ROLE OF PERCEIVED SOCIAL SUPPORT, RESILIENCE AND PSYCHOLOGICAL DISTRESS AMONG CARDIOVASCULAR PATIENTS

A thesis

Presented to Professional Psychology Department,

Bahria University, Islamabad Campus

In Partial Fulfillment

of the Requirement for the

Degree of Bachelor of Sciences

(BS) Psychology

By

Arooj Arshad

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&

Umama Fatima

Supervised By

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JUNE, 2022

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All praise to **Allah Almighty**, the God of all, the master of the day after, who bestowed his blessings and mercy upon us and guided us to the right path. God sent the messenger, **Muhammad (P.B.U.H)** to guide mankind from wickedness to the truth of Islam.

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Tabinda Quddus

Umama Fatima

DEDICATION

This study is wholeheartedly dedicated to our beloved parents, siblings and friends, who have been our source of inspiration and gave us strength when we thought of giving up, who continually provide us their moral, emotional and spiritual support.

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ABBREVIATIONS

CVD	Cardiovascular Diseases
MSPSS	Multidimensional Scale of Perceived Social Support
CD-RISC	Connor-Davidson Resilience Scale
DASS	Depression, Anxiety and Stress Scale
CHD	Coronary Heart Disease
TIAs	Transient Ischaemic Attacks
PAD	Peripheral Arterial Disease
MI	Myocardial Infarction
SCAD	Spontaneous Coronary Artery Dissection
PTSD	Post-Traumatic Stress Disorder
SES	Socio-Economic Status

Abstract

The present study attempts to find the role of perceived social support, resilience, and psychological distress among cardiovascular patients. The data was collected from 320 cardiac patients from different private and government hospitals of Islamabad and Rawalpindi within the age range of 35-65. Purposive and convenient sampling was used for data collection. There were three instruments that were used to measure the variables of the current study i.e., Multidimensional Scale of Perceived Social Support (MSPPS) for Perceived Social Support, Connor-Davidson Resilience Scale (CD-RISC) for Resilience and Depression, Anxiety and Stress Scale (DASS-21) for Psychological Distress. Results of the study revealed that there was a significant positive correlation between perceived social support and resilience and negative correlation with psychological distress. The results also depicted that that resilience negatively predicts depression, anxiety, and stress. There was a significant difference among male and female cardiac patients on perceived social support and resilience. There was a significant difference among employed and unemployed cardiac patients on perceived social support and resilience. There was no significant difference found between nuclear and joint family systems on perceived social support, resilience, and psychological distress. There was also no significant difference found across the levels of education on perceived social support, resilience, and psychological distress among cardiovascular patients. The current study has implications in clinical settings and for friends and family as well to provide cardiac patients with sufficient support to deal with their psychological distress and cope up with the issues. Furthermore, limitations of the study, recommendations for future research and practical implications were also discussed.

Keywords: Perceived Social Support, Resilience, Psychological Distress, Cardiovascular patients.

Chapter I

Introduction

Cardiovascular diseases (CVD's) have become one of the most common health issues of the twenty-first century. According to the reports, it is the major reason of deaths globally and an estimated 17.9 million deaths occur due to cardiovascular diseases (World Health Organization, 2020). Cardiovascular disease and Mental illness are the prime cause of mortality in the world (Hert et al., 2018).

According to WHO 2021, cardiovascular diseases can be defined as diseases that affect the heart and blood vessels. There are four types of cardiovascular diseases which includes Coronary heart disease, Strokes and Transient Ischaemic Attacks (TIAs), Peripheral arterial disease, and Aortic disease. The most common type of cardiovascular disease is coronary heart disease (CHD), which includes anginas, and heart attack (NHS, 2020). Multiple factors play a crucial role in the development of cardiovascular diseases e.g., stress, unhealthy diet, cigarette smoking, genetic factors, diabetes, blood cholesterol levels, obesity, and physical inactivity (Center for Disease Control, 2019).

The most common behavioral risk factors for cardiovascular diseases includes unhealthy diet, physical inactivity and harmful use of alcohol. The effects of these behavioral risk factors show up high blood pressure, high blood glucose, obesity and overweight. The most common symptoms of heart attack or stroke includes pain in the center of chest, arms, left shoulder and back. In addition to these, person might feel nausea, faintness, cold sweat and turning pale (World Health Organization, 2021)

Types of cardiovascular diseases

Coronary heart diseases (CHD)

CHDs are caused due to the high levels of cholesterol and blood pressure resulting in blockage or reduced flow of oxygenated blood to the heart muscles which further increases the risk of angina, heart attacks and heart failure.

Transient ischaemic attacks (TIA's)

TIA are also known as mini stroke, and they temporarily disrupt the flow of the blood to the brain.

Peripheral Arterial Disease (PAD)

PAD also known as vascular disease is caused due to the blockage in arteries that carries blood to limbs.

Aortic Disease

This is the condition in which the aorta (the largest vein which carries blood) gets weak and swollen and it sometimes gets burst. It can cause bleeding which becomes life threatening. This condition is termed as aortic aneurysm.

Cardiovascular diseases commonly start to develop from the age of 49 years (Rodgers et al., 2019), which is a crucial point of life where the decline starts the earlier period of life starts to merge with the later period of life (Lachman et al., 2015). The shift from one stage of life to another brings about many changes. At this age most people are preparing for their retirement and the realization of getting old and depending upon another individual can also

cause psychological distress. As an individual gets older his cognitive, physical, and mental health keeps deteriorating (Mitina et al., 2020).

Perceived Social support helps in adjusting to adverse events in life and helps in overcoming them. Perceived social support and resilience go hand in hand while dealing with adverse events. To overcome psychological distress, it is important perceived social support and resilience play their role at the same time.

The most common mental health problem cardiovascular patients face is psychological distress, which covers general symptoms of depression, anxiety, and stress. To overcome psychological distress perceived social support is required so that a stable psychological state can be maintained and for psychological well-being, perceived social support is an essential factor (Khatiwada et al., 2021).

This world has two types of societies: individualistic and collectivist, collectivist societies tend to have more perceived social support than individualistic societies (Cacioppo & Cacioppo, 2014). Individuals belonging to collectivist societies have greater access to friends, family support due to which psychological distress can be buffered (Li et al., 2021). Limited perceived social support can cause increased psychological distress.

Positive social support with high resilience can help face challenges of mental distress. Perceived social support plays a major role in buffering environmental and genetic vulnerabilities and becomes resilient to stress (Ozbay et al., 2007). Resilience is one of the main factors an individual might be able to come back to normal functioning when faced with adverse life events. Resilience level and perceived social support among patients with cardiac problems should be incorporated into the plan of care to improve patients' quality of life, improve psychological health, and well-being, to prevent further complications in disease (Ali & Ramamneh, 2021).

High perceived social support and higher resilience are linked with low psychological distress (Li et al., 2021). Difference exists between perception of social support and the social support received (Lindorff, 2010). Perceived Social support plays an important role against resistance and against psychological distress, a good quality perceived social support enhances resilience to psychological distress (Ozbay et al., 2007)

Increased rate of resilience is associated with greater satisfaction with life. If the person has the resilience or power of coping that will include a sense of control and will help them feel more positive. Bonanno with his colleagues has defined Resilience as a stable pathway of a healthy functioning after a highly stressful event (Bonanno, 2004; Bonanno, Westphal, & Mancini, 2011). It was found in one of the studies that resilience has emerged as a protective factor for a patient's mental health after any cardiac event (Moreno et al., 2020). There is a possibility that perceived social support and resilience upsurge or downturn the psychological distress in cardiac patients.

Resilience plays a vital role in overcoming adverse experiences. Individuals with high levels of perceived social support experience low severity symptoms of psychological distress (Lee, 2019). Middle aged individuals face more anxiety as compared to other groups as they have responsibility towards older and younger individuals (Hou et al., 2021).

Psychological distress can be a result of a stressful situation which can have physiological symptoms such as elevated blood pressure and heartbeat due to release of stress hormones, build-up of cholesterol-containing deposits in the arteries, the blood becomes thicker, and stickier which can result in blood clots. In conclusion, psychological distress in cardiovascular patients can further aggravate the disease (Huang et al., 2021)

Researchers also have proved that psychological distress can also takes part in the development of cardiovascular diseases and high levels of social support can reduce cardiovascular responses to acute psychological stressors (Thorsteinsson et al., 1998).

A study conducted on female cardiac patients to check psychological distress among them, concluded that female cardiac patients are at higher hazard of comorbid mental health problems (Edwards et al., 2019). Individuals with higher socio-economic status tend to have greater resilience (Wister, et al., 20). Individuals with lower socioeconomic status are financially burdened and face more psychological distress (Zou et al., 2020). Low levels of social support is linked with higher risk of psychological distress and marital relationships tend to influence the prior mentioned relationship (Vaingankar et al., 2020).

Employment and unemployment also play an important role in psychological distress (Wilson & Flinch, 2021). In a research, individuals with lower and average educational background had less psychological distress whereas individuals with higher educational level had higher psychological distress. Family system plays an important role in resilience and social support (Ahar & Muzaffar, 2017).

Perceived Social Support

Perceived Social support plays an important role in the physical and psychosocial well-being of individuals in two settings i.e. physical health and mental illness. Social support is considered as a “buffer effect” where social support protects against harmful effects of stress by either changing the meaning ascribed to it or by manipulating the stressor itself. Social support has therapeutic role and is also determined in the context of post-traumatic stress disorder (PTSD). Low levels of social support is also identified as a determinant of PTSD symptoms after any stress-full event. Higher levels of social support are attributed to family and significant others as compared to friends (Waqas et al., 2018).

