DOI: 10.22094/JOIE.2023.1973531.2015



Work-Related Stress (Economic Stress) and Psychosocial Problems among Shift Workers: A Case Study on Pakistan Railway Lahore, Pakistan

Saadia Zakia Talib^{a,*}, Shahzad Ali ^b

a School of Psychology, University Utara Malaysia, Malayisa

b Lecturer, Department of Business and Management Sciences, Superior University Lahore, Pakistan Phd. In Economics (Candidate), School of Economic, Finance and Banking, UUM, Malyasia

Received 24 December 2022.; Revised 10 January 2023; Accepted 17 January 2023

Abstract

The primary objective is to address the psychosocial problems and occupational stress of Pakistani shift workers who feel insecure in their community. This study found that shift workers, particularly night shift workers, have psychosocial issues and are stressed. To achieve the research objective, 300 sample sizes are selected from the Pakistan railway using a cross-sectional research design, with shift workers and genders categorizing the sample size. The dyadic adjustment scale, depression anxiety, and stress, as well as demographic variables, are used to examine the significant outcome. The result revealed that night shift workers experience anxiety and stress, as well as psychosocial issues. Additionally, multiple regression analysis indicated that socio economic indicator significantly predictors of anxiety, stress, and depression of shift worker. This study contributes to literature of psychological issues, anxiety, and depression of shift worker of railway, and helps the authorities and policies maker to provide the effective and efficient policy for the wellbeing of workers. In Addition, in order to improve the performance of shift workers, the Pakistani railway hospital implemented various management strategies for depressed workers.

Keywords: Work-related Stress; Psychosocial Problems; Shift worker; Pakistan Railway

1. Introduction

Since its independence, Pakistan has focused on long-term growth in the country and in various departments, as the global economy has become more globalized. The Pakistan Railway department, one of the influential departments, improved performance by fostering a positive environment. In the context of Pakistan, human capital is considered a potent tool for achieving improvement in both public sector but also private sectors (Torbjörn Åkerstedt & Torsvall, 1981). The organizations primary objective is to increase productivity by utilizing human resources across multiple shifts. According to Aanonsen (1959), workers are either compelled to work in shifts or have no choice to do so. The majority of organizations are working on their development, and labor is the primary source of increasing productivity, which improves the performance of organizations and the as whole. In order for the employees to feel safe and motivated, organizations must provide a healthy environment that has a psychological impact on health of their employee. Policies regarding stress at work may influence both employee satisfaction and individual productivity.

According to the report of world health organization, depression, anxiety, and stress are carry 80 percent disease (WHO, 2017). Furthermore, Knipe et al. (2019) reported that 76 percent of the suicide taken placed due to depression, stress, and anxiety. As far as Pakistan is concerned, according to the Bloomberg report Pakistan ranked 7th in the world where people are living under the stressful living environment. Therefore, the objective of this study is to investigate the work-related stress and psychological problems in the shift worker. According to Tennant (2001), workers workplace absenteeism has a greater impact on the lives of employees in addition to its economic costs. In this regard, job insecurity and heavy workload for part-time and temporary workers are two of the most significant economic factors. According to Tennant (2001), both increasing job demand and a sense of job security contribute to stress and depression. This is the primary reason workers are experiencing psychological issues as a result of work-related stress (Meers, Maasen, & Verhaegen, 1978).

Work-related stress is well-defined as increased pressure or other types of demands on the workplace, as well as people's negative reactions to these demands (Health and Safety Executive). Furthermore, work stress is defined as

^{*}Corresponding author Email address: ali.huzafah@gmail.com

changes in an employee's physical and mental state when confronted with a challenge or threat at work (Collins, 2006). Over the last few decades, researchers have focused on psychosocial problems and work-related stress to investigate shift workers in various fields. Selve (1970), Lazarus and Folkman (1984), Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986), and Lazarus (2000) defined stress as a daily occurrence in people's lives, whether at work or home. Furthermore, Zimbardo et al. (2003) defined stress as an individual's mental condition that is based on a stressful situation, according to the NIOSH, stress is harmful to the emotional and physical responses, especially when abilities are not matched with job requirements or employers misunderstand workers' needs (NIOSH, 1999). Psychosocial problems are defined as an integral part of the stress process, and in the context of shift workers, organizational environment or condition has also been identified as one of the causes of these problems; however, employee capability and positive and negative stress also play an important role in psychosocial problems (cox et al., 2002). According to Sinokki, (2011), anxiety and depression, as well as other psychosocial issues identified in shift workers, have a significant societal

The purpose of this study is to look into the psychosocial problems and stress related to work in shift workers of the railway in Pakistan because, according to the (EU-OSHA, 2014a; Eurofound, 2014), stress and psychosocial problems both have a negative impact on workers' health and organization performance.

1.1. Hypotheses

H1: there is a significant difference in stress levels between day and shift workers.

H2: there is a positive and significant association between psychosocial problems and shift and day workers.

H3: there is a significant impact of stress in the workplace on the psychosocial Problems of shift and daytime workers.

H4: there is a significant impact of individual characteristics on the psychosocial problem in day and shift workers.

