Effects of Occupational Stress on Employees: Gender Reaction and Coping Techniques

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Abstract- Nowadays organizations are expecting much more from their employees as a consequence of the industry evolution. Higher demands and requirements have impacted the well-being of employees increasing the levels of occupational stress. The purpose of this study was to examine gender differences in response to occupational stress and to investigate the use and effectiveness of coping strategies. An online survey was distributed containing demographic questions, instruments assessing physical and psychological symptoms along with questions inquiring physical activity, overall stress, and coping strategies. A total of 114 participants from various job levels (males = 46, females = 68) completed the survey. It was hypothesized that female employees would report significantly more psychological and physical symptoms than male employees under occupational stress. The results did not support the hypothesis indicating that no significant difference exists between gender and occupational stress. However, differences in the coping strategies used by females and males to reduce stress were found. Thus, knowing how each gender experience occupational stress and what coping strategies are used to decrease stress levels, organizations can have a better understanding of what methods and training to provide employees for the reduction of occupational stress. The findings serve as a contribution to the existing literature on question; yet, the authors suggest further examination on gender, occupational stress, and effectiveness of coping strategies. Limitation of the study are discussed.

Index Terms- gender, occupational stress, coping strategies, physical and psychological symptoms.

I. LITERATURE REVIEW

In the past decades, there has been constant changes in the nature of organizations. Factors such as integration of new technology, economic crisis, and new marketing strategies have forced companies to implement organizational changes to stay competitive and survive. Nevertheless, such continuous fluctuations create additional demands and challenges not only for organizations but for employees as well. Uncertainty about the ways change may affect the work of employees rises anxiety levels. Greubel and Kecklund (2010) suggested that different kinds of organizational changes play a negative part on health, work stress, sleep, sleepiness and recovery. According to Rivera-Torres, Araque-Padilla and Montero-Simo (2013) study on Job Demands-Control and Support model and gender, environments with high work demands and low work control on the part of employees induce higher occupational stress levels; consequently, stress effects are greater on the health of individuals. Results from a survey of 300 general practitioners examining the relationship of quality of life, work demands, and psychological stress done by Vanagas and Bihari-Axelsson (2004) suggested that the combination of increasing job demands and psychological stress produces harmful consequences in the life quality of individuals. All the negative consequences that changes and demands have on the health of employees lead to occupational stress. Occupational stress was conceptualized by Galanakis, Stalikas, Kallia, Karagianni, and Karela (2009) as the incompatibility between the perceptions of demands imposed by the environment and the evaluation of personal resources available to accomplish those demands. Beehr and Newman (1978) defined occupational stress as factors of the job that force employees to deviate from normal functioning making the psychological and physical state to change.

To further investigate the adverse effects that occupational stress generates on employees, researchers have turned the focus to stress reaction by gender. A study reported that response to stress by women comes from perceiving an event as threat; in contrast, the reaction of men to stress follows the evaluation of the availability of resources for managing a stressful situation (Watson, Goh & Sawang, 2011). Based on the findings of Rivera-Torres et al. (2013), the Job Demands-Control and Support model showed that significant difference exists on how each gender reach levels of occupational stress. Intellectual and emotional demands produced high levels of occupational stress in women; whereas, time pressure and work were the most critical demands affecting men with occupational stress (Rivera-Torres et al., 2013). Other results have determined that women are more prone to suffer psychological strain, anger, and depression compared to men when working under similar circumstances (Liu, Spector, & Shi, 2008). In an empirical review done by Jick and Mitz (1985) on gender differences and work stress, various studies were analyzed indicating a tendency of females to report more psychological distress as opposed to males who experienced more physiological symptoms in response to stress. Stroud, Salovey, and Epel (2002) investigated the difference between men and women and the adrenocortical reaction to different occupational stressors. The conclusion was that cortisol levels increase based on the reaction by men to achievement stressors, and the reaction to social rejection by

women. Therefore, the findings revealed that women are more physiologically sensitive to interpersonal conflict than men. Moreover, a research conducted by Matud (2004) based on gender differences and coping techniques suggested that women experience higher somatic symptoms and psychological distress compared to men. Miller et al. (2000) studied the interaction of gender and culture in the experience of job stress by managers from four different countries. The study concluded there was not a difference in stressors experienced by male and females but that differences exist in the strains faced by gender, where men experienced better mental and physical health than women. Based on these studies, there are clearly contradictory findings in the literature of occupational stress and gender reaction.