One of the studies concluded that insufficient perceived social support and relative social isolation have been linked with increased risk of cardiovascular diseases. It is stated that socially isolated men have a higher risk of fatal coronary heart diseases as compared to socially connected men. Higher risk of stroke mortality is associated with lower levels of perceived social support. On the other side, general health, subjective well-being and psychological health can be a result of higher level of perceived social support. Having a poor social support network can lead to a stressful living environment that results in numerous negative health effects (Cadzow & Servoss, 2009).

"Social support systems" includes all those interpersonal relationships including family, friends and significant others who provide individuals with emotional, physical and cognitive assistance in troublesome situations. Social support provided by these interpersonal relationships is the best way to feel good and to improve physical health. Caretakers of patients who look after the patients sometimes feel burdened and can have negative effects on their health as well. It is found that if patients have sufficient perceived social support from friends and significant others can lead to decreasing effects on the health of caretakers (Kahriman & Zaybak, 2015).

Perceived social support states that how an individual perceives the attainability of external assistance when needed in troublesome situations. Social support from friends and family is considered the key contributor to the quality of life, functional and emotional well-being (Leung et al., 2014). High levels of perceived social support protect patients against the symptoms of depression and anxiety as well. Social support is also important for emotional health when the patients are diagnosed with chronic diseases. When there is efficient social support, patients would utilize more coping strategies resulting in less depressive symptoms (Zamanian et al., 2021).

Literature suggests that if there is an impairment in social functioning it can lead towards depressive disorder. Lower levels of perceived social support results in depressive symptoms whereas higher levels of perceived social support is linked with the cognitive reappraisal. Negative effects of depressive symptoms on perceived social support are greater for those with lower levels of cognitive reappraisal. Emotional regulation is also considered one of the key skills for maintaining perceived social support (Ericsson et al., 2021).

Social support is tied to the relationships that make an individual's social networks and individuals often choose family among the closer relationships that make up their social support network (Goldsen et al., 2017). Older adults are restricted towards smaller social networks hence resulting in lower perceptions of social support among them (Harasemiw et al., 2018).

Resilience

Resilience is the ability to bounce back from challenging situations and having skills of coping and adapting positive behavior after stressful events. Coronary heart disease (CHD) is that one chronic diseases that leads to adverse outcomes in an individual by affecting functional level. These adverse outcomes include the negative life consequences that are associated with maladaptation. In the case of CHD, when the patients have enough resilience, bouncing back from the stressful situation becomes easier and overcome from the traumatic event. Resilient patients have the capability to return back to the normal or healthy functioning of life after experiencing that event (Nahla & Ibrahim, 2022).

One of the studies examined resilience among patients with chronic diseases such as cancer, HIV/AIDS and other mental illnesses. This study found that there are some personal characteristics that are linked with resilience and being optimistic after experiencing adverse situations. Resilience is associated with the dynamic or adaptable coping styles. Polk

proposed a model of resilience that elicits the overall health conditions of patients dealing with chronic diseases and returning back to the real position after being exposed to stressing life events (Polk, 1997). There are some strategies that can enhance resilient factors such as: early intervention, self-esteem and support building, peer involvement and co-curricular activities (Edward, 2013).

Chronic diseases are linked with malfunctioning of normal life that affects the physical, mental and social aspects of patients life as these diseases are incurable resulting in undeniable stressors that may affect the patient's ability to make future plans and it becomes challenging for the patients to fulfill family, social and professional roles. Patients with chronic diseases are when encountered in different situations already existing resistance strategies do not work for them. So, resilience is the one way to deal effectively with stressors and to solve interpersonal and financial problems. The purpose of the resilience is to decrease the adverse effects of stressor (Gheshlagh et al., 2016).

Psychological Distress

Psychological distress among patients is explained as overburden of emotions due to their illness. Psychological distress is common among patients with approximately 42 to 61% of patients going through psychological distress (Feldman, 2021) CVD patients feel symptoms of depression, anxiety and stress because of their illness. The mentioned symptoms have the ability to worsen the prognosis of the CVD patients (Melle et al., 2004). Other things such as employment, family or work conflicts, loneliness and severity level of the disease are also the common cause of psychological distress among patients (Viertiö et al., 2021).

Psychological distress is very communal among patients with CVD, specifically among patients who have recently gone through myocardial infarction (MI). Spontaneous

coronary artery dissection (SCAD) is a vascular illness that can be the cause of MI. It was found in one of the studies that symptoms of depression, anxiety and stress are dominant among SCAD patients. Along with the medications SCAD patients also received therapies to reduce the symptoms of depression and anxiety. SCAD patients reported average social support that can be the leading cause of elevated symptoms of depression, anxiety and stress. Having sufficient social support can improve the quality of life (Katherine et al., 2019).

Adults with congenital heart disease (CHD), experience symptoms of depression and anxiety and face many psychological challenges. Patients with higher symptoms of depression also had higher symptoms of anxiety which depicts depression and anxiety are interlinked. Patients who reported higher levels of depression and anxiety reported reduced satisfaction with life and they were not expected to be studying or working (Gleason et al., 2019).

Literature Review

Perceived social support is vital for every individual for sustaining a good mental health and helps in decreasing the consequences of an event. The optimum level of perceived social support depends on the developmental stage of an individual is at (Ozbay et al., 2007: Stice E et al., 2004). Individuals who perceive their social support to be poor experience worse symptoms and have low resilience (Wang et al., 2018).

Perceived Social support helps an individual to deal with biological, psychological, and social stressors. Social support from friends, family members and others are significantly correlated with satisfaction of life and mental well-being (Khatiwada et al., 2021). Quality of life, whether psychological or related to social relationships, is significantly predicted by social support from family, friends, and significant others (Webster et al., 2019).

Perception of social support can be a vital predictor of distress (Drogomyretska et al., 2020). By improving the insight of perceived social support an individual's distress can be decreased, enhancing the resilience (Şahin & Ozer, 2019). Perceived social support is significantly affiliated with resilience, most South Asian countries have traditional family structure, and they get most of the perception of social support from their families (Somasundaram & Devamani, 2016).

Different strategies to manage psychological distress and increased resilience provides the cardiac patients with wellbeing (Dimsdale, 2008). Cardiac diseases have great impact psychologically as well as physiologically on an individual and resilience play an important role in overcoming such impact. Individual resilience is significantly affected by age and socioeconomic status (Liu et al., 2018).

Individuals with no prior history of Cardiac disease show more resilience; it can be due to less knowledge about the disease and procedures (Ali & Ramamneh, 2021). Psychological distress is linked with cardiovascular issues and more resilience is linked to lower risk of cardiovascular symptoms (Nishimi et al., 2021).

Disorders related to mental health are affecting people in the whole world that are creating a lot of burden globally that causes disability, lack of productivity, it even causes mortality and morbidity as well. As a matter of fact, people who are facing mental health issues are antisocial with small social networks and they face a lot of problems in their relationships too. These issues lead people towards more issues like prolonged stay at the hospital, weak immunity and they take more time to recover as compared to other patients. (Rehm & Shield, 2019).

It has also been observed that social support positively affects the outcomes in a healthy way by fixing the mood in a positive way which leads towards a better life, it expands the life span. It has been observed that these positive signs are not only in people with mental health issues but also with patients who are facing other diseases like joint pain, arthritis, and breathing related diseases like Asthma. An important update that is related to perceived social support has brought good results accompanied with willingness to get treated by those people who are facing these mental disorders (Wenn et al., 2022)

When an individual thinks about social support basically it is the concept of social resources that are available for a person in the form of their social circle, people who they interact with who make them feel attached to themselves and provide them support whenever needed. This support also falls in the category of tangible and intangible type of support as well. Tangible support means the instruments and intangible support is referred towards emotional support. PSS is derived from different sources like loved ones, colleagues, family

and friends. The support that is being received from different kinds of sources has overlapping and distinct ways for the social and health related results can be examined and determined by the quality, availability, and frequency and even the quality of the social support which is available. It has also been associated with improved results related to health. It is assumed and believed that PSS acts through the former and by the perception and understanding of the person of the support that is available. The willingness of the person and the support and encouragement which he gets when his condition is improving, and negative emotions are reducing leads towards the solution of this problem. A point that is very important in this scenario is that PSS can be influenced by multiple factors that include gender, marital and relationship status, and socio demographic background (Vainganka et al., 2020).

Literature suggests that social support is a very important tool for psychological distress. When there is social support, there are less chances of psychological distress because social support motivates a person to do better. It is observed and concluded that those who have social support from friends and family, they are more likely to be free from depression and anxiety. Furthermore, those who have high social support are more likely to have higher self-esteem (Saddique et al., 2021)

A study was conducted in 2009 in different countries, and it concluded that females were more likely to have social support as compared to males because females are more socially active, and they have many other networks whereas men only rely on their wives, and they are not open about themselves in front of anyone. So, they have less social support (Melchiorre et al., 2013).

Resilience is defined as the universal capacity that allows a person, community, or group to reduce, eliminate or overcome the effects of adversity that causes damage. Luthar

(1996) has referred to resilience as a procedure that uses positive adaptations in the framework of significant adversity. Luthar has referred to resilience as a procedure that uses positive adaptations in the framework of significant adversity. DeHaan and Hawley had explained resilience as a matter that rises through the hardships (DeHaan & Hawley, 2002). Lasarus has defined it as the ability to overcome the stress causing situations, problems, and hurdles through coping strategies to maintain the effective level of functioning and adjustment. These things related to resilience may seem to be synonymous but different researchers have defined resilience differently as per the course of their own study, theoretical framework, and orientation.

