Sense of Coherence, Perceived Stress Reactivity and Psychological Wellbeing among Rescue Workers: Role of Psychological Capital

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01-275212-013

A thesis Submitted in fulfilment of the requirements for the Award of degree of Master of Science (Clinical Psychology)

Department of Professional Psychology

BAHRIA UNIVERSITY ISLAMABAD

15th Sep 2023

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DEDICATION

This thesis is dedicated to

My Mother (Tabassum Safeer), My Father (M. Safeer)

My Phuphoo (Shakeela Imran)

&

My Husband (Shujah ur Rehman)

For always supporting me.

Acknowledgments

First and foremost, in the name of Allah, the Most Gracious, the Most Merciful. I am very grateful and thankful to HIM for his immense blessings throughout my research.

Secondly, I would like to acknowledge and pay gratitude to those who made my academic experience and the accomplishment of my thesis enriching and meaningful. I would specifically like to express my deep gratitude to my supervisor, Dr. Shazia Yusuf, for guiding me all through. Her motivation, invaluable guidance and support has helped and inspired me a lot.

During the course of the study, I have visited several Rescue 1122 stations in Rawalpindi and Islamabad for collecting data. I take this opportunity to thank all rescue officials, especially Ms. Maria Kamran. I offer my sincere thanks to those who participated in my research project.

I would also like to give my deep and sincere appreciation to my friend, Fauzia Naseem & Abu Turab as their steadfast support, and validation has been a continual source of motivation. Their support and readiness to assist through difficult moments have made the entire experience more pleasurable and unforgettable.

Ms. Rimsha Safeer Abbasi

ABSTRACT

The present study investigated the relationship between sense of coherence, perceived stress reactivity with psychological wellbeing among rescue workers, along with moderating role of psychological capital. It was hypothesized that there will be a positive relationship of sense of coherence, and negative relationship of perceived stress reactivity with psychological wellbeing of rescue workers. Similarly, psychological capital was hypothesized to act as a moderator between study variable. It was hypothesized that a sense of coherences will be positively associated with age. Psychological wellbeing and sense of coherence will be negatively associated to monthly income. The sample consisted of 241 rescue workers from Islamabad and Rawalpindi stations. The instruments used for assessment were orientation to life questionnaire (Jibeen & Khalid in 2010), perceived stress reactivity scale (developed by Scholtz et al. (2011); translated in Urdu by researcher by using the guidelines of WHO), Mental health continuum scale shorter version (faran et al., 2021), and psychological capital scale (Luthans et al. in 2007 and translated by mind garden). The results revealed a significant positive relationship of sense of coherence, and significant negative relationship of perceived stress reactivity with psychological wellbeing of rescue workers. Perceived stress reactivity and sense of coherence was significantly negatively moderated by psychological capital (hope). Results revealed that sense of coherence increases with age and is negatively associated with monthly income. This study has ecological implications for policymakers and human resource managers to develop intervention and training programs based upon positive psychological resources to promote the job performance, and therefore improve the mental health of rescue worker operating in challenging environment.

Keywords: rescue workers, psychological capital, and perceived stress reactivity.

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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Disasters, whether natural or man-made, have a significant and enduring impact on the lives of individuals and communities. From the initial shock and trauma to the long-term effects, individuals can struggle to manage overwhelming emotions and psychological distress following a disaster. For instance, rescue workers, who rush in to aid victims and clear the area to avoid further calamities, usually get involved in the difficult position of potentially risking their own lives. The demands of their work can have a negative impact on their mental health; characteristics of burnout, such as reports of emotional exhaustion and depersonalization, are frequently prevalent among emergency healthcare workers (Schooley, 2016). These reports emphasize the significance of understanding the factors that may influence the first aid responders' capacity to adapt and thrive in such environments (North et al., 2002). The current study intended to shed light on the mental health and well-being of Pakistani rescue workers by investigating the relationship of sense of coherence, perceived stress reactivity, and psychological capital in order to have an in depth understanding of how these constructs impact the psychological functioning of rescue workers.

1.2 Sense of coherence and its importance among rescue workers

Widespread acknowledgment has been accorded to the stress and difficulties encountered by emergency workers in insecure and perilous environments. Due to their exposure to trauma and distress, these employees are susceptible to developing posttraumatic stress symptoms as they frequently assist traumatized individuals, putting

themselves at risk for physical and psychological symptoms (Jonsson et al., 2013). Intriguingly, while some rescue workers experience high levels of stress and exhaustion, there are others who exhibit remarkable dedication to their work and have a sense of personal development. Similarly, workers providing rescue services in war situations have been found to maintain excellent health and function despite facing adversity (Schaufeli & Bakker, 2001; Seligman & Csikszentmihalyi, 2000).

Sense of coherence provides an insight to understand why some individuals are better able to deal with trauma, pain, and sickness than others. It is defined as an overall orientation that determines person's confidence in the face of adversity by perceiving events as structured, predictable, and understandable, and by finding the necessary resources to recognize and cope with traumatic experiences (Antonovsky, 1987; Lindstrom, 2005). As a health-promoting resource, it can increase an individual's resilience and help them feel physically and mentally fit despite the constant environmental demands (Billings & Hashem, 2010).

Antonovsky developed the salutogenesis theory, which places emphasis on the personal resources necessary to maintain health. Accordingly, a sense of coherence is shaped by comprehensibility (life is predictable and understandable), manageability (one's own needs can be met with available resources), and meaningfulness (life makes sense and problems are worthwhile to invest energy in). Salutogenesis is a proactive approach to health, as opposed to the biomedical paradigm, which only considers an individual in terms of their illness. It is founded on five fundamental tenets. First, health is conceptualized as a spectrum based on the notion that even when unwell, a person still possesses healthy traits upon which to build. This indicates that an individual is between being sick (disease)

and healthy (ease). Second, the "story of the person" in general is more important than the focus of the medical method, which is on illness. Third, the focus should be on "health-promoting (salutary) factors" or chances, not on illness or risk factors. Fourth, tension and stress may be beneficial to health rather than a pervasive evil to combat. Instead of presuming a "right treatment based on the right diagnosis" approach, active adaptation is an optimal treatment strategy. Salutogenesis, therefore, focuses on the whole individual by interacting with both interior and exterior environments (Antonovsky, 1979, 1987).

Correspondingly, the sense of coherence is the main idea behind the salutogenic model, which looks at how well a person can stay healthy. It's a global perspective that shows how well a person can understand a problem and solve it if the problem is worth solving. Comprehensibility, manageability, and meaningfulness are the central characteristics that define the sense of coherence. Antonovsky argues that the factor, "Meaningfulness," an emotional and motivational aspect, has the greatest impact on the outcome by letting the people know if something is important enough to deal with (Antonovsky, 1979, 1987).

According to Vogt (2014), employees with a strong sense of coherence increase workplace productivity, which is beneficial to their health and well-being. According to (Feldt et al., 2004), healthy employees are better equipped to handle the demands of the workplace because they perceive the inputs as clear, manageable, and significant. According to Sairenchi et al. (2011), a sense of coherence is an independent human resource that can enhance mental health directly. Eriksson and Lindstrom (2006) discovered that a robust sense of coherence is associated with positive mental health, psychological well-being, and less severe anxiety and depression symptoms. German

rescue workers were studied by Bachem and Maercker (2018) to examine the impact of sense of coherence in relation to post-traumatic, depressed, and somatic symptoms. The findings revealed that a sense of coherence contributed to resilience in the face of mental and physical health challenges.

People with a strong sense of coherence see their lives as structured, predictable, and explicable. They can also find the capabilities they need to deal with traumatic events. Emergency workers may be better able to deal with the long-term stress and traumatic events they face if they have a strong sense of coherence. They are more likely to see their job and experiences as important, understandable, and manageable. This helps them keep a positive attitude and find the resources they need to deal with job demands well. Research revealed that emergency responders such as medical doctors, counsellors, psychiatrists, and community volunteers in war-like conditions were able to maintain psychological functioning and well-being by using their sense of coherence (Veronese et al., 2012).

The greater the risk of impairment due to trauma exposure among humanitarian workers, the more their sense of coherence functions as a Generalized Resistance Resource (GRR) for coping (Bauwens & Tosone, 2010; Jonsson et al., 2013). In challenging and traumatic environments, it assures the psychological well-being of its members. Research also links psychological strain to a reduced sense of coherence. Therefore, developing and enhancing a sense of coherence is essential for humanitarians to safeguard their mental health and maintain positive psychological functioning when exposed to the stress and trauma associated with their work. Eventually, enabling them to navigate the challenges they face in their high-stress and demanding roles (Veronese et al., 2012; Veronese & Pepe, 2014).

1.3 Perceived stress reactivity and its impact on rescue workers

Every day, rescue personnel have to deal with various types of stresses due to their job requirement of attending to emergencies each comprising of different nature and magnitude. Understanding potential stressors in the workplace and how to deal with them is crucial for the survival of rescue personnel as the nature of their work has a profound impact on their mental health (Khrisnanda & Shanti, 2022).

According to Cognitive stress theory, stress occurs because of an interaction between an individual and their environment in which the person sees demands as possibly harmful and unmanageable and reacts to them physically or mentally (Federenko et., 2006). According to Schulz et al. (2005) the degree to which a person normally reacts to stressors with immediate, strong, and/or prolonged reactions is known as perceived stress reactivity. It is possible that the varying impacts of stress on people's health might be explained by their perceived stress reactivity, which was defined by Scholtz et al. (2011a) as a disposition that underlying individual variances in physiological and psychological stress reactions and is largely constant across time.

Stress reactivity can be assessed through behavioral, self-report, or cognitive functioning. It is a mechanism through which stress can result in negative mental health outcomes (Scholtz, 2013; Schneiderman et al., 2005). Lazarus (1966) devised cognitive appraisal model, to provide insight into how individuals evaluate and interpret stressful events. This paradigm postulated that an individual's cognitive appraisal, comprised of primary and secondary appraisals, plays a significant role in determining their emotional and behavioral responses to stressors. These cognitive evaluations are then further associated with mental health outcomes.

The primary appraisal, a type of cognitive appraisal, involves assessing the significance of the stressor in relation to the individual's health and objectives. If the stressor is perceived as a threat to the individual's well-being, such as job loss or physical injury, it can result in negative emotions and elevated stress levels (Lazarus, 1999). In contrast, if the stressor is perceived as a challenge that can be overcome, it may contribute to the positive emotions and a greater sense of mastery among the employees.

The secondary appraisal focuses on assessing an individual's internal and external resources to deal with the stressor. This includes evaluating social support, identifying helpful individuals, and identifying actionable measures to combat the stressor. The availability and efficacy of these mitigating resources can influence a person's mental health (Lazarus, 1991).

According to research, those who engage in more positive cognitive appraisals, perceiving stressors as challenges as opposed to threats, tend to have better mental health outcomes. These people may have increased resiliency, adaptive coping strategies, and an optimistic outlook (Connor et al., 2017). While the individuals who consistently perceive stressors as threats and have limited perceptions of coping resources may experience greater distress and poor mental health. The way individuals evaluate their experiences and the coping resources they perceive can have a significant impact on their wellbeing (Conversano et al., 2010).

Heart disease & mental illness are both associated with abnormal stress reactivity responses, such as a high reaction time to stress induction activities (Zorn et al., 2017). The Job Demands-Resources model (Bakker & Demerouti, 2017) suggests that workers' mental and physical tiredness may moderate the link between demands like disaster-related stress

and performance on the job. Employees with a high level of perceived stress reactivity experience more health-related complaints, depression, anxiety, and chronic stress than employees with low perceived stress reactivity (Dewa, 2004).

Similarly, first respondents may experience increased anxiety, burnout, and even post-traumatic stress disorder (PTSD) as a result of their continuous exposure to stressors and perception of their inability to effectively deal with them (Gio et al., 2021). These negative effects can be manifested in a variety of behaviors, including emotional exhaustion, decreased job satisfaction, decreased performance, disrupted relationships, and physical health issues. In addition, the impact of perceived stress extends to the social and professional networks of rescue workers. When they experience increased stress reactivity, it can hinder their ability to provide effective support and care to those in need, thereby diminishing the overall quality of their work and possibly increasing the risk of errors or accidents (Gabriel & Aguinis, 2022).

Investigating the role of perceived stress reactivity on the mental wellbeing of Pakistani rescue workers may help understand better the processes that create barriers in the provision of supportive and healthy work environment.

1.4 Psychological capital and its impact on wellbeing of rescue workers

Psychological capital is a person's positive psychological state of development. It is characterized by having self-confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; making a positive attribution (optimism) about succeeding now and in the future; working towards goals and re-directing paths when necessary (hope); and being able to recover quickly from problems and adversity

(resistance). It comprises of four dimensions, self-efficacy, optimism, hope, and resilience that help people cope with problems and transitions (Luthans et al., 2007).

1.4.1 Self-efficacy. Based on Bandura's social cognitive theory, self-efficacy is a person's confidence in their ability to use their motivation, cognitions, and courses of action to perform well (Stajkovic & Luthans, 1998). Bandura (1997) found that those with strong self-efficacy are more likely to believe they can control situations and do well when facing hard tasks than those who had inadequate self-efficacy.

1.4.2 Optimism. Scheier et al. (2001) defined optimism as the belief that good things will happen. People who are optimistic tend to have good expectations, which enable them to work toward their goals and deal with uncertainties (Seligman, 2011).

1.4.3 Hope. Snyder et al. (1996) claim that hope is made up of two components: agency (goal-directed energy) and pathways. A person's agency comes from their motivation to succeed in a given role or environment. Pathways, on the other hand, are the means by which one can accomplish a certain goal (Luthans et al., 2008). Hopeful people are more motivated to take action and are more likely to come up with creative solutions to obstacles, as discovered by Avey et al. (2008).

1.4.4 Resilience. Resilience is the ability to get back up after a setback, doubt, risk, or failure, as well as the ability to adapt to changing and stressful life demands. It is found that people with high resilience tend to be better at adapting to negative events and changes in the outside world (Luthans et al., 2006).

It has been discovered that psychological capital mitigates the detrimental effects of stress on mental health and enhances positive outcomes. High levels of psychological

capital are associated with greater fortitude and resilience in the face of adversity (Riolli et al., 2012). Similarly, psychological capital acts as a buffer between sense of coherence, perceived stress reactivity, and psychological well-being (Avey et al. (2010), Researchers have discovered a correlation between psychological capital resources, such as resilience, efficacy, optimism, and positivity, and an employee's psychological well-being (Luthans, 2007; Luthans & Youssef, 2007). Increasing psychological capital may reduce the risk of burnout and traumatic stress in social workers (Virga et al., 2020).

By nurturing and enhancing psychological capital, organizations and policymakers can effectively support the well-being and psychological functioning of Pakistani rescue workers, ensuring that they remain mentally healthy and equipped to handle the demands of their high-stress occupations.

1.4 Psychological wellbeing and its importance among rescue workers

According to Shek (2014), a person who is psychologically well is "one who possesses a number of positive mental health qualities, such as active adjustment to the environment and unity of personality." It comprises of 6 dimensions having autonomy, having environmental mastery, positive relations with others, personal growth, purpose in life, and self-acceptance (Ryff & Keyes, 1995).

According to Huppert (2009), a state of mental health is achieved when a person "develops one's potential, has some control over one's life, has a sense of purpose, and experiences positive relationships." Deci and Ryan's (2008) idea of mental wellness combines eudemonic and hedonic well-being. Eudemonic well-being promotes optimal performance and actualization of potential in the individual and social domains. Hedonic well-being is happiness in which positive affect is present but negative affect is absent.

Beyond the hedonistic and eudemonic points of view, Vazquez et al. (2009) found that wellbeing helps prevent and treat physical illnesses and diseases and is important for living longer. It has been found that a person's mental health has an effect on both their job and their home life.

1.5.1 ***Self-acceptance:*** means having an optimistic attitude about self and the past and being able to accept yourself as a whole including flaws and mistakes. Self-acceptance has been linked to employee performance and optimal mental health (Ryff, 1989b).

1.5.2 ***Positive relations with others:*** People who have good relationships have "warm, satisfying, and trusting relationships" and can show more love and care for others. Positive relationships with other people have been shown to improve mental health (Ryff, 1989b). People are most often happy when they have healthy relationships and social support (Reis, 2012).

1.5.3 ***Autonomy:*** This dimension is marked by the ability to think and act on your own and to make your own decisions. People who are independent don't need other people's approval to decide what to think and do. They judge themselves based on what they believe and what they think is right, and they don't give in to society pressures. People who are independent feel like they have a lot of power over their lives (Ryff, 1989b).

1.5.4 Environmental Mastery: This dimension looks at a person's sense of competence and control over their surroundings, as well as their sense of progress. It entails being able to "select or create environments appropriate to one’s psychic conditions". This is a very essential part of having a healthy mind. People who are efficient at mastering their environment can spot and capitalize on opportunities in their surroundings (Ryff, 1989b).

1.5.6 Personal Growth: Ryff (1989) called this dimension "developing one's potential". In order to reach their greatest potential, people must be receptive to new experiences and capable of challenging themselves emotionally, cognitively, and physically. Consequently, they continue to reach their full powers and potential. The idea that growth and development happen all the time is an essential part of this dimension.

The current study was intended to investigate the relationship between sense of coherence, perceived stress reactivity, psychological capital and psychological wellbeing among rescue workers of Pakistan.

1.5 Research Gap/ Rationale of the study

The jobs involving the vulnerability for the development of stress and strain are always challenging. The employees of such jobs need to have a sense of coherence to deal with stressful situations. As the rescue workers are always exposed to traumatic situations, they are mostly left with psychological burden. Therefore, the first-line respondent's psychological wellbeing is important as they deal with situations involving the safety and security of many people. This study result will help underline the significance of psychological capital (including hope, resilience, self-efficacy, and optimism) as a protective factor of the psychological wellbeing of rescue workers against their job stressors.