On the other hand, there are other factors that may influence the stress levels experienced by each gender. The pressure that individuals experience to fulfill roles and responsibilities with family and work differs as well as the reaction to such aspects. Female and male differences might exist due to the diverse job positions at different organizational levels (Torkelson, Muhonen, & Peiro, 2007). Since females have a minority status in the workplace, additional stressors, such as low-salaries and work-family conflict, are experienced by women leading to increasing levels of stress (Devanna, 1987; Greenglass, 1993). Likewise, multiple roles imposed on females produce higher stress levels. Women have many roles that need to be fulfilled such as wives, mothers, daughters, and professionals. As concluded by Galanakis et al. (2009), females that are working, married, and have children experience higher stress levels compared to single or married men and women, or married couples without children. Though, when comparisons were made between female and male employees of the same age based on educational background and marital status, similar levels of stress were found among employees (Galanakis et al., 2009).

A different area that researchers have explored is how each gender manages occupational stress and the strategies used to lessen the effects of such constraints. Lowe and Bennet (2003) described coping as the process of reducing the negative effects that stressful situations bring to the life of an individual. Coping is also conceptualized as the usage of different methods in order to deal with the state of tension that stress brings (Anbazhagan & Rajan, 2013). Most of the literature on coping discusses two strategies: problem-focused and emotion-focused. Problem-focused technique minimizes stress by changing work habits or work environment that employees are in and resolving problems in a practical way; emotion-focused coping technique regulates emotions that stressors generate and help employees adjust to stress (Anbazhagan, & Rajan, 2013; Torkelson & Muhonen, 2004). Examples of emotion-focused techniques are social support, relaxation techniques, and health maintenance; whereas, some problem-focused techniques are time management, role clarification, delegation, and problem-solving (Anbazhagan & Rajan, 2013). Chang and Taylor (2013) conclusions showed that the combination of both coping strategies can benefit individuals since both techniques have shown to relieve stress; in addition, these strategies aid to sustain job performance levels and physical well-being. Another finding suggested that coping techniques used by females and males were strictly dependent on the type of stressor encountered (Torkelson et al., 2007). Yet, findings by Torkelson and Muhonen (2004) study concluded that the problem- focused technique has no relationship with the reduction health symptoms compared with emotion-focused strategy of seeking emotional support which was associated with fewer health symptoms.

Several studies have reported that males use different coping techniques than females. According to Lowe and Bennet (2003) findings, employees use both problem-focused and emotional-focused coping strategies in the reduction of stress. Torkelson and Muhonen (2004) suggested that difference in the use of coping styles depended on the occupational level and gender. Employees who are at the same level and performing similar tasks tend to use problem-focused technique regardless of the gender; however, those who are at the non-managerial level, males tend to use problem-focused strategy more often than females and females use more emotion-focused techniques (Torkelson & Muhonen, 2004). Similarly, another study found that problem-focused technique tends to be use in upper positions; in contrast, emotion-focused technique is usually used by lower level positions (Narayanan, Menon, & Spector, 1999). Findings obtained in Matud (2004) study indicated that females use frequently emotion-focused coping technique since women experience more psychological distress than males. Nevertheless, ambiguity exists if gender differences really exist in the techniques implemented to reduce physical and psychological symptoms due to stress (Jick & Mitz, 1985).

The intent of this study was to extend the investigation of gender differences in response to occupational stress. In order to examine differences in participants, the effects of occupational stress were measured according to physical and psychological symptoms experienced by gender. Moreover, coping is defined in this study as a process of reducing stress by using two common strategies, problem-focused coping and emotion-focused coping. It was hypothesized that female employees will report significantly more psychological and physical symptoms than male employees under occupational stress. Furthermore, the data was analyzed to explore gender differences in the usefulness of coping strategies in the reduction of stress.

II. METHODOLOGY

Participants

For the purpose of the study, all individuals were required to be at least 18 years old and to be working at the time of participation. The 114 participants that responded the survey were from a convenient sample, which consisted of 68 (59.65%) females and 46 (49.35%) males. Most of respondents indicated that they were of Hispanic ethnicity 82.5%. There were 31 participants that opted to respond the Spanish version survey and 83 that proceed to complete the English version. In addition, 41.2% of participants described their current job level as professionals (28 females and 19 males); whereas, 6 males and 11 females indicated to be in entry level positions.