Family resilience is one of the paramount factors when it comes to resilience. It is explained as the ability of the family to stand and rebound from adversity and to become a better version that is more resourceful and powerful. Studies done in the past have explored different dimensions of family resilience which include cohesion, communication with family members and ability of the family to make adversity meaningful, keeping an outlook that is positive, utilization of economic and social resources. Though there are studies that explore the different aspects of family resilience and their impact on individual resilience. One Japanese study has found that communication among family members creates a high level of psychological resilience but cohesion among the family cannot be associated with resilience of the individual. Some scholars say that the risk characteristics or protective psychological resilience is dependent on the meaning and context of each and every element and how that individual perceives each factor. Social support, socio economic status and family resilience can be positively related with psychological resilience after controlling the clinical and demographic variables (Qiu et al., 2021).

An extensive study was conducted to check whether family type has any link with resilience, and it turned out that joint family provides good social support and thus it makes people more resilient, and they can overcome illness and difficulties (Gupta et al. 2011).

A study was conducted to investigate the association of resilience with psychological distress, and it was concluded that resilience and psychological distress have inverse relation. Higher levels of resilience are associated with lower levels of psychological distress. The people who tend to have high levels of psychological distress have low resilience and they cannot fight the disease and hence become stressed (Bacchi et al., 2017). An extensive experimental study was carried out to check the link of resilience with age. Resilience tends to decline with age. Younger adults are found more resilient than older adults because young people have less life experiences and they have not seen everything like the older ones so they are highly resilient, and they can cope up any illness whereas older people have experienced many losses and faced many difficulties, so they become less resilient, and they sometimes seen waiting for death (Ukraintseva, 2021).

Gender plays an important role in one's life and it has a greater influence on resilience. Males tend to be more resilient as compared to females because females often talk about their illness. and they get sympathy and attention, but males do not open about their problems, and they must maintain their image in front of others and thus they learn to heal up on their own and become more resilient (Sambu & Lenah, 2016).

A comparative study was conducted to explore the relationship of resilience with perceived social support. It was a convenient sampling, and the results came out to be highly significant. Resilience was highly associated with perceived social support. It is easy to fight any disease with social support and it works as back support for resilience. So higher is the social support higher is the resilience among patients (Ravindran et al., 2016).

A study was conducted to check the relationship of resilience with socioeconomic status. And it was concluded that people with high socioeconomic status have more resilience because people have more resources, and they require less effort to overcome the stress (Wister et al., 2020).

The term psychological distress includes multiple risk factors that are related to psychology of the individual that includes symptoms of depression, social dysfunction, and anxiety. These psychological issues are more often recognized as cardiac issues or mortality. SES (Socio-economic status) is also a determinant of health status. It means that cardiac issues and other health problems and diseases are associated with the lower socio-economic status of the individual. When these two factors that include high psychological distress and lower socio-economic status are present then the health outcomes are multiplied adversely. Gallo and Matthews have shed light on the fact that people who have fewer personal resources to manage stressful situations have more difficulty in managing their life. In a recent study it has been observed that more psychological stress increases mortality rate in people with less socioeconomic status as compared to people with high socioeconomic status (Lazzarino et al., 2013).

Individuals also have different levels of socio-economic status in alliance with their family's educational background, education level of their spouse or the future educational opportunities or occupation related opportunities while determining their subjective socio-economic status. Subjective socioeconomic status is lower in adults who have ill health, poor living conditions, availability of medical facilities, increased level of anxiety and depression, more chances to get cold, fever, less immunity and ability to catch viruses, angina, asthma, headache, respiratory issues, and heart attack. In all these studies that have been conducted socio economic status remains an important indicator that predicts and that when we control

objective socio-economic status and, in some scenarios, it was even a better indicator and predictor. This current research addresses the importance and utility of subjective and objective measures of socio-economic status into the studies that clarify the vital importance of material sources in comparison with the position and rank in the society for the sake of understanding the connection between social class and health (Viertiö et al., 2021).

Lower level of subjective socio-economic status (SES) is considered to affect the health of the individual if he or she has exposure to those environments where they experience more stress and events that threaten the individuals. People with low SES are more fearful, less confident, over thinkers and they get more stressed as compared to those people who have higher socio-economic status. Individuals with higher SES feel less stress and their nervous system is affected less while facing stressful situations as compared to people even facing the same kind of situation that affects people with low socioeconomic status more adversely and badly causing them panic attacks, heavy breathing, decrease in appetite and health related issues. It is also observed that people with low socio-economic status also have less resources to handle these stressful situations (Demakakos et al., 2008). An example will clarify it more that if two people of the same experience and same educational level appear for a job interview. It would be more stressful for a person with less socioeconomic status as compared with the person with high socioeconomic status. The individual with low socio-economic status would be more stressed and will already fail the job interview in his own mind due to less self-esteem and he might give wrong and confused answers to the interview panel even if he knows the right answers as he has difficulty in expressing himself. This situation is a perfect example of how he deals with his day-to-day situations in a poor manner that decreases his chances of winning in life, achieving his goals and it also affects his health. His poor health will cause more stress and will again decrease his chances of coping with stress and winning in life and living as a normal person. He will

suffer from self-doubt that causes poor health and more psychological issues. His mental, physical, and even spiritual well-being is also affected due to his poor mental and physical health that is a result of low socioeconomic status as compared to an individual with high socioeconomic status (Demakakos et al., 2008).

One study was conducted to investigate the gender difference with the perspective of psychological distress, and it was concluded that females are more easy victims to psychological distress as compared to the men (11% vs 8%). Because women have many other responsibilities and things to look after which make them more pressurized and they face issues like stress, anxiety, and depression (Viertiö et al., 2021). It was found in one of the studies that female cardiac patients are at higher risk of psychological distress (Edwards et al., 2019).

Theoretical Framework

Adler's theory

According to Adler's theory, the main criterion for mental health is a sense of belongingness and connectedness to fully develop oneself, social interaction and social involvement plays a vital role in individuals' growth (Adler,1932). An individual needs a perception of social support to feel connected with others and be able to tackle psychological distress, if there is no perception of social support the person will have compromised mental health. So, for an individual to be mentally healthy, perceived social support is required to be connected and have the resilience to tackle psychological distress.

Resilience theory

According to Resilience theory, resilience is not a personality trait but a process which enables the individual to deal with adversity in life. The perception of the nature of the

problem or stressor is not important but how the problem is handled. Resilience is defined as the person's capacity to heal and maintain that adaptive behavior which help in dealing with stressful event (Garmezy, 1991). Resilience is the ability of an individual to bounce back to a normal state when the individual faces adversity. Resilience is going back to equilibrium after a certain deviation due to a stressful situation. If there is no resilience and the individual is unable to adapt skillfully after adversity the individual will become psychologically distressed and will remain so. Resilience is an important factor that helps the individual recover from stressful events (Yasien et al., 2016).

Interpersonal Theory

The theory states that psychological distress can be the result of a person's flawed perception of social support (Carson et al., 1996). The interpersonal theory points that human are the product of their relationships with others. Due to disappointment from their past experiences, psychological distress is caused and due to this reason flawed patterns are observed in relationships. An individual's psychological wellbeing is the product of strong perception of social support and an Individual is aware that help would be available from the closed ones when needed.

Social cognitive Theory

Beck (1976) proposed social cognitive theory which states that individuals with psychological distress experience a negative view of self, world and future defining features of depression. The main theme of this theory is that an individual's thinking influences emotional and behavioral experiences. Negative thoughts directly affect the thinking patterns and behavior and may become the cause of severe depression. The cognitive triad proposed by Beck emphasized on the negative and hopeless thoughts a depressed individual experiences (Southam et al., 2011).

Pearlin's Theory of Psychological Distress

Pearlin proposed the theory in which he stated that there are no developmental stages, or these stages are not bound by age; rather it comes with stressors which come along the way of the individual. When a person learns to cope up with these stressors and adopt the change, this is the actual mental and emotional development (pearlin et al., 1987). In the current study, the population targeted was adults who were about to retire and were worried about their financial matters. And they were also worried about the social and interpersonal conflicts they would face. This would lead them to psychological distress.

Conceptual Framework

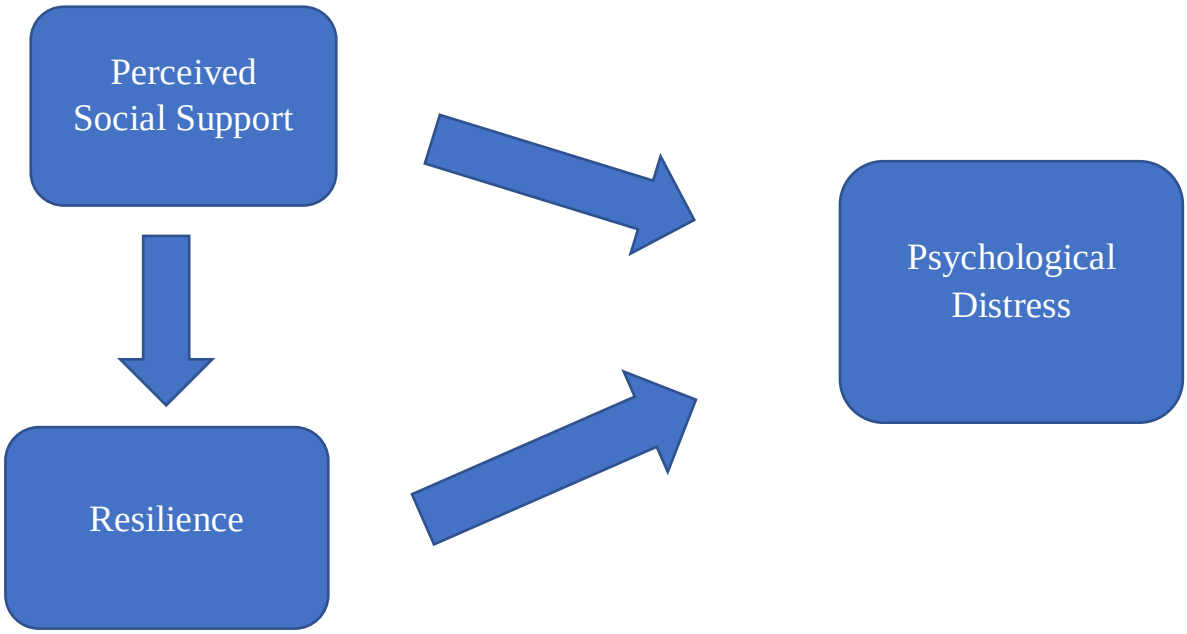

Figure 1: Self-developed model of the study.