Furthermore, individuals providing emergency services in Pakistan confront a unique challenge compared to their counterparts in more developed nations, as the country's situation is extremely dire. In addition to economic and security issues, it is also experiencing a political crisis. Recent governments have also failed to provide adequate funding and support for Pakistan's emergency services, making Pakistani rescue workers

an essential area for research and study. The collectivist nature of Pakistan's culture also distinguishes it from western nations. Most of the research on rescue workers has been conducted in developed Western nations with individualistic cultures. Therefore, the purpose of the present study was to investigate the effect of sense of coherence, perceived stress reactivity, and psychological wellbeing on positive resources of rescue workers in Pakistan. In order to ensure formulation of individualized training strategies and interventions for rescue workers who operate in increasingly challenging contexts, such as Pakistan.

1.6 Problem statement

The present study is investigating the moderating role of psychological capital in the relationship of sense of coherence, and perceived stress reactivity with psychological well-being among rescue workers. As rescue workers are experiencing a lot of stress daily due to a lot of emergency cases which may affect their psychological wellbeing. Here the need is to find out the role of demographic variables (age, marital status, education, duration of job, place of workstation, family system, and family income) on study variables.

1.7 Research questions

- What will be a relationship of perceived stress reactivity, and sense of coherence with psychological wellbeing of rescue workers?
- What will the role of Psychological Capital in the relationship of sense of coherence, and perceived stress reactivity with psychological wellbeing among rescue workers?

- What will be a role and relationship of demographic variables (age, marital status, education, duration of job, place of workstation, family system, and family income) with sense of coherence, perceived stress reactivity, psychological wellbeing, and psychological capital?

1.8 Objectives of the study

- To investigate the relationship between sense of coherence, perceived stress reactivity, psychological wellbeing, and psychological capital among rescue workers.
- To find the moderating role of Psychological Capital in the relationship of perceived stress reactivity, and sense of coherence with psychological wellbeing among rescue workers.
- To examine the role and relationship of demographic variables (age, marital status, education, duration of job, place of workstation, family system, and family income) on the study variables among rescue workers.

1.9 Significance of the Study

By shedding light on the relationships between rescue workers' psychological capital, perceived stress reactivity, sense of coherence, and wellbeing of rescue worker, this study will help clinicians, counselors, psychologists, psychiatrists, and even paramedics will be better equipped to design effective trainings and interventions to help rescue workers improve their coping strategies and moving on with their lives with optimism. All things considered, this research will help policymakers and human resource managers structure rescue workers' working conditions or create intervention programs to

boost job performance, thereby reducing the prevalence of mental health issues among these professionals and protecting their wellbeing.

The study findings can help future researchers to study psychological capital, sense of coherence, psychological wellbeing, and perceived stress reactivity in relation to the factors that can improve rescue workers' mental health. with other safety and risk factors, helping people who work in different areas, like firefighters, nurses, doctors, etc.

CHAPTER 2

LITERATURE REVIEW

The present literature will help to examine the relationship between sense of coherence, perceived stress reactivity, psychological capital with the psychological wellbeing of rescue worker.

Antonovsky (1987) found that sense of coherence has profound impact on an individual's mental health. According to Bothmer and Fridlund (2003) anxiety, depression, demoralization, hostility, despair, and post-traumatic stress disorder substantially and adversely impact the sense of coherence.

A study by Sairenchi et al. (2011) stated that a sense of coherence has a direct impact on psychological well-being when it is used as a personal resource. So, it is observed that people who have a better sense of coherence will be able to keep their mental health even if they are in very stressful or traumatic situations. According to Antonovsky (1987), individuals with a strong sense of coherence are more inclined to make healthy choices as compared to those who have poor sense of coherence. Bachem and Maercker (2016) discovered that sense of coherence promotes healthy habits and mental and physical wellbeing of employees. It is positively linked to self-esteem, optimism, and negatively linked to neuroticism and hostility, all of which are associated with health and wellbeing.

Nillson et al. (2009) examined the effect of age and gender on the sense of coherence. He discovered that men had a stronger sense of coherence and well-being than women. The results revealed that a sense of coherence increases with age. The elderly have a stronger sense of coherence than younger adults. They were more likely to feel good

about themselves, which in return improved their mental health. He argued that around the age of 30, a sense of coherence begins to increase. After then, it normally stabilizes until retirement, when it begins to decline and become steady over time.

According to Wissing and Eeden (2002), sense of coherence has a positive relationship with mental health. A study by Otto (2002) has demonstrated its effectiveness as a coping strategy. Individual with elevated sense of coherence use problem-focused coping approaches, are adaptable in their strategies, and are proficient at using the input to adjust how they are coping. As a result, those with a stronger sense of coherence are more likely to eliminate the source of stress and relieve the tension that comes with it (Torsheim et al., 2001). People with a stronger sense of coherence can avoid stressors and have limited unpleasant events in their lives, while those with a lower sense of coherence can view stress as damaging and anxiety- provoking (Wolff & Ratner,1999).

McSherry and Holm (1994) stated that individuals with a low sense of coherence are more prone to become irritated and angry when confronted with stressors, and they are more inclined to claim that even minor stressors are an ongoing source of stress. Several cross-sectional research have found that sense of coherence is positively associated with behaviors related to health, as well as physical and mental wellbeing (Domingues et al., 2022).

Eriksson and Lindstrom (2005) discovered that sense of coherence has numerous impacts on various facets of health. It appears to be highly related to perceived good health, particularly along the mental dimension and at least among those with a high sense of coherence. It facilitates the identification and management of stress, thereby contributing

to the maintenance of an individual's wellbeing. Thus, it provides innate stress resistance and resilience to psychological stress after loss (Antonovsky, 1993).

Adverse events in life can lead to mental health issues, which can later lead to other health issues. Kivimaki et al. (2002) investigated those psychological problems, such as a lower sense of coherence were associated to negative life events such as the loss or illness of a family member, violence, conflict with other people, or money problems, and later sick leave. Both men and women who experienced these kinds of life traumas were more likely to have psychological issues, such as a lower sense of coherence. Only men, however, were far more likely to skip work due to illness. This could have occurred because men who experienced adversity had weaker social support networks than women.

A study of Swiss nurses revealed that those experiencing burnout had a weakened sense of coherence as compared to their non-burnt-out counterparts (Aries & Ritter, 1999). In another study conducted on nurses by Lewis et al. (1992) revealed that sense of coherence significantly mediated the relationship between stress and exhaustion. In a subsequent study of dialysis nurses, Sense of coherence and coping resources were predictors of personal and work-related stress and exhaustion (Lewis et al., 1994). Lastly, Langeland (2007) found that using the principles of salutogenic therapy in an intervention plan improved sense of coherence and the ability to deal with problems.

Limm et al. (2010) found that more perceived stress reactivity is linked to more psychosomatic and physical complaints, poor mental health, unhealthy habits, and more anxiety and sadness. Federenko et al. (2006) think that, like perceived stress, perceived stress reactivity is affected by genetics and the environment. Federenko et al. (2006) also

think that perceived stress reactivity is affected by how often a person is exposed to a stressor. It is also affected by long-term stress and low educational level. High amounts of perceived stress can lead to chronic activation of the body, which has an adverse effect on mental health (Mcewen, 1998).

High levels of job stress have been linked to low productivity in the workplace, according to studies (Jamal, 2007; Wright & Cropanzano, 2000). Stress among employees may have played a significant role in their performance during the COVID-19 tragedy (Sinclair et al., 2020). According to Ford et al. (2007); Mennino et al. (2005), feelings and actions experienced in one context (such as one's personal life) might have repercussions in another context (such as one's professional life). Work performance has been connected to interpersonal difficulties at home, such as rudeness in the family, according to research by Lim and Tai (2014).

The Conservation of Resources Theory (Hobfoll, 1989) revealed that individuals are inclined to get more resources when they want to reach a target or deal with a tough situation. But when a person loses resources in response to a stressor for the first time, they have less resources to deal with other stressors or long-term stress, making them more exposed. As a result, the stress brought on by the disaster could risk the resources of each worker. This loss of resources could make it harder for workers to deal with demands and stresses at work, which could affect how well they do their jobs (Westman et al., 2005)

Psychological capital as a positive construct of organizational psychology has been linked to a variety of factors, such as job commitment and satisfaction, stress and well-being of the employees (Kim & Cho, 2020). According to Luthans et al. (2007) psychological capital increases individual human capital (people's knowledge and abilities)

and social capital (network of interactions with one another) and reduces problems in organizations by relying on resources like hope, self-efficacy, and resilience. Numerous previous studies (Alipoor et al., 2013; Rahimi et al., 2012) have positively linked the psychological capital associated with the work environment and o organizational characteristics. The study conducted by Madden (2013) shows that psychological capital is essential for dealing with problems in a company and increasing the productivity of the employees.

A study by Luthans and Patera (2008) stated that psychological capital improved the job performance of an employee. It can make employee more motivated, satisfied, committed, and able to deal with stressors at work more effectively and if they encounter any setback, it increases their motivation to find new ways to reach their goals and by giving them a resource that helps them get back on their feet quickly after a setback. Nafei's (2015) studied psychological capital in terms of employee attitudes and performance. The results indicate that psychological capital is related to employee attitudes in terms of job satisfaction and organizational commitment. It was revealed that the higher level of psychological capital is linked with increased employees' satisfaction, the more committed they are, and the better they do their jobs.

Workplace stress and work–family conflict reduce psychological capital. Liu et al. (2012) observed that underpaid and overcommitted female medical practitioners has low psychological capital and depressed symptoms. Similarly, Wang et al. (2012) discovered that psychological capital partially mediated the connection between family conflict and different aspects of burnout for female physicians. Epitropaki (2013) found that more

employment uncertainty was associated with decreased psychological capital, stress, and purpose of life.

According to Cheung et al. (2011), psychological capital moderates the relationship between emotional labour and job burnout. Other researches suggests that stress at work decreases psychological capital (Liu et al., 2012; Wang et al., 2012). Lorenz et al. (2016) revealed that psychological capital is essential for well-being, health, and the happiness of relationships. Thus, psychological capital stands out as an important variable that could change the link between happiness and job achievement. The study conducted on police officers in order to find an association between stress and wellbeing. The psychological capital moderates a relationship between stress and wellbeing among police officers (Mensah & Amponsah, 2016).

Roberts et al. (2011) assert that psychological capital moderates the link between employee worry and their psychological well-being. Cheung et al. (2011) revealed that psychological capital changed the way emotional labor and job happiness, or dissatisfaction were linked. Studies in workplace health have found that hope, resilience, self-efficacy, and optimism play an important role in improving well-being of an employees (Keyes, 2007). The study by (Gillespie et al., 2007) examined numerous components of psychological capital (efficacy, resilience, hope, and optimism) help nurses and other health care workers deal with the stress that comes with their jobs.

The research conducted by Jackson et al. (2007) on nurses revealed that resilience is a substantial psychological trait because it helps nurses deal with the stressors of their jobs. Because these resources can be improved in some way as they are psychological assets rather than obstacles (Avery, 2009).

The research on impact of psychological capital on job burn out among Chinese nurses revealed that those who are hopeful and uses self-efficacy and resilience in stressful environment are more likely to stay healthy than nurses who are not as mentally healthy. Psychological capital comprehends the distinctive characteristics of nursing stress and organizational change. This is especially important for improving well-being in the highly stressed field of nursing. So, psychological capital imparts nurses a personal resource that can help them deal with the growing demands of their jobs and the stress that comes with their roles at work (Peng et al., 2013).

According to Avey et al. (2011) workers are happy and do a better job when they can use psychological capital as a personal resource. Avey et al. (2008) reported that employees with elevated psychological capital are more open to organizational change and accept it more. The results revealed that psychological capital has a strong negative relationship with cynicism, stress, and anxiety. Additionally, it exhibits a strong positive association with the desired attitudes, performance, and well-being of workers (Avey et al., 2010).

Each component of psychological capital's moderating effect has been established. Sui et al. (2007) discovered support for general self-efficacy as a resource for stress mitigation. Malinowski and Lim (2015) found that retaining hope in the workplace is vital for coping with stress and enhancing employees' psychological well-being; they based their findings on a survey of 299 individuals with full-time jobs.

Williams et al. (2010) found that under pressure, people's coping mechanisms change depending on the nature of the stresses and their confidence in their ability to handle

the situation. Self-efficacy is a confidence in one owns' talent to bring about desired outcomes. An individual's sense of confidence in his or her ability to cope with stress plays a vital role in determining how that person reacts to stress. self-efficacy regulates stress, improves self-esteem, well-being, and performance, and optimizes response to unpredictable situations (Winston et al., 2017).

Grey and Jones (2018) found that resilience is another way in which psychological capital affects health. It can help people deal with things like starting a new job, not knowing what the future holds, or a mental health problem like worry or emotional exhaustion (Hartmann et al., 2019).

Bandura (1998) argues that a positive sense of personal effectiveness is necessary to overcome the many hurdles on the path to success and wellbeing. According to the self-regulatory paradigm (Carver et al., 2010), optimism influences outcomes by acting as a form of internal regulation. According to this theory, people feel that there is a disconnection between their present circumstances and the outcomes of their next moves. Employees are more motivated to strive towards their goals if they believe the gap between their expectations and reality may be closed (Liu et al., 2018). Optimistic workers are more likely to push through difficulties and stress in the workplace because they have faith in the eventual success of their efforts, despite the ambiguity of their circumstances (Zheng et al., 2014).

According to Luthans et al. (2007) psychological capital is an "untapped human resource" with the potential to provide competitive advantage if cultivated and maintained over time. That is why there is a need to study the influence of positive psychological capital resources on wellbeing of an employees in workplace.

The above-mentioned chapter comprises of the researches conducted in my area of interest. All the studies are well within the recent few years and highlight the role of psychological capital, sense of coherence, perceived stress reactivity with psychological wellbeing of rescue workers.

2.1 Theoretical Framework

2.1.1 The conservation of resource theory

The Conservation of Resources (COR) Theory is an effective approach in anticipating how people experience and deal with chronic and severe stress, as well as how they become more resilient. The concept states that stress happens when resources are threatened or running out and people are driven to get, defend, and encourage the individual in acquiring the resources. It shows that losing resources has a greater effect on the mind than getting the same resources back. The theory also looks at the role of resources in healthcare settings and how the deprivation or acquisition of a resource affects different health habits (Hoffball, 1989).

The core components of conservation of resource theory are its principles and corollaries, which help explain its ideas in more detail. One of these is the resource investment principle, which asserts that people are more likely to invest in resources they already have. According to the vulnerability corollary, people with fewer resources are more likely to lose those resources and may encounter greater negative consequences. Also, the theory unveils the idea of "resource caravans," which means that people, families, communities, and cultures collaborate in order to accumulate and retain resources.

The theory of the conservation of resources is used as the basis for the idea that good psychological capital resources should come first. The conservation of resources theory explains why people get stressed and how they can react to stressful situations. The main idea behind the theory is that people work hard to get, keep, grow, and retain the things they value the most, and stress occurs when these resources are threatened. (Hobfoll, 1988).

A resource can also be anything that helps people and is important to them. Centrally valued effects are things like social relationships in groups, health, self-defense, a good sense of self, and happiness. These tools are seen as important ways to stay motivated and deal with stress. The conservation of resources focuses on making things better and adjusting to loss and pain. Also, protection and building up resources make people less likely to be hurt by worry. Theoretically, resource groups are formed when the process of resource accumulation evolves over time. People form these associations when they have access to resources and continue to acquire more. Resource Caravans are collaborative and expanding organization of resources (Hobfoll, 2002).

As a whole, the conservation of resource theory discloses pertinent information about stress, resource conservation, and health. It focuses on the recognition and preservation of resources and explores how resource dynamics influence individual and community well-being.

2.2 Conceptual Framework

The conceptual framework describes the relationship of sense of coherence, perceived stress reactivity, psychological wellbeing & role of psychological capital as a moderator. This model demonstrates the hypothesized correlation between sense of coherence, perceived stress reactivity, psychological capital on psychological wellbeing of rescue worker in which this study will construct the relationship that when the independent variable sense of coherence, perceived stress reactivity increases there will be a decrease in dependent variable such as psychological wellbeing.

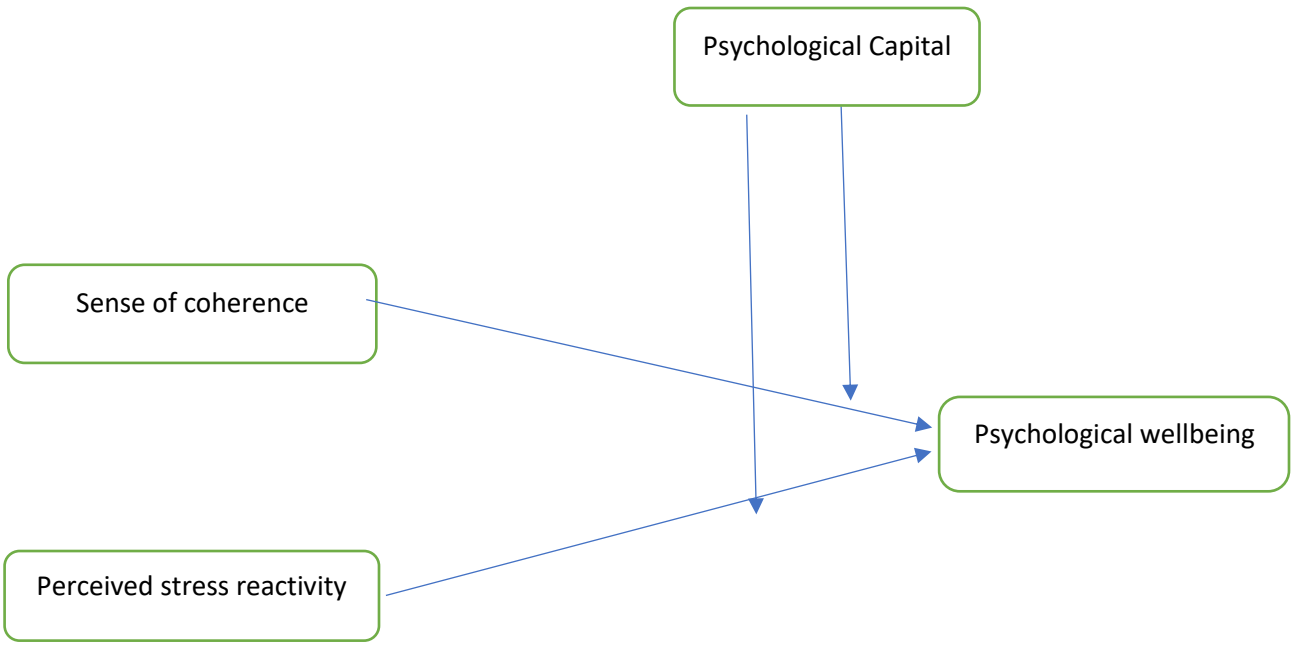


Figure 1. Conceptual framework of the study

2.3 Hypotheses

1. There will be a positive relationship between a sense of coherence and psychological wellbeing among rescue workers.
2. There will be a negative relationship between Perceived stress reactivity and psychological wellbeing among rescue workers.
3. Psychological capital acts as a moderator between sense of coherence and perceived stress reactivity, and psychological wellbeing among rescue workers.
4. There will be a positive relationship between a sense of coherence and the age among rescue workers.
5. A sense of coherence is negatively associated with individual monthly income.
6. Psychological wellbeing is negatively associated with individual monthly income.