Materials

An occupational survey was created with two different language versions, English and Spanish. First, the survey included a demographic questionnaire, such as age and educational level, based on multiple choice and short answers format. In addition, the Physical Symptom Inventory based on

18-items with yes/no responses format was used to assess the physical symptoms experienced by employees in response to stress (Spector & Jex, 1998). Participants had to indicate whether they had a symptom in the past 30 days but did not see a doctor, they had a symptom and saw a doctor or they did not experience the symptom. The full version of the Job-Related Affective Well-being Scale was also used to assess the psychological symptoms experienced by individuals under occupational stress. The scale contains 30-items where responses are based on a five-point scale, 1= Never to 5 = Extremely often. Also, the survey included a short answer question format: how many days a week do you exercise?" to measure regularity of physical exercise, and a question based on a five-point scale 1= Normal to 5 = Very Severe asking the overall stress in the last 30 days. Last, a multiple choice question was formulated about which coping strategy participants use when confronting stressful situations at work. The possible answers were centered on two types of coping techniques, a) problem-focused, b) emotion-focused, c) combination of both, and d) none. The design of the question was intended to take participants that use one of the two strategies to answer and evaluate the level of effectiveness of the techniques based on a five-point scale from 1 = Strongly disagree to 5 = Strongly Agree.

Procedure

The survey was conducted through Google Forms, and it was written in English and Spanish. The Spanish translation was reviewed by a native Spanish speaker. Since the survey was internet-based, the administration was done by sending a recruitment message including the survey link through email and social media, Facebook and LinkedIn, to participants.

When participants received the link, first read the informed consent form. The form contains a description of participant's rights such as the purpose of the survey, the right to withdraw, the risks involved, and the contact information of researchers. It clearly states the survey is anonymous and that participation is absolutely voluntary without any penalties if participants discontinue the survey. Once participants agreed to participate, the time duration to complete the survey was supposed to be about 5-10 minutes. It is important to mention that there was no compensation for participation in the study.

III. RESULTS

In the analysis of descriptive statistics between gender and physical symptoms, females have a higher mean (M = 4.90) compare to the mean of males (M = 4.13) producing a difference of 0.77 points. A difference exists in the mean results of males (M = 107.9) and females (M = 102.09) by 5.82 points between gender and psychological symptoms.

In regards to the descriptive information of coping strategies, the question which strategy do you use when confronting stressful situations at work revealed that 50% of males preferred to use problem-focused coping strategy and 64.7% of females preferred to use a combination of problem and emotion-focused coping strategies.

Another factor analyzed was the stress level of participants. Male participants reported lower average of stress (M = 2.57) compared to female participants (M = 2.78) resulting in a difference between the means of 0.21 points. However, the mean difference was not statistically significant to conclude a difference in stress levels between male and female employees.

Physical, Psychological, Coping Strategies Analysis

In order to test the physical symptoms experienced by female and male employees under occupational stress, a t-test statistical analysis was done. The pretest criteria was tested where normality, homogeneity of variance from the Levene test (p .801), and $n > 30$ were satisfied. Using a .05 alpha level (α = .05) and confidence level of 95%, the p value of .468 (p = .266) suggested that there is no statistically significant difference. In conclusion, results indicated that there is no difference in the physical symptoms experienced by male and female employees under occupational stress.

To examine gender differences in experienced psychological symptoms, a t-test analysis was also used to analyze the variables. Normality, and n criteria was satisfied; however, the Levene test for homogeneity of variance did not satisfy the pretest criteria (p = .021). A p value of .132 (p = .132) was obtained with an alpha level of .05 (α = .05) and 95% confidence level. Findings indicated that there is no statistically significant difference in psychological symptoms experience by both genders when facing job stress.

In order to investigate which coping strategy was the most used by participants, a chi-square test was performed. As depicted in Table 3, a 2x4 chi-square was done where classification of coping strategies was as follows: 1= Problem-focused, 2= emotion focused, 3= combination of both, 4= none. The chi-square p value obtained was .011 less than the used alpha level .05 (α = .05) indicating that there is a statistically significant difference in responses across gender and the use coping strategies. The findings suggest problem-focused is most used by males, and combination of problem-focused and emotion-focused is most preferred by females. However, it should be noted that in the crosstabulation table, each cell does not contain an n of at least 5, meaning that the pretest criterion for a Chi-Square analysis was not satisfied.