Problem Statement

Cardiovascular patients deal with psychological distress due to their disease. How does perceived social support and resilience impact psychological distress among the patients.

Solution

Social support comes from family, friends, and significant others. If a person is socially supported, then they will be resilient and will have decreased psychological distress. If the person is socially ignored their resilience factor would automatically come to lower levels and there is a chance that they will be psychologically distressed.

Rationale

This study aimed at observing or measuring the role of psychological distress among patients with cardiovascular diseases by manipulating perceived social support and resilience. There are excessive studies on cardiac patients but still, there are some variables that need to be explored. Previous studies focused more on coronary heart diseases and there has been minimal literature on resilience among cardiac patients.

This study includes different types of cardiovascular diseases and explores the role of different variables (perceived social support, resilience, and psychological distress). Different demographic variables (gender, age, education, marital status, family system, socio-economic status and income (yearly) were taken to fill the gap regarding the broader understanding of the subject.

According to WHO reports 7,037 children who were younger than 18 years of age experienced cardiac arrest (World Health Organization, 2015). This study would be highly

beneficial for the Pakistani population because cardiovascular diseases are spreading very fast and not only old people are facing this, but younger people are also getting affected by these cardiovascular diseases. So, there is a need to explore the psychological factors that are contributory to the psychological distress of cardiac patients.

Previous studies have already revealed out a different factor which are the pathogenesis of cardiovascular diseases. Whereas this study focused on psychological factors i.e. depression, anxiety, stress and social isolation among cardiovascular patients which will be helpful for the health sectors and general masses to investigate the factors affecting the mental health of cardiovascular patients.

Research Objectives

1. To explore the relationship between Perceived Social Support, Resilience, and Psychological Distress among cardiovascular patients.

2. To find out the impact of Perceived Social Support and Resilience on Psychological Distress among Cardiovascular Patients.

3. To find out the difference in Perceived Social Support, Resilience, and Psychological Distress along the demographic variables.

Research Question

How does Perceived Social Support and Resilience impact Psychological Distress among patients with cardiovascular diseases?

Research Hypotheses

1. There will be a relationship between Perceived Social Support, Resilience, and Psychological Distress among cardiovascular patients.

2. Perceived Social Support and Resilience will predict psychological distress among cardiovascular patients.

3. There will be a difference in Perceived Social Support, Resilience and Psychological Distress among male and female cardiovascular patients.

4. There will be a difference in Perceived Social Support, Resilience and Psychological Distress among employed and unemployed cardiovascular patients.

5. There will be a difference in Perceived Social Support, Resilience and Psychological Distress among cardiovascular patients with joint and nuclear family systems.

6. There will be a difference in Perceived Social Support, Resilience and Psychological Distress among cardiovascular patients with different educational levels.

Chapter II

Method

The section includes research design, participants, inclusion and exclusion criteria, measures, operational definitions, procedure and ethical considerations in detail. This section gives information on the steps that were taken to complete this study.

Research Design

This study used a Correlational research design with the quantitative approach.

Participants

This research consisted of both male and female Cardiovascular Patients (n=320). The age range from 35-65 years was selected. Data was collected from both government and private hospitals of Rawalpindi and Islamabad. Purposive sampling technique was used to collect the data. G-power (version 3.1.9.4) was used to calculate the sample size.

Inclusion Criteria

Individuals diagnosed with cardiovascular diseases with an age range between 35 to 65 were included in the research. Data was solely collected from different government and private hospitals of Rawalpindi and Islamabad. Patients who can read and understand the national language of Pakistan (Urdu) were included in the study.

Exclusion Criteria

Individuals with any other disease than cardiovascular disease or a normal healthy person were excluded from this research.

Measures

Informed Consent Form

Consent form was given to the participants in which they were asked to participate voluntarily, and they were allowed to withdraw from the study at any point without facing any penalty. They were also told that the information provided by them will be used only for research purposes and all the information will remain confidential.

Demographic sheet

The demographic form included age, gender, education, marital status, family system, employment status, and monthly income.

Multidimensional Scale of Perceived Social Support - (MSPSS) (Zimet, Dalhem, Zimet & Farley, 1988)

MSPSS was developed by Zimet, Dalhem, Zimet, and Farley in 1988. An Urdu version of the scale was used which was translated by (Tonsing, Zimet, & Tse, 2012). This scale was used to measure perceived social support from three sources including family, friends, and significant others. It consists of 12-items in total along with three sub-scales and each of the three dimensions (family, friends, and significant others) are assessed with four items. Family subscale consists of (items 3, 4, 8, and 11), friends subscale consist of (items 6, 7, 9, and 12), and significant others subscale consists of (items 1, 2, 5, and 10). It is a 7-point Likert scale where 1 indicates *'very strongly disagree'* to 7 indicates *'very strongly agree'*. Scoring of subscales is done by summing up across all the items then dividing by 4. Total scores were obtained by summing up across all the 12 items and then dividing by 12. Cronbach's coefficient alpha reliability of the total scale was 0.87 whereas, the alpha

reliability of the family subscale was 0.87, reliability of friends subscale was 0.88 and for the subscale, significant others was also 0.88.

Connor-Davidson Resilience Scale - (CD-RISC) (Conner & Davidson, 2003)

CD-RISC was developed by Conner & Davidson (2003). It was translated into Urdu by Sajida Naz in 2011. In this study the Urdu version was used. CD-RISC was used to measure the ability to manage adversity and stress. It consists of 25 items. It is a 5-point Likert scale where 0 is '*not true at all'* to 4 is *'true nearly all the time'*. The overall score was obtained by adding up all the 25 items which gave a score that can range from 0 to 100. Lower scores indicate less resilience, and higher scores indicate more resilience. The alpha reliability of CD-RISC was 0.89.

Depression, Anxiety Stress Scale - (DASS-21) (Lovibond & Lovibond, 1995)

DASS-21 was developed by Lovibond and Lovibond in 1995 (Lovibond & Lovibond, 1995). In the present study the Urdu version of DASS was used which was translated by Naeem Aslam in 2007 (Aslam, 2007). DASS-21 is a self-report scale that consists of 3 subscales and each subscale consists of 7-items. The subscales include depression subscale (item 3, 5, 10, 13, 16, 17, 21) anxiety subscale (item 2, 4, 7, 9, 15, 19, 20) and stress subscale (item 1, 6, 8, 11, 12, 14, 18). It is a 4-point Likert scale where 0 indicates *'Did not apply to me at all'* and 3 is *'Applied to me very much or most of the time'*. Scoring of each subscale was done by summing up the score of relevant items of each subscale. A higher score in the subscale will indicate pathology level. The alpha reliability for the Depression subscale was 0.84. The reliability for the Anxiety subscale was 0.86 and for the Stress subscale was 0.83. The overall Alpha reliability for the DASS-21 Urdu version was 0.92.

Operational Definitions

Perceived Social Support

In this study, perceived social support is operationally defined as the perception of being cared for, having a support group who helps during a stressful situation in life. It gives a sense of empathetic understanding and plays an important role in maintaining the health and psychological well-being of individuals.

Resilience

The American Psychological Association has defined Resilience as the procedure of adapting skillfully during tragedy, trauma, threats, adversity, or even significant sources of stress (APA, 2014). In the current study resilience is operationally defined as the capacity of responding positively to stressful events and that capacity to recover from difficult and challenging situations.

Psychological Distress

Psychological distress is a deviation from equilibrium/ healthy mental state. It includes symptoms of stress, anxiety, and depression (Viertiö et al., 2021). In the current study, Psychological Distress is operationally defined as an emotional state in which fluctuation occurs between depressive, anxiety, and stress-like symptoms.

Procedure

The permission to conduct the research was taken from the competent authorities of Bahria University, Islamabad Campus. Permission to use the required three scales for each variable was taken from the respective authors. Different Government and private hospitals were approached along with consent and permission to collect data from their patients having

cardiovascular diseases. To collect data, instruments were compiled in a booklet form. Later, written consent was taken from every patient from whom the data was collected. All the participants were given adequate information about the study and the questionnaires. All ethical concerns were kept in mind. Concrete results were obtained using statistical analysis.