2. Literature Review

Wang (2005) used Canadian respondents to explain the relationship between work-related stress and demographic variables, stress hurts psychosocial behavior and increases the risk associated with stress. To achieve the research's goal, data are gathered from Canada's national population health survey. Melchior et al. (2007) investigated the existence of a work-related stress problem in young males and females. After interviewing the respondents, it was

discovered that stress-related work was the major issue. The findings revealed that the demand for jobs is heavily influenced by stress. According to the findings of this study, stress harms the health of young workers. Coyle-Shapiro and Morrow (2006) examined the willingness of job transferees and client organizations to switch between long-term contract jobs and innovative and growing job classifications. Two types of transfer staff employees are offered by organizational determination and social exchange literature on drawings (Nazemosadat, Naderi-Boldaji, Ghanbarian, & Nematollahi, 2022). He has reinforced his position through a surveillance survey conducted by four UK contract on behalf of organizations agencies. The results show that the client organization's commitment is shifting the client organization's and client organization's attention. According to the Memon et al. (2023) working environment really matter it is challenging for the employee to give their best if environmental is not friendly. Sleep disturbance is considered as another important factor that influences presenteeism (Gillet, Huyghebaert-Zouaghi, Réveillère, Colombat, Fouquereau, 2020). Sleep-related problems are amongst the most common health issues in shiftwork nurses and are a significant cause of turnover (Han, Kim, Lee, & Lim, 2020). Sleep allows recovery from emotional dissonance and workload and may reduce presenteeism (Gillet et al., 2020). Previous studies have reported that sleep disturbance is not only related to presenteeism but also to occupational stress (Baek, Ki, Ryu, & Smi, 2022; Furuichi et al., 2020).

2.1. Work-related stress

Stress at work is a phenomenon that happens when the demands of work are not appropriate to the resources available to workers; it may lead to the beginning of detrimental bodily and emotional responses. According to findings from recent research, environmental factors and certain types of work organization, such as shift work and night shifts, have the potential to influence how one experiences stress related to their job, which in turn can have an effect on the development of pathological conditions (Briguglio et al., 2021; Samadi, Mozaffari, & Shaghaghi, 2016). Workplace stress causes stress, which is defined as a reaction to challenges encountered on the job, or an antagonistic situation. Most physiatrists agreed that this situation has an impact on people's physical and mental health. There are two types of stress: distress and eustress. It is an innate response in which the associated stressors are cognitively valued as either positive or challenging. Distress, on the other hand, is the stress reaction associated with those stressors that are rated as negative (Eccleston, Collins, & Higgins, 2008). These two types of stress assist us in meeting our daily goals, and they stimulate productivity. Stress has significant implications when considering the amount, which is determined by the

duration and force of the stress. Emotional, physical, and psychological illness will suffer as a result of this stress reaction (Higgins, 2006).

Long, Macdonald, Smith, and Calder (1995) defined stresses as interactions between individuals and their environment that place certain demands on them. If the person can fight the stressful situation, he or she will be able to overcome stress, and as result, the individual will feel distressed. Personal capabilities play an important role in stress. Furthermore, in general, stress is defined as a situation in which an individual's capabilities and job requirements do not match. This situation may be hazardous to both physical and emotional health (NIOSH, 1999).

Baker (1985) presented the person-environment model, which was also used by Blix and Lee (1991). These researchers proposed that stress problems occur when there is a mismatch between job environment and skills. Workrelated stress is a well-known critical issue that occurs most often the employer places undue pressure on the employee and tasks related to the job are not completed successfully (Blix & Lee, 1991; Presser, 1995). Kristof- Brown, Zimmerman, and Johnson (2005), studied teacher stress and explored that the most common cause of stress is an unpleasant event. As a result, it may be detrimental to one's mental health. Furthermore, the researcher classified stress as follows; work conditions, time pressures, status, indiscipline activities, and pupils demotivation. According to Selve (1970), stress is a negative reaction to a situation, whether it is emotional, mental, or physical. According to Selve (1970), stress and stressor are both defined by the term stimulus, and Van-Dick, Wagner, Stellmacher, and Christ (2005) emphasize the mediating role of workload and job demand.

The meaning of the term "stress" might shift quite a bit according on the scientific discipline being discussed. The term "stress" refers to a combination of mental and physical shifts that may be seen and evaluated in a variety of ways, such as on the levels of brain activity, cellular processes, and a person's subjective experience (von Dawans, Strojny, & Domes, 2021).

2.2. Types of work stress

2.2.1. Acute stress

Acute stress is commonly used when a person is feeling excited or thrilled about their life (Sincero, 2012). Short trauma exposure was identified using acute stress. Furthermore, acute stress is referred to as a shock rather than a mental or psychological shock, and it occurs when people are confronted with a terrifying event (Zhang et al., 2022). This condition is found in people who are afraid of an unpleasant event (Anderson & Floresco, 2022). If stress is not properly located, an acute stress reaction (ASR) occurs. This stress is also known as PTSD, and it is found

in those who are hypervigilance about unpleasant events (Coll et al., 2022). As a result, an acute stress reaction differs from PTSD because these stress symptoms were discovered last month. Although the data addressing the directionality of the link is varied, it has often been discovered that acute stress will affect the processing of information relevant to rewards. For instance, one finding from a number of research is that short-term exposure to high levels of both physiological (for example, exposure to cold water) and psychological (for example, exposure to the prospect of shock or socio-evaluative worry) stress lowers sensitivity to rewards (Porcelli, Lewis, & Delgado, 2012; Samaras, Tsoukali, Katsika, Pavlidis, & Papadakis, 2023) and blunt neural responses to reward-related information (Freeman, Panier, Schaffer, & Weinberg, 2022), while others have demonstrated the stress-induced facilitation of reward processing by socio-evaluative (Dewi et al., 2023) and physical (Raio, Konova, & Otto, 2020) stressors.

2.2.2. Episodic stress

If acute stress is frequently encountered, this is referred to as episodic stress (Sincero, 2012). This stress is found in people who are always in good mood or in people who want to get to their destination as soon as possible (Daley et al., 1997). This type of person is incapable of dealing with stress or pressure. This stress may impair an individual's ability to think clearly. Individuals with migraine, chest pain, prolonged overstimulation, tension, and headaches were discovered. So, before a major problem arises, an individual must consult with a professional to deal with it (McManus, Talmi, Haroon, & Muhlert, 2021).