CHAPTER 3

RESEARCH METHODOLOGY

The current study investigated the relationship between sense of coherence, perceived stress reactivity, and psychological wellbeing among rescue worker & moderating role of psychological capital. It was a correlational design using survey method for data collection.

3.1 Research Epistemology

Positivism was a research epistemology for the current study. It considers that knowledge is derived through empirical observation. It emphasizes objectivity, quantifiable facts, and the application of methodical procedures to comprehend the world. Positivists strive to construct universally applicable general laws and regularities. To draw conclusions and make predictions, they prefer quantitative data and statistical analysis.

3.2 Research Design

The cross-sectional correlation design was used. It was focused on investigating the relationship between the study variables. In the current research the dependent variable was psychological wellbeing and independent variables were perceived stress reactivity, sense of coherence, and psychological capital as a moderator. This design was used because it was the most economical process by which data can be collected from large sample.

3.3 Research Approach

This research was based on ‘deductive approach’ in which hypotheses are put forward in propositional or question form about the causal relation between phenomena. Empirical evidence was gathered, analyzed, and formulated in the form of a theory that

explains the effect of the independent variable on the dependent variable. It was then confirmed or rejected depending on the results of statistical analysis. The purpose was to measure, control, predict, construct laws and ascribe causality.

3.4 Research Strategy

The quantitative research method was used in the study. The data was collected by using a survey method.

3.5 Population and sampling technique

A sample of (N=241) rescue workers were selected for the current study by using G power. The participants' age ranged from 22 to 45 years (Haleem et al., 2017). The purposive sampling technique was used.

3.6 Inclusion Criteria

- The participants must be literate and understand Urdu language.

3.7 Exclusion Criteria

- The sample having any disability (physical and psychological).

3.8 Instruments

The following assessments tools were used to collect the data.

3.8.1 Informed consent

Participants were provided with an informed consent form prior to their participation in the study.

3.8.2 Demographic Data Sheet

The demographic information including age, gender, monthly income, total family income, work hours per week, type of employment, base of workplace, family system, social status, primary work shift, religion, designation, qualification, city, marital status, family system, family income, and duration of job was obtained with the help of a demographic sheet.

3.8.3 Psychological Capital Questionnaire (PCQ) Self-Rater Short Form

It was developed by Luthans et al. (2007) and translated by Mind Garden. It has four subscales: Hope, Optimism, Efficacy, and Resilience. The Self-Rater Short-Form has 12 items. The efficacy is measured by items 1-3, hope is measured by items 4-7, resilience is measured by items 8-10 and optimism is measured by items 11-12. It is a six-point Likert scale, with score ranges from 1-6. Hope = 0.87, Efficacy = 0.92, Resilience = 0.83, and Optimism = 0.78 have satisfactory internal consistency. High scores on the subscales show that the person is more self-confident, hopeful, resilient, and optimistic. The alpha reliability as a whole was determined to be 0.85, and the reliability of its components increased from 0.67 to 0.76. (Haleem, 2017)

3.8.4 The orientation to life questionnaire

It was developed by antonovsky in 1979 and translated by Jibeen and Khalid in 2010.It has 13- item with 7-point likert scale with two anchoring answers. It measures a respondent's comprehensibility (whether they think the stressors are predictable), manageability (how sure they are that they can deal with the stressors), and meaningfulness (whether they think it's important to face the task). According to Erikson and Lindstrm

(2005) the alpha reliability is between 0.82-0.95. The scale has high face, content, and criterion validity (Wissing & Eeden, 2002).

3.8.5 Perceived Stress Reactivity Scale

It was developed by Schlotz et al. (2011), to assess perceived stress reactivity. Researcher translated this scale into Urdu by following WHO guidelines. It is a 23-item scale. Each question has three choices. It comprises of five subscales: Reactivity to Work Overload, Reactivity to Social Conflicts, Reactivity to Social Evaluation, Reactivity to Failure, and Prolonged Reactivity. The total score is calculated by adding the scores of all subscales. Test retest, discriminant, and convergent reliabilities of the scale were established (Schlotz et al., 2011a).

3.8.6 Mental Health Continuum Short Form (MHC-SF)

It was developed by (Keyes et al., 2008) and translated into Urdu by Faran et. al. (2021). It is a 6-point Likert scale with score ranges from 0-5. It consists of 14 items, each of which was chosen to show a different aspect of well-being. The short form has 3 questions about mental well-being (which measure hedonic well-being), 6 questions about psychological well-being, and 5 questions about social well-being. All of these questions together measure eudemonic well-being. With these answer choices, you can find out how often people experience each sign of good mental health. Based on these three subscales, this scale also shows whether a person's mental health is doing well or not. Each statement had a correlation coefficient between 0.85-0.93, and the alpha reliability for the English and Urdu forms was 0.79-0.87, respectively (Faran et al., 2021).

3.9 Operational definitions

3.9.1 Psychological Capital

It is a person's positive psychological state of development and is characterized by having self-confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; making a positive attribution (optimism) about succeeding now and in the future; persevering toward goals (hope); and when necessary, redirecting paths to goals and when beset by problems and adversity (resilience). As a result, it has been demonstrated that the psychological capital which comprises of efficacy, optimism, hope, and resilience, together represents a second-order, core element that predicts performance and satisfaction. (Luthans et al., 2007). The psychological capital of rescue workers was assessed by using psychological capital scale developed by Luthans et al., (2007) and translated by mind garden (2015). It has 12 items and has four subscales. The overall psychological capital score was calculated by taking an average of all items. Maximum score is 72 and minimum score is 1.

3.9.2 Sense of Coherence

It's an overall orientation that affects a person's confidence in the face of adversity by understanding events as structured, predictable, and understandable and by finding the resources to recognise and cope with traumatic situations (Antonovsky, 1987; Lindstrom, 2005). The Urdu translated version of "The Orientation to Life Questionnaire," (Jibeen & Khalid, 2010) was used to assess rescue workers' sense of coherence. It consists of 13 items. The overall score of scale is calculated by taking sum of all the items. The highest score (91) indicates that the individual has a high sense of coherence and has control over the situation and minimum score is 1.

3.9.3 Perceived Stress Reactivity

It is defined as “disposition that underlies individual differences in physiological and psychological stress responses that is relatively stable over time” may help explain the differential impact of stress on individuals’ health. The Urdu translated version of perceived stress reactivity scale was used originally developed by Schlotz et al. (2011) and translated by researcher using WHO guidelines. This scale has 23 items. The overall score is obtained by adding the scores from all five subscales. The highest score on scale is 46 which indicates highest perceived stress reactivity. The lowest score of 0 indicates a low level of perceived stress reactivity.

3.9.4 Psychological well-being

Psychological well-being combines eudemonic well-being, which promotes optimal performance and potential in the individual and social domains, with hedonic well-being, which is happiness with no negative impact (Deci & Ryans, 2008). It was assessed by using Mental Health continuum short form (Keyes et al., 2008) and translated by (Faran et al., 2021). It is a 14-items scale. Maximum score is 70 and minimum score is 0.

3.10 Procedure

The study was conducted on a sample of 241 rescue personnel between the ages of 22 and 45. The data was collected with the help of questionnaire mainly from Rawalpindi and Islamabad rescue 112 stations. After data collection, it was analyzed, and results were reported.

3.11 Ethical Considerations

Concerning ethical issues, the study was approval by Bahria University's Institutional Review Board. The study's objectives and implications were explained and

informed consent was taken from the participants. In addition, researchers ensure participant anonymity, respect, confidentiality of information, and the right to withdraw from research at any time.

3.12 Statistical Analysis

After collecting data, descriptive statistics, intercorrelations, regression analyses, and one-way analysis of variance (ANOVA) were performed using Statistical Package for the Social Sciences (SPSS-IBM version 27.0). The Hayes Process Macro was used for moderation analysis to investigate the role of psychological capital.

3.13 Translation of Scale

The first step of the study dealt with scale translation. The primary goal was to translate the scale from Urdu to English and to assess language clarity and understanding. The sample comprised of bilingual specialists (n=03) and committee approach members (n=03) with strong command and knowledge of Urdu and English. After the translation was completed, 30 rescue workers were approached and translated scales were administered on them. Perceived stress reactivity scale (Scholtz et al., 2011) was translated.

3.13.1 Process of Translation

After taking permission from original author, translation of PSRS was started using standardized procedures that were defined by WHO (2016)

The translation was carried out in six steps that are as follows:

Step 1: Forward translation

Step II: Committee Approach

Step III: Backward translation

Step IV: Committee Approach

Step V: Finalization of scale items

Step VI: Final draft of instruments

3.13.1.1 Step 1: Forward translation

- **Translation from English language to Urdu language**

In forward translation, scale was translated from English language to Urdu language. A panel of experts were approached to get a better and adequate version of forward translation.

- **Experts**

  Three bilingual experts with a psychological background were approached for forward translation: MS scholars and a PhD doctor. The translation was done by experts who chose appropriate terminology to make the scale clear and understandable. Final drafts of all translations were processed for committee review.

3.13.1.2 Step II: Committee Approach

After drafting all of the translations, a panel comprised of three experts was consulted. Three faculty members from the Department of Professional Psychology at BUIC with expertise in test development, translation, and adaptation served on the panel. Members of the committee evaluated every item's translation in order to come up with a final version. After comparing the translations and analyzing the discrepancies between the two languages, they chose the closest

translation based on the sentence structure and wordings. The statements that provided the closest meaning to the original variants of the scale were chosen.

3.13.1.3 Step III: Backward Translation

- **Translation from Urdu language to English language**

  For backward translation was done to translate the scale from Urdu to English language. Again, a panel of experts were approached for this purpose.

- **Experts**

  Three bilingual experts with a strong command of both English and Urdu were approached. They translated the Urdu statements into English. Two experts have master's degree in psychology, and one has masters in English. The expert chose the appropriate words to make the scale understandable. Finally, all of the translations were redrafted in preparation for committee review.

3.13.1.4 Step IV: Committee Approach

An expert panel was approached for a backward translation review. The panel was comprised of three faculty members from the Department of Professional

Psychology at BUIC with expertise in test development, translation, and adaptation, as well as fluency in both English and Urdu. The panel reviewed and evaluated all translations of each item to produce a final version, selecting the closest and most appropriate transition based on sentence structure and phrasing. The statements that provided the closest meaning to the original version of the scale were chosen.

3.13.1.5 Step V: Finalization of scale items

After conducting committee approach for backward translation, the final selected statements were drafted and compared with the original scale items. The statements were

delivering the same similar meaning. After carefully reviewing and analysing the final draft of the scale in Urdu language was prepared.

3.13.1.6 Step VI: Final draft of instruments

The final version of perceived stress reactivity scale was available after the translation process was completed. For the purpose of determining language clarity and comprehension, a scale was administered to a sample of 30 rescue workers. Participants were briefed on the objectives and asked to provide feedback on any difficulty or ambiguity they encountered while reading the items. The participants' responses were adequate, indicating that the statements were understandable.

3.13.2 Part II: Pilot study

Pilot study was conducted to establish the psychometric properties of the translated scale, the participants were male rescue worker(n=30) voluntarily recruited from Rescue 112 stations of Rawalpindi and Islamabad. The measures administered were demographic sheet and perceived stress reactivity scale (Scholtz et al., 2011).

CHAPTER 4

RESULTS

4.1 Table 1

Socio demographic characteristics of the sample (N=241).

Variables	*f*	%	*M*	*SD*
Age			36.12	7.38
Monthly Income			64287.5	7.38
Total family Income			102070.12	93983.31
Work hours per week			49.83	5.27
Gender				
Male	232	96.3%		
Female	9	3.7%		
Marital status				
Married	205	85.1%		
Unmarried	36	14.9%		
Education				
Matriculation	43	17.8%		
Intermediate	69	28.6%		
Bachelors	102	42.3%		
Masters	27	11.2%		

Type of Employment		
Formal	203	84.2
Informal	21	8.7
Contractual	17	7.1
Base of workplace		
Urban	203	84.2%
Rural	20	8.3%
Road	18	7.5%
Family System		
Nuclear	79	32.8%
Joint	162	67.2%
Primary Work shift		
Day	37	15.4
Night	5	2.1
Evening	5	2.1
Alternate	194	80.5

Note: f= frequencies of demographic variables, %= percentage, M=mean and SD= Standard deviations.

Table 1 shows the frequencies and percentages of demographics variables of the study.

4.2 Table 2

Psychometric properties of the scales and subscales (N=241)

Variables	*K*	*M*	*SD*	Range		α
				Potential	*Actual*	
Perceived Stress Reactivity	23	18.07	7.65	0-46	0-40	.83
Sense of Coherence	13	60.93	11.21	1-91	36-91	.66
Psychological Capital	12	55.78	9.24	1-72	14-72	.75
Efficacy	3	13.37	3.08	3-18	3-18	.74
Hope	4	18.92	3.63	4-24	4-24	.76
Resilience	3	13.83	2.69	3-18	5-18	.68
Optimism	2	9.66	2.02	2-12	2-12	.62
Psychological Wellbeing	14	51.55	11.35	0-70	8-70	.80
Emotional Wellbeing	3	11.55	3.35	0-15	0-15	.86
Social Wellbeing	5	17.12	5.18	0-25	2-25	.76
Psychological Wellbeing	6	22.88	5.68	0-30	0-30	.78

Table no 2 shows descriptives values and reliabilities values of the instruments used to measure the desired variable. The alpha reliability values ranging from .62 to .86 indicate that the instruments used for data collection are psychometrically sound.

The alpha reliability of perceived stress reactivity scale is.83. The reliability value for sense of coherence scale is .66. The reliability value of psychological capital scale is

.75 and its subscales (efficacy, hope, resilience and optimism are .74, .76, .68, .62). The alpha reliability of psychological wellbeing scale is .80 and its subscales (emotional wellbeing, social wellbeing, and psychological wellbeing are .86, .76, and .78).

4.3 Table 3

Correlation Analysis for the study variables (N=241)

	Variables	1	2	3	4	5	6	7	8	9	10	11
1	**Perceived Stress Reactivity**	-	-	-	-	-	-	-	-	-	-	-
2	**Sense of Coherence**	-.46**	-	-	-	-	-	-	-	-	-	-
3	**Psychological Capital**	-.41**	.26**	-	-	-	-	-	-	-	-	-
4	Efficacy	-.41**	.26**	.83***	-	-	-	-	-	-	-	-
5	Hope	-.39**	.35**	.89***	.65***	-	-	-	-	-	-	-
6	Resilience	-.33**	.29**	.82***	.53***	.66***	-	-	-	-	-	-
7	Optimism	-.29**	.31**	.71***	.48**	.48**	.53***	-	-	-	-	-
8	**Psychological wellbeing**	-.45**	.32**	.55***	.45**	.47**	.48**	.40**	-	-	-	-
9	Emotional Wellbeing	-.37**	.15*	.47**	.41**	.38**	.41**	.33**	.68***	-	-	-
10	Social Wellbeing	-.34**	.29**	.41**	.30**	.38**	.36**	.29**	.83***	.43**	-	-
11	Psychological Wellbeing	-.37**	.29**	.45**	.38**	.37**	.39**	.34**	.84***	.37**	.49**	-

Note. *p < .05, **p < .01 and ***p < .001.

Table 3 shows the correlation between study variables. There is a significant negative relationship between Perceived Stress Reactivity with sense of coherence, Psychological Capital (Efficacy, Hope, Resilience, and Optimism) and psychological wellbeing (Emotional wellbeing, social wellbeing, and psychological wellbeing) of rescue workers.

4.4 Table 4

Bivariate correlation between demographic variables (age, individual monthly income, family income, and weekly work duration) and study variables. (N=241)

	Variables	Age	Individual monthly income	Family income	Weekly work duration
1	**Perceived Stress Reactivity**	.05	.14*	.05	-.01
2	**Sense of Coherence**	.11*	-.11*	.02	-.15**
3	**Psychological Capital**	.03	-.01	-.03	-.18**
4	Efficacy	-.03	.03	-.14*	-.06
5	Hope	-04	-.01	.02	-.24**
6	Resilience	.03	-.04	-.04	-.09
7	Optimism	.09	.07	-.03	-.19**
8	**Psychological wellbeing**	-.04	-.15*	-.06	.09
9	Emotional Wellbeing	.06	-.03	-.14*	.02
10	Social Wellbeing	-.01	-.07	.02	.03
11	Psychological Wellbeing	-.10	-.21**	-.06	.15*

p<.05, **p<.01*p.001*

Table 4 shows the correlation of study variables with demographics. Perceived stress reactivity was found to be significantly positively related to individual monthly income among rescue workers. Sense of coherence was found to be significantly negatively correlated with age. Psychological capital (hope and optimism) and sense of

coherence was significantly negatively correlated with weekly work duration. Psychological capital(efficacy) and psychological wellbeing (emotional wellbeing) were negatively significantly correlated with family income. Psychological wellbeing (psychological wellbeing) was significantly negatively correlated with individual monthly income and significantly positively correlated with weekly work duration among rescue workers.

