PERCEIVED SOCIAL SUPPORT, COPING STRATEGIES AND SYMPTOMS OF POST-TRAUMATIC STRESS DISORDER AMONG RESCUE WORKERS IN PAKISTAN

[1]DR. HINA IMRAN, [2]QADEER AHMAD ALVI, [2]PRO. DR. RIAZ AHMAD, [3]KOMAL ZULFIQAR, [2]DR. SAJID IQBAL ALYANA

1Associate Professor, 2Psychologist, 3Professor, 4Psychologist, 5Assistant Professor

1,3, Institute of Clinical Psychology University of Karachi, Karachi-Pakistan

2, 4, Riphah International University, Faisalabad-Pakistan

5, National University of Medical Sciences (NUMS), Rawalpindi-Pakistan

Correspondence: sajidalyana@gmail.com

Abstract: Because they rescue and assist victims of violent crimes, natural catastrophes, accidents, and terrorist attacks, rescue professionals go through a lot of stress. Post-Traumatic Stress Disorder (PTSD) may develop as a result of excessive exposure to and inadequate coping mechanisms for such stressful situations. The present study was accomplished to explore the association between perceived stress and symptoms of PTSD and mediation role of coping strategies among rescue workers in Pakistan. After the literature review following hypotheses for this study were formulated: 1) Perceived social support would be a significant predictor of Post-Traumatic Stress Disorder Symptoms among rescuers workers. 2) Coping Strategies would mediate the relationship between perceived stress and symptoms of post traumatic disorder among rescuers workers. A total number of 317 male rescue workers with the age range of 18 to 40 were recruited from Rescue 1122 from different cities of Punjab, Pakistan. The participants were assessed through following measures, Demographic Form, Post-traumatic stress disorder checklist, perceived social support scales and coping strategies scale. The Regression and Mediation analysis results showed that Coping Strategies mediate the relationship between perceived stress and symptoms of post traumatic disorder among rescuers workers. Perceived social support came out as a significant predictor of Post-Traumatic Stress Disorder Symptoms among rescuers workers.

Keywords: Perceived Social Support, Posttraumatic Stress Disorder, Rescue Workers, CopingStrategies.

Introduction

Emergency workers work in emergency response situations protecting human life, property and the environment during accidents and major incidents and disasters. In emergency situations, many professional groups are involved depending on the extent and consequences of the accidents. As rescue workers have to face a considerable number of traumatic events, their mental health and job performance may be adversely affected. Rescue workers' daily encounters with traumas burdens their mental life as these encounters, at times; also make them question their own control over their lives causing distress. They lose interest in daily activities and fail to experience positive emotions. They do not feel like participating in pleasurable activities, which they previously enjoyed. They lose interest even in their hobbies, and develop a nonchalant attitude towards things (Galea et al., 2005).

Post-traumatic stress disorder is a major mental health issue that often follows exposure to stressful situations. Lifetime prevalence of PTSD is between 1% and 14%,whereas annual prevalence is between 2% and 3% (Shalev, et al., 2017). These numbers vary widely by socioeconomic status and country of residence. Numerous studies have linked a lack of perceived social support (PSS) after trauma to the onset of PTSD. Some of the most often stated protective variables include an individual's perception of their own optimism and the empathy of significant others, whereas some of the most frequently reported danger factors are their own tendency to place blame or isolate themselves socially (Maercker & Horn, 2013; Vogt et al., 2017). In two extensive meta-analyses, researchers found that low- quality support and a lack of perceived social support (PSS) were significant risk factors for the onset of PTSD both before and after the traumatic event (Brewin et al., 2000; Ozer et al., 2003).

Post-traumatic stress disorder was first recognised as a distinct mental health condition in 1980, when it was included in the DSM's third edition. Exposure to traumatic events (such vehicle accidents, violence, or rape) may cause post-traumatic stress disorder (PTSD), whether from first-hand experience, watching the incident, hearing about it from close friends or family, or reliving the event

in one's mind. Add to that the incidence of trauma-related disorders, which is around 8.7 percentage points more in the United States than in Europe, Asia, or Africa, where it is just 2.5%, and you have a very serious problem. However, the rate of occurrence varies across professions that need constant mental exertion.

According to the Diagnostic and Statistical Manual of Mental Disorders, FourthEdition (July, 2000), a traumatic experience is described as direct or indirect exposure to at least one occurrence involving actual or threatened death or severe harm, or a danger to one's own or another's bodily integrity. Rescue personnel' daily routines consist of activities that meet DSM-IV-TR criteria A1 for trauma: providing emergency medical care to critically wounded persons, looking for and retrieving victims from wreckages and firefights. To a greater extent, the chance of acquiring PTSD rises with the number of traumatic incidents encountered, making rescue workers a particularly vulnerable group (Ronnie, 1992).

Post-traumatic stress disorder is a mental illness that may develop when someone encounters, sees, or is otherwise exposed to a traumatic incident that causes strong emotional reactions of dread, helplessness, or terror, such as the death or severe injury of a loved one or a close friend. Because of the ongoing nature of depression and other prevalent mental diseases, neuropsychiatric disorders have been estimated to account for about 14% of the global burden of disease. By 2020, mental illness, such as stress-related diseases, is expected to overtake physical illness as the major cause of disability, according to the World Health Organization's global burden of disease assessment. There is a wide range of PTSD prevalence among various groups. As an example, the lifetime prevalence of post-traumatic stress disorder ranges from 0.3% to 8.7% among high-income countries 4-7 (Kalia, 2002).

Cognitive and behavioral avoidance, as well as the escape-avoidance mode of coping, have been shown to be predictors of increased distress among rescue workers. Marmar et al., (1996) observed that problem-focused coping was related with both high and low levels of distress. Although studies have been able to uncover maladaptive coping methods, no studies have identified any adaptive coping strategies. This wasa major takeaway from their investigation.

Several studies have been conducted in order to explore the mental responses of those who participate in rescue efforts following traumatic occurrences. Rescue personnel havebeen shown to be more resistant to the possible psychological effects of exposure to disasters than other groups who have been traumatized, according to the vast majority of research. Oneindicator of this is the low rate at which illnesses like PTSD appear in the general population (Alexander & Wells, 1991; Duckworth, 1986; Ersland et al., 1989).