Ethical Consideration

During the whole process of the study ethical concerns were considered. Permission to conduct the research was taken from the ethical committee of Bahria University. The instruments were used after obtaining consent from the respective authors. The guidelines given by the authors were followed while administering and scoring the respective instruments. After getting the permission, questionnaires were distributed among cardiovascular patients. Then informed consent was taken from these patients regarding their willingness to be a part of this study. Proper and clear information was given about the aim of the study. They were also informed that they can withdraw from the study at any point. All the queries of the participants were properly addressed. Participants were informed that their confidentiality will be maintained. They were ensured that their information will be used only for academic and research purposes.

Chapter III

Results

After collection of data, the Statistical Package for Social Sciences (SPSS-IBM Version 25) was used to conduct statistical analysis. To compute frequency Descriptive Statistics were used, mean and percentages for socio-demographic variables. To measure the strength of relationship between variables Pearson-Product moment correlation coefficient was used. To measure the causal relationship between variables Multiple Regression was used. Non-parametric test was used as data was not normally distributed. Mann-Whitney U test was used to measure the differences among two groups. Kruskal-Wallis test was used to compare three or more groups.

Table 1

Frequencies and percentages of the demographic characteristics of sample (n=320)

Characteristics of Participants	(n)	(%)	M	SD
Age			1.90	0.78
35-45	116	36.3		
46-55	119	37.2		
56-65	85	26.6		
Gender				
Male	222	69.4		
Female	98	30.6		
Education				
Primary	13	4.1		
Secondary	10	3.1		
Matriculation	61	19.1		
Intermediate	114	35.6		
Graduate	73	22.8		

Post Graduate	44	13.8		
Doctorate	5	1.6		
Marital Status				
Unmarried	96	30.0		
Married	191	59.7		
Divorced	25	7.8		
Widow	6	1.9		
widower	2	0.6		
Family System				
Nuclear	200	62.5		
Joint	120	37.5		
Employment Status				
Employed	233	72.8		
Unemployed	87	27.2		
Monthly Income			91884.06	99376.30

Table 1 explains the descriptive statistics of participants. The sample consisted of a total of 320 patients with cardiovascular diseases. Participants with age range of 35-45 are 116 (33.3%), 46-55 are 119 (37.2%) and 56-65 are 85 (26.6%). Male patients who participated in the study are 222 (69.4%) and female patients are 98 (30.6%). Participants with primary education are 13 (4.1%), with secondary education are 10 (3.1%), with matriculation are 61 (19.1%), with intermediate are 114 (35.6%), who have done graduation are 73 (22.8%), who have done postgraduate are 44 (13.8%) and participants who have done doctorate are 5 (1.6%). Unmarried participants are 96 (30.0%), married are 191 (59.7%), divorced are 25 (7.8%), widow is 6 (1.9%), and participants who are widower are 2 (0.6%). The participants who are living in a nuclear family system are 200 (62.5%) as compared to the participants living in a joint family system who are 120 (37.5%). Employed participants are 233 (72.8%) and unemployed are 87 (27.2%). Mean of the monthly income is 91884.06 and standard deviation is 99376.30

Table 2

Psychometric properties of study variables (n= 320)

Scale	No. of items	M	SD	Range		Cronbach's alpha
				Minimum	Maximum	
MSPSS	12	4.87	1.24	1	7	.91
Family	4	4.81	1.42	1	7	.81
Friends	4	4.71	1.37	1	7	.84
SOS	4	5.18	1.46	1	7	.80
CD-RISC	25	64.34	17.13	0	99	.92
Depression	7	7.86	4.88	0	20	.81
Anxiety	7	8.21	4.66	0	21	.79
Stress	7	9.35	4.40	0	20	.75

Note. MSPSS= Multidimensional Scale of Perceived Social Support, SOS= Significant Other Subscale, CD-RISC= Connor Davidson Resilience Scale

Table 2 Illustrates the psychometric properties of scales and subscales of Perceived Social Support, Resilience and Psychological Distress. The Cronbach's α value for MSPSS is 0.91 (> 0.80) which shows high internal consistency. The Cronbach's α value for the subscales of MSPPS (family, friends and SOS) ranges from 0.80 to 0.84 respectively. The Cronbach's α value for CD-RISC is 0.92 (> 0.80) which indicates high internal consistency. The Cronbach's α value for the subscale of Psychological Distress (Depression, Anxiety and Stress) ranges from 0.75 to 0.81 respectively.

Table 3

Pearson bivariate correlation among multidimensional scale of perceived social support and its subscales, Connor Davidson Resilience scale and depression, anxiety and stress scale and its subscales (n=320)

	M	SD	1	2	3	4	5	6	7	8
MSPSS	4.87	1.24	-	.89**	.84**	.90**	.48**	-.31**	-.25**	-.18**
Family	4.81	1.42		-	.59**	.75**	.42**	-.29**	-.22**	-.16**
Friends	4.71	1.37			-	.63**	.42**	-.28**	-.25**	-.16**
SOS	5.10	1.45				-	.42**	-.26**	-.19**	-.14**
CD-RISC	64.34	17.12					-	-.29**	-.29**	-.22**
Depression	7.88	4.88						-	.82**	.74**
Anxiety	8.21	4.67							-	.74**
Stress	9.35	4.40								-

Note. MSPSS= Multidimensional Scale of Perceived Social Support, SOS= Significant Other Subscale, CD-RISC= Connor Davidson Resilience Scale

Table 3 shows the significant correlation among MSPSS, CD-RISC and DASS and their subscales. In the table, MSPSS shows significant positive correlation with Family subscale (r = .89, p<0.01), Friends subscale (r= .84, p<0.01) and SOS (r=.90, p<0.01) and is also positively correlated with CD-RISC (r= .48, p<0.01) and have significantly negative correlation with Depression (r=-.31, p<0.01), Anxiety (r= -.25, p<0.01) and Stress (r= -.18, p<0.01). Family sub scale shows positive significant correlation with Friends subscale (r= .59, p<0.01) and SOS (r= .75, p<0.01). family subscale shows significant positive correlation with

CD-RISC (r=.42, p= < 0.01). On the other hand, with Depression it has significantly negative correlation i.e. (r= -.29, p<0.01), Anxiety (r= -.22, p<0.01) and Stress (r= -.16, p<0.01). Friends subscale is in positively significant correlation with SOS (r= .63, p<0.01) and CD-RISC (r= .42, p<0.01) and is in negatively significant correlation with depression (r= -.28, p<0.01), Anxiety (r= -.25, p<0.01) and Stress (r= -.16, p<0.01). SOS shows positive significant correlation with CD-RISC (r= .42, p<0.01) and it shows negative significant correlation with Depression (r= -.26, p<0.01), Anxiety (r= -.19, p<0.01) and Stress (r= -.14, p<0.01). CD-RISC shows negative significant correlation with Depression (r= -.29, p<0.01), Anxiety (r= -.29, p<0.01) and Stress (r= -.22, p<0.01). Depression has a positive significant correlation with Anxiety (r= .82, p<0.01) and Stress (r= .74, p<0.01). Anxiety has positive significant correlation with Stress i.e. (r=.74, p<0.01).

Table 4

Multiple regression Analysis to predict Depression by Perceived Social Support and Resilience (n=320)

Predictors	*B*	SE	β	*p*	95% CI
Constants	15.60	1.18		.00	[13.28, 17.92]
Family	-.45	.29	-.13	.12	[-1.01, 0.12]
Friends	-.40	.25	-.11	.11	[-0.90, 0.10]
SOS	-.05	.29	-.16	.85	[-0.62, 0.51]
CD-RISC	-.05	.02	-.19	.00	[-0.08, -0.02]
$R= 0.36, R^2= 0.13, \Delta R^2=0.13, F= 11.50, P=.00$					

Note. SOS= Significant Other Subscale, CD-RISC= Connor Davidson Resilience Scale

Table 4 shows resilience negatively significantly predicts depression in cardiovascular patients with β=-.19. the value of R^2shows there is 13% variance in the dependent variable. The model fit is significant (F=11.50, p<.00).

Table 5

Multiple regression Analysis to predict Anxiety by Perceived Social Support and Resilience (n=320)

Predictors	***B***	**SE**	**β**	***p***	**95% CI**
Constants	14.79	1.14		.00	[12.55, 17.03]
Family	-.28	.28	-.09	.31	[-0.83, 0.26]
Friends	-.52	.24	-.15	.04	[-0.10, -0.04]
SOS	-.19	.28	.06	.49	[-0.36, 0.74]
CD_RISC	-.06	.02	-.22	.00	[-0.09, -0.03]
$R= 0.33, R^2= 0.11, \Delta R^2=0.11, F= 9.58, P=.00$					

Note. SOS= Significant Other Subscale, CD-RISC= Connor Davidson Resilience Scale

Table 5 shows friends sub-scale and resilience negatively significantly predicts anxiety among cardiovascular patients with β=-.15 for friends sub-scale and β=-.22 for resilience. the value of R^2 shows there is 11% variance in the dependent variable. The model fit is significant (F=9.58, p<.00).

Table 6

Multiple regression Analysis to predict Stress by Perceived Social Support and Resilience (n=320)

Predictors	***B***	**SE**	**β**	***p***	**95% CI**
Constants	13.88	1.10		.00	[11.71, 16.05]
Family	-.25	.27	-.08	.36	[-0.77, 0.28]
Friends	-.21	.24	-.06	.38	[-0.67, 0.26]
SOS	.12	.27	.04	.67	[-0.41, 0.65]
CD_RISC	-.05	.02	-.18	.00	[-0.08, -0.02]
$R= 0.24$, $R^2= 0.06$, $\Delta R^2=0.06$, $F= 4.88$, $P=.00$					

Note. SOS= Significant Other Subscale, CD-RISC= Connor Davidson Resilience Scale

Table 6 shows resilience negatively predicts stress in cardiovascular patients with β=-.18. the value of R^2 shows there is 6% variance in the dependent variable. The model fit is significant ($F=4.88$, $p<.00$).