4.5 Table 5

Means, Standard Deviations, and One-way Analysis of Variance in Efficacy and psychological wellbeing across different levels of Education. (N=241)

	Matriculation N= 43		Intermediate N=69		Bachelors N=102		Masters N=27		*F (3,237)*	*p*	*Post Hoc*	*Mean-differences*	*95% Cl*		η^2
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*			*I-J*		*LL*	*UL*	
Perceived stress reactivity	17.91	6.67	17.72	8.54	18.87	7.72	16.52	6.59	.71	.55					.009
Sense of coherence	60.63	12.15	60.77	10.64	61.17	11.99	61.15	8.29	.04	.99					.001
Psychological capital	55.30	8.24	55.20	9.55	56.34	8.76	55.99	13.33	.24	.87					.003
Efficacy	12.60	2.65	13.00	3.43	13.64	2.82	14.56	3.36	2.88	.03	-1.95	1<4	-3.88	-.02	.035
Hope	18.59	3.76	19.03	3.42	19.20	3.46	18.30	4.99	.69	.56					.009
Resilience	14.28	2.56	13.75	2.47	13.96	2.78	13.44	3.66	.79	.56					.009
Optimism	9.93	1.77	9.52	2.04	9.65	1.98	9.69	2.66	.47	.87					.005
Psychological wellbeing	54.60	10.85	52.04	11.70	50.61	10.99	48.96	12.28	1.80	.15					.022
Emotional wellbeing	12.42	2.84	11.64	3.52	11.02	3.44	11.93	3.11	1.97	.12					.02
Social wellbeing	17.72	5.59	17.14	5.23	16.83	4.97	17.19	5.55	.39	.83					.004
Psychological wellbeing	24.47	4.94	23.36	5.24	22.75	5.34	19.85	7.87	3.93	.00	4.61 3.41	1>4 2>4	1.07 .13	8.26 6.69	.05

Table 5 shows the group differences between different educational levels among rescue workers. There were significant group differences found between psychological capital(efficacy) and psychological wellbeing of rescue workers across different educational levels. Post-Hoc analysis revealed that efficacy was significantly higher in rescue workers with master's degree as compared to rescue workers with matriculation. The rescue workers with matriculation degree significantly scored higher on psychological wellbeing as compared to those with master's degree. Similarly, the rescue workers with bachelor's degree scored higher on psychological wellbeing as compared to those with master's degree.

4.6 Table 6

The moderating effect of Psychological Capital on the relationship between perceived stress reactivity, sense of coherence and psychological wellbeing. (N=241)

Predictor	Estimate	*SE*	95% CI		*p*
			LL	*UL*	
Main effect					
Constant	54.39	10.68	33.35	75.43	.00
Perceived stress reactivity	-1.72	.51	-2.72	-.71	.00
Psychological capital	.10	.17	-.23	.45	.55
Perceived stress reactivity* Psychological Capital	.02	.00	.01	.04	.01
R^2	.61				
F	46.99				

Table 6 shows the moderating effect of psychological capital in between perceived stress reactivity and psychological wellbeing among rescue workers. Perceived stress reactivity is significantly negatively moderated by psychological capital.

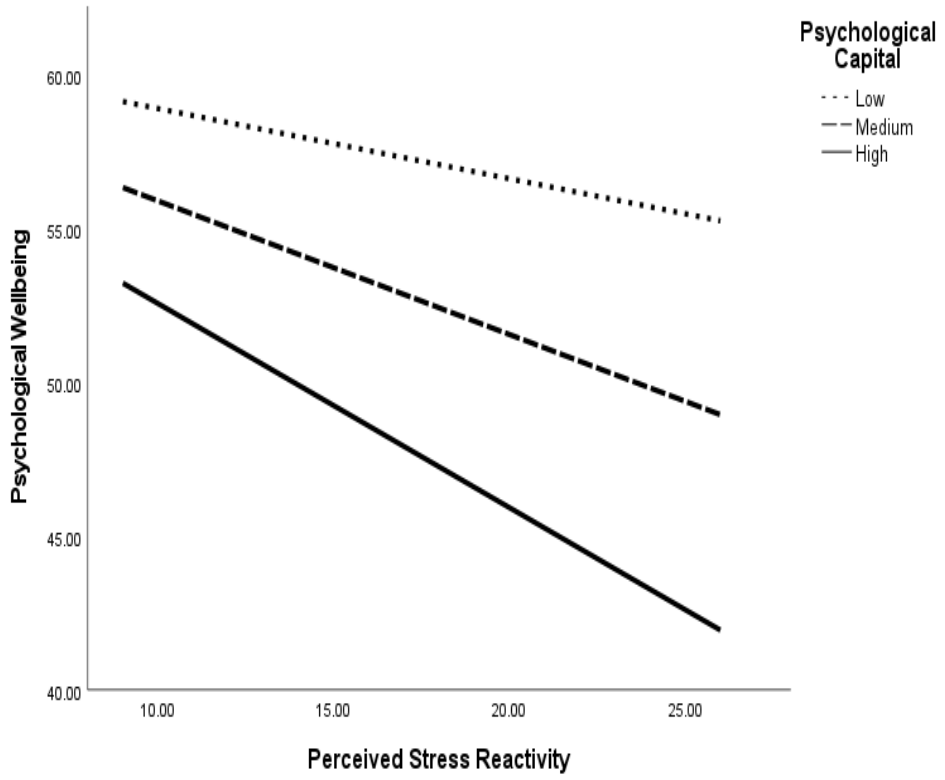


Figure 2

This figure shows the moderating role of psychological capital between perceived stress reactivity and psychological wellbeing among rescue workers. The more psychological capital will be used by rescue workers the more psychological wellbeing will increase.

4.7 Table 7

The moderating effect of Psychological Capital(efficacy) on the relationship between perceived stress reactivity, and psychological wellbeing. (N=241)

Predictor	Estimate	*SE*	95% CI		*p*
			LL	*UL*	
Main effect					
Constant	51.43	9.13	33.46	69.41	.00
Perceived stress reactivity	-.81	.41	-1.63	.00	.05
Efficacy	.69	.61	-.51	1.89	.26
Perceived stress reactivity* Efficacy	.02	.03	-.03	.08	.39
R^2	.53				
F	31.59				

Table 7 shows the moderating effect of psychological capital(efficacy) in between perceived stress reactivity and psychological wellbeing among rescue workers. Perceived stress reactivity is negatively moderated by psychological capital (efficacy) which is non-significant.

4.8 Table 8

The moderating effect of Psychological Capital (Hope) on the relationship between perceived stress reactivity, and psychological wellbeing. (N=241)

Predictor	Estimate	*SE*	95% CI		*p*
			LL	*UL*	
Main effect					
Constant	63.78	9.88	44.32	83.22	.00
Perceived stress reactivity	-1.74	.47	-2.67	-.81	.00
Hope	-.11	.47	-1.03	.82	.82
Perceived stress reactivity* Hope	.06	.02	.02	.11	.01
R^2	.57				
F	37.88				

Table 8 shows the moderating effect of psychological capital (Hope) in between perceived stress reactivity and psychological wellbeing among rescue workers. Perceived stress reactivity was significantly negatively moderated by psychological capital (hope).

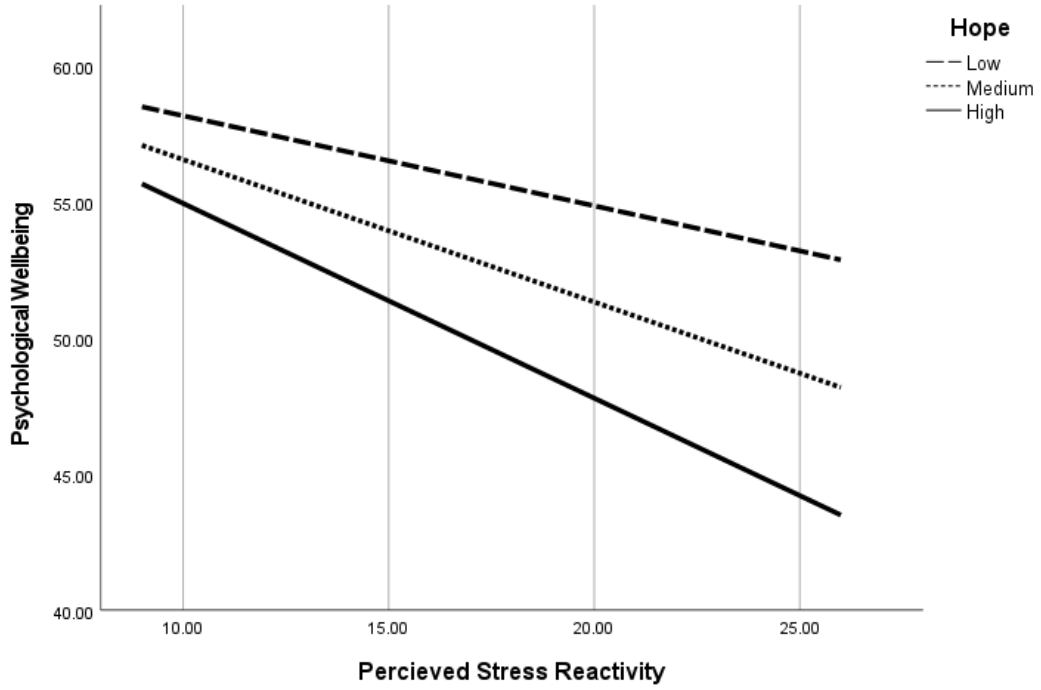


Figure 3

This figure shows the moderating effect of Hope in between perceived stress reactivity and psychological wellbeing among rescue workers. More the hope will be used by rescue workers the psychological wellbeing will be increasing.

4.9 Table 9

The moderating effect of Psychological Capital (Resilience and Optimism) on the relationship between perceived stress reactivity, and psychological wellbeing.

Predictor	Estimate	*SE*	95% CI		*p*
			LL	*UL*	
Main effect					
Constant	54.73	9.74	35.54	73.93	.00
Perceived stress reactivity	-1.34	.47	-2.28	-.40	.01
Resilience	.49	.64	-.78	1.75	.45
Perceived stress reactivity* Resilience	.06	.03	-.00	.12	.07
R	.33				
F	39.64				
Main Effect					
Constant	49.48	10.70	28.39	70.57	.00
Perceived stress reactivity	-.75	.49	-1.73	.23	.13
Optimism	1.25	1.01	-.74	.23	.21
Perceived stress reactivity * Optimism	.02	.05	-.07	.11	.66
R^2	.28				
F	31.10				

Table 9 shows the moderating effect of psychological capital (Resilience and optimism) in between perceived stress reactivity and psychological wellbeing among rescue workers. Perceived stress reactivity was negatively moderated bypsychological capital (resilience and optimism) which was non-significant.

4.10 Table 10

The moderating effect of Psychological Capital on the relationship between sense of coherence and psychological wellbeing. (N=241)

Predictor	Estimate	*SE*	95% CI		*p*
			LL	*UL*	
Main effect					
Constant	31.71	23.31	-14.20	77.62	.17
Sense of	-.24	.39	-1.01	.54	.55
Coherence					
Psychological	.22	.39	-.55	.99	.57
Capital					
Sense of	.01	.00	-.00	.02	.33
Coherence *					
Psychological					
Capital					
R^2	.32				
F	37.42				

Table 10 shows the results of moderation analysis which reveals that the main effect of psychological capital on the relationship of sense of coherence and psychological wellbeing was insignificantly positive.

4.11 Table 11

The moderating effect of Psychological Capital (Hope) on the relationship between sense of coherence and psychological wellbeing. (N=241)

Predictor	Estimate	*SE*	95% CI		*p*
			LL	*UL*	
Main effect					
Constant	71.78	22.45	27.54	116.00	.00
Sense of	-.77	.38	-1.53	-.01	.04
Coherence					
Hope	-1.42	1.09	-3.57	.72	.19
Sense of	.05	.02	.01	.08	.01
Coherence *					
Hope					
R^2	.27				
F	28.95				

Table 11 shows the moderating effect of psychological capital on relationship between sese of coherence and psychological wellbeing among rescue workers. Sense of coherence was significantly negatively moderated by Hope.

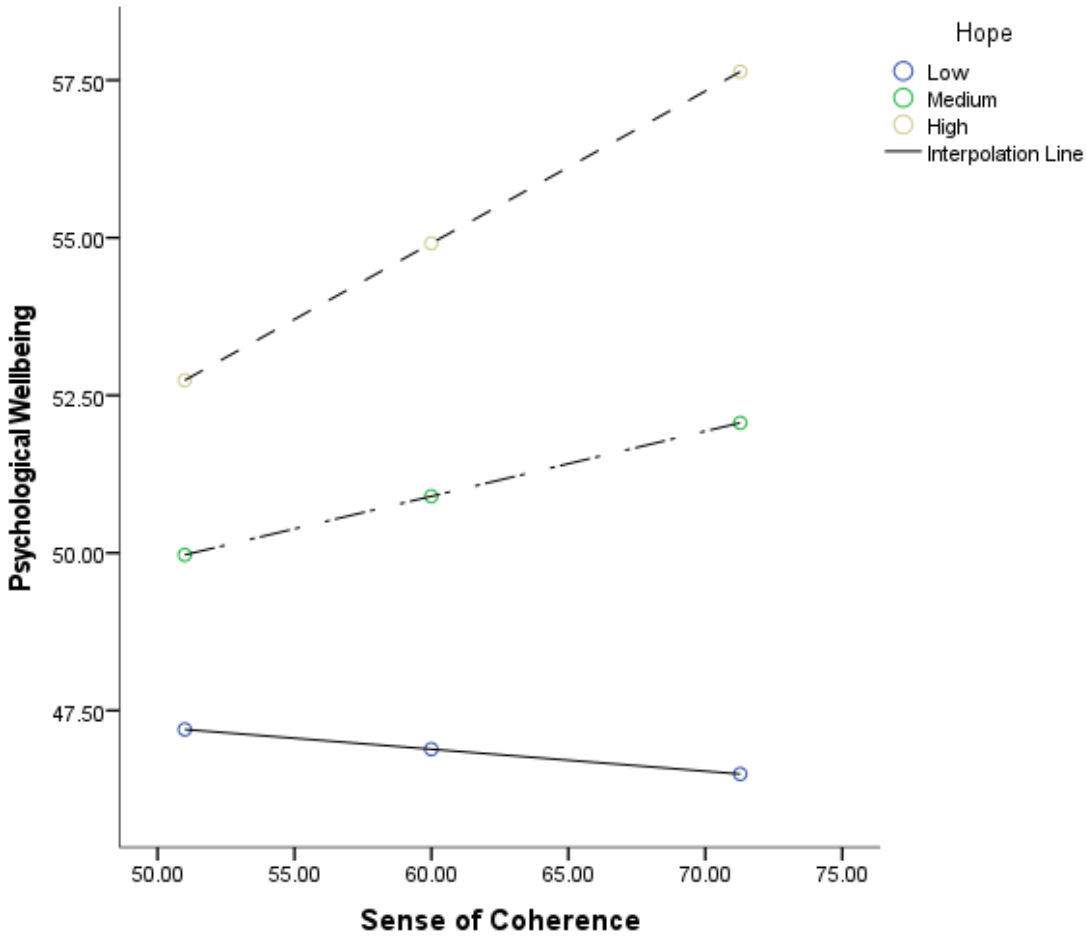


Figure 4

This figure shows the moderating effect of psychological capital (Hope) in between sense of coherence and psychological wellbeing among rescue workers. The more hope will be used by rescue workers the more psychological wellbeing will be increase.

4.12 Table 12

The moderating effect of Psychological Capital (Efficacy, Resilience, Optimism) on the relationship between sense of coherence and psychological wellbeing. (N=241)

Predictor	Estimate	*SE*	95% CI		*p*
			LL	*UL*	
Main effect					
Constant	24.10	18.56	-12.46	60.66	.19
Sense of Coherence	.13	.31	-.48	.74	.67
Efficacy	1.04	1.30	-1.52	3.61	.42
Sense of Coherence *	.01	.02	-.04	.05	.76
Efficacy					
R^2	.25				
F	25.84				
Main effect					
Constant	9.41	20.67	-31.29	50.11	.65
Sense of Coherence	.29	.35	-.39	.97	.40
Resilience	2.12	1.39	-.62	4.86	.13
Sense of Coherence *	-.01	.02	-.05	.04	.80
Resilience					
R^2	.27				
F	28.79				
Main effect					
Constant	24.45	19.70	-14.37	63.25	.22
Sense of Coherence	.14	.34	-.52	.81	.67
Optimism	1.42	1.96	-2.45	5.28	.47
Sense of Coherence *	.01	.03	-.06	.07	.81
Optimism					
R^2	.21				
F	20.47				

Table 12 shows the results of moderation analysis which reveals that the main effect of efficacy, resilience, and optimism on the relationship between sense of coherence and psychological wellbeing was found to be insignificantly positive.

CHAPTER 5

DISCUSSION

The current study is directed towards the understanding of relationship that exist among perceived stress reactivity, sense of coherence, psychological capital and psychological wellbeing of rescue workers. The results are directed towards examining the relationship of sense of coherence, perceived stress reactivity, psychological capital on psychological wellbeing of rescue workers. The results indicated the moderating role of psychological capital interacting with the relationship between sense of coherence and perceived stress reactivity. The study aimed to investigate the demographic differences in the study variable and explore these answers in Pakistani context. The study sample comprises of 241 rescue workers taken from Rawalpindi and Islamabad rescue 1122 stations respectively. There are 232 male and 9 females. The type of employment includes 203 in formal, 21 in informal and 17 were on contractual bases. The primary work shifts comprise of 194 on alternate shift, 37 on day shift, and 5 were on day and night shift respectively.

For the assessment of perceived stress reactivity, the translated version of perceived stress reactivity scale was used. The α- reliability was .83 for present study. For measuring sense of coherence, “The Orientation to life questionnaire” was used and alpha reliability was (.66) and for psychological wellbeing “The Short Form of the Mental Health Continuum” (having 3 subscales) was used and reliabilities were (.80 and for subscales .86, .76, & .78). For measuring psychological capital, “Psychological Capital Questionnaire” (having 4 subscales) was used, and the reliabilities were (.75 and for subscales .74, .76, .68, & .62).