Galea, et al., (2005) conducted a thorough investigation on the emotional aftermath of disasters and found that anywhere from 5 to 40% of rescue workers are experiencing PTSD after responding to man-made disasters. This was a far smaller range than what was documented among direct survivors, which ranged from 25–75%, but it was greater than whatwas observed in the normal population, which ranged from 1–1% (Galea et al., 2005). On the other hand, as is seen from this meta-analysis, prevalence rates vary considerably across studies. Changes in the kind of disaster, the level of destruction, and the amount of losses, as well as methodological factors like sampling methods, shifting measures, and other such variances, may all contribute to this variation. Furthermore, there is a dearth of studies examining whether certain characteristics are associated with reduced or higher rates of post- disaster symptomatology among rescue workers.

After a tragic oil rig accident, Alexander and Wells, (1991) had the unique chance to compare police officers' pre- and post-disaster judgments of their performance while managing bodies. In addition, they compared the results from the post-assessment to the evaluations of a matched control group of law enforcement personnel who had not been part of this experiment. The authors of the study discovered no variation in symptomatology between the pre-disaster evaluations and the post-disaster ones. They also were unable to determine any distinctions between the under investigation police and the control group. In addition to the well-functioning organizational processes that are believed to be present in thepolice service, the authors of this study have drawn the conclusion that these data reflect effective coping strategies among police personnel.

Two teams of rescue personnel were examined by Marmar et al., (2006) after they responded to a highway collapse after an earthquake and compared to one another and to a control group with no prior disaster response experience. As time passed, they saw no significant variations in PTSD symptoms

across the groups. North et al., (2002) examined thefrequency of post-traumatic stress disorder among firefighters who assisted in rescue efforts after the 1995 Oklahoma City bombing and found that it was 13%, much lower than the 23% prevalence among the blast's main victims.

Studies found that among rescue workers who contributed to the emergency during and after 9/11, there were significant differences between different occupational groups. The researchers discovered that the lowest prevalence rates occurred for police (6.2%) and the highest prevalence rates occurred for unaffiliated volunteers (21.2%). These research results were just published in the peer-reviewed journal Occupational and Environmental Medicine. This suggests that prevalence rates were higher among occupational groups who were less qualified for their vocation, such as those working in the domains of search and rescue and firefighting, for instance. In addition to this, they came to the conclusion that the intensity of symptoms connected with post-traumatic stress disorder often increased in association with the total number of days spent at the area in question.

Cukor et al., (2011) carried out a study in which they investigated the progression of post-traumatic stress disorder over time among emergency responders who had been stationed at the World Trade Center in the years after the 9/11 attacks. The researchers that carried out this study showed that the prevalence of post-traumatic stress disorder was highestin the first year after 9/11, at a rate of 9.5%, but that this percentage dropped to 4.8% four years after the event. This number went down even more to 2.4% six years after the incident. The scientists also discovered that a history of trauma, major depressive illness, panic disorder, and occupational exposure at the time of the initial test were all factors that predicted post-traumatic stress disorder six years after the incident.

Studies of PTSD in a variety of trauma groups have shown that a number of characteristics are useful in predicting who would develop PTSD after experiencing a traumatic event (Ozer et al., 2003). There seems to be a correlation between the severity of PTSD and the cumulative amount of exposure to trauma both before and after the first traumatic incident (Brewin et al., 2000). Previous research has linked a history of trauma to a greater likelihood of getting PTSD after experiencing a single stressful event. Also, peri- traumatic behavior like dissociation at the time of the incident have been linked to the emergence of posttraumatic symptoms. Furthermore, studies have linked extreme negativity to a higher risk of developing PTSD (Fedoroff, et al., 2000).

Perceived social support can be defined as a person's impression of if his/her social network is supported or not. Perceived social support is defined as anindividual's perception of whether a social network is adequately supportive or not. In this sense social support is an individual's self-appraisal. It is argued that individuals who are loved and wanted in different parts of life and who find help when they are in need are more satisfied with their close relationships and feel that they are supported by others. Perceived social support is an individual's cognitive perception that s/he has established reliable bonds with others and that others provide support to them (Yamaç, 2009). Provided social support means the behaviors and actions others display. In other words, it is considered to be a behavioral assessment of support. Although the benefits of social support for individuals havebeen appreciated for a long time, it is accepted that perceived social support is particularly a better precursor of health results and it is also reported that there is a positive relation between perceived social support and psychological illnesses and low levels of anxiety(Yamaç, 2009). It is also emphasized that social support has an intermediary role in specific areas of life. These areas mostly include family and workplace (Carlson & Perrewe, 1999). Therefore, studies on social support are divided as work-based and nonwork-based social support (Wadsworth & Owens, 2007).

Social support is the perception of being cared for by others and having a reliable network to turn to when needed, in everyday situations or specific moments of crisis. It can be perceived from three sources: family, friends, and significant others (Zimet et al., 1988). Social support is also referred to as the frequency of support actions that are provided by others which is why it can be understood as the subjective feeling of being supported (Santini et al., 2015).

Understanding the phenomena of social support may be done from a variety of angles,including its multidimensional and interactive character and the way it is perceived (Pruitt & Zoellner, 2008). Studies that compare real and perceived social support (PSS) have shown that the latter is more often reported (Guay et al., 2011). There is a disconnect between the purpose of the individual seeking to offer assistance and the perceived value of the encounter (Pruitt & Zoellner, 2008). If the receiver believes they can depend on others around them, they may be less likely to have negative health effects

as a result of stress. Relationships that are perceived as loving and caring by the victim and provide them with information, resources, and a sense of community are examples of positive support (Hobfoll & Stephens, 1990; Hollifield et al., 2016). Perceived social support from close others has been shown to have a protective effect in numerous studies (Brewin et al., 2000; Vogt et al., 2017).

Coping strategies are as numerous and varied as the stressors that precede them. From Folkman and Lazarus' Ways of Coping Questionnaire and Charles Carver and colleagues' Coping Orientation of Problem Experience (COPE), some common strategies or categoriesfor coping responses are accepting the situation or one's role in it, active/confrontive copingto remove the stressor or oneself from the stressor, anticipatory coping aimed toward an expected but uncontrollable event, avoiding/escaping the stressor or associated feelings of distress, denying the problem or feelings, disengaging mentally or behaviorally (giving up), distancing/detaching from the situation or minimizing its significance, planning the steps to solve the problem, reinterpreting the stressor as a positive or growth-oriented experience, seeking social support (discussed later), controlling one's emotions or waiting for an appropriate time to act, using substances to dull feelings, suppressing competing activities until the problem subsides, turning to religion, using humor, and venting emotions (Brewin et al., 2000).