2.2.3. Chronic stress

Acute stress differs from chronic stress in that it lacks excitement or thrill, but it can still be harmful because chronic stress tears apart an individual's life particularly his or her mind (Sincero, 2012). In today's fast-paced society, an individual experiences a high degree of personal stress, which usually manifests as anxiety, depression, tension, and insomnia (Debelić et al., 2022). In addition to these, patients with breast cancer face changes in their body image, side effects of treatment, and family and social factors that lead to mental stress and psychological distress, all of which lead to chronic psychological stress

2.3. Definition of occupational stress

According to the WHO (2015), job stress is caused by unexpected responsibilities or work delegated to a person that he or she is unable to handle. Job stress also refers to the inability of humans or employees to adapt to the work environment (CWA, 2016; Mostafaeipour, Khademi Zare, Aliheidari, & Sedaghat, 2018). Furthermore, unseen pressure exerted by the employees or personalities does not correspond to the requirements of the job or new task. Jobrelated stress is also defined as excessive and

unmanageable pressure at work in form of alerts, meeting demands, and deadlines, which are unavoidable demands related to the work environment. According to the WHO (2015) report, stress can harm both business performance and health. If a person's job and job theme are incompatible (Humphrey, 1998). NIOSH (1999) provided the most comprehensive definition, which stated that stress occurs when a person's and job's requirements do not match the capabilities of employees. Individuals' emotional and physical health are harmed as a result of stress. Furthermore, Lazarus and Cohen-Charash (2001) defined work-related stress as a gap between job responsibilities and an individual. The employee is to blame for the stress (Cooper & Cartwright, 1994; Kristensen, 1996; Santos & Cox. 2000). Both psychological and practical, considerations are intertwined (Jones, Flynn, & Kelloway, 1995). In terms of practical life is a concern with exchange programs and employment contracts. When it comes to behavior, commitment to the organization, and supervisor support psychology comes into play. When employees' responsibilities are ignored or when organizations goals are violated. Individual must understand their responsibilities and enjoy their jobs, and employees must be rational and aware of the consequences of negligence (Folkman et al., 1986; Volckmar- Eeg & Vassenden, 2022).

2.4. Causes of occupation stress

The causes of stress are numerous, but it is entirely controllable if employees are supported by their management as well as coworkers. Employees are frequently unable to distinguish between pressure and stress and, as a result, blame management.

2.4.1. Personal characteristics

Personal demographic can also have an impact on how to manage stress during events (Ganster & Schaubroeck, 1991; Suprapto, Linggi, & Arda, 2022). Since 1940, there has been a focus on stress and demographic association. Factors that cause stress because they are unable to maintain the demand of their job, and affected people cannot cover it, and their job performance suffers as a result (Shah, Afshan, Mirani, & Solangi, 2022). It has also been observed that stressors can be detrimental to emotional intelligence and job performance (George, 1992). Demographic variables such as personality, response style, and behavioral activities all have an impact on emotions (Grummitt, Barrett, Kelly, Stapinski, & Newton, 2022).

2.4.2. Negative affectivity

After reviewing the literature, it is discovered that negative responses are found in those who are not in the job environment (Hartmann & McLeish, 2022; Watson & Clark, 1984). If an individual believes that the organization will be able to support their employees emotionally and in terms of their well-being. Brief, Burke, George, Robinson,

and Webster (1988) reported a negative effect on the relationship between well-being and unsupported events, when the negative effect of stress is present means, there is a correlation between performance and stress (Brief et al., 1988).

2.4.3. Cognitive distortions

Cognitive theorists stated that stress is found when an individual's pattern of thinking changes. In addition, most experts have suggested that people who are having trouble meeting their life goals should alter their way of thinking (Beck, 1984; Ellis, 1962).

2.4.4. Family-work conflict

Both home and career are integral to one's well-being. Increasing one's standard of living is a driving motivation for many people and a significant factor in household economic activity (Edgar, 2000; Van-den-Heuval, 1993) as stated by (Sarantakos, 1996).

2.4.5. Workload

The capacity of a worker is the extent to which he or she can contribute to the achievement of organizational goals within a given time frame; when workload increases beyond this capacity, it is called overload (Farahiah & Jazlil, 2015; Hassan & Emara, 2022). Workload stress occurs when an individual's skill set, industry expertise, and available time are all inadequate to finish the required amount of work (French, Caplan, & Van Harrison, 1982).

2.4.6. Time pressure

Because of the importance of meeting deadlines at work and not wanting their performance to be deemed subpar, time constraints can also be a source of stress. Time constraints have been linked to increased levels of stress in the workplace, according to research by Humphrey (1998); (Meiabadi, Vafaeesefat, & Sharifi, 2013).

2.4.7. Performance pressure

Organizations around the world are facing challenges in meeting the demands of an emerging market, so they are focusing on performance. In this regard, organizations rely entirely on their employee's performance (Cascio, 1995). Organizations are also focusing on facilitating workers by providing them with amenities such as health care and creating an environment in which workers can relax and maximize productivity (Chen, Gully, & Eden, 2001).

2.4.8. Unclear work roles

An additional source of stress for employees is misunderstandings or disagreements between their employers and themselves regarding their respective roles within the company and the tasks they must complete (Rose, 1993). Worker productivity drops when responsibilities aren't made clear. Uncertainty about one's role on the job can have a chilling effect on employee behaviour and turn an otherwise upbeat disposition sour.

Misunderstandings arise when necessary details about a task are not clarified. A manager's or supervisor's first duty is to define the employee's position clearly so that they can fulfil it successfully. Due to this, businesses can boost their performance and accomplish their goals (Cordes & Dougherty, 1993).

3. Method

3.1. Research design

To achieve this study's goal, a cross-sectional research strategy was adopted(Creswell, 2002). A variety of methods exist for randomly selecting individuals from a larger population to provide usable statistics. Because of the nature of the research, random sampling is required (Westfall, 2009). This research used a sample of employees from the Pakistan Railway to analyse the effects of stress and mental health issues on the job. Three hundred people participated in the survey that led to these findings. Volunteers' ages varied from 18 to 45. The respondent is likely working shifts for Pakistan Railways as they are a contract employee. The following measure is preferable for this study, but others can be used as well.