Gender and Stress Level

The study also examined the stress levels of participants. To determine if there was a difference in stress level experienced by male and female employees under occupational stress, a t-test was run to analyze the data. The pretest criteria satisfied the assumptions to proceed with the t-test analysis. Using a .05 alpha level and 95% confidence level, the p value of .336 was obtained suggesting that there is no statistically significant difference. In conclusion, the finding indicated that there is no difference in stress levels experienced by male and female employees under occupational stress.

IV. DISCUSSION

The aim of this study was to examine the physical and psychological symptoms experienced by male and female employees under occupational stress. The findings indicated that no differences were found in the experience of physical and psychological symptoms by both genders suffering occupational stress; consequently, the initial hypothesis was not supported.

The interpretation of the results suggested that physical and psychological symptoms are encountered in a similar magnitude by male and female employees. Makhbul and Hasun (2011) study supports the findings that there is no difference in the experience of stress by both genders. The study revealed that support staff from Malaysia experienced and reacted similarly to their jobs and stressors regardless of the gender. While in Matud (2004) study, it was determined that a difference exists between genders where females experience higher somatic symptoms, psychological distress, frustrations, and conflicts. Miller et al. (2000) findings suggested that men and women working at a same level encounter the same stressors but women experience worst physical and mental health as a reaction to such stressors.

Furthermore, the authors wanted to explore the preferences of gender with respect to coping strategies use and the effectiveness of such techniques. Based on the results, male employees use more problem-focused coping techniques, whereas female employees use a combination of both (problem and emotion-focused). Other findings showed that problem-focused strategy is used by both genders when working at the same managerial level; in contrast, males in the non-managerial level tend to choose problem-focus coping strategy more than females (Torkelson & Muhonen, 2004). In the research of Matud (2004), interpretations indicated that women use more emotion-focused and avoidance technique than men. Nevertheless, it is unclear which coping technique is most effective in reducing the effects of stress (Jick & Mitz, 1985). The authors were aimed at investigating and clarifying which type of coping style was more effective to lessen the consequences of occupational stress but proper analysis was not possible to be performed.

Limitations

There are various limitations involved in the current study. First, the sample used in the research is a convenient sample. Second, the demographic question about the job level of participants, a few individuals chose the option “retired” or “unemployed”. The study required participants to be actively working at least 30 days prior participating in the survey. The authors decided to include the data of retired or unemployed participants; even though, there is the possibility of response bias since the time period is unknown which such job levels have been held by the participants. Other limitation is that the assumption for the t-test analysis performed on gender and psychological symptoms variables was not met due to the probability obtained ($p = .021$) in the Levene test for homogeneity of variance. Likewise, when gender preferences of coping strategies were examined, the criterion 1- $n > 5$ for the chi-square test was not satisfied making the analysis less robust. Thus, it might be possible that the size of the sample affected the statistical testing. To conclude, the question for effectiveness for coping strategies could not be measured due to inadequate elaboration and structure of questions and answers. It was intended for participants to answer the effectiveness of the coping techniques based on the question answered in regards to the preference of coping strategies used. If participants answered the use a combination of both techniques or none, the survey finished with that question. Those individuals that answered preference for problem-focused or emotion-focused coping strategy jumped to the next question about effectiveness of the chosen technique based on a five-point scale. By structuring the questions in that manner, the number of participants per group (females and males who evaluated the effectiveness of problem and emotion focused techniques) were negatively reduced in order to be able to run statistical tests and meet assumptions.

In conclusion, the aim of this study was to find differences in the psychological and physical symptoms experienced by female and male employees. Specifically, it was predicted that females will experience more psychological and physical symptoms than males caused by occupational stress. Results revealed that there are no gender differences with respect to the occupational stress outcome suggesting that both genders experience symptoms in a similar manner. The authors were able to examine gender preferences of coping techniques indicating that male employees use more problem-focused coping techniques; whereas, female employees use a combination of both (problem and emotion-focused). The results of this study serve as a contribution to the existing literature pertaining to occupational stress; yet, the authors suggest further examination on the topic. The literature is still unclear about which gender is more prone to experience higher distress under occupational stress due to the extensive organizational aspects where the variables can be studied. Effectiveness of coping techniques and the relationship of psychological and physical symptoms experienced by employees should also be considered for further analysis.

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