Individuals also engage in proactive coping. These future- and action-oriented behaviors can prepare a person not only for specific stressors, but also for those that are likelyto arise in the normal course of life. Proactive coping includes building and strengthening all resources (e.g., from practical and academic knowledge, experiences, and sufficient numbers and varied kinds of social contacts; see also direct effects hypothesis of social support). As well, proactive coping involves gaining skills and abilities to assess the changing environment more accurately, from signs of a possible stressor, to appropriate strategies and resource use, to feedback on a given situation. Though it is impossible to make causal claims, future-oriented coping tends to be associated with positive outcomes such as goal achievement and lower levels of distress. However, too great an emphasis on the future may be a sign of hypervigilance, which has been linked to negative outcomes such as anxiety and poor information processing (Carlson & Perrewe, 1999).

It is possible to describe coping strategies as distinct mental and behavioral processes that are employed by the individual in order to successfully cope with stressful situations. The individual's knowledge of the obligations placed on him and his ability to meet those demands are the two primary factors that define his degree of stress (Lazarus & Folkman 1984). The evaluation of stress necessitates the use of various coping mechanisms (Stranks, 2005). When employees attempt to deal with the obligations, responsibilities, and other patterns of compression related to their concerns, but run into problems, trepidation and anxieties in trying to make things work, stress levels in the workplace skyrocket to dangerously high levels.

Similarly, Jamal, et al., (2016) investigated the link between coping techniques and the professional life stress that was reported by house-job physicians. Additionally, the study analyzed the strong negative correlation between stress and problem-focused coping. Inaddition, there was a positive association between stress and both the avoidance coping strategy and the emotion oriented coping strategy. Students from a private university college in Kuala Lumpur participated in another research that looked at the association between personality, different coping techniques, and psychological stress (Chao, 2012). It was expected that avoidance coping mechanisms were connected to higher levels of psychologicalstress when the outcomes of this research were analyzed.

A lack of social support is one of the factors that has been found as being one of the most reliable predictors of the development of post-traumatic stress disorder (PTSD) in the aftermath of a stressful incident (Yap & Devilly, 2004). It has also been shown that a crucial element in the development of posttraumatic stress disorder (PTSD) is the degree to which a person believes they have control over their own lives. In conclusion, there is evidence to show that women have a greater likelihood of having post-traumatic stress disorder (PTSD). The second research found that the gender gap associated with trauma caused by accidents and catastrophes was much bigger than that associated with other forms of trauma, such as severe illness and interpersonal violence (Ditlevsen & Elklit, 2012).

An explosion at a fireworks factory in the southern region of Denmark in November (2004) caused a catastrophic tragedy. The facility was situated in the middle of a residential neighborhood that was home to around 2,000 people. The material repercussions were considerable, since 355 dwellings were destroyed, of which 87 were damaged to a significant degree. As a result of the evacuation of the

neighborhood, there was one firefighter fatalitybut no people were harmed. Three months after the explosion, 13% of the inhabitants were diagnosed with post-traumatic stress disorder, and this prevalence percentage did not alter throughout the subsequent 12 months. A comparative group of people from another nearby neighborhood that was not harmed by the disaster as a result of the geological circumstances had a prevalence of 1% for post-traumatic stress disorder after three months. There were around 350 firefighters, 150 police officers, and 300 others who volunteered their time to helpout during the emergency. Together, they made up the group of 800 people who helped out throughout the situation. The operation to save people involved expanding the fire, evacuating inhabitants with the assistance of police and ambulance drivers, cordoning off the area, and placing them in a school. In addition to this, a number of additional rescue organizations participated in the effort at some time throughout the crisis. One person working for the rescue effort was murdered, while numerous others were injured (Ditlevsen& Elklit, 2012).

Severe mental problems like post-traumatic stress disorder (PTSD) have been linkedto catastrophic occurrences like plane crashes and earthquakes (post-traumatic stress Disorder). These kinds of mishaps, thankfully, are quite rare during rescue operations. Clohessy and Ehlers, (1999) discovered that a sizable minority of emergency workers (21%) who were not exposed to major disasters also experienced Disorder of post-traumatic stress Disorder, implying that frequently occurring critical incidents can be just as stressful for emergency workers as disaster work (Marmar et al., 1996). However, some studies have shown that paramedics actually had lower stress levels than those in other occupations(Regehr et al., 2002; Janka & Duschek, 2018). Regular but minor pressures may have a cumulative effect on emergency workers' psyches that is too great to ignore (van der Ploeg & Kleber, 2003). There also seems to be a discrepancy between the reported stress levels of paramedics and the long-term repercussions, including increasing burnout. According to research (Glaser et al.,1985), being always on high alert is associated with a weakened immune system.

Police officers, EMS workers, and firefighters, among others, may be at a greater risk for acquiring PTSD because of the extreme stress they're put under on the job. The dangers faced by EMS workers are greater than those faced by other types of emergency workers. Thecumulative and negative effects of these incidents make patients more susceptible, althoughin the absence of repeated traumatic occurrences, Disorder may resolve on its own over time. Recent studies have indicated that PTSD is quite common among those in high-risk professions, with a prevalence rate ranging from 3% to 24.5%.

Persistent symptoms of post-traumatic stress disorder (PTSD) have been linked to dissatisfaction at work, frequent absences, and even premature retirement. Post-traumatic stress disorder (PTSD) may be either primary or secondary, depending on whether the person experienced the incident as a victim or a bystander.

Although the association between social support and PTSD is unclear, a lack of perceived support is a key risk factor for the disorder's development and persistence (Brewin, et al., 2000; Kraemer et al., 2001). Literature differs between an individual's genuine support and perceived availability of aid, highlighting social support's complexity. Perceived social support is more closely connected with an individual's ability to regulate and manage stress than received social support, however the relationship between the two is contested (Norris &Kaniasty, 1996). The stress-buffering hypothesis (Cohen & Wills, 1985) and other "social causation" models postulate that a lack of social support may precede and contribute to psychological distress after trauma, while "social erosion" models postulate that psychological isolation reduces an individual's social support resource (Bryant, 2016). Complex PTSD patients benefit from therapy that teaches social support-seeking skills. More study on social support and PTSD subtypes might lead to focused therapy. Individuals often use a variety of responses to various forms of stress. When the source of stress or danger cannot be avoided or is easily mitigated, people often resort to passive coping mechanisms like denial and avoidance. If the source of stress cannot be changed or avoided, passive coping mechanisms (such as inaction or withdrawal) may be used. A traumatic occurrence is one that is so devastating that it permanently alters the victim's mental and emotional state. There are many causes of trauma, some of which involvephysical violence and others which are more abstract. Since people typically evaluate trauma differently and have different coping mechanisms in place, their reactions to traumatic situations might be very different from one another. Intriguingly, new neuroimaging studies suggest that active and passive emotional coping methods are mediated by distinct brain pathways (Ozer et al., 2003).