3.2. Instruments

Demographic variables include things like birth order, marital status, socioeconomic status, job nature, number of children, family type, educational attainment, family structure, etc. The 42 administratively-selected items in the questionnaire are meant to measure the model's dependent variables, and thus provide an assessment of stress-related symptoms. A total of 27 items in Urdu are used to measure different aspects of marital discontentment and contribute to the DAS's global reporting of marital distress. Components such as dyadic contentment, dyadic cohesion, affectionate expression, and agreement were modified

(Dutta, Agnihotri, Sahoo, Rajkumar, & Das, 2009). Data collection is a major concern for psychologists, and the Urdu translation of this item shows a reliability of 0.89.

3.3. Procedure

When conducting interviews for this heading, researchers report to the department head and conduct the interviews under their watchful eye. The survey was broken up into two parts: the first was used to collect basic demographic information from respondents, and the second was where we measured all the model-selected variables. Those who responded were broken down into three categories: morning workers, night workers, and those whose shifts changed throughout the day. After completing the necessary steps to collect the data, the authorities will double-check the respondent's claims about his or her work schedule to determine whether the employee works morning, night, or rotating shifts. The data is securely stored and will never be shared. Researchers often conduct in-person interviews with respondents to ensure they fully understand and are able to fulfil the study's goals. Responses came in at a rate of 96%, on average taking 25 minutes. The following moral standards were followed: The research participants were made aware of the study's goals. All responses will be kept private. Participants were not obligated to continue participating in the study if they felt uncomfortable. Participants who reported emotionally distressed during testing were offered counselling to help them feel more at ease. Those who had initially signed up for the study but later changed their minds were given the option to drop out. Descriptive statistics, t-tests, hierarchy regression, and correlations of selected variables were analyzed using SPSS 21.

Table 1 Descriptive Statistics and Reliabilities

Variables	min-max	M	SD	K	α	
Depression, Anxiety, and Stress Sca	le					
Depression	0-40	3	1.21	14 14 14	.67	
Anxiety	0-40	5	0.23		.75	
Stress	0-42	9	0.12		.65	
DASS Total	0-121	19.11	13.12	42	.87	
Dyadic Adjustment Scale						
DAS Total	0-160	65.43	11.62	32	.67	
Consensus	0-65	43.45	13.54	13	.72	
Satisfaction	0-50	23.33	12.55	10	.73	
Cohesion	0-25	14.21	12.43	5	.74	
affection	0-20	11.12	4.24	4	.67	

Table 2 Correlation

Var.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age	-	.10	.06	.30***	.04	17*	.16**	17*	.10	.17*	.04	.08	07	14*	09
2. Edu	-	-	.64***	.04	.13	.11	.12**	60	.20**	.06	.08	02	00	.12**	.03
3. Exp	-	-	-	.17*	.25	.07	.09	.04*	.16*	13	.05	08	03	11	03
4. Income	-	-	-	-	.18*	01	.14*	.06	.10	.10	00	09	.13	.08	05
5. FS	-	-	-	-	-	05	02	.09	07	.08	03	01	06	02	06
6. HS	-	-	-	-	-	-	.02	.00	06	1	.06	.05	01	.06	.03
7. DAS	-	-	-	-	-	-	-	.51***	.52***	.65***	.60***	63**	69**	31***	63***
8. Cons	-	-	-	-	-	-	-	-	.36**	.43**	.19**	.31***	.39***	04	28***
9. Sat	-	-	-	-	-	-	-	-	-	.39**	.02	10	22**	01	17*
10. Cohes	-	-	-	-	-	-	-	-	-	-	.16*	2.5***	.45***	00	.30***
11.Affect	-	-	-	-	-	-	-	-	-	-	-	.32***	.36***	.33***	.46***
12. DASS	-	-	-	-	-	-	-	-	-	-	-	-	.02	.09	.30***
13. Anxiety	-	-	-	-	-	-	-	-	-	-	-	-	-	.04	.38***
14. Stress	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.15*
15. Depress	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note.*.p<.05; **.p<.01; ***.p<.001;

4. Results and Findings

The DASS stress, depression, and anxiety levels are measured on two separate scales, the results of which are presented in Table 1. The dyadic adjustment scales are used to measure the level of agreement, contentment, unity, and love among workers. Table 1's second column displays the minimum and maximum values of the data. The Mean (M) value presented in the following column depicts the central Tendency of the data, while the standard deviation depicts the dispersion of the data around the mean. The values in the table show a wide range of variation. The alpha value, displayed in the very last column, showed how confident we could be in the data. In table 2 we see the correlation value, which quantifies the closeness of the relationship between the variables. The value of a correlation can be positive or negative. The closer the value of one's correlation to zero, the closer the two variables are. In addition, if the value is less than 0.30, the relationship is weak; if it is greater than 0.70, it is strong; and if it is between 0.30 and 0.70, it is medium. The results of the regression analysis conducted using the aforementioned three building blocks are shown in Table 3. Age was found to have a negative correlation in block 1.

The value of r-square indicates the total variable due to independent variable. In block 2, age, education and experience are taken as independent variables to investigate the work-related stress among the shift workers. According the results education and experience has positive impact on shift worker. The reason of positive relationship is experience and education improve the chances to get the opportunity for the higher rank.

5. Discussion

Working hours have a significant impact on people's lives. In this regard, the research is being conducted to ascertain the impact of psychosocial problems on shift workers employed by the Pakistan railway. It is a well-known fact that people who work during the day have very different psychological states than those who work at night. Depression, stress, and anxiety level are observed to vary between day and night shift workers. According to this study's findings, night-shift workers are more depressed than day-shift workers. Almondes and Araújo (2009) investigated the relationship between employees' working hours, whether day or night and the psychosocial problems they face at work and home. Daytime workers can reduce their stress levels significantly more than night shift workers.