It was hypothesized that there will be a negative relationship between perceived stress reactivity and psychological wellbeing among rescue workers. The study findings revealed a significant negative association between perceived stress reactivity and psychological wellbeing among rescue workers. The discoveries are braced by the research of Limm et al. (2010) revealed that perceived stress reactivity is negatively associated with psychosomatic and physical complaints and poor mental health. High levels of perceived stress can result in chronic activation of the body, which is associated with poor psychological health (Mcewen, 1998).

In Pakistani culture, a cross sectional research conducted in four districts of Sindh to measure the trauma and emergency care services provided by the physicians to the people. The results revealed that those physicians who had taken a life support or trauma training course outperformed those who had never attended a course. From this it was deduced that those who received proper training for handling emergency situations are better able to manage their own stress levels and efficiently deal with trauma or work burden effectively than those who didn't receive proper training (Razzak et al., 2015).

It was hypothesized that there will be a positive relationship between sense of coherence and psychological wellbeing among rescue workers. The results revealed a significant positive association between a sense of coherence and psychological wellbeing among rescue workers. The research findings are consistent with the study of Wissing and Eeden (2002) revealed that sense of coherence is positively linked with psychological wellbeing. Another study by Bachem and Maercker (2016) conducted on German rescue workers revealed that a sense of coherence is a potential factor of resilience against mental and physical health issues. Studies (Schnyder et al., 2000; Cohen & Dekel, 2000) revealed that sense of coherence reduces sadness, anxiety,

life stress, and physical symptoms and improves psychological and physical well-being and functioning abilities.

In Pakistani culture, communal support and interconnectedness are highly valued. A strong sense of coherence can aid in the formation of meaningful relationships and social networks both inside and outside of the workplace. These support systems can provide emotional, instrumental, and informational assistance to rescue personnel, resulting in an improvement in their mental health. Frequently, rescue workers' job involves saving lives, assisting others, and serving the community. A high sense of coherence can provide rescue workers with a sense of meaning and purpose in their work, thereby enhancing their motivation, job satisfaction, and psychological health (Nosheen et al., 2017).

The present study depicts a substantial positive relationship between psychological capital and psychological wellbeing. The findings are consistent with a study of Luthans et al. (2013) that psychological capital has an effect on staff well-being over time. Psychological capital, according to Sweetman and Luthans (2010), boosts an individual's ability to handle challenging situations and pro-activeness, which promotes psychological wellbeing and work performance. Hansen et al. (2015) revealed that psychological capital and wellbeing are positively correlated. Luthans et al. (2007) found that psychological wellness is better predicted when psychological capital is treated as a multidimensional construct.

It was hypothesized that a sense of coherence will be positively associated with age. The results of the study revealed that there is a positive relationship between sense of coherence and age. This is in accordance with the study of Eriksson (2007) revealed that the older age groups have a better sense of coherence. Possibly, maturity acquired

with age enhances individual sense of coherence. As an individual got older, they were more likely to feel good about themselves. Another study is consistent with the results that revealed all the components of sense of coherence are significantly positively related with age indicating that sense of coherence relatively increases in early adulthood. Adulthood is characterized by an increase in independence and efficacy as a person enter practical life and start managing his life on his own. This dramatic increase in autonomy is likely accompanied by a greater sense of coherence (Lajunen, 2018; Silverstein & Heap, 2015).

It was found in results that psychological wellbeing is significantly negatively associated with individual monthly income. The results supported by the study of Gardarsdóttir et al. (2009) which shows that financial success actually contribute little to the happiness and wellbeing of an individual.

A sense of coherence is negatively associated with individual monthly income. Results are confirmed by Barnard (2016) found that high-income persons with low sense of coherence have greater debt and poor financial planning than high-income, high-coherence individuals (with a similar pattern in low-income groups). The results contradict Barnard et al. (2010) finding that respondents with a higher sense of coherence had better financial health.

It was hypothesized that psychological capital acts as a moderator between sense of coherence, perceived stress reactivity, and psychological wellbeing among rescue workers. The results were in accordance with the study of Roberts et al. (2011) that reveals that psychological capital moderates the link between employee worry and their psychological well-being. The research findings revealed that perceived stress reactivity and psychological well-being is significantly negatively moderated by hope.

The results were supported by a study of Malinowski and Lim (2015) stated that preserving hope in the workplace helps people cope with stress and improve mental health of employees. The results are consistent with the study of Keyes (2007) that revealed that hope, resilience, self-efficacy, and optimism all have positive effect on well-being. The research conducted on role of psychological capital on job burnout among Chinese nurses revealed that those nurses who are hopeful and resilient can cope up easily with stressor of their job and stay healthy (Peg et al., 2013).

Perceived stress reactivity significantly negatively predicts psychological wellbeing and sense of coherence significantly positively predicts psychological wellbeing. The results are in line with the study on healthcare professionals conducted by Stoyanova and Stoyanov (2021) found that Sense of coherence enhances well-being. Veronese and Pepe (2015) found that psychological well-being is positively associated with sense of coherence. According to Sairenchi et al. (2011) a sense of coherence has a direct impact on psychological well-being when it is used as a personal resource. So, it is thought that people who have a better sense of coherence will be able to keep their mental health even if they are in very stressful or traumatic situations. Limm et al. (2010) found that higher stress reactivity has been linked to psychosomatic and physical problems, poor mental health, poor lifestyle choices, anxiety, and depression.

One way analysis of variance revealed that the self-efficacy of an individual with master's degree is more than matriculation. The results are consistent with the study of Abun et al. (2021) that revealed higher levels of self-efficacy are associated with greater levels of education and work experience. These results suggest that educational level and years of job experience are important determinants of self-efficacy. According to the data on the differences between educational levels, the group of employees with doctoral degrees has the highest mean self-efficacy rating, while the

groups of bachelor's degree and master's degree holders have the lowest and lowest mean self-efficacy ratings (Abun et al., 2021).

Results of regression analysis revealed that the individual with the master's degree have low psychological wellbeing as compared to matriculation. Our findings are inconsistent with the studies (Raghupathi & Raghupathi, 2020; Kondirolli & Sunder, 2022) which revealed that Education improves mental wellness. Educated people have more options, giving them more power and security. Well-educated persons report better health, fewer morbidity, death, and disability. Self-reported poor health, shorter life expectancy, and illness survival are connected to low education.

5.1 Limitations

In addition, longitudinal studies must be conducted to derive causal inferences. Most of the studies that have been conducted thus far have been cross-sectional, which makes it difficult to draw conclusions about cause and effect and examine potential shifts in these variables over time. More insight into what influences rescue personnel' mental health can be gained by using longitudinal study. Some participants did not complete their questionnaires because they had to attend to urgent matters. They subsequently filled out the questionnaires. This likely influenced their responses. The study's findings should therefore be interpreted with caution. Research must be conducted on the families of Rescue 1122 employees because they represent a vulnerable population due to the dangerous and demanding nature of their loved ones' employment (Regehr, 2009).

5.2 Implications

Healthcare workers across health systems and disciplines are facing significant stressors, burdens, and mental health challenges as a result of their work. This is

especially the case for those who work on the frontlines during public health emergencies—with further challenges faced by those who work in impoverished and low-resource settings or in settings where stigmatization is high. Identifying the role of psychological capital as a moderator in this context can offer valuable information on how certain personal resources and strengths can buffer the impact of stress on rescue workers' well-being. This knowledge can inform the development of targeted interventions to enhance their resilience and coping strategies. The findings of this research can have practical implications for the design of training programs and support systems for rescue workers. Understanding the factors that influence their well-being can aid in creating more effective and tailored interventions to improve their overall psychological health.

The administration at rescue stations needs to identify workers with clinically significant levels of trauma, stress, burnout, and offer them therapeutic services. This will enhance their mental health, thereby increasing their job performance and productivity. Newly hired employees should be instructed on psychological discomfort and healthy coping mechanisms. Thus, they will be able to recognize the warning signs and immediately begin addressing them. During training, the workers' ways of dealing with stress should be found out, and the management should work on promoting adaptive ways of dealing with stress as soon as possible (Papovic, 2009).

5.3 Implications for psychological theory and practice

The results of this study show how important it is to improve rescue workers' personal resources (like self-efficacy, hope, resilience, and optimism), sense of coherence and wellbeing. These psychological capital resources are in a state that can be altered and enhanced by educational programs and the psychological capital Intervention Training model (Luthans et al., 2007; Luthans et al., 2006). The findings

can assist organizations in developing psychoeducational programs and seminars on psychological capital resources such as self-efficacy, hope, resilience, and optimism, which can assist rescue personnel in dealing with stressful situations more effectively. The results can also be used to help create training programs for rescue workers and other vulnerable groups that focus on mental health (e.g., risk and protective factors). By building on the results of this study, organizations can also set up monthly refresher courses for rescue workers to boost their morale. The results can help make decisions about policies and methods for long-term training programs.

5.4 Conclusion

Based on findings, the link between sense of coherence, perceived stress reactivity and psychological wellbeing is moderated by psychological capital. Rescue workers had better compassion, happiness, psychosocial capacity, and mental health. Still, more study is needed to come up with policies that could help rescue workers with the resources they have better deal with the hard and dangerous work they do. It may not be possible to totally get rid of stress and burnout among rescue workers yet, but our research shows that Pakistani rescue workers have a lot of good qualities (like psychological capital, sense of coherence, and better mental health) that help them do their jobs. More research needs to be done to find out how available psychological resources can be saved, gathered, and built on. This could help with training for people who work in helping fields.

REFERENCES

Abbas, M., Raja, U., Darr, W., & Bouckenooghe, D. (2012). Combined effects of perceived politics and psychological capital on job satisfaction, turnover intentions, and performance. *Journal of management*, *40*(7),1813-1830. https://doi.org/10.1177/0149206312455243

Abun, Damianus & Asuncion, Sonny & Lazaro, Janette & Magallanes, Theogenia & Nimfa,C. (2021). The effect of educational attainment, length of work experience on the self-efficacy of teachers and employees. *International Journal of Business Ecosystem & Strategy*, *3*, 16-28 https://doi.org/10.2139/ssrn.3954135

Antonovsky, A. (1979). *Health, stress, and coping*.

Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage stress and stay well*. Jossey-Bass.

Antonovsky, A. (1993). The sense of coherence as a determinant of health. *Health and Wellbeing*, 202-211. https://doi.org/10.1007/978-1-349-22493-7_22

Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science & Medicine*, *36*(6), 725-733. https://doi.org/10.1016/0277-9536(93)90033-z

Antonovsky, A. (1996). The salutogenic model as a theory to guide health promotion. *Health Promotion International*, *11*(1),11-18. https://doi.org/10.1093/heapro/11.1.11

Aries, M., & Zuppiger Ritter, I. (1999). Nurses with high scores on burnout and nurses with low scores on burnout: A comparison – Results of a longitudinal and

qualitative study. *Pflege*, *12*(2), 83-88. https://doi.org/10.1024/1012-5302.12.2.83

Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management*, *48*(5), 677-693. https://doi.org/10.1002/hrm.20294

Avey, J. B., Luthans, F., Smith, R. M., & Palmer, N. F. (2010). Impact of positive psychological capital on employee well-being over time. *Journal of Occupational Health Psychology*, *15*(1), 17-28. https://doi.org/10.1037/a0016998

Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance. *Human Resource Development Quarterly*, *22*(2), 127-152. https://doi.org/10.1002/hrdq.20070

Avey, J. B., Wernsing, T. S., & Luthans, F. (2008). Can positive employees help positive organizational change? Impact of psychological capital and emotions on relevant attitudes and behaviors. *The Journal of Applied Behavioral Science*, *44*(1), 48-70. https://doi.org/10.1177/0021886307311470

Bachem, R., & Maercker, A. (2016). Development and psychometric evaluation of a revised sense of coherence scale. *European Journal of Psychological Assessment*, *34*(3), 206-215. https://doi.org/10.1027/1015-5759/a000323

Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, *22*(3), 273-285. https://doi.org/10.1037/ocp0000056

Bandura, A. (1997). Self-efficacy: *The ex ercise of control*. New York, NY: Freeman.

Bandura, A. (2012). On the Functional Properties of Perceived Self-Efficacy Revisited. *Journal of Management*, *38*(1), 9–44. https://doi.org/10.1177/0149206311410606

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Macmillan.

Barnard, A. (2016). Sense of coherence: A distinct perspective on financial well-being. *South African Journal of Economic and Management Sciences*, *19*(4), 647–660. https://doi.org/10.4102/sajems.v19i4.1405

Bauwens, J., & Tosone, C. (2010). Professional posttraumatic growth after a shared traumatic experience: Manhattan clinicians' perspectives on post-9/11 practice. *Journal of Loss and Trauma, 15*(6), 498-517. https://doi.org/10.1080/15325024.2010.519267

Carver, C. S., Scheier, M. F., & Segerstrom, S. C. (2010). Optimism. *Clinical Psychology Review*, *30*(7),879889. https://doi.org/10.1016/j.cpr.2010.01.006

Cheung, F., Tang, C. S., & Tang, S. (2011). Psychological capital as a moderator between emotional labor, burnout, and job satisfaction among school teachers in China. *International Journal of Stress Management*, *18*(4), 348-371. https://doi.org/10.1037/a0025787

Conversano, C., Rotondo, A., Lensi, E., Della Vista, O., Arpone, F., & Reda, M. A. (2010). Optimism and its impact on mental and physical well-being. *Clinical Practice & Epidemiology in Mental Health*, *6*(1), 25-29. https://doi.org/10.2174/1745017901006010025

Da-Silva-Domingues, H., Del-Pino-Casado, R., Palomino-Moral, P. Á., López Martínez, C., Moreno-Cámara, S., & Frías-Osuna, A. (2022). Relationship between sense of coherence and health-related behaviours in adolescents and

young adults: A systematic review. *BMC Public Health*, *22*(1). https://doi.org/10.1186/s12889-022-12816-7

Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: an introduction. *Journal of Happiness Studies*, *9*(1), 1–11. https://doi.org/10.1007/s10902-006-9018-1

Dewa, C., Lesage, A., Goering, P., & Caveen, M. (2004). Nature and prevalence of mental illness in theworkplace. *HealthcarePapers*, *5*(2), 12-25. https://doi.org/10.12927/hcpap..16820

Epitropaki, O. (2013). Employment uncertainty and the role of authentic leadership and positive psychological capital. *Academy of Management Proceedings*, *2013*(1), 10925. https://doi.org/10.5465/ambpp.2013.10925abstract

Eriksson M, Lindström B. (2005) Validity of Antonovsky's sense of coherence scale: a systematic review. *J Epidemiol Community Health*. *59*(6):460-6. 10.1136/jech.2003.018085

Eriksson, M. (2006). Antonovsky's sense of coherence scale and the relation with health: A systematic review. *Journal of Epidemiology & Community Health*, *60*(5), 376-381 https://doi.org/10.1136/jech.2005.041616

Eriksson, M., & Lindstrom, B. (2007). Antonovsky's sense of coherence scale and its relation with quality of life: A systematic review. *Journal of Epidemiology & Community Health*, *61*(11), 938-944. https://doi.org/10.1136/jech.2006.056028

Faran, Muhammad & Hassan, Naima & Ejaz, Bisma & Khawar, Amna & Malik, Nudra & Komal, Afreen & Muazzam, Amina. (2021). Validation of the Urdu Translation of Mental Health Continuum- Short form (MHC-SF): Education in

Perspective. *Eurasian Journal of Educational Research.* DOI:10.14689/ejer.2021.95.3

Federnko, I. S., Schlotz, W., Kirschbaun, C., Bartels, M., Hellhammer, D. H., & Wust, S. (2006). The heritability of perceived stress. *Psychological Medicine*, *36*(3), 375-385. https://doi.org/10.1017/s0033291705006616

Feldt, T., Kivimäki, M., Rantala, A., & Tolvanen, A. (2004). Sense of coherence and work characteristics: A cross-lagged structural equation model among managers. *Journal of Occupational and Organizational Psychology*, *77*(3), 323-342. https://doi.org/10.1348/0963179041752655

Ford, M. T., Heinen, B. A., & Langkamer, K. L. (2007). Work and family satisfaction and conflict: A meta-analysis of cross-domain relations. *Journal of Applied Psychology*, *92*(1), 57-80. https://doi.org/10.1037/0021-9010.92.1.57

Gabriel, K. P., & Aguinis, H. (2022). How to prevent and combat employee burnout and create healthier workplaces during crises and beyond. *Business Horizons*, *65*(2), 183-192. https://doi.org/10.1016/j.bushor.2021.02.037

Gabriel, K. P., & Aguinis, H. (2022). How to prevent and combat employee burnout and create healthier workplaces during crises and beyond. *Business Horizons*, *65*(2), 183-192. https://doi.org/10.1016/j.bushor.2021.02.037

Garðarsdóttir, R. B., Dittmar, H., & Aspinall, C. (2009). It's not the money, it's the quest for a happier self: The role of happiness and success motives in the link between financial goals and subjective well-being. *Journal of Social and Clinical Psychology, 28*(9),1100-1127. https://doi.org/10.1521/jscp.2009.28.9.1100

Ghio, L., Patti, S., Piccinini, G., Modafferi, C., Lusetti, E., Mazzella, M., & Del Sette, M. (2021). Anxiety, depression and risk of post-traumatic stress disorder in health workers: The relationship with burnout during COVID-19 pandemic in Italy. *International Journal of Environmental Research and Public Health*, *18*(18), 9929. https://doi.org/10.3390/ijerph18189929

Gillespie, B. M., Chaboyer, W., Wallis, M., & Grimbeek, P. (2007). Resilience in the operating room: Developing and testing of a resilience model. *Journal of Advanced Nursing*, *59*(4),427-438. https://doi.org/10.1111/j.1365-2648.2007.04340.x

Gray, D., & Jones, K. (2018). The resilience and wellbeing of public sector leaders. *International Journal of Public Leadership*, *14*(3), 138-154. https://doi.org/10.1108/ijpl-09-2017-0033

Haleem, Maryam & Masood, Sobia & Aziz, M. & Jami, Humaira. (2017). Psychological capital and mental health of rescue workers. *Pakistan Journal of Psychological Research. 32.* 429-447.