There is as wide a range of coping mechanisms as there are types of stress. recognizing one's own responsibility in a preexisting circumstance; Extinction of the stressor or oneself as a means of active/confrontational coping; strategies for dealing with an impending, out-of-your-control situation; attempting to remove oneself from the source of stress or the misery it causes; According to the Ways of Coping Questionnaire created by Folkman and Lazarus and the Coping Orientation of Problem Solving Inventory, some prevalent techniques or categories for coping responses include avoiding the stressor orblaming others for the problem (Blum, 2014).

Some research has shown a link between coping mechanisms and PTSS, as was indicated before. Denial, ranting, behavioral disengagement, and self-blame are just some of the maladaptive coping methods that have been shown to be more prevalent among people with PTSD when confronted with a stressful effect (Cofini et al., 2015). Previous studies haverevealed that female victims of physical and sexual assault who used avoidant coping strategies had a considerably higher frequency of posttraumatic stress disorder (PTSD). It has only been investigated by Schnider et al., (2007) and Dworkin et al., (2018), who discovered that avoidant emotion coping and a lack of social support predicted PTSD severity in non- clinical university students.

METHOD

Participants

The sample consisted of (N=317) male rescue workers with an age range from18 to 40 years.

Inclusion Criteria

- The rescue male workers were included in the study.
- The age range of 18 to 40 were included in the study.
- Rescue workers of Punjab are included in the study.
- Those rescue workers who were willing for informed consent are included.

Exclusion Criteria

- Rescue workers with any kind of physical impairment were excluded.
- Those men who are not in rescue are excluded in the study.
- Those men who are not willing for informed consent were excluded from the study.
- Rescue workers who are not in Punjab are excluded.

Research Instruments

Following are the assessment measures used in the present study.

Informed Consent Sheet

The purpose of the study will be to inform participants, assure them that their information stays confidential, only used for the research purpose and no harm will happen tothem if they choose to participate in the study. Then inform them what they require to do,how to fill the questionnaire, and the estimated time required to complete the questionnaire. Then informed consent was given to the participants.

Demographic Sheet

At first demographic questionnaires will be used to collect personal information of participants such as (gender, age, birth order, family system, residence, socioeconomic status), and Job Experience.

Post-Traumatic Stress Disorder Checklist

The Posttraumatic Stress Disorder Checklist is a 17-item self-report tool that corresponds to the 20 Disorders listed in DSM-5 (Blevins et al., 2015). It can provide a globalassessment of PTSD severity both at the time of diagnosis and over the course of treatment. We used a urdu translated version in our research.

Perceived Social Support Scale

The Multidimensional Scale of Perceived Social Support (Zimet et al, 1988) is a 12- item measure of perceived adequacy of social support from three sources: family, friends, & significant other; using a 5-point Likert scale (0 = strongly disagree, 5 = strongly agree).

Coping Strategies Scale

The Brief-COPE is a 28 item self-report questionnaire designed to measure effective and ineffective ways to cope with a stressful life event. "Coping" is defined broadly as an effort used to minimize distress associated with negative life experiences. The scale is often used in health-care settings to

ascertain how patients are emotionally responding to a serious circumstance. It can be used to measure how someone is coping with a wide range of adversity, including a cancer diagnosis, heart failure, injuries, assaults, natural disasters,financial stress or mental illness. The scale is useful in counseling settings for formulating thehelpful and unhelpful ways someone responds to stressors. (Dias et al. 2012).

As mentioned above, this study used online data surveys to collect responses from the participants. The participants for this survey consist of Pakistan Rescue Workers. In the first stage questionnaire was developed in google forms and sent to respondents through email address. A cover letter along with a survey form link was also sent to the respondents asemail attachment. The purpose of research and request to participate was explained in the cover letter. The participants were asked to share their email address as the identity of the respondent. Then collected data was further used for data analysis.

Procedure

Following the approval of the study's summary at a board meeting, the psychology department at Riphah International University in Faisalabad authorized the research team to begin gathering data. The goals of the study were explained to each research subject. The study only included participants who cooperatively fulfilled the inclusion criteria. Participants were told they could leave the study at any time without facing any repercussions and that no information they submitted would be shared with outside parties. Following that, questionnaires were given to the young participants to fill out. Every participant completed the questionnaires and tests on their own. The suggested hypotheses of the current study were assessed using descriptive statistics, Pearson correlation, and t-test using SPSS version 26.

Ethical Considerations

Before beginning any work on the project, the Advanced Studies and Research Board examined and approved the study's objectives, protocols, and resources. The research proposal was approved by the A.S.R.B. and then sent to the Ethical Review Board (ERB) of Riphah International University for additional ethical clearance before beginning data collection. Throughout the study, every suggestion and piece of advice from the two boards was carefully taken into consideration. This study closely followed the four primary ethical precepts of competence, responsibility, individual rights, and dignity. Additionally, if all conditions are satisfied, the relevant authors or authorities have granted copyrights to all psychological scales used in this study.

RESULTS AND DISCUSSION

The data analysis of the study is presented in this chapter. All the calculations were done in SPSS 20.0 (Statistical Package for the Social Sciences).

Table 1: *Results of Cronbach Reliability*

Sr no	Scales	Cronbach ‘s alpha	No of items
1	Perceived social support	0.76	12
2	Coping Strategies	0.74	28

Table 2: *Frequency Results of Demographic Characteristics (N=300)*

Demographics	***F***	**%**
Gender	-	-
Male	317	100%
Education	-	-
Intermediate	10	2%
Graduate	211	42%
Post-Graduate	96	54%
Residence	-	-
Rural	57	6%
Urban	260	94%
Marital Status	-	-
Married	277	87.9%
Unmarried	40	9.2%
Job experience	-	-
1-3 years	211	76.9%
3-5 years	80	18%
5-7 years	17	4.1%
8 years	9	1%

Note: f= Number of Respondents, %= Percentage

Demographic Information of the entire data is presented in table .2 for their gender, education, marital status, family system and job experience. It includes frequency and percentage, meanwhile it does not contain mean and standard deviation because the data is non-numeric.