There are almost certainly multiple explanations for the psychosocial problems observed in shift workers (Torbjörn Åkerstedt, Kecklund, & Knutsson, 1991; Ohayon & Milesi, 2016). If there is constant change in one's life cycle, particularly in one's wake and sleeping habits. These two habits are intended to be explained using two instruments. The first is homeostatic, which means that someone is having difficulty sleeping and awake the majority of the time. The second is circadian, which means that some are having difficulty waking up or is awake the majority of the time (Torbjürn Åkerstedt & Gillberg, 1981). These factors contribute to temperature and contributed to the discovery of the psycho problem. Homeostatic pressure is more prevalent in night shift workers due to their nocturnal habits. When they attempt to sleep during the day, they are unable to do so, which results in internal and external psychological and physical problems. As a result of this waking habit, they also affect their family life (Borbély,

2000). Additionally, it is worth noting that shift workers who struggle to meet biological demands and who face psychosocial difficulties are distinct from daytime workers. Shift workers are found to be highly anxious in this regard, and they are unable to control the situation. Suri, Sen, Singh, Kumar, and Aggarwal (2007) bolster the study's findings by delving deeper into the relationship between outsourcing shift workers and day shift workers. Additionally, the study concluded that significant differences exist between shift and night workers. Furthermore, they are also disturbed to meet biological demands and are a source of psychological conflict. They must employ some strategies to maintain control of this situation, or else the level of anxiety will increase (Caplan, 1980). Confrontation strategies must be used to minimize anxiety's reaction. They should consult with consultants to strengthen their ability to combat both internal and external sources of depression, stress, and anxiety (Lazarus & Folkman, 1984). This is because shift workers are stressed, and the study's findings indicated that shift workers are day workers who experience distinct types of stress. This is a perfectly normal phase of stress, and individuals are capable of controlling the situation (Lipp, 2000). Bara and Arber (2009) collected longitudinal data from households in the United Kingdom. The study's findings revealed a strong correlation between employees who are working different shifts and their mental health. To obtain an accurate result from 1995 to 2005 data, night shift workers and workers who are working different shifts were also included in the study. The study is based on a questionnaire that is divided into two sections. The first section assesses general health, and the second section assesses workers' stress levels (Bara & Arber, 2009). According to reports, or depression, data from the first year, he accounts for factors such as age, valley status, education, occupation, and basic health. He recognized that there were four or more years of men who have worked to work occasionally, which is often twice as many as diabetes health problems. However, working different shifts has a significant effect on men's mental health and circulation: those who work more than four years due to depression may be more likely to report negative health problems. Are there distinct changes, but the night's work played no role? Additionally, it was hypothesized that age, education, anxiety, depression, and stress all have a predictive relationship with marital adjustment. The study's findings that age, education, anxiety, depression, and stress are all significant predictors of marital adjustment among railway workers.

According to Srivastav, Flik, and Bonga (1998), demographic variables can influence an individual's ability to experience stress. Marriage life, work life, and socioeconomic status, if he or she is in education, are all included in this study, as are all factors impacted by stress or depression. According to the study's findings, both husband and wife status and their life adjustments have a significant effect. Indeed, the type of tension affects both individual factors (e.g., age, personality symptoms, physical characteristics) and a variety of work conditions (e.g., workshops, shift schedules) concerning "interference variables" and social conditions. Depression and stress are discovered as a result of job-related stress caused by excessive work. Japan is chosen to accomplish the study's objective. A deplorable and inhospitable work environment contributes to depression (Kawakami, Haratani, & Araki, 1992).

Table 3 Regression Analysis

·	Total Dyadic Adjustment Score					
Variables	ΔR^2	В				
Block 1	.03*					
Age		16 [*]				
Block 2	.14***					
Age		11				
Education		.33***				
Experience		.13*				
Block 3	.12**					
Age		.90***				
Education		36***				
Experience		.58***				
Stress		12*				
Anxiety		- 17 [*]				
Depression		31***				
Total R^2		.28**				

Note. *p<.05; **p<.01; ***p<.001

6. Conclusion

In nut whole shell, night shift workers exhibited more features of anxiety, depression, and stress than those working in the daytime. In the same way, the research also showed that age, education, anxiety, depression, and stress are significant predictors of marital adjustment of workers of the railway. These results are directing us that authorities must consider their policies to cater to their employees' anxiety, depression, and stress level in night shift workers because past research showed that there were no noticeable differences regarding features of anxiety, depression, and stress among workers of day and night sift. Hence, these results suggested that symptoms of anxiety, depression, and stress can be managed with better strategies and care.

6.1. Limitation and Suggestions

The following limitations were observed in the current research venture and accordingly, the suggestions are suggested for their improvement. The selection of the sample was from a limited section of the city and a greater representation of adolescents from urban and rural setups is suggested.

- Time is considered one of the limitations faced during the research. Lack of resources also one of the limitations to gather fulfillment of the objective of the study.
- Detailed analyses of the indigenously developed tool were not undertaken and probably the in-depth analysis of the tool with confirmatory factor analyses at later stages would help in improving the internal and external validity of the research.
- The data was collected from educated and literate; inclusion.

6.2. Implications

Organizations aim to increase their profitability; it does not matter whether workers are working in shifts. So, this research is useful for the organization. The result of this study suggested that organizations must hire a psychiatrist the provide the solution to the problem related to the workers. This resulted in to increase in the productivity of workers and they can easily accept tasks for the fulfillment of the objective of the organization. The finding of this study suggested that employees can adjust their vision to the organization's vision. If people are physically having good health, they can loyal to their work and higher productivity of the workers. This study was a psychological effect on the organization, such as the result of the results that psychological expert requires psychological symptoms. It also improves the performance and efficiency of the workers' psychological health. They can pay more attention

to their work. The results show that the work of the employees is also on their married adjustment. At the end of his married adjustment due to psychological trouble due to unusual working hours and marriages. Experts specialists should focus on this area so that the workers and their families can help better and healthy life.