Table 7

Mann Whitney U test showing differences between Male and Female gender on Perceived Social Support, Resilience and Psychological Distress (n=320)

Variables		n	Mean Ranks	U	*p*
MSPSS	Male	222	170.12	8742.0	.01
	Female	98	138.70		
Family	Male	222	168.98	8996.50	.01
	Female	98	141.30		
Friends	Male	222	167.90	9235.50	.03
	Female	98	143.74		
SOS	Male	222	169.68	8840.50	.01
	Female	98	139.71		
CD_RISC	Male	222	167.69	9282.00	.04
	Female	98	144.21		

Depression	Male	222	159.27	10604.50	.72
	Female	98	163.29		
Anxiety	Male	222	160.48	10873.5	.995
	Female	98	160.55		
Stress	Male	222	160.26	10824.5	.94
	Female	98	161.05		

Note. MSPSS= Multidimensional Scale of Perceived Social Support, SOS= Significant Other Subscale, CD-RISC= Connor Davidson Resilience Scale

Table 7 shows that male cardiovascular patients have higher perception of social support and score more on MSPSS total (Mean rank= 170.12) as compared to female cardiovascular patients (Mean Rank= 138.70), U= 8742.0 and p= 0.01. Male cardiac patients have more family support (Mean Rank = 168.98) than female cardiac patients (Mean Rank = 141.30), U= 8996.50 and p= 0.01. Similarly, male cardiac patients have more support from friends (Mean Rank = 167.90) than female cardiac patients (Mean Rank = 143.74), U = 9235.50 and p = 0.03. Male cardiac patients have more support from significant others (Mean Rank = 169.68) as compared to female cardiac patients (Mean Rank = 139.71), U = 8840.50 and p = 0.01. Resilience among male cardiac patients is more (Mean Rank = 167.69) than female cardiac patients (Mean Rank = 144.21), U = 9282.00 and p = 0.04.

Table 8

Mann Whitney U test showing difference between Employed and Unemployed on Perceived Social Support, Resilience and Psychological Distress (n=320)

Variables		N	Mean Ranks	U	*P*
MSPSS	Employed	233	171.63	7541.50	.00
	Unemployed	87	130.68		
Family	Employed	233	168.18	8346.50	.02
	Unemployed	87	139.94		
Friends	Employed	233	170.43	7821.50	.00
	Unemployed	87	133.90		
SOS	Employed	233	173.43	7182.50	.00
	Unemployed	87	126.56		
CD_RISC	Employed	233	166.95	8633.50	.04
	Unemployed	87	143.24		

Depression	Employed	233	157.89	9528.50	.41
	Unemployed	87	167.48		
Anxiety	Employed	233	160.23	10072.00	.93
	Unemployed	87	161.23		
Stress	Employed	233	158.64	9703.00	.57
	Unemployed	87	165.47		

Note. MSPSS= Multidimensional Scale of Perceived Social Support, SOS= Significant Other Subscale, CD-RISC= Connor Davidson Resilience Scale

Table 8 shows that employed cardiovascular patients have higher perception of social support and score more on MSPSS total (Mean rank= 171.63) as compared to unemployed cardiovascular patients (mean rank= 130.68), U= 7541.50 and p= 0.00. Employed cardiac patients have more family support (Mean Rank = 168.18) than unemployed cardiac patients (Mean Rank = 139.94), U= 8346.50 and p= 0.02. Similarly, employed cardiac patients have more support from friends (Mean Rank = 170.43) than unemployed cardiac patients (Mean Rank = 133.90), U = 7821.50 and p = 0.00. Employed cardiac patients have more support from significant others (Mean Rank = 173.43) as compared to unemployed cardiac patients (Mean Rank = 126.56), U = 7182.50 and p = 0.00. Resilience among employed cardiac patients is

more (Mean Rank = 166.95) than unemployed cardiac patients (Mean Rank = 143.24), U = 8633.50 and p = 0.04.

Table 9

Mann Whitney U test showing difference between Joint and Nuclear Family system on Perceived Social Support, Resilience and Psychological Distress (n=320)

Variables		n	Mean Ranks	U	*P*
MSPSS	Nuclear	200	158.58	11615.0	.63
	Joint	120	163.71		
Family	Nuclear	200	156.04	11108.50	.27
	Joint	120	167.93		
Friends	Nuclear	200	160.31	11962.0	.96
	Joint	120	160.82		
SOS	Nuclear	200	160.35	11969.0	.97
	Joint	120	160.76		
CD-RISC	Nuclear	200	157.27	11353.0	.42

	Joint	120	165.89		
Depression	Nuclear	200	161.93	11714.5	.72
	Joint	120	158.12		
Anxiety	Nuclear	200	161.61	11779.0	.78
	Joint	120	158.66		
Stress	Nuclear	200	164.45	11210.5	.32
	Joint	120	153.92		

Note. MSPSS= Multidimensional Scale of Perceived Social Support, SOS= Significant Other Sub scale, CD-RISC= Connor Davidson Resilience Scale

Table 9 shows the difference between Joint and Nuclear Family systems on Perceived Social Support, Resilience and Psychological Distress. Mann-Whitney U test predicts insignificant results as all the significance values are ($p > 0.05$).

Table 10

Kruskal-Wallis test showing difference across the levels of education on Perceived Social Support, Resilience and Psychological Distress (n=320)

variables		n	Mean Rank	K	*P*
MSPSS	Primary	13	5.8	3.27	.77
	Secondary	10	4.5		
	Matriculation	61	4.9		
	Intermediate	114	5		
	Graduate	73	5.2		
	Postgraduate	44	5.3		
	Doctorate	5	5.2		
Family	Primary	13	5.5	3.31	.77
	Secondary	10	4.7		
	Matriculation	61	5		
	Intermediate	114	4.9		
	Graduate	73	5		

	Postgraduate	44	5.6		
	Doctorate	5	5.6		
Friends	Primary	13	5.2	5.34	.5
	Secondary	10	4		
	Matriculation	61	5		
	Intermediate	114	5		
	Graduate	73	5		
	Postgraduate	44	5.2		
	Doctorate	5	3.8		
SOS	Primary	13	6.2	5.93	.43
	Secondary	10	5		
	Matriculation	61	5.2		
	Intermediate	114	5.5		
	Graduate	73	5.2		
	Postgraduate	44	5.7		

	Doctorate	5	5.5		
CD-RISC	Primary	13	60.4	10.51	.11
	Secondary	10	40.8		
	Matriculation	61	60.1		
	Intermediate	114	60.2		
	Graduate	73	60.3		
	Postgraduate	44	60.7		
	Doctorate	5	40.3		
Depression	Primary	13	5.7	4.57	.6
	Secondary	10	5.7		
	Matriculation	61	5.7		
	Intermediate	114	5.5		
	Graduate	73	5.4		
	Postgraduate	44	5.2		
	Doctorate	5	5.6		

Anxiety	Primary	13	5.7	11.37	.08
	Secondary	10	5.9		
	Matriculation	61	5.5		
	Intermediate	114	5.8		
	Graduate	73	5.4		
	Postgraduate	44	5.1		
	Doctorate	5	5.8		
Stress	Primary	13	10	3.2	.78
	Secondary	10	10		
	Matriculation	61	5.7		
	Intermediate	114	5.9		
	Graduate	73	5.6		
	Postgraduate	44	5.6		
	Doctorate	5	10.5		

Note. MSPSS= Multidimensional Scale of Perceived Social Support, SOS= Significant Other Subscale, CD-RISC= Connor Davidson Resilience Scale

Table 10 shows the difference among different educational levels and the test revealed insignificant differences as the significant values is ($p > .05$).

Chapter IV

Discussion

This study was conducted on cardiovascular patients to investigate the impact of Perceived Social Support and Resilience on Psychological Distress. There were three instruments that were used to measure the variables of this study. The Urdu version of the Multidimensional Scale of Perceived Social Support (MSPSS) was used (Tonsing, Zimet, & Tse, 2012) was to measure perceived social support from three sources including family, friends and significant others. The Urdu version of the Connor-Davidson resilience scale (CD-RISC) was used (Naz, 2011). This instrument was used to measure Resilience among cardiac patients. In order to measure psychological distress in the current study Depression, Anxiety and Stress scale (DASS-21) Urdu version was used (Aslam, 2007).

To analyze the psychometric properties of the scale, Cronbach's α was calculated. The reliability of MSPSS ranged from 0.87 to 0.88 (Tonsing, Zimet, & Tse, 2012). Whereas, in the current study the reliability of MSPSS was 0.91. The reliability of the subscales of MSPSS, family subscale was 0.87, friends subscale was 0.88 and significant others subscale was 0.88 (Tonsing, Zimet, & Tse, 2012). In the present study the reliability of family subscale, friends subscale and significant others subscale was 0.81, 0.84 and 0.80 respectively.

The Cronbach's α reliability of Connor-Davidson Resilience (CD-RISC) Scale was 0.87 (Kathryn & Conner, 2003). In the current study, the reliability of the CD-RISC was 0.92. The overall reliability of the DASS-21 scale, Urdu version was 0.92 (Aslam, 2007). Whereas, in the current study the reliability of DASS-21 ranged from 0.75 to 0.81. The reliability of subscale of DASS-21, depression subscale was 0.84, anxiety subscale was 0.86

and stress subscale was 0.83 (Aslam, 2007). In the present study the reliability of depression, anxiety and stress sub-scales were 0.81, 0.79 and 0.75 respectively.