Hypothesis No 1:

Perceived social support would be a significant predictor of The Post Traumatic Stress Disorder Symptoms among rescuers workers.

Table 3: *Model Summary of Linear Regression*

Predictor	**R^2 Sig**	**Adjusted R^2**	**F**
Perceived social support	.65 .000	.64	18.727

[a] *predictor (constant): Perceived social support*

Table 4: *Coefficient of linear regression analysis with Perceived social support as apredictor of PTSD Symptoms among rescue workers.*

Model	**B**	**SE B**	***β***	**T**	**Sig**
Constant	1.642	.362		4.204	.000
Perceived Social Support	.425	.023	.812	24.5	.000

These tables show the model summary of the variable and the main predict of the study among rescue workers. The table also shows the R square, adjusted r square and sig of the Estimate. These findings indicate a Perceived social support statistically significant predictor of PTSD symptoms among rescue workers.

Hypothesis No 2:
Coping Strategies would mediate the relationship between perceived Social Support and symptoms of PTSD among emergency workers

Table 4.6: *This table summaries Coping Strategies mediating the relationship between perceived Social Support and symptoms of PTSD among emergency workers*

Variable	B	95%CI	SEB	Beta	R^2	Ad R^2	Sig
Step 1					0.43	0.43*	.000
Constant	-10.23*	[-13.23, 7.236]	1.32				.000
Perceived Social Support	0.29*	[0.26, -.317]	0.04	0.674*			.000
Step 2					.69	.26*	.000
Constant	-4.23*	[-6.46, 2.005]	1.13				.000
Perceived Social Support	0.11*	[0.84, 0.136]	0.13	.25*			.000
Coping Strategies	0.59*	[0.541, 0.650]	0.28	.66*			.000

Dependent Variable= PTSD Symptoms
Note: p<.05
Step 1's R^2 score of 43 indicated that Self-compassion explained 43% variance with PTSD Symptoms (p .05). The Step 2 R^2 value of 69 explained 69% variance with Coping Strategies (p .05)

Discussion
Rescue workers are at high risk of developing mental health problems as a consequence of their high level of exposure to traumatic incidents (Benedek, Fullerton, & Ursano, 2007; McFarlane & Bryant, 2007). Two systematic reviews of posttraumatic stress disorder after disasters showed that the highest prevalence of posttraumatic stress disorder was found among survivors and rescue workers (Galea, et al., 2005; Neria, et al., 2008). Morespecifically, the prevalence of posttraumatic stress disorder among rescue workers ranges between 10% and 20%. These findings support the notion that may be considered –victimsǁ of a disaster. Although we have described the prevalence of PTSD in rescuers in general, these workers were found to be highly heterogeneous regarding sociodemographic characteristics, assigned duties, and type and frequency of exposure to traumatic events. They comprised different occupational groups that are thought to be associated with varying levels of risk for developing PTSD. Our results support previous observations that rescue workers have the highest prevalence of PTSD among all occupational groups (Marmar et al., 1996).
This difference in prevalence estimates may be explained by the fact that rescue workers are exposed to greater pressure and stress at work than other teams. Rescue Workers respond to more emergency calls than police officers and firefighters combined and have closer contact with the victims, a fact that may foster the process of identification and potentially increase the feelings of guilt when they fail in their attempts to help them. Studies also found that rescuers from Asia had higher prevalence estimates of PTSD than rescuers from Europe. However, six out of the seven Asian samples were assessed after an earthquake and floods. Because earthquakes and floods are the natural disasters most capable of causing widespread destruction, and consequently, result in major human and economic losses they are also conceivably the most traumatizing events (Shafique et al., 2008).
In addition, it is conceivable that the exposure of almost all samples of rescuers to disasters of such magnitude can account, at least partially, for the higher PTSD prevalence observed in these workers. In addition, other variables may contribute to the higher PTSD prevalence found among Asian rescuers as compared to Europeans. For instance, differences in financial compensation policies and in the

amount and type of psychological support provided could influence rescuer ‘s resilience (Udomratn, 2008).

Some of our negative results warrant further consideration. First, we found no association between gender composition and the prevalence of PTSD. It may seem counterintuitive, because female gender has been consistently associated with the risk of developing PTSD in the general population (Tolin et al., 2006).

Negative coping style is mainly expressed as evasion, yield, fantasy and repression. A negative state of mind and emotion often results in a series of changes in physiological functions, such as insomnia, fatigue, loss of appetite, distractibility and slow response, which further result in mental fatigue, reduced efficiency and error proneness. These behaviors in turn weaken self-confidence and worsen negative emotional experiences.A negative coping style is associated with the incidence of cancer, and negative coping is stably correlated with psychosomatic symptoms as well as a variety of diseases. In contrast, positive coping is a positive approach used when people actively search for the solution to a problem. Individuals who demonstrate positive coping tend to adapt well to a stressful environment and actively seek help and relief, which can change their subjectiveperception, boost resilience and improve mood. From the univariate analysis of post- traumatic stress disorder risk factors in our study, we observed a positive correlation between post-traumatic stress disorder and negative coping, which is consistent with previous reports (Zhu, 2003).

Several studies have reported the relationship between coping styles and PTSS in clinical populations with PTSD, but data are scarcer regarding emotional dysregulation and mechanisms of coping in non-clinical samples. To our knowledge, only investigated the association between habitual coping styles and PTSD severity in non-clinical college students, showing that avoidant emotion coping and lack of social support predicted PTSS, respectively. These non-clinical samples may be advantageous since it minimizes confounding factors such as comorbidities and medication use, allowing a more precise and accurate comparison with data yielded in different studies.

As shown by 1st hypothesis, several studies also explored the relationship between perceived social support and both positive and negative coping strategies. Most commonly, the studies considered avoidance or denial. ‗Avoidance coping ‘, i.e. deliberate avoidance of traumatic thoughts, was associated with greater psychological distress and predicted traumatic stress. Avoidant thoughts appeared to predict PTSD more strongly in fire-fighters with low exposure than intense exposure. In terms of positive coping mechanisms, ‗proactive coping ‘and positive thinking were associated with post-traumatic growth. Another study found that confrontive coping, distancing and planned problem-solving significantly reduced the effect of direct rescue effortinvolvement on general psychiatric morbidity. Only one study found no significant relationship between coping strategies and outcomes. (Tucker, 2002).