References

- Aanonsen, A. (1959). Medical problems of shift-work. *Industrial Medicine and Surgery*, 28(9), 422-427.
- Åkerstedt, T., & Gillberg, M. (1981). The circadian variation of experimentally displaced sleep. *Sleep*, *4*(2), 159-169.
- Åkerstedt, T., Kecklund, G., & Knutsson, A. (1991). Spectral analysis of sleep electroencephalography in rotating three-shift work. *Scandinavian journal of work, environment & health*, 330-336.
- Åkerstedt, T., & Torsvall, L. (1981). Shift work Shift-dependent well-being and individual differences. *Ergonomics*, 24(4), 265-273.
- Almondes, K. M. d., & Araújo, J. F. (2009). The impact of different shift work schedules on the levels of anxiety and stress in workers in a petrochemicals company. *Estudos de Psicologia (Campinas)*, 26(1), 15-23.
- Anderson, M. C., & Floresco, S. B. (2022). Prefrontalhippocampal interactions supporting the extinction of emotional memories: the retrieval stopping model. *Neuropsychopharmacology*, 47(1), 180-195.
- Baek, J., Ki, J., Ryu, J., & Smi, C. K. (2022). Relationship between occupational stress, sleep disturbance, and presenteeism of shiftwork nurses. *Journal of Nursing Scholarship*.
- Baker, D. B. (1985). The study of stress at work. *Annual review of public health*, 6(1), 367-381.
- Bara, A.-C., & Arber, S. (2009). Working shifts and mental health–findings from the British Household Panel Survey (1995-2005). *Scandinavian journal of work, environment & health*, 361-367.
- Beck, A. (1984). Cognitive approaches to stress, principles and practices of stress management, 91-110. In: New York: Guilford Press
- Blix, A. G., & Lee, J. W. (1991). Occupational stress among university administrators. *Research in Higher Education*, 32(3), 289-302.
- Borbély, A. (2000). Achermann (2000) Sleep homeostasis and models of sleep regulation. *Principles and practice of sleep medicine*. *Saunders, Philadelphia*, 377-390.
- Brief, A. P., Burke, M. J., George, J. M., Robinson, B. S., & Webster, J. (1988). Should negative affectivity remain an unmeasured variable in the study of job stress? *Journal of Applied Psychology*, 73(2), 193.
- Briguglio, G., Teodoro, M., Italia, S., Verduci, F., Pollicino, M., Coco, M., . . . Lembo, G. (2021). Salivary

- biomarkers and work-related stress in night shift workers. *International Journal of Environmental Research and Public Health*, 18(6), 3184.
- Caplan, G. (1980). Um modelo conceptual para prevenção primária. *G. Caplan, Princípios de psiquiatria preventiva*, 40-69.
- Cascio, W. F. (1995). Whither industrial and organizational psychology in a changing world of work? *American psychologist*, 50(11), 928.
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational research methods*, 4(1), 62-83.
- Coll, S. Y., Eustache, F., Doidy, F., Fraisse, F., Peschanski, D., Dayan, J., . . . Laisney, M. (2022). Avoidance behaviour generalizes to eye processing in posttraumatic stress disorder. *European journal of* psychotraumatology, 13(1), 2044661.
- Collins, S. (2006). Mental health difficulties and the support needs of social work students: Dilemmas, tensions and contradictions. *Social Work Education*, 25(5), 446-460.
- Cooper, C. L., & Cartwright, S. (1994). Healthy mind; healthy organization—A proactive approach to occupational stress. *Human relations*, 47(4), 455-471.
- Cordes, C. L., & Dougherty, T. W. (1993). A review and an integration of research on job burnout. *Academy of management review*, 18(4), 621-656.
- Coyle-Shapiro, J. A., & Morrow, P. C. (2006). Organizational and client commitment among contracted employees. *Journal of vocational behavior*, 68(3), 416-431.
- Creswell, J. W. (2002). *Educational research: Planning,* conducting, and evaluating quantitative: Prentice Hall Upper Saddle River, NJ.
- CWA. (2016). Occupational stress and workplace. *Communication Workers of America*, https://www.cwa-union.org/national-issues/health-and-safety/health-and-safety-fact-sheets/occupational-stress-and-workplace.
- Daley, S. E., Hammen, C., Burge, D., Davila, J., Paley, B., Lindberg, N., & Herzberg, D. S. (1997). Predictors of the generation of episodic stress: a longitudinal study of late adolescent women. *Journal of abnormal* psychology, 106(2), 251.
- Debelić, I., Mikolčić, A., Tihomirović, J., Barić, I., Lendić, Đ., Nikšić, Ž., . . . Lovrić, R. (2022). Stressful Experiences of Parents in the Paediatric Intensive Care Unit: Searching for the Most Intensive PICU Stressors. International Journal of Environmental Research and Public Health, 19(18), 11450.
- Dewi, M. I., Tao, C. S., Dong, M., Hatton, B., Fournier, M. A., & Erb, S. (2023). Behavioral impulsivity moderates the relationship between acute stress and reward sensitivity. *Personality and Individual Differences*, 204, 112040.
- Dutta, T., Agnihotri, M., Sahoo, P., Rajkumar, V., & Das, A. K. (2009). Effect of different protein—energy ratio in pulse by-products and residue based pelleted feeds on

