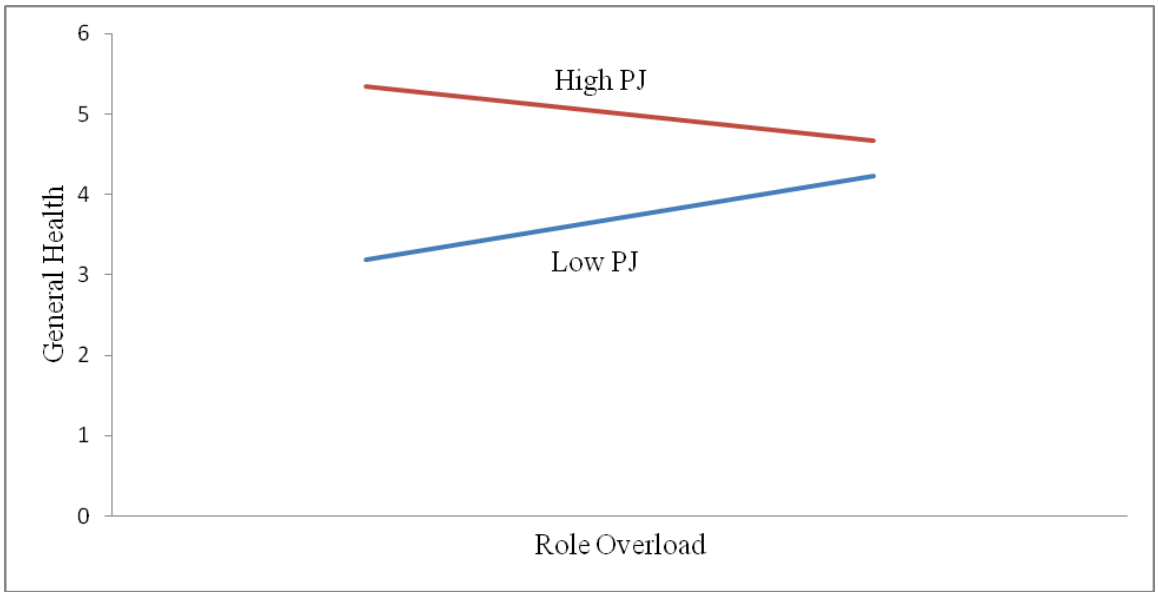

Figure 1: Effect of Role Overload × Procedural Justice on general health.

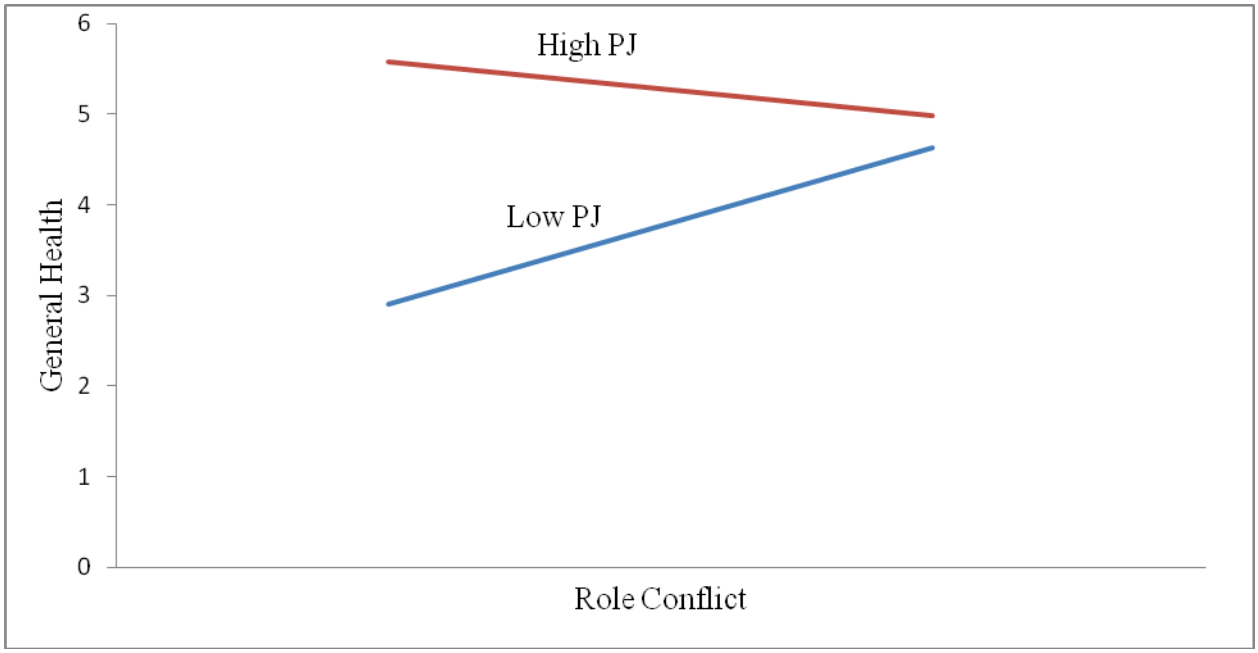

Figure 2: Effect of Role Conflict × Procedural Justice on general health.