The first hypothesis was that there will be a relationship between perceived social support, resilience and psychological distress among cardiovascular patients. Current study showed positive correlation with perceived social support and resilience and negative correlation with psychological distress among cardiovascular patients. It is also aligned with prior literature which states that perceived social support is significantly positively correlated with psychological distress. People who have supportive friends and family experience less psychological distress (Khatiwada, 2021). According to the literature, there is a positive relationship between social support and mental health (Stewart 1993). One study found out that resilience has a negative relationship with psychological distress. Higher the resilience lower will be the psychological distress (Yasien et al., 2016). Another study stated that higher levels of resilience are linked to lower levels of cardiovascular diseases (Nishimi et al., 2021). The reason behind it could be that if one has social support in life he can overcome any hardship in life. Resilience also comes with social support. Those who get social support from their friends and family form this ability to overcome life problems and as a result they have stress free life.

The second hypothesis states that perceived social support and resilience predicts psychological distress among cardiovascular patients. The current study indicated that resilience predicts depression, anxiety and stress among cardiovascular patients. According to the literature, higher is the level of resilience, lower will be the level of psychological distress (Bacchi et al., 2017). Resilience predicts the psychological distress as people who have resilience are less prone to stress because they are the people with strong

will and they know that they can fight any battle, so they take everything as a challenge and do not fall victim to psychological distress.

It was also found in the current study that friends support predicts anxiety negatively. The more the friend support the lesser will be the anxiety. It was found in one of the studies that support network (support from friends, family and significant others) was linked with the anxiety. Patients who had higher levels of social support either from friends or family had lesser symptoms of anxiety (MNSc, et al., 2002).

The third hypothesis was that there will be a gender difference in cardiovascular patients with respect to perceived social support, resilience, and psychological distress. The current study had clearly identified this difference. It was found in the present study that males have greater perceived social support (family, friends and significant others) and resilience in comparison to the females. These results are conforming with the previous literature that males significantly perceive more social support from family, friends and significant others to deal with stressful life events (Soman & Bhat, 2016). The reason could be that the males are more socially active and have a circle of friends around so they can easily perceive social support from friends. On the contrary, one of the studies conducted among women concluded that females with poor mental or physical health would have low perceived social support because women may not get the same benefits from social relationships as compared to men. This can be due to the socializing patterns or cross-cultural differences (Caetno et al., 2013).

On the other hand, males are more resilient as compared to females because according to the literature, males manage their problems on their own and they don't want anyone to know their problems, so in order to maintain their image, they become resilient, whereas females are less resilient (Sambu & Lenah, 2016). One of the studies also found that men

mostly want to appear strong as compared to women and become more resilient after facing difficult or life challenging situations (Campbell-sills et al., 2009).

Current study indicated that there was no difference among gender with respect to psychological distress. However, it was found in one of the studies that men with high levels of psychological distress are more vulnerable to ischaemic heart diseases and women with higher levels of psychological distress are more prone towards cancer moratlity (Ferraro & Nuriddin, 2006).

Fourth hypothesis was that there will be a difference in Perceived Social Support, Resilience and Psychological Distress among employed and unemployed patients with cardiovascular diseases. Current findings indicated that employed patients with cardiovascular diseases have high perception of social support from family, friends and significant others as compared to unemployed cardiac patients. The results are in line with the previous literature which found that the number of hours patients worked at a paying job they will have lower levels of depression and will have greater perceived social support because of the social circle they will have at any organization in which they are working as employees. So, higher levels of perceived social support was directly related to higher levels of psychological well-being (Aquino et al., 1996). Another study also indicated that the employed adults reported more positive social support than did the unemployed adults and those who showed positive social support will definitely lead them to fewer anxiety symptoms and there will be higher life satisfaction (Verena et al., 2006).

Current findings also indicated that employed cardiac patients are more resilient than unemployed cardiac patients. One of the studies found employment status as a predictor of resilience. Previous literature also indicated that people who worked showed higher scores in resilience than those who stayed at home (Estela et al., 2016 ; Saeed et al., 2015). Resilience

is linked with job satisfaction and those people who are happy in organizational settings are ultimately satisfied with the jobs. Then resilience will be higher among employed people because of the happy work environment and sufficient social support.

It was also found in the current study that there will be no difference in psychological distress among employed or unemployed cardiovascular patients. However, one of the studies showed that unemployment results in the increased likelihood of psychological distress (Sidorchuk et al., 2017). Because patients with cardiac diseases or any chronic illness are totally dependent on their families to take care of them either financially, emotionally or psychologically. On the other hand, employed cardiac patients face less psychological distress because they are financially independent and can easily deal with the expanses of the treatment.

Fifth hypothesis stated that there will be a difference in perceived social support, resilience and psychological distress among cardiovascular patients with joint and nuclear family systems. The results of the current study showed no differences in perceived social support, resilience and psychological distress among cardiac patients with joint or nuclear family systems. However, another study suggested that patients who live in joint family system were provided with enough social support which make them resilient and results in a satisfaction with life. Patients who were provided with the social support can easily overcome the difficulties (Gupta et al., 2011).

Sixth hypothesis stated that there will be a difference in perceived social support, resilience and psychological distress among cardiovascular patients with different educational levels. But the current study found no such differences. These results were in line with the previous literature which suggests that educational levels could not predict perceived social support. Because in most cultures women are educated but still considered as home-makers

(Nazari et al., 2015). Since, women have to maintain a balance between their education and being a homemaker. They are left behind in socializing. Whereas, in most cultures men are thought of as bread winners for the family and they have to maintain the balance between their education and being socialized to fulfil their family needs.

Conclusion

In conclusion, the results of the current study concluded that there was a significant positive correlation between perceived social support and resilience and negative correlation with psychological distress. The results also depicted that that resilience negatively predicts depression, anxiety and stress. There was a significant difference among male and female cardiac patients on perceived social support and resilience. There was a significant difference among employed and unemployed cardiac patients on perceived social support and resilience. There was no significant difference found between nuclear and joint family system on perceived social support, resilience and psychological distress. There was also no significant difference found across the levels of education on perceived social support, resilience and psychological distress among cardiovascular patients. The findings from this study can provide implications for family and friends of the patients to help them against their disease and to spread awareness regarding social support needed by cardiac patients to overcome psychological distress during the course of their disease.

Limitations

There are some limitations in the present study. Firstly, the data was collected from twin cities (Islamabad and Rawalpindi), and cardiac patients only from age 35-65 years due to this reason the findings cannot be generalized to healthy populations or other age groups. Secondly, there were more males than females so the findings cannot be generalized across all genders. The data collected was from OPD/out-patient facilities only, where most patients

were waiting for their turn to see the doctor due to this reason mood irritability was high in patients which might have influenced the results. As self-report questionnaires were used, due to this self-report biasness could be high. Most patients were not genuine with their answers because of the presence of their family members. Most confounding variables like age, gender, employment status, family system, education was controlled but the results could have residual confounding variables present such as mood on the day data was collected. Patients with any type of cardiovascular diseases were included in the study rather than focusing on specific diseases. Also, the severity of the disease was not controlled. It would have been better if the results were compared to perceived social support and resilience in healthy individuals. Pakistan is a diverse country language wise; it is possible that most individuals who responded to the questionnaire might not have Urdu as their first language which may have affected their answers. Data was collected during the holy month of Ramadan and many participants were fasting when they were asked to fill the questionnaire, during fasting mood irritability is mostly high which might have been projected on their responses.

Practical Implications

This study has an implication in the health sector, as health professionals should develop programs to overcome psychological distress that can deal with the particular crisis of cardiac patients. From a clinical point of view, this study emphasizes on the importance of perceived social support and resilience, to have lower psychological distress and provides indication for tailoring family social support-oriented intervention to work towards psychological wellbeing of Cardiovascular patients. The findings from this study can provide implications for family and friends of the patients to help them against their disease as going through the disease itself is distressing so to overcome with distress perceived social support

and resilience play an important role. To spread awareness regarding social support needed by cardiac patients to overcome psychological distress during the course of their disease.

Future Recommendation

Further studies should aim towards understanding the underlying causal relationship between Low perceived social support, resilience and psychological distress and work towards developing intervention for the patients. This study will help organizations to arrange the environments which will help cardiac patients to work effectively. It can also help families to understand the problems of people facing cardiac diseases and will enable them to provide social support to them in combating their illness. As the current study focuses on the presence of psychological distress further studies should explore coping strategies used by cardiovascular patients to overcome psychological distress. Future researchers can focus on specific heart disease for example coronary heart disease (CHD), peripheral arterial disease or aortic disease. Rather than including patients with all types of cardiovascular diseases.

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Annexures

Annexure A

Email Permission For Scales

Gmail Tabinda Quddus <tabindaq73@gmail.com>

permission of multidimensional scale of perceived social support (MSPSS) scale

2 messages

Tabinda Quddus <tabindaq73@gmail.com> Mon, Jan 17, 2022 at 5:10 PM
To: "gzimet@iu.edu" <gzimet@iu.edu>
Cc: sundasshakoorabbasi@gmail.com
Bcc: umama.fatima.uf@gmail.com

I Tabinda Quddus- student of BS psychology (7th semester) from department of professional psychology, Bahria University, Islamabad, Pakistan, I along with my classmate is about to begin my thesis on "Social Support among cardiovascular patients", under the supervision of Ms. Sundas Shakoor (Lecturer, Department of Professional Psychology). During the literature review I came across your scale "Multidimensional Scale Of Perceived Social Support (MSPSS)" in Urdu version, and after comprehensively studying it, I wanted to use this scale to measure social support in my research. Therefore, it is my humble request if you could provide us with the complete scale and scoring procedure along with the permission to use it for our study.
I will be highly grateful and will be waiting for your kind response.
Regards,
Tabinda Quddus
Department of Professional Psychology,
Bahria University,
Islamabad.