- growth, rumen fermentation, carcass and sausage quality in Barbari kids. *Small Ruminant Research*, 85(1), 34-41.
- Eccleston, K., Collins, L., & Higgins, S. P. (2008). Primary syphilis. *International journal of STD & AIDS*, 19(3), 145-151.
- Edgar, D. (2000). Families and the social reconstruction of marriage and parenthood in Australia. *Issues Facing Australian Families: Human Services Respond, Pearson Education Australia, Frenchs Forest.*
- Ellis, N. (1962). Organisational strategies: the organisational approach to stress management: practical issues. In: New York, Springer
- EU-OSHA. (2014a). European Agency for Safety and Health at Work, Campaign guide Managing stress. and psychosocial risks at work.
- Eurofound, E.-O. (2014). Psychosocial risks in Europe: Prevalence and strategies for prevention. *Publications Office of the European Union, Luxembourg*.
- Farahiah, N., & Jazlil, M. (2015). *Mediating effect of job stress on job satisfaction among lecturers*. Universiti Utara Malaysia,
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: cognitive appraisal, coping, and encounter outcomes. *Journal of personality and social psychology*, 50(5), 992.
- Freeman, C., Panier, L., Schaffer, J., & Weinberg, A. (2022). Neural response to social but not monetary reward predicts increases in depressive symptoms during the COVID-19 pandemic. *Psychophysiology*, e14206.
- French, J. R., Caplan, R. D., & Van Harrison, R. (1982). The mechanisms of job stress and strain (Vol. 7): Chichester [Sussex]; New York: J. Wiley.
- Furuichi, W., Shimura, A., Miyama, H., Seki, T., Ono, K., Masuya, J., & Inoue, T. (2020). Effects of job stressors, stress response, and sleep disturbance on presenteeism in office workers. *Neuropsychiatric disease and treatment*, 16, 1827.
- Ganster, D. C., & Schaubroeck, J. (1991). Work stress and employee health. *Journal of management*, 17(2), 235-271.
- George, J. M. (1992). The role of personality in organizational life: Issues and evidence. *Journal of Management*, 18(2), 185-213.
- Gillet, N., Huyghebaert-Zouaghi, T., Réveillère, C., Colombat, P., & Fouquereau, E. (2020). The effects of job demands on nurses' burnout and presenteeism through sleep quality and relaxation. *Journal of Clinical Nursing*, 29(3-4), 583-592.
- Grummitt, L., Barrett, E., Kelly, E. V., Stapinski, L., & Newton, N. (2022). Personality as a possible intervention target to prevent traumatic events in adolescence. *Behavioral Sciences*, *12*(4), 90.

- Han, K., Kim, Y.-H., Lee, H. Y., & Lim, S. (2020). Novice nurses' sleep disturbance trajectories within the first 2 years of work and actual turnover: A prospective longitudinal study. *International Journal of Nursing Studies*, 112, 103575.
- Hartmann, S. A., & McLeish, A. C. (2022). Tolerance for specific negative affective states and coping-oriented cannabis use motives among college student cannabis users. *Journal of American College Health*, 70(3), 911-917.
- Hassan, M. K., & Emara, I. (2022). A New Techno-Economic Real-Time Total Process Performance Indicator. *Journal of Optimization in Industrial Engineering*, 15(2), 265-281.
- Higgins, E. T. (2006). Value from hedonic experience and engagement. *Psychological review*, 113(3), 439.
- Humphrey, J. H. (1998). Job stress: Prentice Hall.
- Jones, B., Flynn, D. M., & Kelloway, E. K. (1995). Perception of support from the organization in relation to work stress, satisfaction, and commitment.
- Kawakami, N., Haratani, T., & Araki, S. (1992). Effects of perceived job stress on depressive symptoms in blue-collar workers of an electrical factory in Japan. *Scandinavian journal of work, environment & health*, 195-200
- Knipe, D., Williams, A. J., Hannam-Swain, S., Upton, S.,
 Brown, K., Bandara, P., . . . Kapur, N. (2019).
 Psychiatric morbidity and suicidal behaviour in low-and middle-income countries: a systematic review and meta-analysis. *PLoS medicine*, 16(10), e1002905.
- Kristensen, T. S. (1996). Job stress and cardiovascular disease: a theoretic critical review. *Journal of occupational health psychology*, 1(3), 246.
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of Individuals Fit and at Work: A Meta Analysis of Person-Job, Person-Orgnizzation, Person Group, and Person Supervisor Fit. *Personnel psychology*, 58(2), 281-342.
- Lazarus, R. S., & Cohen-Charash, Y. (2001). Discrete emotions in organizational life. *Emotions at work:* Theory, research and applications for management, 4584.
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal. and coping. New York, NY: Springer Publishing Company.
- Lipp, M. E. N. (2000). Inventário de sintomas de stress para adultos. *São Paulo: Casa do Psicólogo*.
- Long, E. R., Macdonald, D. D., Smith, S. L., & Calder, F. D. (1995). Incidence of adverse biological effects within ranges of chemical concentrations in marine and estuarine sediments. *Environmental management*, 19(1), 81-97.
- McManus, E., Talmi, D., Haroon, H., & Muhlert, N. (2021). Psychosocial stress has weaker than expected effects on episodic memory and related cognitive abilities: A meta-analysis. *Neuroscience & Biobehavioral Reviews*.