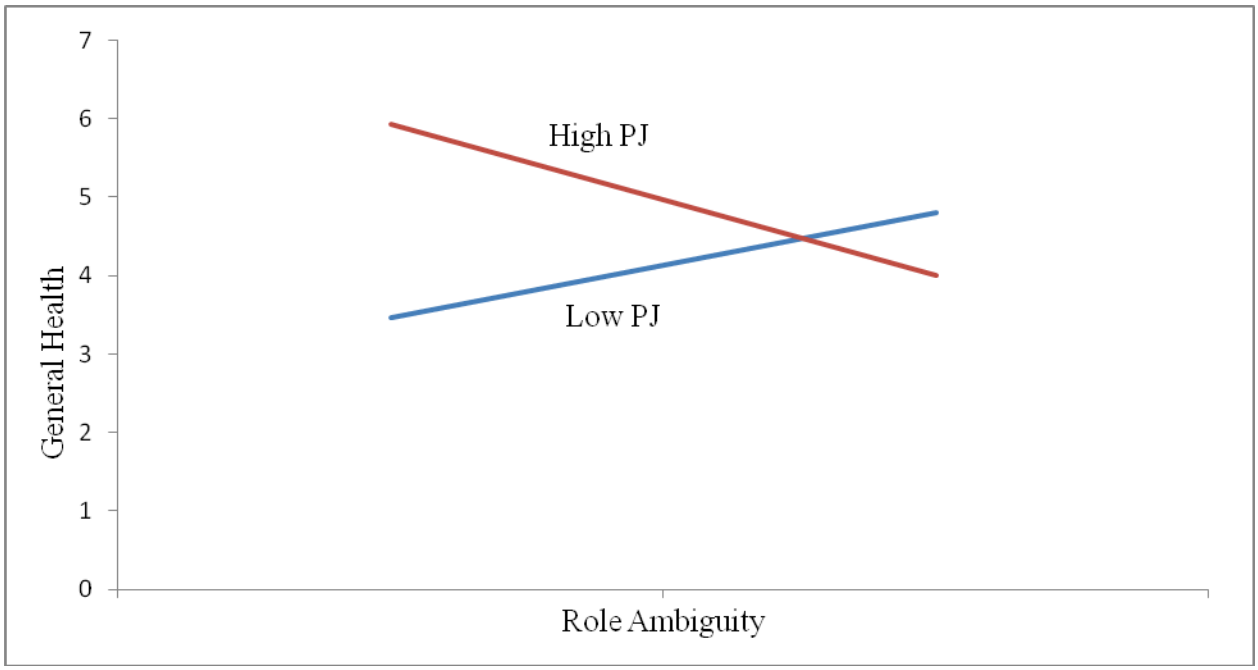

Figure 3: Effect of Role Ambiguity × Procedural Justice on general health.

Figure 1 shows the nature of the interaction between role overload and perceived procedural justice on general health. Figure 2 shows the nature of the interaction between role conflict and procedural justice and finally, Figure 3 shows the nature of interaction between role ambiguity and procedural justice.

As can be seen in the Figure 1, as role overload increased, general health decreased when perceived procedural justice was high. However, the opposite was true when perceived procedural justice was low. That is, as role overload increased, general health increased when the perceptions of procedural justice was low. These results indicate that when respondents perceived high procedural justice, they experienced poorer general health as role overload increased. However, when participants perceived low procedural justice, they experienced better general health as role overload increased.

Similar patterns were observed for the moderating role of perceived procedural justice on the relationship between role conflict and general health, as well as the on the relationship between role ambiguity and general health. As can be seen in Figures 2 and 3, as role conflict and role ambiguity increased, general health decreased when procedural justice was high. In contrast, as role conflict and role ambiguity increased, general health also increased when procedural justice was low.

Intention to leave. At step 1, role overload, role conflict, and role ambiguity together explained 11.5% of the variance in intention to leave, $R^2 = .11$, $F(3,151) = 6.56$, $p < .01$. The examination of the beta weights of the role stressors shows that only role conflict ($\beta = .23$, $p < .01$) uniquely contributed to the prediction of intention to leave. That is, the more role conflict participants encountered, the more intention they had to leave their organizations. At step 2, perceived procedural justice and the role stressors together explained 14.1% of the variance in intention to leave, $R^2 = .14$, $F(4,150) = 6.16$, $p < .01$. Perceived procedural justice accounted for a significant change in the variance in intention to leave above and beyond the variance explained by the role stressors, $\Delta R^2 = .03$, $F(1,150) = 4.50$, $p < .05$. At step 3, role stressors, perceived procedural justice, and their interaction terms together explained 17% of the variance in intention to leave, $R^2 = .17$, $F(7,147) = 4.28$, $p < .01$. Although the interaction terms explained additional 3% of the variance in intention to leave above and beyond that was explained by the role stressors and perceived procedural justice, the change in the amount of the variance was not statistically significant, $\Delta R^2 = .03$, $F(3,147) = 1.66$, $p = .18$. These results indicate

that perceived procedural justice did not moderate the relationship between the role stressors and intention to leave.

