Introduction

Work related stress is defined as an employee's reaction to characteristics at the workplace that seem mentally and physically threatening ***(Jamal, 2005)***.

Occupational stress is an exploding phenomenon in the current global scenario. The impact of which costs for the employees and organization severely ***(Cotton & Hart, 2003)***.

Work-related stress in developing countries is often made worse by a broad spectrum of factors outside the work environment from gender inequalities, poor environmental management of industrial pollution to illiteracy, parasitic and infectious diseases, poor hygiene and sanitation, poor nutrition, poor living conditions, inadequate transportation systems and general poverty ***(WHO, 2007).***

Hoel et al., (2001) reported that, in a survey conducted by the Families and Work Institute in the United States, 26% of the workers stated that they were often or very often burned-out or stressed by their work.

In 2014/2015, the ***(HSE, 2015)*** reported that work related stress in the UK accounted 43% of work absence and for 35% of all health-related work illness.

In Australia, every year 7,200 Australians are compensated for work-related mental health conditions, equating to around 6% of workers' compensation claims, and approximately $543 million is paid in workers' compensation

for work-related mental health conditions ***(Safe Work Australia, 2019).***

The established link between work stressors and employee's health places a clear moral obligation on employers to provide a healthy environment ***(Patterson et al., 2003)***. In addition to this moral obligation, it has also been argued that employers should be aware of the impact of reduced well-being and ill health in monetary terms. For example, ***Kessler et al., (1999)*** estimated that monthly productivity losses of approximately $200 to $400 were experienced by each worker due to depression.

Work-related stress promotes a successful role, and a certain degree of stress is a natural phenomenon felt by humans and it is also a part of their survival and well-being. However, excessive chronic stress could negatively affect their physical and mental health states ***(Rada & Johnson-Leong, 2004; Sancho & Ruiz, 2010)***.

Work-related stressors, such as having too little time to complete one's work or lacking control over the timing and methods of work, high job demands that require employees to exert additional effort over time, can cause fatigue and lead to undesirable outcomes ***(Mackay et al., 2015)***.

Work pressures arise from the work environment that an employee is working in and employees are expected to overcome these pressures. There may be multiple pressures within the working environment, all of which can lead to

psychological stress. This arises and increases as the employee goes up the ladder in his career ***(Cavanaugh et al., 2000).***

Work related stress is an increasingly important occupational problem and a significant cause of economic loss. Stress-related outcomes cost organizations $50 billion to $75 billion every year. These costs are realized in the form of decreased productivity, increased job turnover and increased absenteeism ***(Kendrick, 2000).***

The WHO (World Health Organization) emphasizes in the Protecting Workers Health Series No. 6 (2007) that persistence of stress without management could lead to various negative effects on both workers and the companies they work for. Effects on workers may include physiological health (musculoskeletal, cardiovascular), psychological health (anxiety, depression), as well as the worker's cognition and behaviors. Despite stress does not represent a health impairment in itself, however, stress is the first alarming sign for such harmful physical and emotional consequences ***(WHO, 2007).***

Occupational stress negatively affects the quality of life and health, resulting in economic and social costs ***(de Jonge et al., 2000; Kudielka et al., 2005)***. The relationship between occupational stress and depression has been also previously reported in multiple of studies ***(Tsutsumi et al., 2001; Larisch et al., 2003).***

Burnout is common among employees who work in stressful environments ***(WHO, 2005)***. Cardiovascular diseases, musculoskeletal disorders, anxiety and depression are all associated with burnout ***(Ramírez et al., 2018; Wiederhold et al., 2018)***.

When a person faces an imbalance in psychological and behavioral response needed to cope with stress, it can become a detrimental risk factor for health. Thus, stress can affect physical, mental health and social well-being, with consequences for both the person and the society ***(Prabhu et al., 2015)***.

Work related stress occurs most commonly when there is an imbalance between the workload and the productivity of the individual to meet those demands. Improper work environment, management problems, conflicts with colleagues all contribute to increasing stress. Associations between occupational stress and mental health are usually made, despite the inability to show a direct association between them. This is because; the majority of the diseases commonly attributed to stress have multiple other causes. The effects of occupational stress on ill-health may be physiological, emotional, behavioural, cognitive or a combination of all four ***(Prabhu et al., 2015).***

Many studies have been conducted on the relationship between work related stress and depression, the majority of these studies have examined job strain, a work stressor characterized by the combination of high job demands and low

job control. According to at least four systematic reviews job strain is associated with an increased risk of depression ***(Bonde, 2008; Netterstrøm et al., 2008; Siegrist, 2008; Theorell et al., 2015).***

Rationale:

Work related stress affects the overall mental and physical wellbeing of employees. Workers in health industry are more prone to work stress than any other workplace. Many researches were conducted among health-care professionals, but our study focuses on hospital employees who are not involved in the direct patient's care.