- Meers, A., Maasen, A., & Verhaegen, P. (1978). Subjective health after six months and after four years of shift work. *Ergonomics*, 21(10), 857-859.
- Meiabadi, M. S., Vafaeesefat, A., & Sharifi, F. (2013). Optimization of plastic injection molding process by combination of artificial neural network and genetic algorithm.
- Melchior, M., Caspi, A., Milne, B. J., Danese, A., Poulton, R., & Moffitt, T. E. (2007). Work stress precipitates depression and anxiety in young, working women and men. *Psychological medicine*, *37*(8), 1119-1129.
- Memon, M. A., Shaikh, S., Mirza, M. Z., Obaid, A., Muenjohn, N., & Ting, H. (2023). Work-From-Home in the New Normal: A Phenomenological Inquiry into Employees' Mental Health. *International Journal of Environmental Research and Public Health*, 20(1), 48.
- Mostafaeipour, A., Khademi Zare, H., Aliheidari, T., & Sedaghat, A. (2018). Implementing Bounded Linear Programming and Analytical Network Process Fuzzy Models to Motivate Employees: a Case Study. *Journal of Optimization in Industrial Engineering*, 11(2), 25-35.
- Nazemosadat, S. M. R., Naderi-Boldaji, M., Ghanbarian, D., & Nematollahi, M. A. (2022). Reliability Analysis of a Mounted Moldboard Plow Bottom Standard using the FORM Method. *Journal of Optimization in Industrial Engineering*, 15(2), 179-190.
- NIOSH. (1999). Stress at work. National Institute for Occupational Safety and Health. Available at: http://www.cdc.gov/niosh/docs/99-101.
- Ohayon, M. M., & Milesi, C. (2016). Artificial outdoor nighttime lights associate with altered sleep behavior in the American general population. *Sleep*, *39*(6), 1311-1320.
- Porcelli, A. J., Lewis, A. H., & Delgado, M. R. (2012). Acute stress influences neural circuits of reward processing. *Frontiers in neuroscience*, *6*, 157.
- Presser, H. B. (1995). Job, family, and gender: Determinants of nonstandard work schedules among employed Americans in 1991. *Demography*, 32(4), 577-598.
- Raio, C. M., Konova, A. B., & Otto, A. R. (2020). Trait impulsivity and acute stress interact to influence choice and decision speed during multi-stage decision-making. *Scientific reports*, 10(1), 1-12.
- Rose, J. (1993). STRESS AND STAFF IN RESIDENTAL SETTINGS: THE MOVE FROM HOSPITAL TO THE COMMUNITY. *Mental Handicap Research*, 6(4), 312-332.
- Samadi, M., Mozaffari, M. M., & Shaghaghi, J. (2016). Neurological Analysis of Consumer Behavior in Shopping Malls Using EEG. *Journal of Optimization in Industrial Engineering*, 9(20), 19-29.
- Samaras, A., Tsoukali, P., Katsika, L., Pavlidis, M., & Papadakis, I. E. (2023). Chronic impact of exposure to low dissolved oxygen on the physiology of

- Dicentrarchus labrax and Sparus aurata and its effects on the acute stress response. *Aquaculture*, 562, 738830.
- Santos, S. R., & Cox, K. (2000). Workplace adjustment and intergenerational differences between matures, boomers, and Xers. *Nursing Economics*, 18(1), 7.
- Sarantakos, S. (1996). Modern Families, South Yarra: MacMillan Education. In: Australia
- Selye, H. (1970). The evolution of the stress concept: Stress and cardiovascular disease. *American Journal of Cardiology*, 26(3), 289-299.
- Shah, S. B., Afshan, G., Mirani, M. A., & Solangi, R. (2022). Effect of supervisors' stress on subordinates' unethical behavior: moderating role of managers' despotic leadership. *Management Research Review*.
- Sincero, S. (2012). Three different kinds of stress. *Retrieved June*, 17, 2014.
- Srivastav, A. K., Flik, G., & Bonga, S. W. (1998). Plasma calcium and stanniocalcin levels of male tilapia, Oreochromis mossambicus, fed calcium-deficient food and treated with 1, 25 dihydroxyvitamin D3. General and comparative endocrinology, 110(3), 290-294.
- Suprapto, S., Linggi, E. B., & Arda, D. (2022). Personality Characteristics of Nursing Students with Stress Perception in Clinical Practice in the Era Covid-19 Pandemic. *Journal of Positive Psychology and Wellbeing*, 6(1), 534-538.
- Suri, J., Sen, M., Singh, P., Kumar, R., & Aggarwal, P. (2007). Sleep patterns and their impact on lifestyle, anxiety and depression in BPO workers. *Indian J Sleep Med*, 2.
- Tennant, C. (2001). Work-related stress and depressive disorders. *Journal of psychosomatic research*, 51(5), 697-704.

- Van-den-Heuval, A. (1993). Missing work to care for sick children. *Family Matters*, 34(2), 52-55.
- Van-Dick, R., Wagner, U., Stellmacher, J., & Christ, O. (2005). Category salience and organizational identification. *Journal of Occupational and Organizational Psychology*, 78(2), 273-285.
- Volckmar-Eeg, M. G., & Vassenden, A. (2022). Emotional creaming: Street-level bureaucrats' prioritisation of migrant clients 'likely to succeed'in labour market integration. *International Journal of Social Welfare*, 31(2), 165-175.
- von Dawans, B., Strojny, J., & Domes, G. (2021). The effects of acute stress and stress hormones on social cognition and behavior: current state of research and future directions. *Neuroscience & Biobehavioral Reviews*, 121, 75-88.
- Wang, J. (2005). Work stress as a risk factor for major depressive episode (s). *Psychological medicine*, 35(6), 865-871.
- Watson, D., & Clark, L. A. (1984). Negative affectivity: the disposition to experience aversive emotional states. *Psychological bulletin*, *96*(3), 465.
- Westfall, L. (2009). Sampling methods. *The Certified Quality Engineer Handbook*.
- WHO. (2015). *Occupational Health*: World Health Organization.
- Zhang, W., Kaldewaij, R., Hashemi, M. M., Koch, S. B., Smit, A., van Ast, V. A., . . . Roelofs, K. (2022). Acute-stress-induced change in salience network coupling prospectively predicts post-trauma symptom development. *Translational psychiatry*, 12(1), 1-8.

This article can be cited: Talib, S., & Ali, S. (2023). Work-Related Stress and Psychosocial Problems among Shift Workers: A Case Study on Pakistan Railway Lahore, Pakistan. *Journal of Optimization in Industrial Engineering*, *16*(1), 49-59. doi: 10.22094/joie.2023.1973531.2015