Affective commitment. At step 1, role overload, role conflict, and role ambiguity together explained 6% of the variance in job anxiety, $R^2 = .06$, $F(3,151) = 3.40$, $p < .05$. The examination of the beta weights of the role stressors shows that only role overload ($\beta = -.17$, $p < .05$) uniquely contributed to the prediction of affective commitment. That is, the more role overload participants encountered in their jobs, the less affectively committed they were towards their organizations. At step 2, perceived procedural justice and the role stressors explained 13% of the variance in affective commitment, $R^2 = .13$, $F(4,150) = 5.85$, $p < .01$. Perceived procedural justice accounted for a significant change in the variance in affective commitment above and beyond the variance explained by the role stressors, $\Delta R^2 = .07$, $F(1,150) = 12.44$, $p < .01$. At step 3, role stressors, perceived procedural justice, and their interaction terms together explained 15% of the variance in affective commitment, $R^2 = .15$, $F(7,147) = 3.59$, $p < .01$. Although the interaction terms explained additional 2% of the variance in affective commitment above and beyond that was explained by the role stressors and perceived procedural justice, the change in the amount of the variance was not statistically significant, $\Delta R^2 = .02$, $F(3,147) = .65$, $p = .59$. These results indicate that perceived procedural justice did not moderate the relationship between the role stressors and affective commitment.

Job satisfaction. At step 1, role overload, role conflict, and role ambiguity together explained 5.5% of the variance in job satisfaction, $R^2 = .05$, $F(3,151) = 2.95$, p

<.05. The examination of the beta weights of the role stressors shows that none of the role stressors uniquely contributed to the prediction of job satisfaction. At step 2, perceived procedural justice and the role stressors explained 12% of the variance in job satisfaction, R^2 =. 12, $F(4,150) = 5.27$, $p < .01$. Perceived procedural justice accounted for a significant change in the variance in job satisfaction above and beyond the variance explained by the role stressors, $\Delta R^2 = .07$, $F(1,150) = 11.59$, $p < .01$. At step 3, role stressors, perceived procedural justice, and their interaction terms together explained 14% of the variance in job satisfaction, $R^2 = .14$, $F(7,147) = 3.57$, $p < .01$. Although the interaction terms explained additional 2% of the variance in job satisfaction above and beyond that was explained by the role stressors and perceived procedural justice, the change in the amount of the variance was not statistically significant, $\Delta R^2 = .02$, $F(3,147) = 1.26$, $p = .29$. These results indicate that perceived procedural justice did not moderate the relationship between the role stressors and job satisfaction.

Tests of Research Question 2 (Interactional Justice)

Research question 2 stated that interactional justice would moderate the relationship between role stressors and strains. This hypothesis was tested using the hierarchical regression analysis (MRC). In step 1 of the hierarchical regression, we entered the role stressors (i.e., role overload, role conflict, and role ambiguity) and each one of the strains was regressed on these stressors. In step 2, we entered perceived interactional justice. In step 3, the cross products of each of the role stressors and perceived interactional justice were entered as interaction terms between the role

stressors and perceived interactional justice. R^2, ΔR^2 and regression coefficients (beta weights) were examined at each step. Results of five MRCs are presented in Table 4.

Table 4

Hierarchical MRC for the Moderating Effect of Interactional Justice (IJ)

		Anxiety			General Health		
		β	R^2	Δ R^2	β	R^2	Δ R^2
Step:1	Role Stressors		.21**	.21**		.01	.01
	RO	.26**			.00		
	RC	.15			.12		
	RA	.19*			-.03		
Step:2	IJ	.02	.21**	.00	.32**	.11**	.10**
Step3	Interaction		.22**	.01			
	RO×IJ	-.27			.08	.15**	.04
	RC×IJ	-.06			-.72		
	RA×IJ	-.09			.00		

		Intention to Leave			Affective Commitment		
		β	R^2	Δ R^2	β	R^2	Δ R^2
Step:1	Role Stressors		.11**	.11**		.06*	.06*
	RO	.12			-.17*		
	RC	.23**			.02		
	RA	.07			-.15		
Step:2	IJ	-.31**	.20**	.09**	.22**	.11**	.05**
Step: 3	Interaction		.21**	.01		.12**	.01
	RO×IJ	-.22			-.12		
	RC×IJ	-.09			-.20		
	RA×IJ	.27			.41		

		Job Satisfaction		
		β	R^2	Δ R^2
Step:1	Role Stressors		.05*	.05*
	RO	-.09		
	RC	-.12		
	RA	-.10		
Step:2	IJ	.32**	.15**	.10**
Step: 3	Interaction		.17**	.02
	RO×IJ	.11		
	RC×IJ	.39		
	RA×IJ	-.21		