Aim of the Work

Goals:

To improve employees' mental health that may improve their productivity and accomplishment.

Research hypothesis:

1. Hospital employees, even those who are not involved in the direct patient care, are more exposed to work related stress than others in the equivalent jobs.
2. Work stress negatively affect mental health of the employees.
3. Poor socioeconomic status has a negative effect on the mental health of the employees.

Research questions:

1. What is the prevalence of work related stress among employees in Ain Shams University hospitals?
2. What is the effect of work related stress on their mental health?
3. What is the effect of socio-economic status on their mental health?

Objectives

This study was designed to:

1. To measure the prevalence of workplace stress among a sample of employees of Ain Shams University hospitals and determine its risk factors.
2. To measure the effect of workplace stress and socioeconomic status on the occurrence of depression, anxiety and stress among a sample of employees of Ain Shams University hospitals.

Chapter 1

Definition, Causes and Prevalence of Work-related stress

Work related stress can be defined as a pattern of emotional, cognitive, behavioural and physiological reactions to adverse and noxious aspects of work content, work organization and work environment. It is a state characterised by high levels of arousal and distress and often by feelings of not coping ***(European Commission, 2000).***

It attributes to how persons are drained by mental and physical pressures at work to the extent that they may fail to accomplish their career goals ***(Kolakar et al., 2002).*** This has been identified as a significantly increasing problem in the modern world due to its effect on the employee's productivity ***(Arsakularathna & Perera, 2017).***

Employees are often being required to work beyond their contracted hours due to tight deadlines and shortage of staff. Moreover, many organizations are reducing their permanent workforce and changing to a culture of temporary contracts, increasing feelings of job insecurity among the personnel ***(Parent-Thirion et al., 2007)***.

A report in the 27 European Member States has shown that stress is the second major cause of health problems in the workplace, affecting as many as 22% of employees ***(Milczarek***

et al., 2009). The European Commission reported that the cost of work-related stress in the EU15 was approximately €20, 000 million per year ***(European Commission, 2000).*** Studies estimate that 50-60% of all lost working days have some associations with work-related stress ***(Cox et al., 2010).***

The ***HSE, (2004)*** state that around half a million people in the UK experience work-related stress at a level that they believe is making them ill, up to five million people feel "very" or "extremely" stressed by their work and work-related stress costs society about £3.7 billion every year.

The ***National Association of Mental Health, (2005)*** draws an important distinction between stress and pressure. Pressure is defined as a subjective feeling of tension or arousal that is triggered by a potentially stressful situation. Because it stimulates mental alertness and motivation, pressure may have a positive impact on employee performance and satisfaction. However, when this pressure becomes extreme, continuous and unrelieved, it may lead to irritability, fear, frustration, aggression and stress, and may even contribute to a variety of short or long term physical and mental illnesses. When pressure exceeds an individual's ability to cope, the result is stress.

Stress has two major dimensions: physiological stress and psychological stress. Physiological stress is often viewed as a physiological reaction of the body (headache, migraine, abdominal pain, lethargic, backache, chest pain, fatigue, heart palpitation, sleep disturbance and muscle ache, as well as

changes in eating, drinking, sleeping and smoking habits) to various stressful triggers at the workplace ***(Beehr et al., 2001; Critchley et al., 2004; Mansor et al., 2003)***. While psychological stress is often seen as an emotional reaction (anxiety and depression burnout, job alienation, hostility, depression, tension, anger, anxiety, nervousness, irritability and frustration) as a result of the stimuli at the workplace ***(Antoniou et al., 2003; Millward, 2005; WHO, 2005)***. If employees cannot control such stresses this may negatively affect their work attitudes and behavior (satisfaction, commitment, productivity, quality and health) in the workplace ***(Seaward, 2005; Newell, 2002; WHO, 2005)***.

Symptoms of acute stress include emotional disturbance such as increased anxiety, worry, frustration, and hostility. Physical symptoms of acute stress can include fatigue, increased blood pressure (temporarily), increased heart rate, drowsiness, headaches, jaw pain, back pain and confusion ***(Zimbardo et al., 2003)***.It may result in muscle aches ***(Chrousos, 2009)***, weakening of the body's immune system ***(Volmer & Fritsche, 2016)***, exhaustion disorder ***(Grossi et al., 2015)*** or cardiovascular diseases ***(Kivimäki & Steptoe, 2018)***.