Validating our 2nd hypothesis, some studies have reported an association between coping styles and PTSD. For example, Cofini et al., (2015) showed that adults with PTSD have used more maladaptive coping strategies (denial, venting, behavioral disengagement, and self- blame) in dealing with an earthquake ‘s stressful impact. Other studies reported a strong association between avoidant coping styles and higher levels of PTSD in female victims of physical and sexual assault. In the same vein, studies showed that individuals with emotion regulation difficulties scored higher on PTSD.

Social support has a buffering effect on stressors and plays an important role in maintaining good emotional experiences. In the post-traumatic stress disorder survey of Yantai salvage soldiers, post-traumatic stress disorder occurrence was associated with social support, self-characteristics, the level of content and experiences. In general, increasing socialsupport, such as improving the methods of superiors and actively seeking social support can reduce the occurrence of post-traumatic stress disorder. The survey in Shangyi, Zhangbei 3 months after the local earthquake found that post-traumatic stress disorder incidence was closely related to social support. Many researchers believe that good social support is beneficial for health, while the presence of inferior social relations does harm to physical and mental health. Social support on one hand protects the individuals under stress (i.e. buffering effect), and on the other hand is of great significance in maintaining good emotional experiences. The present study found that post-traumatic stress disorder and low socialsupport were positively correlated, which is consistent with previous results. Among all the factors in our study, low social support had the largest post-traumatic stress disorder (Chowdhury, 2011).

Considering the literature, emotion dysregulation and the use of poor and inadequate coping styles while facing a stressor represent risk factors that enhance the probability of developing posttraumatic stress symptoms (PTSD). According to Lazarus and Folkman,coping interferes with one ‘s ability to resist a trauma, probably attenuating stress responses.In fact, the use of adaptive coping skills is part of the treatment of patients with PTSD and helps to alleviate PTSD following a traumatic experience. Coping refers to cognitive and behavioral efforts to manage the internal and external demands of the interaction between the individual and the environment. Basically, coping styles can be classified into problem- focused coping (e.g., dealing with stress sources and taking proactive steps to change them) and emotion-focused coping (e.g., regulating one ‘s emotion to reduce stress). Additionally, coping styles can also be classified as adaptive/functional and maladaptive/dysfunctional. Adaptive coping styles (e.g., cognitively reframing a stressor) are strategies focused onreducing stress or eliminating the stressor and are related to positive outcomes such asoptimism, high self-esteem, and resilience. In contrast, dysfunctional coping styles (e.g., denial) have questionable value in reducing stress or eliminating the stressor, and they are related to poor outcomes such as high trait anxiety, low self-esteem, low optimism, low resilience, and high PTSD severity.

we found that the prevalence of PTSD in rescue workers investigated after the exposure to the same major disaster were not significantly different from that of rescuers investigated in their daily occupational routine, where they are repeatedly exposed to traumatic events of less magnitude, but not necessarily to a major disaster. A possibleexplanation for this counterintuitive finding can be found in the ―buffering hypothesis**‖**, according to which social support received during times of intense stress may reduce the psychological impact of traumatic events.

Several studies have shown that reappraisal, considered an adaptive coping strategy, can downregulate brain responses to negative stimuli; this is especially important in those with higher PTSD symptom severity since they often show greater electrocortical and brain hyperactivation in response to negative traumatic and non-traumatic stimuli. Thus, our main goal was to investigate whether the habitual use of different coping styles would be associated with PTSD in a non-clinical sample. Our hypothesis was that habitual use of adaptive coping would be associated with better outcomes, while dysfunctional coping would be related to higher PTSD. Our secondary goal was to compare two statistical approaches: TheFrequentist and Bayesian analyses. This is important because one current issue in our scientific community is the replication of findings due to low power and the use of statistical methods that are not adequate for the analyses.

It is conceivable that major disasters, as compared to relatively minor, isolated incidents, may activate social networks to a greater degree, providing rescue workers with increased social support. This finding, taken together with the high prevalence of PTSD reported in the present study, highlights the importance of implementing continuous effective preventive measures for PTSD, such as stepped collaborative care and cognitive behavioral therapy for acute stress disorder, in the work environment of rescue workers instead of only in the aftermath of a disaster.

A literature review showed that the prevalence of PTSD in rescue workers in generalis 10%. Although several researchers have described rescue operations as an occupational hazard for the development of PTSD (Fullerton, 2004). Several studies to estimate the PTSD prevalence among rescue workers and to determine its correlates. The current prevalence we found, 10%, is higher than both 1.3–3.5% reported in the general population from diverse countries. These comparisons confirm that rescue workers are a high-risk group for the development of PTSD. However, even the high PTSD prevalence found in the present study probably underestimates the real magnitude of the problem, because traumatized rescueworkers have increased sick leaves and tend to retire prematurely thus becoming unavailable for studies that investigate only active workers (Berger et al., 2007).

Limitations

Our findings should be interpreted within the context of some limitations. No doubt, this dissertation has been designed in a different way and contributes theoretically with its findings but it also includes some limitations that could be taken into account in future work.

First, our literature search was performed in only electronic databases, a fact that may have precluded us from identifying all studies on this topic. Nevertheless, the chosen databases are among the most relevant and representative sources in the field of mental health, which is the largest database of publications on PTSD in the world. Further, we also performed hand searching and had direct contact

with authors and experts. Even if any study was left aside by our search, it is unlikely to have a large influence on our conclusions. Second, in an attempt to reduce the heterogeneity and to base our results on the best scientificevidence available we decided to be very rigorous in our studies selection. It is not ageneralized study and can be generalized by taking a broader sample. The time frame was limited to conduct the research. A mono data collection method was used in the study.

Despite these limitations, we were able to demonstrate that rescue workers in general have a current prevalence of PTSD that is much higher than that of the general population. These results indicate the need for improving pre-employment strategies to select the most resilient individuals for rescue work, to implement continuous preventive measures for personnel, and to promote educational campaigns about PTSD and its therapeutic possibilitiesin order to help rescuers become more aware of this disorder and make them more comfortable to talk about it and seek treatment. Additional studies are also necessary to address other relevant issues such as the prevalence of partial PTSD, and what are the most effective measures to prevent PTSD and other disorders in this population.

The results show significant correlation between coping strategies and PTSD among rescue workers. The results of the Pearson product-moment correlation showed that Coping Strategies negatively correlate with PTSD among rescue workers. The value of the negative correlation among coping strategies and PTSD is (.10). Which is not a significant value. On the other hand, perceived social support had a significant relationship with coping strategies and PTSD among rescue workers. Correlation is significant at the 0.01 level with .88** for coping strategies and .56** significantly correlated with PTSD.