Notes. IJ = Interactional Justice, RO = Role Overload, RC = Role Conflict, RA = Role Ambiguity,*p < .05, ** p < .01

Anxiety. At step 1, role overload, role conflict, and role ambiguity together explained 21% of the variance in anxiety, $R^2 = .21$, $F(3,150) = 13.01$, $p < .01$. The examination of the beta weights of the role stressors shows that role overload ($\beta = .26$, $p < .01$) and role ambiguity ($\beta = .19$, $p < .05$) uniquely contributed to the prediction of anxiety. That is, the more role overload and role ambiguity participants encountered, the more anxiety they felt due to their jobs. At step 2, perceived interactional justice and the role stressors together explained 21% of the variance in anxiety, $R^2 = .21$, $F(4,149) = 9.73$, $p < .01$. However, perceived interactional justice did not explain any additional variance in anxiety above and beyond the variance explained by the role stressors, $\Delta R^2 = .00$, $F(1,149) = .12$, $p = .73$. At step 3, role stressors, perceived interactional justice, and their interaction terms together explained 22% of the variance in anxiety, $R^2 = .22$, $F(7,146) = 5.90$, $p < .01$. Although the interaction terms explained additional 1% of the variance in anxiety above and beyond that was explained by the roles stressors and perceived interactional justice p, the change in the amount of the variance was not statistically significant, $\Delta R^2 = .01$, $F(3,146) = .82$, $p = .48$. These results indicate that perceived interactional justice did not moderate the relationship between the role stressors and anxiety.

General health. At step 1, role overload, role conflict, and role ambiguity together explained only 1% of the variance in general health, $R^2 = .01$, $F(3,151) = .67$, $p = .57$. At step 2, perceived interactional justice and the role stressors explained 11% of the variance in general health, $R^2 = .11$, $F(4,150) = 4.52$, $p < .01$. Perceived interactional justice accounted for a significant change in the variance in general health above and

beyond the variance explained by the role stressors, $\Delta R^2 = .10$, $F(1,150) = 15.89$, $p < .01$. At step 3, role stressors, perceived interactional justice, and their interaction terms together explained 15% of the variance in general health, $R^2 = .15$, $F(7,147) = 3.73$, $< .01$. Although the interaction terms explained additional 4% of the variance in general health above and beyond that was explained by the roles stressors and perceived interactional justice, the change in the amount of the variance was not statistically significant, $\Delta R^2 = .04$, $F(3,147) = 2.50$, $p = .06$. These results indicate that perceived interactional justice did not moderate the relationship between the role stressors and general health.

Intention to leave. At step 1, role overload, role conflict, and role ambiguity together explained 11% of the variance in intention to leave, $R^2 = .11$, $F(3,151) = 6.56$, $p < .01$. The examination of the beta weights of the role stressors shows that only role conflict ($\beta = .23$, $p < .01$) uniquely contributed to the prediction of intention to leave. That is, the more role conflict participants encountered in their jobs, the more intention they had to leave their organizations. At step 2, perceived interactional justice and the role stressors explained 20% of the variance in intention to leave, $R^2 = .20$, $F(4,150) = 9.60$, $p < .01$. Perceived interactional accounted for a significant change in the variance in intention to leave above and beyond the variance explained by the role stressors, $\Delta R^2 = .09$, $F(1,150) = 16.65$, $p < .01$. At step 3, role stressors, perceived interactional justice, and their interaction terms together explained 21% of the variance in intention to leave, $R^2 = .21$, $F(7,147) = 5.56$, $p < .01$. Although the interaction terms explained additional 1% of the variance in intention to leave above and beyond that was explained by the role stressors and perceived interactional justice, the change in the amount of the variance was

not statistically significant, $\Delta R^2 = .01$, $F(3,147) = .35$, $p = .79$. These results indicate that perceived interactional justice did not moderate the relationship between the role stressors and intention to leave.

Affective commitment. At step 1, role overload, role conflict, and role ambiguity together explained 6% of the variance in affective commitment, $R^2 = .06$, $F(3,151) = 3.40$, $p < .05$. The examination of the beta weights of the role stressors shows that only role overload ($\beta = -.17$, $p < .05$) uniquely contributed to the prediction of affective commitment. That is, the more role overload employees encountered in their jobs, the less affectively committed they were towards their organizations. At step 2, perceived interactional justice and the role stressors explained 11% of the variance in intention to leave, $R^2 = .11$, $F(4,150) = 4.51$, $p < .01$. Perceived interactional justice accounted for a significant change in the variance in affective commitment above and beyond the variance explained by the role stressors, $\Delta R^2 = .05$, $F(1,150) = 7.44$, $p < .01$. At step 3, role stressors, perceived interactional justice, and their interaction terms together explained 12% of the variance in affective commitment, $R^2 = .12$, $F(7,147) = 2.78$, $p = .01$. Although the interaction terms explained additional 1% of the variance in affective commitment above and beyond that was explained by the role stressors and perceived interactional justice, the change in the amount of the variance was not statistically significant, $\Delta R^2 = .01$, $F(3,147) = .52$, $p = .67$. These results indicate that perceived interactional justice did not moderate the relationship between the role stressors and affective commitment.