Stress related hazards at work can be divided into work content and work context ***(WHO, 2010)*** as follows:

Work contents includes:

- Job content (monotony, under-stimulation, meaningless of tasks, lack of variety)
- Work load and work pace (too much or too little to do, work under time pressure)
- Working hours (strict or inflexible, long and unsocial, unpredictable, badly designed shift systems)
- Participation and control (lack of participation in decision-making, lack of control over work processes, pace, hours, methods, and the work environment)

Work context includes:

- Career development, status and pay (job insecurity, lack of promotion opportunities, under- or over-promotion, work of 'low social value', piece rate payment schemes, unclear or unfair performance evaluation systems, being over- or under-skilled for a job)
- Role in the organization (unclear role, conflicting roles)
- Interpersonal relationships (inadequate, inconsiderate or unsupportive supervision, poor relationships with colleagues, bullying/harassment and violence, isolated or solitary work)
- Organizational culture (poor communication, poor leadership, lack of clarity about organizational objectives, structures and strategies)
- Work-life balance (conflicting demands of work and home, lack of support for domestic problems at work, lack of

support for work problems at home, lack of organizational rules and policies to support work-life balance).

Causes of Work related stress:

❖ *Work load:*

Work overload is one of the most stressful task demands that faces employees ***(Anderson & Pulich, 2001).***

Kinman & Jones, (2004) found that perceptions of an unmanageable workloads were associated with psychological distress and job dissatisfaction, as well as lower level of control. Workload and other job demands also impact stress and fatigue leading to health complications and decreased work productivity ***(Macdonald, 2003).*** On the other hand, the mental load can also arise from repetitive and monotonous works, in which the worker reaches a state of saturation, drowsiness and decreased reaction capacity ***(López-López et al., 2018).***

❖ *Interpersonal conflicts:*

Relationships and conflicts with superiors, subordinates and colleagues can all play an important part in an individual's stress levels ***(HSE, 2006)***. Interpersonal conflicts at work have previously been associated with health-related outcomes, such as poor sleep quality ***(Fortunato & Harsh, 2006),*** burnout ***(Harvey, Blouin & Stout, 2006)*** and with organizational outcomes such as job dissatisfaction, turnover intention ***(Frone, 2000)***. A prospective study by ***(Bültmann et al., 2002)*** found that interpersonal conflicts at baseline predicted the onset of

prolonged fatigue and psychological distress in 1-year follow-up.

❖ *Working conditions:*

A systematic review and meta-analysis by ***(Kivimäki et al., 2006)*** shows that long work hours, shift work, and employee work time control are associated with stress-related diseases, the conceptual associations between work stress and work hours are important. It is associated with a 50% excess of coronary heart disease (CHD) according to prospective studies.

As for shift work, the work demands of some shift worker occupations may also be especially stressful due to the special nature of the work (on-call emergency work and working alone). For example, 68% of a representative group of anesthetists had stress, and 18% had moderate burnout ***(Lindfors et al., 2006)***.

❖ *Bullying:*

The concept of workplace bullying entails situations in the workplace where an employee persistently and over a long time perceives him- or herself to be mistreated and abused by other members of the organization, and where the person in question finds it difficult to defend him/herself against these actions ***(Nielsen & Einarsen, 2012).***

Bullying in the workplace may be related specifically to one's tasks and can take the form of unreasonable deadlines, meaningless tasks, or excessive monitoring of work ***(Ortega et***

al., 2009). Workplace bullying may also be person-related and take the form of gossiping, verbal hostility, persistent criticism, or social exclusion ***(Ortega et al., 2009; Agervold, 2009; Nielsen et al., 2012)***. About 2 to 30% of the working population has experienced bullying at work ***(Khubchandani & Price, 2015)***. Consistent with stress theories, workplace bullying has been recognized as a main source of distress that is associated with lowered job satisfaction and performance, reduced commitment ***(Nielsen & Einarsen, 2012)***.

❖ *Role ambiguity:*

Role ambiguity occurs when an employee lacks or does not understand his/her job responsibilities, obligations, performance expectations and/or objectives ***(Yun et al., 2007).*** It may reduce an employee's effectiveness, thereby burdening coworkers or causing resentment and inhibiting the development of workplace friendships.

❖ *Role conflict:*

Role conflict is defined as the lack of congruent expectations and demands from other people in the workplace. It is psychologically uncomfortable and may induce negative emotional reactions, diminish effectiveness and job satisfaction, and decrease the employee's intent to remain a member of the organization ***(Allen & Mellor, 2002; Burke, 2002).***

❖ *Job control:*

Workers have very little say in the way they do their work or when they can take rest breaks, they are not involved in making decisions about work that affects them or their clients, they are unable to refuse a service to an aggressive client, also skills and experience are not utilized ***(Safe Work Australia, 2014)***.

❖ *Poor support:*

Workers have inadequate support from supervisors and co-workers, few information about work priorities or training on how to do the job, minimal equipment and resources to do the job, inadequate worker support systems (lack of access to employee assistance programs, counselling and information on mental health or workplace policies) ***(Safe Work Australia, 2014)***. Respondents who receive less support tend to report lower levels of psychological health and less satisfaction ***(Kinman & Jones, 2004)***.

❖ *Lack of personal development*

Kinman & Jones, (2004) mentioned that the lack of opportunity for personal development were significantly associated with job stress. ***(Donders et al., 2012)*** reported that a higher score on promotion possibilities is associated with more well-being at work.