REFERENCES

[1] Alexander, D. A., & Wells, A. (1991). Reactions of police officers to body-handling after a major disaster a before-and-after comparison. *The British Journal of Psychiatry*, *159*(4), 547-555.

[2] Alyana, S. I., Fatima, U., Farwa U &; Saeed, R., (2023) Psychological distress and job satisfaction among health care professionals in post covid-19 era. Pakistan Journal of Psychology, 53(02), 35-46.

[3] Anjum, W., Munawar, N., Habib, S., Watto, S. A., Alyana, S. I. (2022) Linking Psychological Well-Being to Coping Strategies: The Moderating Role of Perceived Academic Stress Among Undergraduate University Students. Webology, 19(1), 8559-8572.

[4] Benedek, D. M., Fullerton, C., & Ursano, R. J. (2007). First responders: mental healthconsequences of natural and human-made disasters for public health and public safety workers. *Annu. Rev. Public Health*, *28*, 55-68.

[5] Berger, W., Figueira, I., Maurat, A. M., Bucassio, E. P., Vieira, I., Jardim, S. R., ... & Mendlowicz, M. V. (2007). Partial and full PTSD in Brazilian ambulance workers: prevalence and impact on health and on quality of life. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *20*(4), 637-642.

[6] Blum, R. W. (2014). Robert Wm. Blum: An Autobiography. In *The Developmental Scienceof Adolescence* Psychology Press, 29-45.

[7] Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of consulting and clinical psychology*, *68*(5), 748–766.

[8] Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of consulting and clinical psychology*, *68*(5), 748–766.

[9] Bryant, R. A. (2016). Social attachments and traumatic stress. *European Journal of Psychotraumatology*, *7*(1), 29065.

[10] Carlson, D. S., & Perrewé, P. L. (1999). The role of social support in the stressor-strain relationship: An examination of work-family conflict. *Journal of management*, *25*(4), 513-540.

[11] Chao, R. C. L. (2012). Managing perceived stress among college students: The roles of socialsupport and dysfunctional coping. *Journal of college counseling*, *15*(1), 5-21.

[12] Chowdhury, G. G., & Chowdhury, S. (2011). *Information users and usability in the digital age*. Facet publishing.

[13] Clohessy, S., & Ehlers, A. (1999). PTSD symptoms, response to intrusive memories and coping in

ambulance service workers. *British journal of clinical psychology*, *38*(3), 251-265.
[14]Cofini, V., Carbonelli, A., Cecilia, M. R., Binkin, N., & di Orio, F. (2015). Post-traumatic stress disorder and coping in a sample of adult survivors of the Italian earthquake. *Psychiatry research*, *229*(1-2), 353-358.
[15]Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological bulletin*, *98*(2), 310–357.
[16]Cukor, J., Wyka, K., Mello, B., Olden, M., Jayasinghe, N., Roberts, J., ... & Difede, J. (2011).The longitudinal course of PTSD among disaster workers deployed to the World Trade Center following the attacks of September 11th. *Journal of traumatic stress*, *24*(5), 506-514.
[17]Dias, C., Cruz, J. F., & Fonseca, A. M. (2012). The relationship between multidimensional competitive anxiety, cognitive threat appraisal, and coping strategies: A multi-sport study. *International Journal of Sport and Exercise Psychology*, *10*(1), 52-65.
[18]Ditlevsen, D. N., & Elklit, A. (2012). Gender, trauma type, and PTSD prevalence: a re- analysis of 18 nordic convenience samples. *Annals of general psychiatry*, *11*, 1-6.
[19]Duckworth, D. H. (1986). Psychological problems arising from disaster work. *Stress Medicine*, *2*(4), 315-323.
[20]Dworkin, E. R., Menon, S. V., Bystrynski, J., & Allen, N. E. (2018). Sexual assault. *Stress Medicine*, *2*(4), 15-23.
[21]Ersland, S., Weisæth, L., & Sund, A. (1989). The stress upon rescures involved in an oil rig disaster.—Alexander L. Kielland‖ 1980. *Acta Psychiatrica Scandinavica*, *80*, 38-49.
[22]Fedroff, I. C., Taylor, S., Asmundson, G. J., & Koch, W. J. (2000). Cognitive factors in traumatic stress reactions: Predicting PTSD symptoms from anxiety sensitivity and beliefs about harmful events. *Behavioural and Cognitive Psychotherapy*, *28*(1), 5-15.
[23]Galea, S., Nandi, A., & Vlahov, D. (2005). The epidemiology of post-traumatic stress disorder after disasters. *Epidemiologic reviews*, *27*(1), 78-91.
[24]Glaser, J. K., Glaser, R., Williger, D., Stout, J., Messick, G., Sheppard, S., ... & Donnerberg, R. (1985). Psychosocial enhancement of immunocompetence in a geriatric population. *Health Psychology*, *4*(1), 25–41.
[25]Guay, R. P. & Kristof-Brown, A. (2011). Person–environment fit. In S. Zedeck (Ed.), APA
[26]handbook of industrial and organizational psychology, Maintaining, expanding, and contracting the organization *American Psychological Association,* 3-50.
[27]Hobfoll, S. E., & Stephens, M. A. P. (1990). Social support during extreme stress: Consequences and intervention. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Social support: An interactional view* John Wiley & Sons, 454-481.
[28]Hollifield, M., Toolson, E. C., Verbillis-Kolp, S., Farmer, B., Yamazaki, J., Woldehaimanot, T., & Holland, A. (2016). Effective screening for emotional distress in refugees: the refugee health screener. *The Journal of Nervous and Mental Disease*, *204*(4), 247- 253.
[29]Jamal, Y., & Niloferfarooqi, Y. (2016). Professional life stress and coping strategies used by house-job doctors. *Studies on Ethno-Medicine*, *10*(2), 132-139.
[30]Janka, A., & Duschek, S. (2018). Self-reported stress and psychophysiological reactivity in paramedics. *Anxiety, Stress, & Coping*, *31*(4), 402-417.
[31]Kalia, M. (2002). Assessing the economic impact of stress, the modern day hidden epidemic. *Metabolism-Clinical and Experimental*, *51*(6), 49-53.
[32]Kraemer, H. C., Stice, E., Kazdin, A., Offord, D., & Kupfer, D. (2001). How do risk factors work together? Mediators, moderators, and independent, overlapping, and proxy risk factors. *American journal of psychiatry*, *158*(6), 848-856.
[33]Lazarus R. S., & Folkman S. (1984). *Stress, Appraisal and Coping*. New York: Springer.
[34]Maercker, A. & Horn, S. (2013). Proposals for mental disorders specifically associated with stress inthe International Classification of Diseases-11. *The Lancet*, *381*(9878), 1683-1685.
[35]Marmar, C. R., McCaslin, S. E., Metzler, T. J., Best, S., Weiss, D. S., Fagan, J., ... & Neylan, (2006). Predictors of posttraumatic stress in police and other firstresponders. *Annals of the New York Academy of Sciences*, *1071*(1), 1-18.
[36]Marmar, C. R., Weiss, D. S., Metzler, T. J., Ronfeldt, H. M., & Foreman, C. (1996). Stress responses