Job satisfaction. At step 1, role overload, role conflict, and role ambiguity together explained 5.5% of the variance in job satisfaction, $R^2 = .05$, $F(3,151) = 2.95$, $p < .05$. The examination of the beta weights of the role stressors shows that none of the role stressors uniquely contributed to the prediction of job satisfactions. At step 2, perceived interactional justice and the role stressors explained 15% of the variance in job satisfaction, $R^2 = .15$, $F(4,150) = 6.86$, $p < .01$. Perceived interactional justice accounted for a significant change in the variance in job satisfaction above and beyond the variance explained by the role stressors, $\Delta R^2 = .10$, $F(1,150) = 17.6$, $p < .01$. At step 3, role stressors, perceived interactional justice, and their interaction terms together explained 17% of the variance in job satisfaction, $R^2 = .17$, $F(7,147) = 4.24$, $p < .01$. Although the interaction terms explained additional 2% of the variance in job satisfaction above and beyond that was explained by the roles stressors and perceived interactional justice, the change in the amount of the variance was not statistically significant, $\Delta R^2 = .02$, $F(3,147) = .79$, $p = .50$. These results indicate that perceived interactional justice did not moderate the relationship between the role stressors and job satisfaction.

Discussion

Because of the many negative consequences associated with stress, occupational stress is one of the most heavily studied topics in industrial and organizational psychology (Beehr, 1998). Although research on occupational stress has shown a consistent and negative relationship between various stressors and strains, there is a dearth of research that examines moderator variables that might play an important role in the relationship between a stressor and a strain. Several researchers (e.g., Beehr, 1998) have called for more attention to potential moderators in the occupational stress research domain. This study proposed that both procedural justice and interactional justice perceptions act as moderator in the relationship between role stressors and strains.

More specifically, role stressors (role overload, role ambiguity, and role conflict) could act as potential threats within the work environment. If employees perceive these role stressors as potential threats, they might be prompted to evaluate justice (procedural justice, and interactional justice) within the organization. Employees may evaluate various procedures within the organization where they can voice grievances or provide input or where they can be a part of decision-making process by which they can help identify role stressors encountered at work. Furthermore, the quality of interactions (e.g., being treated with respect, being given timely information) with their supervisors and coworkers may also help them clarify their roles and thus enable them to tackle role stressors encountered at work. As a result, employees may experience fewer physical or psychological strains (e.g., anxiety, depression, job dissatisfaction, intention to leave). Thus, both justice perceptions were proposed as moderators.

The present study, examined role stressors (role overload, role conflict, and role ambiguity) as they have been the most frequently studied forms of psychological stressors (Glazer & Beehr, 2005). The strains examined included anxiety, general health, intention to leave, affective commitment, and job satisfaction.

Research Question 1 stated whether procedural justice moderates the relationship between the role stressors and the strains. For the most part, results showed that perceived procedural justice did not moderate the relationship between the role stressors and the strains. However, procedural justice perception was found to moderate the relationship between each of the role stressors and general health. Yet, the nature of the interaction was counterintuitive. More specifically, there was a negative relationship between role overload and general health when participants perceived high procedural justice. That is, the more role overload the participants experienced, the poorer their health became when they perceived a high level of procedural justice. The opposite relationship was true when employees perceived low procedural justice. There was a positive relationship between role overload and general health when participants perceived low procedural justice. That is, the more role overload the participants experienced, the better their general health became when they perceived a low level of procedural justice. The same patterns were observed for role conflict and role ambiguity.

Although these results are hard to interpret, reasons for these results could be that for those who perceived high levels of justice in their work environment, factors like hierarchical and bureaucratic setup of the government-owned organizations in India might have strengthened the relationship between the role stressors and general health

rather than weakened it. That is, hierarchical and bureaucratic setup within these organizations are defined by the numerous layers of authority and well established spheres of job responsibilities. Even if the participants perceived procedural justice in their organizations, the measures of procedural justice would still have to operate within the various layers of the organization. Thus, when the participants face increased levels of role stressors, even if they have an opportunity to voice their concerns, resolving these concerns (e.g., role stressors) might involve a lot of time and resources. This delay in addressing employee grievances might eventually strengthen relationship between the role stressors and general health. In contrast, for those who perceived low levels of procedural justice, encountering both low levels of procedural justice and high levels of the role stressors could be overwhelming for them. Under such situations, facing multiple problems in the work environment (e.g., low justice, high role stressors) might have prompted them to aggressively seek coping measures (e.g., social support) to deal with the overwhelming work situations. Due to these coping activities, the employees might have experienced decrease in a strain (or increase in general health). However, we did not measure these organizations' structures or the participants' coping strategies, and hence, these interpretations are speculative. As mentioned earlier, these findings are counterintuitive, thus they should be interpreted with caution.