Hansen, A., Buitendach, J. H., & Kanengoni, H. (2015). Psychological capital, subjective well-being, burnout and job satisfaction amongst educators in the Umlazi region in South Africa. *SA Journal of Human Resource Management*, *13*(1). https://doi.org/10.4102/sajhrm.v13i1.621

Hartmann, S., Weiss, M., Newman, A., & Hoegl, M. (2019). Resilience in the workplace: A multilevel review and synthesis. *Applied Psychology*, *69*(3), 913-959. https://doi.org/10.1111/apps.12191

Hobfoll SE. (1989) Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist.* 44:513–524.

doi: 10.1037/0003-066X.44.3.513.

Hobfoll, S. E. (1988). *The ecology of stress*. Taylor & Francis. https://doi.org/10.1037/1089-2680.6.4.307

Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, *6*(4),307-324. https://doi.org/10.1026/0012-1924.51.3.124

Huppert, F. A. (2009). Psychological Well-being: Evidence regarding Its Causes and Consequences. *Applied Psychology: Health and Well-Being*, *1*(2), 137–164. https://doi.org/10.1111/j.1758-0854.2009.01008.x

Jackson, D., Firtko, A., & Edenborough, M. (2007). Personal resilience as a strategy for surviving and thriving in the face of workplace adversity: A literature review. *Journal of Advanced Nursing*, *60*(1), 1-9. https://doi.org/10.1111/j.1365-2648.2007.04412.x

Jamal, M. (2007). Job stress and job performance controversy revisited: An empirical examination in two countries. *International Journal of Stress Management*, *14*(2), 175-187. https://doi.org/10.1037/1072-5245.14.2.175

Jibeen, T., & Khalid, R. (2010). Predictors of Psychological well-being of Pakistani Immigrants in Toronto, Canada. *International Journal of Intercultural Relations*, *34*(5), 452–464. https://doi.org/10.1016/j.ijintrel.2010.04.010

Jonsson, A. (2003). Post-traumatic stress among Swedish ambulance personnel. *Emergency Medicine Journal*, *20*(1), 79-84. https://doi.org/10.1136/emj.20.1.79

Jonsson, A. (2003). Post-traumatic stress among Swedish ambulance personnel. *Emergency Medicine Journal*, *20*(1), 79-84. https://doi.org/10.1136/emj.20.1.79

Keyes, C. L. M., Wissing, M., Potgieter, J. P., Temane, M., Kruger, A., & van Rooy, S. (2008). Evaluation of the mental health continuum–short form (MHC–SF) in setswana-speaking SouthAfricans. *ClinicalPsychology&Psychotherapy*, *15*(3), 181–192. https://doi.org/10.1002/cpp.572

Keyes, C. L. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American Psychologist*, *62*(2), 95-108. https://doi.org/10.1037/0003-066x.62.2.95

Khrisnanda, F., & Theresia Indira Shanti. (2022). Psychological distress and dyadic coping in the context of marital satisfaction of Indonesian search and rescue (SAR) rescuers: A mixed-method study. *ANIMA Indonesian Psychological Journal*, *37*(2), 307-362. https://doi.org/10.24123/aipj.v37i2.4887

Kim, K., & Cho, Y. (2020). The moderating effect of managerial roles on job stress and satisfaction by employees' employment type. *International Journal of Environmental Research and Public Health*, *17*(21), 8259. https://doi.org/10.3390/ijerph17218259

Kivimäki, Mika & Vahtera, Jussi & Elovainio, Marko & Lillrank, Benita & Kevin, May. (2002). Death or Illness of a Family Member, Violence, Interpersonal Conflict, and Financial Difficulties as Predictors of Sickness Absence: Longitudinal Cohort Study on Psychological and Behavioral Links. *Psychosomatic medicine. 64* 817-25. 10. 10.1097/01.PSY.0000031576.42041.B1

Kivimäki, M., Vahtera, J., Elovainio, M., Lillrank, B., & Kevin, M. V. (2002). undefined. *Psychosomatic Medicine*, *64*(5), 817-825. https://doi.org/10.1097/00006842-200209000-00015

Krasikova, D. V., Lester, P. B., & Harms, P. D. (2015). Effects of psychological capital on mental health and substance abuse. *Journal of Leadership & Organizational Studies*, *22*(3), 280-291. https://doi.org/10.1177/1548051815585853

Lajunen, T. (2018). Cross-cultural evaluation of Antonovsky's orientation to life questionnaire: Comparison between Australian, Finnish, and Turkish young adults. *Psychological Reports*, *122*(2), 731-747. https://doi.org/10.1177/0033294118765420

Langeland, E., Wahl, A. K., Kristoffersen, K., & Hanestad, B. R. (2007). Promoting coping: Salutogenesis among people with mental health problems. Issues in Mental Health Nursing, 28(3), 275–295. https://doi.org/10.1080/ 01612840601172627.

Law, B. M., & Shek, D. T. (2014). A longitudinal study on deliberate self-harm and suicidal behaviors among Chinese adolescents. *Quality of Life in Asia*, 155-172. https://doi.org/10.1007/978-981-287-143-5_9

Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist*, *46*(4), 352-367. https://doi.org/10.1037/0003-066x.46.4.352

Lazarus, R. S. (2006). *Stress and emotion: A new synthesis*. Springer Publishing Company.

Lewis, S. L., Bonner, P. N., Campbell, M. A., Cooper, C. L., & Willard, A. (1994). Personality, stress, coping, and sense of coherence among nephrology nurses in dialysis settings. *ANNA journal, 21*(6), 325–336.

Lewis, S. L., Campbell, M. A., Becktell, P. J., Cooper, C. L., Bonner, P. N., & Hunt, W. C. (1992). Work stress, burnout, and sense of coherence among dialysis nurses. *ANNA journal, 19*(6), 545–554.

Lim, Sandy & Tai, Kenneth. (2013). Family Incivility and Job Performance: A Moderated Mediation Model of Psychological Distress and Core Self-Evaluation. *The Journal of applied psychology. 99.* 10.1037/a0034486.

Limm, H., Angerer, P., Heinmueller, M., Marten-Mittag, B., Nater, U. M., & Guendel, H. (2010). Self-perceived stress reactivity is an indicator of psychosocial impairment at the workplace. *BMC Public Health, 10*(1). https://doi.org/10.1186/1471-2458-10-252

Limm, H., Angerer, P., Heinmueller, M., Marten-Mittag, B., Nater, U. M., & Guendel, H. (2010). Self-perceived stress reactivity is an indicator of psychosocial impairment at the workplace. *BMC Public Health*, *10*(1). https://doi.org/10.1186/1471-2458-10-252

Lindstrom, B. (2005). Salutogenesis. *Journal of Epidemiology & Community Health*, *59*(6), 440-442. https://doi.org/10.1136/jech.2005.034777

Liu, L., Chang, Y., Fu, J., Wang, J., & Wang, L. (2012). The mediating role of psychological capital on the association between occupational stress and depressive symptoms among Chinese physicians: A cross-sectional study. *BMC Public Health*, *12*(1). https://doi.org/10.1186/1471-2458-12-219

Lorenz, T., Beer, C., Pütz, J., & Heinitz, K. (2016). Measuring psychological capital: Construction and validation of the compound PsyCap scale (CPC-12). *PLOS ONE*, *11*(4), e0152892. https://doi.org/10.1371/journal.pone.0152892

Lundberg, O., & Toivanen, S. (2011). Sense of coherence and social structure. *Encyclopedia of Environmental Health*, 20-25. https://doi.org/10.1016/b978-0-444-52272-6.00196-3

Luthans, F., Avey, J. B., & Patera, J. L. (2008). Experimental analysis of a web-based training intervention to develop positive psychological capital. *Academy of*

ManagementLearning&Education,*7*(2),209-221. https://doi.org/10.5465/amle.2008.32712618

Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, *60*(3), 541-572. https://doi.org/10.1111/j.1744-6570.2007.00083.x

Luthans, F., Vogelgesang, G. R., & Lester, P. B. (2006). Developing the psychological capital of resiliency. *Human Resource Development Review*, *5*(1), 25-44. https://doi.org/10.1177/1534484305285335

Madden, L. T. (2013). Juggling demands: The Impact of Middle Manager roles and Psychological Capital (PhD diss., University of Tennessee) [Unpublished doctoral dissertation]. (n.d.).

Malinowski, P., & Lim, H. J. (2015). Mindfulness at work: Positive affect, hope, and optimism mediate the relationship between dispositional mindfulness, work engagement, and well-being. *Mindfulness*, *6*(6), 1250-1262. https://doi.org/10.1007/s12671-015-0388-5

McEwen, B. S. (1998). Protective and damaging effects of stress mediators. *New England Journal of Medicine*, *338*(3), 171-179. https://doi.org/10.1056/nejm199801153380307

McSherry, W. C., & Holm, J. E. (1994). Sense of coherence: Its effects on psychological and physiological processes prior to, during, and after a stressful situation. *Journal of Clinical Psychology*, *50*(4), 476-487. https://doi.org/10.1002/1097-4679(199407)50:43.0.co;2-9

Mennino SF, Rubin BA, & Brayfield A (2005). Home-to-job and job-to-home spillover: The impact of company policies and workplace culture. The Sociological Quarterly ;46(1):107–135. doi: 10.1111/j.1533-8525.2005.00006.

Mensah, J., & Amponsah-Tawiah, K. (2016). Mitigating occupational stress: The role of psychological capital. *Journal of Workplace Behavioral Health*, *31*(4), 189-203. https://doi.org/10.1080/15555240.2016.1198701

Nafei, W. (2015). The effects of psychological capital on employee attitudes and employee performance: A study on teaching hospitals in Egypt. *International Journal of Business and Management*, *10*(3). https://doi.org/10.5539/ijbm.v10n3p249

Nilsson, K. W., Leppert, J., Simonsson, B., & Starrin, B. (2009). Sense of coherence and psychological well-being: Improvement with age. *Journal of Epidemiology & Community Health*, *64*(4), 347-352. https://doi.org/10.1136/jech.2008.081174

Nilsson, K. W., Leppert, J., Simonsson, B., & Starrin, B. (2009). Sense of coherence and psychological well-being: Improvement with age. *Journal of Epidemiology & Community Health*, *64*(4), 347-352. https://doi.org/10.1136/jech.2008.081174

North, C. S., Tivis, L., McMillen, J. C., Pfefferbaum, B., Spitznagel, E. L., Cox, J., Nixon, S., Bunch, K. P., & Smith, E. M. (2002). Psychiatric disorders in rescue workers after the Oklahoma City bombing. *American Journal of Psychiatry*, *159*(5), 857-859. https://doi.org/10.1176/appi.ajp.159.5.857

Nosheen, A., Riaz, M. N., Malik, N., & Yasmin, H., & Malik, S. (2017). Mental health outcomes of sense of coherence in individualistic and collectivistic

culture: Moderating role of social support. *Pakistan Journal of Psychological Research. 32.* 563-579.

O'Connor, D. B., Wilson, A. E., & Lawton, R. (2017). Interactive effects of trait self-control and stress appraisals on blood pressure responses to a laboratory stressor. *International Journal of Behavioral Medicine, 24*(4), 602-612. https://doi.org/10.1007/s12529-017-9632-9

Otto, C. G. (2002). Coping orientation and resources of adult patients with depressed mood. Unpublished master's thesis, University of Port Elizabeth, Port Elizabeth, South Africa *[Unpublished doctoral dissertation]. (n.d.).*

Peng, J., Jiang, X., Zhang, J., Xiao, R., Song, Y., Feng, X., Zhang, Y., & Miao, D. (2013). The impact of psychological capital on job burnout of Chinese nurses: The mediator role of organizational commitment. *PLoS ONE, 8*(12), e84193. https://doi.org/10.1371/journal.pone.0084193

Raghupathi, V., & Raghupathi, W. (2020). The influence of education on health: An empirical assessment of OECD countries for the period 1995–2015. *Archives of Public Health, 78*(1). https://doi.org/10.1186/s13690-020-00402-5

Rahimi, F., Arizi, H., Noori, A., & Namdari, K. (2012). The relationship between psychological capital in the workplace and employees' passion for their work in the organization. *Quarterly Journal of Occupational and Organizational Counseling, 4*(12), 9-30. (n.d).

Razzak, J. A., Baqir, S. M., Khan, U. R., Heller, D., Bhatti, J., & Hyder, A. A. (2013). Emergency and trauma care in Pakistan: A cross-sectional study of healthcare levels. *Emergency Medicine Journal, 32*(3), 207-213.

Regehr, C. (2009). Social support as a mediator of psychological distress in firefighters. The Irish Journal of Psychology, 30(1-2), 87-98.

Reis, H. T. (2012). Perceived partner responsiveness as an organizing theme for the study of relationships and well-being. In L. Campbell, & T. J. Loving, (Eds.), Interdisciplinary research on close relationships: The case for integration (pp. 27-52). Washington, DC: American Psychological Association

Riolli, Laura. (2012). Psychological Capital as a Buffer to Student Stress. Psychology. *03*, 1202-1207.. DOI:10.4236/psych.2012.312A178

Roberts, S. J., Scherer, L. L., & Bowyer, C. J. (2011). Job stress and incivility. *Journal of Leadership & Organizational Studies*,*18*(4), 449-458.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6), 1069–1081. https://doi.org/10.1037//0022-3514.57.6.1069

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*(4), 719–727. https://doi.org/10.1037/0022-3514.69.4.719

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069-1081. https://doi.org/10.1037/0022-3514.57.6.1069

Sairenchi, T., Haruyama, Y., Ishikawa, Y., Wada, K., Kimura, K., & Muto, T. (2011). Sense of coherence as a predictor of onset of depression among Japanese workers: A cohort study. *BMC Public Health*, *11*(1). https://doi.org/10.1186/1471-2458-11-205

Scheier, M. F., Carver, C. S., & Bridges, M. W. (2001). Optimism, pessimism, and psychological well-being. *Optimism & pessimism: Implications for theory, research, and practice*, 189-216. https://doi.org/10.1037/10385-009

Schlotz, W. (2013). Stress reactivity. *Encyclopedia of Behavioral Medicine*, 1891-1894. https://doi.org/10.1007/978-1-4419-1005-9_64

Schlotz, W., Yim, I. S., Zoccola, P. M., Jansen, L., & Schulz, P. (2011). The perceived stress reactivity scale: Measurement invariance, stability, and validity in three countries. *Psychological Assessment*, *23*(1), 80-94. https://doi.org/10.1037/a0021148

Schneiderman, N., Ironson, G., & Siegel, S. D. (2005). Stress and health: Psychological, behavioral, and biological determinants. *Annual Review of Clinical Psychology*, *1*(1), 607-628. https://doi.org/10.1146/annurev.clinpsy.1.102803.144141

Schooley, B., Hikmet, N., Tarcan, M., & Yorgancioglu, G. (2016). Comparing burnout across emergency physicians, nurses, technicians, and health information technicians working for the same organization. *Medicine*, *95*(10), e2856. https://doi.org/10.1097/md.0000000000002856

Schulz, P., Jansen, L. J., & Schlotz, W. (2005). Stress reactivity: Theoretical concept and measurement. *Diagnostica*, *51*(3), 124-133.

Seligman, M. E. (1998). *Learned optimism*. Free Press.

Seligman, M. E. (2011). *Learned optimism: How to change your mind and your life*. Vintage.

Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, *55*(1), 5-14. https://doi.org/10.1037/0003-066x.55.1.5

Sinclair, R. R., Allen, T., Barber, L., Bergman, M., Britt, T., Butler, A., Ford, M., Hammer, L., Kath, L., Probst, T., & Yuan, Z. (2020). Occupational health science in the time of COVID-19: Now more than ever. *Occupational Health Science, 4*(1-2), 1-22. https://doi.org/10.1007/s41542-020-00064-3

Siu, O., Lu, C., & Spector, P. E. (2007). Employees? well-being in greater China: The direct and moderating effects of general self-efficacy. *Applied Psychology*, *56*(2), 288-301. https://doi.org/10.1111/j.1464-0597.2006.00255.x

Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the state hope scale. *Journal of Personality and Social Psychology*, *70*(2), 321-335. https://doi.org/10.1037/0022-3514.70.2.321

Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin*, *124*(2), 240-261. https://doi.org/10.1037/0033-2909.124.2.240

Torsheim, T., Aaroe, L. E., & Wold, B. (2001). Sense of coherence and school-related stress as predictors of subjective health complaints in early adolescence: Interactive, indirect or direct relationships? *Social Science & Medicine*, *53*(5), 603-614. https://doi.org/10.1016/s0277-9536(00)00370-1

Vazquez, C., Hervas, G., Rahona, J. J., & Gomez, D. (2009). Psychological Well-Being and Health. Contribution of Positive Psychology. *Annuary of Clinical and Health Psychology*, *5*, 15-27.

Veronese, G., & Pepe, A. (2014). Sense of coherence mediates the effect of trauma on the social and emotional functioning of Palestinian health providers. *American Journal of Orthopsychiatry*, *84*(5), 597-606. https://doi.org/10.1037/ort0000025

Veronese, G., Fiore, F., Castiglioni, M., El Kawaja, H., & Said, M. (2012). Can sense of coherence moderate traumatic reactions? A cross-sectional study of Palestinian helpers operating in war contexts. *British Journal of Social Work, 43*(4), 651-666. https://doi.org/10.1093/bjsw/bcs005

Vîrgă, D., Baciu, E.-L., Lazăr, T.-A., & Lupșa, D. (2020). Psychological Capital Protects Social Workers from Burnout and Secondary Traumatic Stress. *Sustainability*, *12*(6), 2246. https://doi.org/10.3390/su12062246

Vogt, K. (2014). Resourceful work for well-being: An investigation of sense of coherence, job crafting and the positive power of job resources. Unpublished doctoral thesis Germany: Universität Zürich [Unpublished doctoral dissertation]. (n.d.).