of emergency services personnel to the Loma Prieta earthquake Interstate 880 freeway collapse and control traumatic incidents. *Journal of traumatic stress*, *9*(1), 63-85.

[37]McFarlane, A. C., & Bryant, R. A. (2007). Post-traumatic stress disorder in occupational settings: anticipating and managing the risk. *Occupational Medicine*, *57*(6), 404-410.

[38]Neria, Y., Nandi, A., & Galea, S. (2008). Post-traumatic stress disorder following disasters: a systematic review. *Psychological medicine*, *38*(4), 467-480.

[39]Norris, F. H., & Kaniasty, K. (1996). Received and perceived social support in times ofstress: a test of the social support deterioration deterrence model. *Journal of personality and social psychology*, *71*(3), 498.

[40]North, C. S., Tivis, L., McMillen, J. C., Pfefferbaum, B., Cox, J., Spitznagel, E. L., ... & Smith, E. M. (2002). Coping, functioning, and adjustment of rescue workers after the Oklahoma City bombing. *Journal of Traumatic Stress: Official Publication of the International Society for Traumatic Stress Studies*, *15*(3), 171-175.

[41]North, C. S., Tivis, L., McMillen, J. C., Pfefferbaum, B., Cox, J., Spitznagel, E. L., ... & Smith, E. M. (2002). Coping, functioning, and adjustment of rescue workers after the Oklahoma City bombing. *Journal of Traumatic Stress: Official Publication of the International Society for Traumatic Stress Studies*, *15*(3), 171-175.

[42]Ozer, S. P., & Roth, W. T. (2000). Psychophysiological assessment: Clinical applications for PTSD. *Journal of affective Disorders*, *61*(3), 225-240.

[43]Pruitt, L. D., & Zoellner, L. A. (2008). The impact of social support: An analogue investigation of the aftermath of trauma exposure. *Journal of anxiety disorders*, *22*(2),253-262.

[44]Regehr, C., Hill, J., & Glancy, G. D. (2000). Individual predictors of traumatic reactions in firefighters. *The Journal of nervous and mental disease*, *188*(6), 333-339.

[45]Ronnie, J. (1992). *Shattered Assumptions: Towards a New Psychology of Trauma*. NewYork: Free Press.

[46]Santini, F. O., Lübeck, R. M., & Sampaio, C. H. (2015). Promoção de desconto: Seus efeitos na compra por impulso e nas intenções de recompra. *Gestão & Planejamento- G&P*, *15*(3).

[47]Schnider, K. R., Elhai, J. D., & Gray, M. J. (2007). Coping style use predicts posttraumatic stress and complicated grief symptom severity among college students reporting a traumatic loss. *Journal of Counseling Psychology*, *54*(3), 344-350.

[48]Shafique, M., van der Meijde, M., Kerle, N., & van der Meer, F. (2008). Impact of topographic parameters on seismic amplification applying Geospatial tools. In *RemoteSensing for a Changing Europe: Proceedings of the 28th Symposium of the European Association of Remote Sensing Laboratories, Istanbul, Turkey, 2-5 June 2008*, IOS Press, 386-390.

[49]Shalev, A., Liberzon, I., & Marmar, C. (2017). Post-traumatic stress disorder. *New England journal of medicine*, *376*(25), 2459-2469.

[50]Stranks, J. (2005). *Human factors and behavioural safety*. Routledge.

[51]Tolin, D. F., & Foa, E. B. (2006). Sex differences in trauma and posttraumatic stress disorder:A quantitative review of 25 years of research. *Psychological Bulletin*, *132*(6), 959– 992.

[52]Tucker, C. M., Zayco, R. A., Herman, K. C., Reinke, W. M., Trujillo, M., Carraway, K., ... & Ivery, P. D. (2002). Teacher and child variables as predictors of academic engagementamong low-income African American children. *Psychology in the Schools*, *39*(4), 477-488.

[53]Udomratn, P., & Srisurapanont, M. (2016). Psychiatry in Thailand. In D. Bhugra, S. Tse, R. Ng, & N. Takei (Eds.), *Routledge handbook of psychiatry in Asia* Routledge/Taylor &Francis Group, 300-309.

[54]Vogt, N. M., Kerby, R. L., Dill-McFarland, K. A., Harding, S. J., Merluzzi, A. P., Johnson, S.C., ... & Rey, F. E. (2017). Gut microbiome alterations in Alzheimer ‘s disease. *Scientific reports*, *7*(1), 13537.

[55]Wadsworth, L. L., & Owens, B. P. (2007). The effects of social support on work–family enhancement and work–family conflict in the public sector. *Public Administration Review*, *67*(1), 75-87.

[56]Yamaç, Ö. (2009) *The Relationship Between University Students' Perceived Social Support and Stress Coping Styles*. Unpublished Master's Thesis, Selçuk University Social Sciences Institute, Educational Sciences Department, Psychological Counseling and Guidance Department, Konya.

[57]Yap, M. B. H., & Devilly, G. J. (2004). The role of perceived social support in crime victimization. *Clinical Psychology Review*, *24*(1), 1–14.

[58]Zhu, Z., Yu, C., Luo, W., Miao, Y., Lu, Z., Liu, L., & Yang, J. (2003). Accurate identificationof the pastry contained in a ceramic pot excavated from Jurou Li's grave from the Jin dynasty (1115–1234 ce) in Xi'an, Shaanxi, China. *Archaeometry*, *62*(1), 130-140.

[59]Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment*, *52*(1), 30-41.

[60]Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment*, *52*(1), 30-41.