Research Question 2 stated whether interactional justice moderates the relationship between the role stressors and strains. The results demonstrate that interactional justice perception did not moderate the relationship between any of the role stressors and the strains. The lack of moderating role of interactional justice perception

on the relationship between the role stressors and the strains might be due to participants' expectations associated with interactional justice. These participants might expect interactional justice to be a basic requirement in the work relationships in the organization, irrespective of the stressors encountered in their workplace. Thus, this basic expectation of treating each other with respect and dignity on the day-to-day basis (i.e., high levels of interaction justice) may not necessarily exert a stronger effect in dealing with increased levels of role stressors than usual. However, we did not measure the participants' expectations with regards to interpersonal treatment within their organizations and, hence, this interpretation is speculative.

The results also showed that justice perceptions had the main effect on the strains. These justice perceptions served as stressors in the present study. A closer look at zero-order correlations shows that both procedural justice and interaction justice perceptions were positively related to anxiety and intention to leave and negatively related to affective commitment and job satisfaction. Procedural justice was not related to affective commitment. Interestingly, procedural and interactional justice perceptions were not related to general health. Even after controlling for the effects of the role stressors, both justice perceptions predicted all the strains except anxiety. These results are consistent with past research that indicates low justice perception or injustice serves as a stressor (Robbins, Ford, & Tetrick, 2011). Perhaps, justice perceptions indeed serve as a stressor rather than a moderator of the relationship between a role stressor and a strain.

The role stressors also had direct effects on the strains, but not all the stressors were related to the strains in a similarly manner. Zero-order correlations show that

all the role stressors were positively related to anxiety and intentions to leave, and negatively related to affective commitment and job satisfaction (role conflict was not related to affective commitment) to the same degree. However, these role stressors were not related to general health. When these role stressors were considered simultaneously, role overload contributed to the prediction of anxiety and affective commitment, role conflict to the prediction of intention to leave, and role anxiety to the prediction of anxiety. These role stressors did not contribute to the predictions of general health and job satisfaction. These results indicate that some of the role stressors seem to be more important in predicting some of the strain variables.

Theoretical and Practical Implications

There are several implications of this study. First of all, this research underlines the need to interpret the relationship between stressors and strains in light of various variables (e.g., justice perception) which might moderate this relationship. In the present study, one form of justice perceptions (i.e., procedural justice perception) was found to moderate the relationship between the role stressors and general health. Our results indicate a negative relationship between the role stressors and general health when perceived procedural justice is high, while the relationship is positive when perceived procedural justice is low.

Although these results are counterintuitive, these results indicate that justice perceptions might not only mitigate but also enhance the relationship of the stressors and general health. To better understand the moderating variable (e.g., justice perception) must be further analyzed along with the nature and set up of organizations (e.g.,

hierarchical, bureaucratic) which might provide a better understanding of the results. Furthermore, there might be also additional variables (e.g., job security) which might influence the justice perception of the employees. This in turn might influence the relationship between roles stressors and general health. Given the dearth of studies which analyze justice perception as a possible moderator in the stressor and strain relationship, more studies are needed to explore this relationship. Secondly, the results of the present study are consistent with past research which show that justice perceptions act as stressors. Given the lack of significant findings associated with perceived justice as a moderator, and consistently significant findings on perceived justice as a stressor, perhaps, justice perceptions should be considered as part of stressors.

Procedural and interactional justice perception can act as stressors as indicated by the main effects of these justice perceptions on strains. At the organization level efforts should be made to establish fair procedures through which employees can voice their concerns, be a part of the decision making process, and can address their grievances. Furthermore, organizations should strive to create a culture where there is fairness and respect in interpersonal interactions. Also, organizations should take regular feedback in the form of surveys from employees in order to know the efficiency of the prevailing procedural and interactional justice systems. Furthermore, as role stressors have direct impact on strains (e.g., anxiety, affective commitment, intention to leave), organizations should take steps to tackle these role stressors and alleviate various strains experienced by the employees.

Strengths, Weaknesses, and Future Research

There are several strengths of the study. First, in response to Beehr's (1998) call for more research on moderator variables on the relationship between stressors and strains, this study is the one of the earliest attempts to examine the role of justice perceptions as a potential moderator of the relationship between stressors and strains. Second strength of this study is that sample consisted of respondents from different job titles (e.g., engineers, accountant, human resources professionals) and from different organizations, thus, results of the study might be generalizable.

Despite the strengths of the study, this study is not without limitations. First, general health was measured subjectively. Thus, the subjective nature of this measure may not have reflected the objective status of participants' health. Also, since the responses from employees were collected by administering self-report questionnaire, social desirability may have played a role in getting inaccurate responses. Second, the single item used to measure of job satisfaction might not reveal accurate levels of reported job satisfaction by the employees. Third, the high correlation between procedural and interactional justice suggest that respondents may have found difficulty in differentiating between procedural and interactional justice. Given that the majority of the respondents were males, the results of the study may not generalize to female respondents. Finally, given the cross-sectional nature of the study, no causal statements of the results could be made.