Von Bothmer, M. I., & Fridlund, B. (2003). Self-rated health among university students in relation to sense of coherence and other personality traits. *Scandinavian Journal of Caring Sciences*, *17*(4), 347-357. https://doi.org/10.1046/j.0283-9318.2003.00234.x

Wang, Y., Chang, Y., Fu, J., & Wang, L. (2012). Work-family conflict and burnout among Chinese female nurses: The mediating effect of psychological capital. *BMC Public Health*, *12*(1). https://doi.org/10.1186/1471-2458-12-915

Westman, M., Hobfoll, S. E., Chen, S., Davidson, O. B., & Laski, S. (n.d.). Organizational stress through the lens of conservation of resources (Cor) theory. *Research in Occupational Stress and Well-being*, 167-220. https://doi.org/10.1016/s1479-3555(04)04005-3

Williams, S., Wissing, M. P., Rothmann, S., & Temane, Q. M. (2010). Self-efficacy, work, and psychological outcomes in a public service context. *Journal of*

Psychology in Africa, *20*(1), 43-52. https://doi.org/10.1080/14330237.2010.10820341

Wissing, M. P., & Van Eeden, C. (2002). Empirical clarification of the nature of psychological well-being. *South African Journal of Psychology*, *32*(1), 32-44. https://doi.org/10.1177/008124630203200105

Wolff, A. C., & Ratner, P. A. (1999). Stress, social support, and sense of coherence. *Western Journal of Nursing Research*,*21*(2),182-197. https://doi.org/10.1177/01939459922043820

Wright, T. A., & Cropanzano, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology*, *5*(1), 84-94. https://doi.org/10.1037/1076-8998.5.1.84

Zorn, J. V., Schür, R. R., Boks, M. P., Kahn, R. S., Joëls, M., & Vinkers, C. H. (2017). Cortisol stress reactivity across psychiatric disorders: A systematic review and meta-analysis. *Psychoneuroendocrinology*,*77*,25-36. https://doi.org/10.1016/j.psyneuen.2016.11.036

APPENDICES

APPENDIX-I

INFORMED CONSENT

اجازت نامہ

میں رمشاء سفیر عباسی ماسٹرز طبی نفسیات، بحریہ یونیورسٹی اسلام آباد کیمپس کی طالبہ ہوں۔ میں ریسکیوورکرزپر اپنی تحقیق کر رہی ہوں۔ اس مقصد کے لئے اپنی تحقیق میں آپکی شمولیت اجازت چاہتی ہوں۔

حاصل کردہ معلومات کو صیغہ راز میں رکھا جائے گا اور صرف تحقیقی مقصد کے لئے ہی استعمال کیا جائے گا۔ آپکی اس تحقیق میں شرکت مکمل طور پر رضاکارانہ ہو گی۔ اگر آپ اس تحقیق سے متفق ہیں تو برائے کرم اس فارم پر اپنے دستخط ثبت کریں۔ اگر آپ کے اس پر کوئی تحفظات ہوں تو آپ اس تحقیقی کام سے کسی وقت بھی کنارہ کر سکتے ہیں۔

آپ کے تعاون کا شکریہ

دستخط برائے کنندہ:

تاریخ.

دستخط تجزیہ کار:

APPENDIX-II

DEMOGRAPHIC SHEET

ذاتی کوائف نامہ

- عمر----------
- جنس----------
- ازدواجی حیثیت. ----------
- تعلیم----------
- (Type of employment)روزگار کی قسم مستقل غیر مستقل معاہداتی
- (Base of workplace) جائے ملازمت شہری دیہاتی سفری
- ہفتہ وار کام کا دورانیہ. ----------
- خاندانی نظام. انفرادی مشترکہ
- ماہانہ آمدنی----------
- ملازمت کا عہدہ. ----------
- (Primary work shift) بنیادی اوقات دن رات شام کے اوقات متبادل شفٹ اور کچھ
- مذہب----------
- شہر----------
- فی مہینہ مجموعی خاندان کی آمدنی----------
- سماجی و اقتصادی حیثیت. زیریں طبقہ. متوسط طبقہ. اعلی طبقہ

APPENDIX-III

THE ORIENTATION TO LIFE QUESTIONNAIRE

ہدایات

مندرجہ ذیل سوالات کی فہرست دی گئی ہے اور آپ نے سات درجے کے سکیل پر جو کہ معنی کے لحاظ سے مختلف ہے اور جس کے دو مقرر کردہ جملے دیے گئے ہیں، ایک جواب کا انتخاب کرنا ہے۔ ہر سوال کے سات ممکنہ جوابات ہیں۔ آپ کو ''1'' سے لے کر ''7'' تک اُس نمبر پر نشان لگانا ہے جو کہ آپ کے جواب کو ظاہر کرتا ہے۔ اگر نمبر ''1'' کے نیچے دیئے گئے الفاظ آپ کے مطابق صحیح ہیں تو ''1'' پر دائرہ لگائیے اور اگر نمبر ''7'' کے نیچے دیئے گئے الفاظ درست ہیں تو ''7'' پر دائرہ لگائیے۔ اگر آپ مختلف طریقے سے محسوس کرتے ہیں تو آپ اس نمبر پر دائرہ لگائیے جو کہ بہترین طور پر آپ کے احساسات کو بیان کرتا ہے۔

-1	کیا ماضی میں ایسا ہوا ہے کہ آپ ان لوگوں کے برتاؤ سے حیران ہوئے ہوں جن کے بارے میں آپ کا خیال تھا کہ آپ انہیں اچھی طرح جانتے ہیں۔	کبھی نہیں ہوا 1 2 3 4 5 6 7 ہمیشہ ایسا ہوا
-2	کیا آپ کو یہ محسوس ہوتا ہے کہ آپ ایک انجانی صورت حال میں ہیں اور یہ نہیں جانتے کہ کیا کرنا ہے۔	بہت زیادہ دفعہ 1 2 3 4 5 6 7 شاذ و نادر یا کبھی نہیں
-3	کیا آپ کے احساسات و خیالات بہت گڈمڈ رہتے ہیں۔	بہت زیادہ دفعہ 1 2 3 4 5 6 7 شاذ و نادر یا کبھی نہیں
-4	کیا آپ کے اندر ایسے احساسات ہیں جن کے بارے میں آپ کا خیال ہے کہ وہ نہیں ہونے چاہئیں۔	بہت زیادہ دفعہ 1 2 3 4 5 6 7 شاذ و نادر یا کبھی نہیں
-5	جب کوئی واقعہ رونما ہوا تو عموماً	اس واقعہ کا اس کی اصل اہمیت سے کم یا زیادہ اندازہ لگایا 1 2 3 4 5 6 7 چیزوں کو صحیح تناسب میں دیکھا۔
-6	کیا ایسا ہوا ہے کہ جن لوگوں پر آپ نے بھروسہ کیا انہوں نے آپ کو مایوس کیا۔	کبھی نہیں ہوا 1 2 3 4 5 6 7 ہمیشہ ایسا ہوا
-7	کیا آپ کو یہ احساس ہوتا ہے کہ آپ کے ساتھ غیر منصفانہ سلوک کیا جا رہا ہے۔	بہت زیادہ دفعہ 1 2 3 4 5 6 7 شاذ و نادر یا کبھی نہیں
-8	بہت سے لوگ حتیٰ کہ وہ جو کہ مضبوط کردار کے مالک ہوتے ہیں بعض اوقات بارا ہوا محسوس کرتے ہیں۔ ماضی میں آپ نے کس حد تک ایسے محسوس کیا؟	کبھی نہیں ہوا 1 2 3 4 5 6 7 ہمیشہ ایسا ہوا
-9	یہ احساس آپ کو کتنا زیادہ ہوتا ہے کہ حالات کو آپ یقینی طور پر قابو میں نہیں رکھ سکتے۔	بہت زیادہ دفعہ 1 2 3 4 5 6 7 شاذ و نادر یا کبھی نہیں
-10	کیا آپ کو لگتا ہے کہ جو کچھ آپ کے اردگرد ہو رہا ہے آپ واقعی اس کی پرواہ نہیں کرتے۔	شاذ و نادر یا کبھی نہیں 1 2 3 4 5 6 7 بہت زیادہ دفعہ
-11	اب تک آپ کی زندگی میں	کوئی بھی واضح مقصد یا نصب العین نہیں تھا 1 2 3 4 5 6 7 بہت واضح نصب العین اور مقاصد تھے۔
-12	وہ کام جو روزانہ آپ کرتے ہیں وہ	بھرپور لطف اور تسکین کا باعث ہیں 1 2 3 4 5 6 7 تکلیف اور بیزاری کا باعث ہیں۔
-13	یہ احساس آپ کو کتنا زیادہ ہوتا ہے کہ آپ روزمرہ زندگی میں بے معنی کام کرتے ہیں۔	بہت زیادہ 1 2 3 4 5 6 7 شاذ و نادر یا کبھی نہیں۔

APPENDIX-IV

PERCEIVED STRESS REACTIVITY SCALE

یہ سوالنامہ آپ سےدی گئی صورتحال پر آپ کے ردعمل کے بارے میں پوچھتا ہے، جس کا آپ نے ماضی میں تجربہ کیا ہوگا۔ تین جوابات تجویز کیے گئے ہیں۔ براہ کرم اس جواب کی نشاندہی کریں جو عام طور پر آپ کے اپنے ردعمل کو انتہائی قریب سے بیان کرتا ہو۔ براہ کرم کسی بھی سوال کو نہ چھوڑیں، چاہے بہترین جواب تلاش کرنا مشکل ہو۔

1	جب کام اور ذمہ داریاں اس حد تک بڑھ جائیں کہ ان کو سر انجام دینا مشکل ہوتو۔۔	• عام طور پر پریشان نہیں ہوتا/ہوتی۔ • میں عام طور پر تھوڑی سی بے چین محسوس کرتا/ کرتی ہوں۔ • میں عام طور پر کافی گھبرا جاتا/جا تی ہوں۔
2	جب میں نوکری پرایک مشکل/ سخت دن کے بعد آرام کرنا/پر سکون ہونا چاہو تو	• یہ عام طور پر میرے لیے کافی مشکل ہوتا ہے • میں عام طور پر کامیاب ہوجاتا/ہوجاتی ہوں • مجھے زیادہ تر کوئی مسئلہ نہیں ہوتا۔۔
3	جب دوسروں کے ساتھ میرا جھگڑا/ تنازعہ ہو جو فوری طور پر حل نہ ہو تو۔۔	• میں زیادہ تر اس کی پرواہ نہیں کرتا/کرتی • یہ عام طور پر مجھے تھوڑا سا متاثر کرتا/کرتی ہے • یہ عام طور پر مجھے بہت زیادہ متاثر کرتا/ کرتی ہے
4	جب میں کوئی غلطی کرتا/ کرتی ہوں تو۔	• ۔۔ زیادہ تر میں پر اعتماد رہتا/رہتی ہوں • میں کبھی کبھار اپنی صلاحیتوں کے بارے میں بے یقینی محسوس کرتا/کرتی ہوں۔ • مجھے اکثر اپنی صلاحیتوں پر شک ہوتا ہے۔
5	جب دوسرے مجھے بے جا تنقید کا نشانہ بنائیں	• میں عام طور پرایک لمبے عرصے کے لئے خفا رہتا/ رہتی ہوں ۔ • میں صرف تھوڑے وقت کے لیے خفا رہتا/ رہتی ہوں۔ • زیادہ تر میں شاید ہی خفا ہوتا/ ہوتی ہوں۔۔
6	جب میں دوسرے لوگوں سے بحث کرتا/کرتی ہوں تو۔۔	• میں عام طور پر جلدی پرسکون ہوجاتا/جاتی ہوں۔ • میں عام طورپر کچھ وقت کے لئے اداس رہتا/رہتی ہوں۔ • عام طور پر مجھے پرسکون ہونے میں کافی وقت درکارہوتا ہے۔
7	جب میرے پاس کسی کام کو مکمل کرنے کے لیے بہت مختصر وقت ہوتا ہے تو۔۔	• میں عام طور پر پرسکون رہتا/رہتی ہوں۔ • میں عام طور پر بے چین محسوس کرتا/کرتی ہوں۔ • میں عام طور پر کافی مشتعل ہو جاتا/ جاتی ہوں۔
8	جب میں کوئی غلطی کروں تو	• میں عام طور پرایک طویل عرصے کے لئے خفا رہتا/رہتی ہوں۔۔ • میں صرف کچھ دیرکے لیے خفا رہتا/رہتی ہوں • میں زیادہ تر اس پر قابو پا لیتا/لیتی ہوں
9	جب مجھے کسی سماجی صورت حال میں کیا کرنا/کہنا ہے کہ بارے میں بے یقینی/بے اعتمادی ہو تو۔۔	• میں زیادہ تر پرسکون رہتا/رہتی ہوں۔ • میں اکثر گرم مزاجی محسوس کرتا/کرتی ہوں۔ • مجھے اکثر پسینہ آنے لگتا ہے
10	جب سخت محنت کے بعد میرے پاس فارغ وقت ہوتو۔۔	• مجھے اکثر آرام کرنے اور پُرسُکون ہونےمیں مشکل ہوتی ہے۔ • مجھے عام طور پر مکمل پُرسکون ہونے کے لیے کچھ وقت درکار ہوتا ہے۔ • میں عام طورپر مؤثر طریقے سے پُرسُکون ہونے کے قابل ہوتا ہوں اور اُس دن کے مسائل کو بھول جاتا/جاتی ہوں
11	جب میں دوسروں کی تنقید کا نشانہ بنوں تو۔۔	• اہم دلائل عام طور پر میرے ذہن میں اس وقت آتے ہیں جب دلیل پیش کرنے کا وقت گزر جاتا ہے۔ • مجھے اکثر اچھا جواب تلاش کرنے میں دشواری ہوتی ہے۔ • میں عام طور پر اپنے دفاع/بچاؤ میں دیا جانے والا جواب سوچتا/ سوچتی ہوں
12	جب کوئی چیز میری توقع کے مطابق نہیں ہوتی تو۔۔	• میں عام طور پر پرسکون رہتا/رہتی ہوں۔ • میں عام طور پر بے چین محسوس کرتا/کرتی ہوں۔ • میں عام طور پر کافی مشتعل ہو جاتا/جاتی ہوں
13	جب میں کوئی مقصد حاصل نہیں کرپاؤ تو ۔۔	• میں عام طور پر طویل عرصے تک خفا ہو جاتا/جاتی ہوں۔ • میں عام طور پر دل برداشتہ ہوکر سنبھل جاتا/جاتی ہوں۔ • عموماً مجھے بامشکل ہی کوئی پرواہ ہوتی ہے۔

14	جب دوسرے لوگ مجھ پر تنقید کریں تو۔۔	• زیادہ تر میں اعتماد بالکل نہیں کھوتا/کھوتی ۔ • زیادہ تر میں تھوڑا سا اعتماد کھو دیتا/دیتی ہوں۔ • زیادہ ترمیں بہت بے اعتمادی محسوس کرتا/کرتی ہوں۔
15	جب میں کسی چیز میں ناکام ہو جاؤں تو۔۔	• مجھے عام طور پر اسے کسی حد تک قبول کرنا مشکل لگتا ہے۔ • میں عام طورپراسے کسی حد تک قبول کرلیتا/لیتی ہوں۔ • زیادہ تر، میں بامشکل ہی اس کے بارے میں سوچتا/سوچتی ہوں۔
16	جب بیک وقت مجھ پر بہت سے مطالبات ہوں تو۔۔	• میں عام طور پر پرسکون رہتا ہوں اور ایک کے بعد دوسرا کام سر انجام دیتا/ دیتی ہوں۔ • میں عام طور پر بے چین ہو جاتا/جاتی ہوں۔ • عام طور پر، معمولی مداخلت سے بھی میں چڑجاتا/جاتی ہوں۔
17	جب دوسرے میرے بارے میں کچھ غلط کہتے ہیں تو۔۔	• میں عام طور پر کافی پریشان ہو جاتا/جاتی ہوں۔ • میں عام طور پر تھوڑا سا اداس ہو جاتا/جاتی ہوں۔ • زیادہ تر میں اس کی پرواہ نہیں کرتا/کرتی۔
18	جب میں کسی کام میں ناکام ہو جاتا/جاتی ہوں تو۔۔	• میں عام طور پر بہت بے چینی/بے سکونی محسوس کرتا/کرتی ہوں۔ • میں عام طور پر کسی حد تک بے سکونی/ بے چینی محسوس کرتا/کرتی ہوں۔ • زیادہ تر، مجھے کوئی فرق نہیں پڑتا۔
19	جب میں دوسروں سے بحث کرتا/کرتی ہوں تو۔۔	• میں عام طورپر بہت پریشان ہو جاتا/جاتی ہوں۔ • میں عام طور پر تھوڑا سا پریشان ہو جاتا/جاتی ہوں۔ • میں عام طور پر پریشان نہیں ہوتا /ہوتی۔
20	جب میں تناؤ کا شکار ہوتا/ہوتی ہوں۔۔	• میں عام طور پر اپنے فرصت کے اوقات سے لطف اندوز نہیں ہو سکتا/سکتی۔ • مجھے عام طور پر اپنے فرصت کے اوقات سے لطف اندوز ہونے میں دشواری ہوتی ہے۔ • میں عام طور پر اپنے فرصت کے اوقات سے لطف اندوز ہوتا/ہوتی ہوں
21	جب کام اور فرائض اس حد تک جمع ہوجائیں کہ ان پر قابوپانا مشکل ہوتو۔۔	• میری نیند متاثر نہیں ہوتی • میری نیند میں تھوڑا سا خلل آتا ہے۔ • میری نیند میں بہت زیادہ خلل آتا ہے
22	جب مجھے دوسرے لوگوں کے سامنے بولنا پڑتا ہےتو۔	• میں اکثر بہت گھبرا جاتا/جاتی ہوں۔ • میں اکثر تھوڑا گھبرا جاتا/جاتی ہوں۔ • زیادہ تر، میں پرسکون رہتا/رہتی ہوں
23	جب مجھے بہت سے کام اور فرائض پورے کرنے ہوں تو۔۔	• زیادہ تر، میں پرسکون رہتا/رہتی ہوں • میں عام طور پر بےصبرا ہوتا/ہوتی ہوں۔ • میں اکثر چڑچڑا ہو جاتا/جاتی ہوں۔

APPENDIX-V

PSYCHOLOGICAL CAPITAL QUESTIONNNAIRE

PART-C

نیچے دے گئے بیانات آپکی اپنے بارے میں موجودہ سوچ کو بیان کرتے ہیں. مندرجہ ذیل پیمانہ استعمال کرتے ہوے آپ اتفاق یا اختلاف کے درجے کی نشاندہی کریں