Future research needs to analyze various organizational factors (e.g., hierarchy, power distance) along with justice perceptions in order to understand the true nature of

moderating relationships among role stressors and strains. Furthermore, variables such as job security, work authority, and organizational culture can also be analyzed when studying the role of justice perception in stressors and strain relationships.

Conclusion

This study is one of the earliest attempts to analyze the role of justice perceptions as a possible moderator in a stressor and strain relationship. Results showed that perceived procedural justice moderated the relationship between role stressors and general health. However, both procedural justice and interactional justice perceptions were directly related to many of the strains, even after controlling for the effects of the role stressors. These results indicate that there is a need to consider justice perceptions as part of stressors as well as further analyze justice perception in light of various factors (e.g., nature of organization, job security) which might influence the relationship between stressors and strains.

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APPENDIX

Survey Items

Section I.

Please indicate the extent to which you agree or disagree with the following statements by circling the appropriate number, from 1 (strongly disagree) to (7 strongly agree).

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

A. Job-Related Stress							
1. I receive an assignment without the manpower to complete it.	1	2	3	4	5	6	7
2. I am given enough time to do what is expected of me on my job.	1	2	3	4	5	6	7
3. It seems like I have too much work for one person to do.	1	2	3	4	5	6	7
4. On my present job, the amount of work seems to interfere with how well I can do the job.	1	2	3	4	5	6	7
5. I often notice a marked increase in my work load.	1	2	3	4	5	6	7
6. I have to do things that should be done differently.	1	2	3	4	5	6	7
7. I work with two or more groups who operate quite differently.	1	2	3	4	5	6	7
8. I receive incompatible requests from two or more people.	1	2	3	4	5	6	7
9. I do things that are apt to be accepted by one person and not accepted by another.	1	2	3	4	5	6	7
10. I work on unnecessary things.	1	2	3	4	5	6	7

11. I feel certain about how much authority I have.	1	2	3	4	5	6	7
12. I have clear, planned goals and objectives for my job.	1	2	3	4	5	6	7
13. I know I have divided my time properly.	1	2	3	4	5	6	7
14. I know exactly what is expected of me.	1	2	3	4	5	6	7
15. Explanation is clear of what has to be done.	1	2	3	4	5	6	7
16. I have been able to concentrate on what I am doing.	1	2	3	4	5	6	7
17. I have felt fidgety or nervous as a result of my job.	1	2	3	4	5	6	7
18. My job gets to me more than it should.	1	2	3	4	5	6	7
19. There are lots of times when my job drives me right up the wall.	1	2	3	4	5	6	7
20. Sometimes when I think about my job I get a tight feeling in my chest.	1	2	3	4	5	6	7
21. I have lost much sleep over worry.	1	2	3	4	5	6	7
22. I have felt that I am playing a useful part in things.	1	2	3	4	5	6	7
23. I have felt capable of making decisions about things.	1	2	3	4	5	6	7
24. I have felt that I can't overcome my difficulties.	1	2	3	4	5	6	7
25. I have been able to enjoy my normal day-to-day activities.	1	2	3	4	5	6	7
26. I have been able to face up to my problems.	1	2	3	4	5	6	7
27. I have been feeling unhappy or depressed.	1	2	3	4	5	6	7
28. I have been losing confidence in myself.	1	2	3	4	5	6	7
29. I have been thinking of myself as a worthless person.	1	2	3	4	5	6	7
30. I have been feeling reasonably happy, all things considered.	1	2	3	4	5	6	7
B. Organizational Attitudes							
1. I do not feel like "part of the family" at my organization.	1	2	3	4	5	6	7

2. I would be very happy to spend the rest of my career with this organization.	1	2	3	4	5	6	7
3. I will actively look for a new job in the next year.	1	2	3	4	5	6	7
4. This organization has a great deal of personal meaning for me.	1	2	3	4	5	6	7
5. I do not feel a strong sense of belonging to my organization.	1	2	3	4	5	6	7
6. I enjoy discussing my organization with people outside of it.	1	2	3	4	5	6	7
7. I really feel as if this organization's problems are my own.	1	2	3	4	5	6	7
8. I often think about quitting.	1	2	3	4	5	6	7
9. Overall, I am satisfied working at this organization.	1	2	3	4	5	6	7
10. I do not feel "emotionally attached" to this organization.	1	2	3	4	5	6	7
11. I think that I could easily become as attached to another organization as I am to this one.	1	2	3	4	5	6	7
12. I will probably look for a new job in the next year.	1	2	3	4	5	6	7

APPENDIX

SURVEY ITEMS

The purpose of this section is to examine your perceptions about *workplace equity*. In answering the following questions, think about the day-to-day decisions made about worker responsibilities, schedules, rewards, and general treatment. For each statement, indicate your AGREEMENT or DISAGREEMENT by circling the appropriate response according to the following scale:

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

C. When decisions about other employees in general or you in particular are made in this company...

1.	... requests for clarification and additional information are allowed.	1	2	3	4	5	6	7
2.	... you are treated with respect and dignity.	1	2	3	4	5	6	7
3.	... you are dealt with in a truthful manner.	1	2	3	4	5	6	7
4.	... all the sides affected by the decisions are represented.	1	2	3	4	5	6	7
5.	... the decisions are applied with consistency to the parties affected.	1	2	3	4	5	6	7
6.	... you are offered adequate justification for the decisions.	1	2	3	4	5	6	7
7.	... accurate information upon which the decisions are based is collected.	1	2	3	4	5	6	7
8.	... complete information upon which the decisions are based is collected.	1	2	3	4	5	6	7
9.	... opportunities are provided to appeal or challenge the decisions.	1	2	3	4	5	6	7

10. ... you are treated with kindness and consideration.	1	2	3	4	5	6	7
11. ... you are shown concern for your rights as an employee.	1	2	3	4	5	6	7
12. ... you are helped to understand the reasons for the decision.	1	2	3	4	5	6	7

Please answer the following questions using the answer scale below:

Very Unfairly	Unfairly	Undecided	Fairly	Very Fairly
1	2	3	4	5

D. To what extent are you fairly rewarded…

1. ... considering the responsibilities that you have.	1	2	3	4	5
2. ... taking into account the amount of education and training that you have had.	1	2	3	4	5
3. ... in view of the amount of experience that you have.	1	2	3	4	5
4. ... for the amount of effort that you put forth.	1	2	3	4	5
5. ... for the work that you have done well.	1	2	3	4	5
6. ... for the stresses and strains of your job.	1	2	3	4	5

APPENDIX

SURVEY ITEMS

Section IV: Socio-Demographic and Type of Workplace Information

Instructions: For purposes of statistical analysis *only*, please answer the following questions about yourself. Your answers will remain *anonymous*. This biographical data is *important* to this research study so that we can describe the overall sample of respondents. Most of the questions listed below are answered by circling a number. Some ask that you write a number or words. Please write **clearly and legibly**.

1. Sex (circle one): 1 Male 2 Female

2. Age (as of last birthday): _____years

3. Were you born in India? 1 No 2 Yes

If not, how long have you lived in India?

_____ year(s) _____month(s)

How long have you been working in India:

____ year(s) _____ month(s)

4. If you were not born in India, please indicate in which country you were born (Please write **clearly**).

_____

How long were you living in the country where you were born?

_____ year(s) _____(months)

5. a. What is your religion? _____

b. If you are from a religion with a caste system, to which caste do you belong?

_____

6. Which state do you come from? _____

7. What is the primary and secondary language you speak at home?
Primary _____
Secondary _____

8. How many years have you spent in your profession or this career path: ____years ____ months

9. Marital status:

1 Single
2 Married/Re-married
3 Living with partner(s)
4 Divorced/separated
5 Widowed/widower
6 Other (Please specify)_____

10. Highest academic degree:

1 High School Degree
2 Bachelors degree
3 Master's degree
4 Doctorate
5 Other (Please specify)_____

11. Employment status: 1 Full-time 2 Part-time (Please specify):_____

12. Job Title (please write clearly): _____

13. How long have you been working for this company: _____ year(s) ____ month(s)

14. Do you supervise other employees? 1 Yes 2 No

If yes, how many?_____

15. Do you work in a local firm? 1 Yes 2 No

If yes, please go to #16, if no, please go to #17.

16. Does your firm have relationships with other countries (suppliers, marketing, etc.)?
1 Yes 2 No

17. In how many countries does your firm have subsidiaries?

(1) 1-3

(2) 4-8

(3) 9-15

(4) 16 or more

18. Dependency: How would you describe the relationships of your workplace with other subsidiaries (local branches)?

1 There are no relationships with subsidiaries in other countries.

2 We sometimes work together (e.g., exchange information).

3 We are working very closely together with other subsidiaries.

19. Autonomy: How would you describe the decision making process in your organization?

1 We work autonomously within the general targets set by the headquarter.

2 We work autonomously but we have to work according to policy and procedures set by the headquarter.

3 We have to refer all our decisions to the headquarter.

20. Orientation: The orientation of my company in relation to its services/products:

1 Each subsidiary develops / sells its own products to its local market (or few more countries).

2 Our company develops products with response to the worldwide environment while at the same time each subsidiary makes local adaptation according to the local market needs.

3 Mostly products and/or services are the same for all countries. Sometimes, the products development and design is according to inputs of local branches.

4 All products and/or services are considered as fitting to all customers around the world. There are no differences in the same product/service sold to people from different countries.

21. What has been your experience with "time" while working in this organization? (Please continue to write your answer on the back of this page).

_____

_____

_____