بہت ذیادہ متفق	متفق	کچھ حد تک متفق	کچھ حد تک غیر متفق	غیر متفق	بہت ذیادہ غیر متفق
6	5	4	3	2	1

شمار		بہت ذیادہ غیر متفق	غیر متفق	کچھ حد تک غیر متفق	کچھ حد تک متفق	متفق	بہت ذیادہ متفق
		1	2	3	4	5	6
1	مجھے انتظامیہ کے ساتھ میٹنگوں میں اپنے دائرۂ کار کی نمائندگی میں خود اعتمادی کا احساس ہوتا ہے۔	1	2	3	4	5	6
2	مجھے اپنی کمپنی/ادارے کی حکمت عملی کے بارے میں بات چیت میں خود اعتمادی کا احساس ہوتا ہے۔	1	2	3	4	5	6
3	مجھے اپنے ساتھ کارکنوں کے کسی گروپ کو معلومات پیش کرنے کے . سلسلے میں خود اعتمادی کا احساس ہوتا ہے	1	2	3	4	5	6
4	اگر میں کسی کام میں الجھ جاتا ہوں تو میں اس سے نکلنے کے کئی طریقے سوچ سکتا ہوں۔	1	2	3	4	5	6
5	ٹھیک اس وقت میں اپنے آپ کو اپنے موجودہ کام میں کافی حد تک کامیاب سمجھتا ہوں۔	1	2	3	4	5	6
6	میں اپنے کام کے موجودہ اہداف کو حاصل کرنے میں کئی طریقے سوچ سکتا ہوں۔	1	2	3	4	5	6
7	اس وقت، میں کام کے ان اہداف پر پورا اترتا ہوں جو میں نے اپنے لئے طے کئے ہوئے ہیں۔	1	2	3	4	5	6
8	اگر ضرورت ہو تو میں، جیسے کہ کہا جاتا ہے، "اپنے بل بوتے پر" کام سنبھال سکتا ہوں۔	1	2	3	4	5	6
9	عام طور پر میں کوئی مشکل کام بھی روز مرہ کی طرح کرلیتا ہوں۔	1	2	3	4	5	6
10	میں کام میں مشکل اوقات کا مقابلہ بھی کر لیتا ہوں کیونکہ مجھے ایسے مواقع کا پہلے بھی تجربہ ہوچکا ہے۔	1	2	3	4	5	6
11	میں ہمیشہ اپنے کام کے روشن پہلوؤں کو دیکھتا ہوں۔	1	2	3	4	5	6
12	جہاں تک کام کا تعلق ہے مستقبل میں میرا کیا ہوگا اس کے بارے میں میں پر امید ہوں۔	1	2	3	4	5	6

APPENDIX-VI

MENTAL HEALTH CONTINNUM SCALE

مندرجہ ذیل بیانات کو پڑھیں اور اس خانے میں نشان لگائیں جو کہ آپ کے تجربات اور احساسات کی بہترین عکاسی کرتا ہے۔

	پچھلے مہینے کو ذہن میں رکھتے ہوئے جواب دیجئے کہ آپ نے کتنی مرتبہ درج ذیل طریقوں سے محسوس کیا	کبھی نہیں	ایک یا دو مرتبہ	ہفتے میں تقریباً ایک مرتبہ	ہفتے میں دو یا تین مرتبہ	تقریباً ہر روز	ہر روز
.1	خوش						
.2	زندگی میں دلچسپی لینا						
.3	زندگی سے مطمئن						
.4	کہ آپ کے پاس کچھ ایسا اہم موجود ہے جس سے آپ معاشرے کو فائدہ پہنچا سکیں						
.5	کہ آپ کا تعلق ایک معاشرے سے ہے (مثلاً سماجی گروہ، اسکول، ہمسائیگی ،وغیرہ)						
.6	کہ ہمارا معاشرہ تمام لوگوں کے لیئے ایک اچھی جگہ ہے یا بہتر جگہ بن رہی ہے						
.7	کہ لوگ بنیادی طور پر اچھے ہیں						
.8	کہ ہمارے معاشرے کا کام کرنے کا طریقہ آپ کے لیئے قابل فہم ہے						
.9	کہ آپ کو اپنی شخصیت کے زیادہ تر پہلو پسند ہیں						
.10	آپ اپنی روزمرہ زندگی کی ذمہ داریوں کو اچھے طریقے سے سنبھال لیتے ہیں						
.11	کہ آپ کے دوسروں کے ساتھ پُر اعتماد تعلقات ہیں						
.12	کہ آپ ایسے (دشوار) تجربات سے گزرے ہیں جنہوں نے آپ کو مبچور ہونے اور ایک بہتر انسان بننے میں مدد کی						
.13	سوچنے اور اپنے نظریات اور رائے کے اظہار میں پُر اعتماد ہونا						
.14	کہ آپ کی زندگی بامعنی ہے۔						

APPENDIX-VII

PERMISSION FROM UNIVERSITY

Bahria University
Discovering Knowledge

03-Apr-2023

TO WHOM IT MAY CONCERN

REQUEST FOR DATA COLLECTION

It is stated that **Ms. Rimsha Safeer Abbasi** Enrollment No. 01-275212-013 is a student of MS Clinical Psychology Bahria University Islamabad Campus conducting research on "**Rescue Workers**" under supervision of undersigned. It is requested that kindly allow her to collect the data from your esteemed institution.

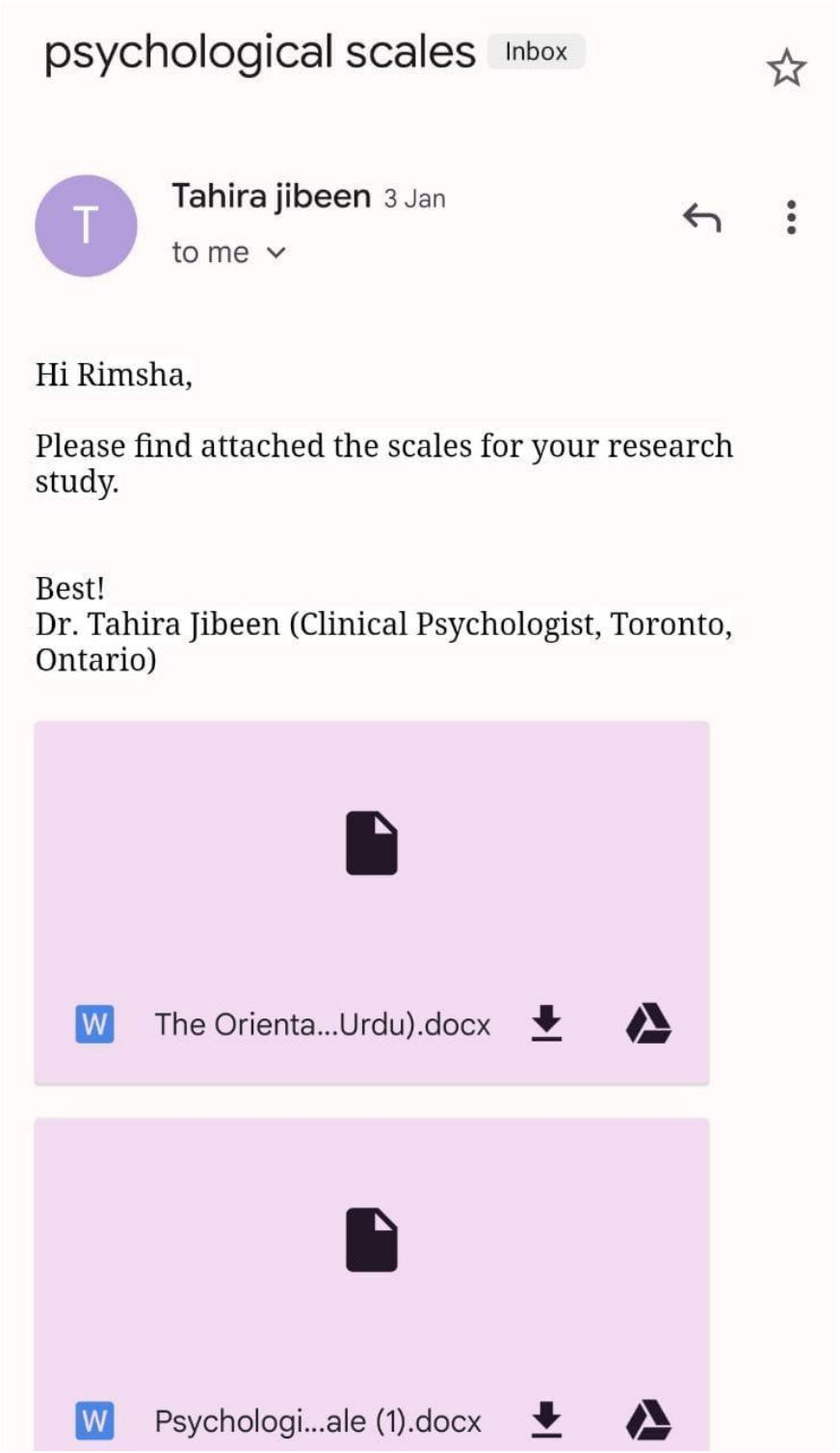
Regards,

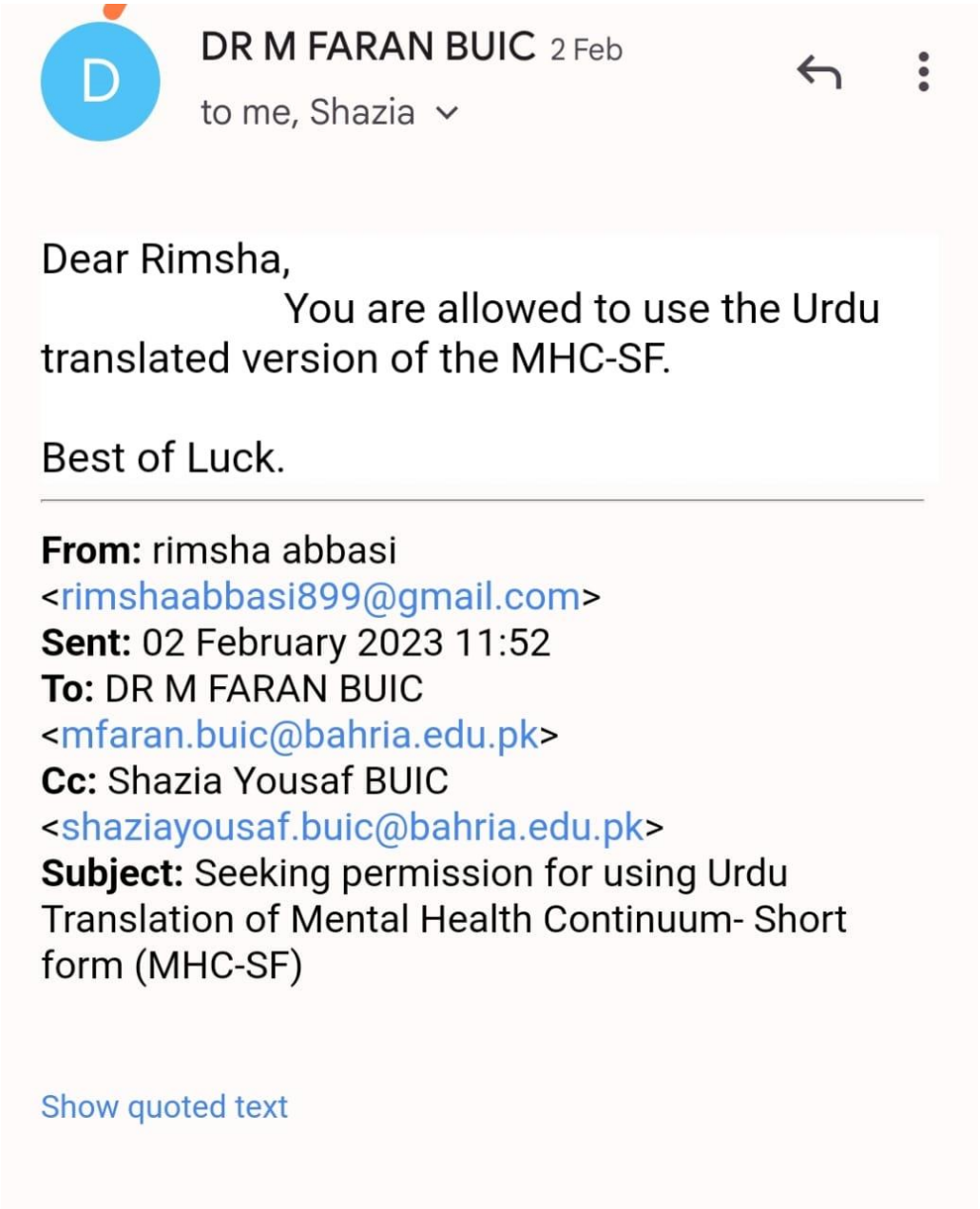
3/4/2023

Dr. Shazia Yusuf
Head of Department
Professional Psychology
Bahria University
H-11 Islamabad

APPENDIX-VIII

PERMISSION FROM CONCERNED AUTHORS


psychological scales
Inbox
T
Tahira jibeen 3 Jan
to me
Hi Rimsha,
Please find attached the scales for your research study.
Best!
Dr. Tahira Jibeen (Clinical Psychologist, Toronto, Ontario)
The Orienta...Urdu).docx
Psychologi...ale (1).docx



DR M FARAN BUIC 2 Feb

to me, Shazia

Dear Rimsha,

You are allowed to use the Urdu translated version of the MHC-SF.

Best of Luck.

From: rimsha abbasi <rimshaabbasi899@gmail.com>
Sent: 02 February 2023 11:52
To: DR M FARAN BUIC <mfaran.buic@bahria.edu.pk>
Cc: Shazia Yousaf BUIC <shaziayousaf.buic@bahria.edu.pk>
Subject: Seeking permission for using Urdu Translation of Mental Health Continuum- Short form (MHC-SF)

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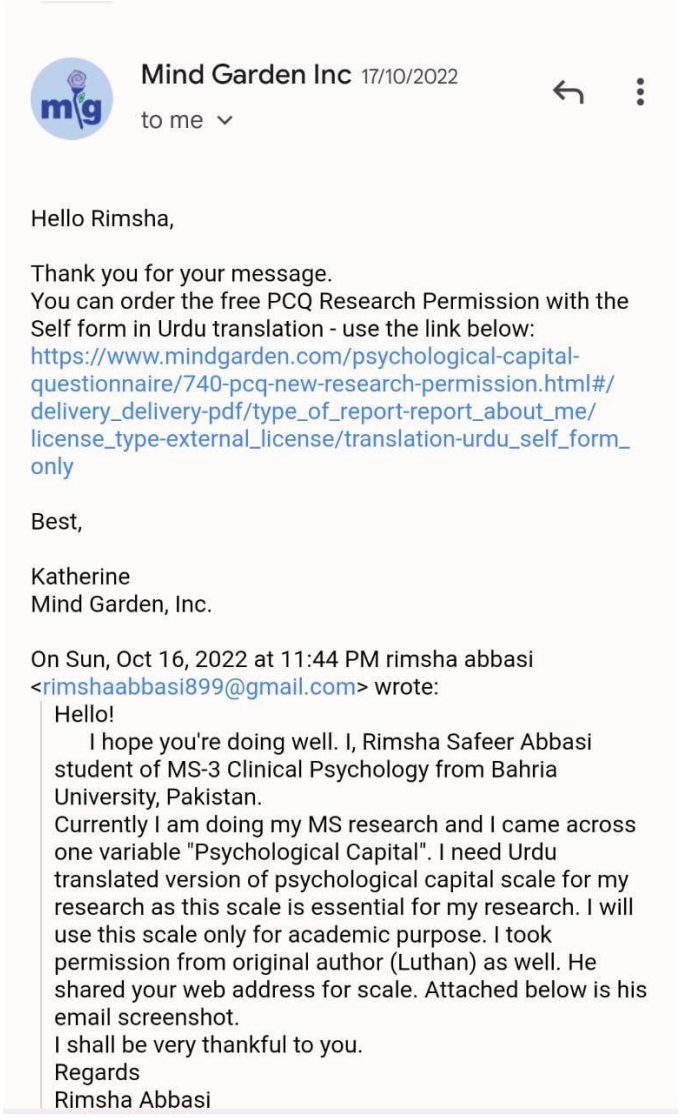

Mind Garden Inc 17/10/2022

to me

Hello Rimsha,

Thank you for your message.
You can order the free PCQ Research Permission with the Self form in Urdu translation - use the link below:
https://www.mindgarden.com/psychological-capital-questionnaire/740-pcq-new-research-permission.html#/delivery_delivery-pdf/type_of_report-report_about_me/license_type-external_license/translation-urdu_self_form_only

Best,

Katherine
Mind Garden, Inc.

On Sun, Oct 16, 2022 at 11:44 PM rimsha abbasi <rimshaabbasi899@gmail.com> wrote:

> Hello!
> I hope you're doing well. I, Rimsha Safeer Abbasi student of MS-3 Clinical Psychology from Bahria University, Pakistan.
> Currently I am doing my MS research and I came across one variable "Psychological Capital". I need Urdu translated version of psychological capital scale for my research as this scale is essential for my research. I will use this scale only for academic purpose. I took permission from original author (Luthan) as well. He shared your web address for scale. Attached below is his email screenshot.
> I shall be very thankful to you.
> Regards
> Rimsha Abbasi

Ilona Yim 14 Feb

to me, ilona.yim, shaziayousa...

Dear Rimsha,

I am s sorry, I am going through my old email today and realized I did
not respond to this. You are very welcome to use the scale. Thank you
for asking for permission.

Good luck with your study. All the best,

Ilona Yim

Show quoted text

--
Ilona S. Yim, PhD
Professor and Interim Chair
Department of Psychological Science

4562 Social and Behavioral Sciences Gateway
University of California, Irvine
Irvine, CA 92697-7085
Phone: 949-824-0130

APPENDIX-IX

PLAGIARISM CERTIFICATE

Sense of coherence, perceived stress reactivity, and psychological wellbeing of rescue workers: role of psychological capital

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