Zimet, Gregory D <gzimet@iu.edu> Tue, Jan 18, 2022 at 6:24 PM
To: Tabinda Quddus <tabindaq73@gmail.com>
Cc: "sundasshakoorabbasi@gmail.com" <sundasshakoorabbasi@gmail.com>

Dear Tabinda Quddus,

You and your classmate have my permission to use the Multidimensional Scale of Perceived Social Support (MSPSS) in your research. I have attached several documents: 1. A copy of the original English version of the scale, with scoring information on the 2nd page; 2. A document listing several articles that have reported on the reliability and validity of the MSPSS (references #19, #24, and #29 all report on Urdu versions of the scale); 3. A chapter on the MSPSS; and 4. Copies of two Urdu translations and an article on the Tonsing translation (you have my permission to use either of these translations).

I hope your research goes well.

Best regards,

Greg Zimet

Gregory D. Zimet, PhD, FSAHM

Professor of Pediatrics & Clinical Psychology

Jonathan Davidson, M.D. <jonathan.davidson@duke.edu> Mon, Mar 7, 2022 at 9:39 PM
To: Tabinda Quddus <tabindaq73@gmail.com>

Dear Tabinda,

Thank you for your payment. Can you kindly return the completed request form and signed agreement sent in January?

Please find attached the RISC-25 and related materials.

Wishing you the very best,

Jonathan Davidson

From: Tabinda Quddus <tabindaq73@gmail.com>
Sent: Monday, January 17, 2022 7:22 AM
To: mail@cd-risc.com <mail@cd-risc.com>
Cc: sundasshakoorabbasi@gmail.com <sundasshakoorabbasi@gmail.com>
Subject: permission of CD-RISC

I Tabinda Quddus- student of BS psychology (7th semester) from department of professional psychology, Bahria University, Islamabad, Pakistan, I along with my classmate is about to begin my thesis on "Resilience among cardiovascular patients", under the supervision of Ms. Sundas Shakoor (Lecturer, Department of Professional Psychology). During the literature review I came across your scale "Connor-Davidson Resilience Scale (CD-RISC)" in Urdu version, and after comprehensively studying it, I wanted to use this scale to measure social support in my research. Therefore, it is my humble request if you could provide us with the complete scale and scoring procedure along with the permission to use it for our study.
[Quoted text hidden]

---

4 attachments

Scoring the CD-RISC.pdf
254K

CD-RISC 25 Urdu 042911_CR.pdf
163K

aCD-RISC-25 01-01-20 F_CR.pdf
616K

aRISC Manual 2022_FINAL.pdf
5857K

Tabinda Quddus <tabindaq73@gmail.com> Tue, Apr 5, 2022 at 10:41 PM
To: "Jonathan Davidson, M.D." <jonathan.davidson@duke.edu>

[Quoted text hidden]

---

2 attachments

archnew doc 04-05-2022 22.17.pdf
852K

archnew doc 04-05-2022 22.18.pdf
984K

Gmail Tabinda Quddus <tabindaq73@gmail.com>

permission of DASS-21 scale

2 messages

Tabinda Quddus <tabindaq73@gmail.com> Mon, Jan 17, 2022 at 5:00 PM
To: p.lovibond@unsw.edu.au
Cc: sundasshakoorabbasi@gmail.com
Bcc: umama.fatima.uf@gmail.com

I Tabinda Quddus- student of BS psychology (7th semester) from department of professional psychology, Bahria University, Islamabad, Pakistan, I along with my classmate is about to begin my thesis on "Psychological distress among cardiovascular patients", under the supervision of Ms. Sundas Shakoor (Lecturer, Department of Professional Psychology). During the literature review I came across your scale " Depression, Anxiety and Stress scale (DASS-21)" in Urdu version, and after comprehensively studying it, I wanted to use this scale to measure psychological distress in my research. Therefore, it is my humble request if you could provide us with the complete scale and scoring procedure along with the permission to use it for our study.
I will be highly grateful and will be waiting for your kind response.
Regards,
Tabinda Quddus
Department of Professional Psychology,
Bahria University,
Islamabad.

Peter Lovibond <p.lovibond@unsw.edu.au> Wed, Jan 19, 2022 at 6:30 AM
To: Tabinda Quddus <tabindaq73@gmail.com>
Cc: "sundasshakoorabbasi@gmail.com" <sundasshakoorabbasi@gmail.com>

Dear Tabinda,

You and your classmate are welcome to use the DASS in your research. You can download the questionnaires (including translations in certain languages) and scoring key from the DASS website www.psy.unsw.edu.au/dass/ . Please also see the FAQ page on the website for further information.

Best regards,

Peter Lovibond

[Quoted text hidden]

Annexure B

Informed Consent Form

Informed Consent Form

اجازت نامہ

یہ تحقیق بحریہ یونیورسٹی اسلام آباد کیمپس میں بی۔ایس سائکالوجی کے طلباء کی طرف سے دل کی بیماریوں کے مریضوں میں سماجی مدد، لپک اور نفسیاتی پریشانی دیکھنے کے لیے کی گئی ہے اس تحقیق میں آپ کی شرکت رضاکارانہ ہے اور آپ کو یقین دہانی کاروائی جاتی ہے کہ آپ کی معلومات کو خفیہ رکھا جائے گا آپ اپنی مرضی کے مطابق کسی بھی وقت اس تحقیق سے الگ / کنارہ کش ہو سکتے ہیں آپ سے لی گئی معلومات صرف تحقیقی مقصد کے لیے استعمال ہو گی تحقیق اگلے ۲-۳ ماہ میں مکمل ہو جائے گی اگر آپ تحقیق کے نتائج میں دلچسپی رکھتے ہیں تو آپ ہم سے اس پر رابطہ کر سکتے ہیں:

ای میل Tabindaq73@gmail.com

اگر آپ تحقیق میں حصہ لینے کے لیے رضامند ہیں نیچے دی گئی جگہ پر دستخط کریں۔

_____

دستخط

آپ کی دلچسپی اور شراکت کے لیے آپ کا شکریہ۔

Annexure C

Demographic Information Form

Demographic Information Form

ذاتی کوائف

1) عمر:

2) جنس: i) مرد ii) عورت

3)تعلیم: i) پرائمری ii) سیکنڈری iii) میٹرک iv) انٹرمیڈیٹ v) گریجویٹ vi) پوسٹ گریجویٹ vii) ڈاکٹریٹ

4) ازدواجی حیثیت: i) غیر شادی شدہ ii) شادی شدہ iii) طلاق یافتہ iv) بیوہ v) رنڈوا

5) خاندانی نظام: i) انفرادی ii) مشترکہ

6) ذریعہ معاش: i) روزگار ii) بے روزگار

7) ماہانہ آمدنی:

Annexure D

Multidimensional Scale Of Perceived Social Support (MSPSS)

Questionnaire No. 1

سوالنامہ نمبر.1

مہربانی فرما کر نیچے دیے گئے سوالات کو پڑھیں اور اپنا جواب موزوں باکس میں ٹِک لگا کر کریں

		مکمل اختلاف	اختلاف	زرا سا اختلاف	نہ اختلاف ، نہ متفق	زرا سا متفق	متفق	مکمل متفق
1	جب مجھے مدد کی ضرورت ہوتی ہے تو ایک خاص فرد موجود ہوتا ہے۔	1	2	3	4	5	6	7
2	میں اپنی خوشیاں اور غم کسی خاص فر دسے شیئر کرتی / کر تا ہوں۔	1	2	3	4	5	6	7
3	میری فیملی مجھے مدد کرنے کی کوشش کرتی ہے۔	1	2	3	4	5	6	7
4	میں اپنی فیملی سے جذباتی مدد حاصل کرتی / کرتا ہوں۔	1	2	3	4	5	6	7
5	میری زندگی میں ایک ایسا فرد ہے جو صحیح معنوں میں میرے لیئے تسکین کا باعث ہے۔	1	2	3	4	5	6	7
6	میرے دوست میری مدد کرنے کی کوشش کرتے ہیں۔	1	2	3	4	5	6	7
7	مصیبت کے وقت میں اپنے دوستوں سے مدد حاصل کرتی/ کرتا ہوں۔	1	2	3	4	5	6	7
8	میں اپنے مسائل کے بارے میں اپنی فیملی سے بات کر سکتی / سکتا ہوں۔	1	2	3	4	5	6	7
9	میں اپنی خوشیاں اور غم اپنے دوستو نسے بانٹ سکتی / سکتا ہوں۔	1	2	3	4	5	6	7

10	میری زندگی میں ایک ایسا فرد ہے جو میرے جذبات کی قدر کرتا ہے۔	1	2	3	4	5	6	7
11	میری فیملی مجھے اپنی زندگی کے متعلق فیصلے کرنے میں مدد کرتی ہے۔	1	2	3	4	5	6	7
12	میں اپنے مسائل کے بارے میں اپنے دوستوں سے بات کر سکتا ہوں۔	1	2	3	4	5	6	7

Annexure E

Connor-Davidson Resilience Scale (CD-RISC)

Questionnaire No. 2

سوالنامہ نمبر-2

---------- نمبر شمار ---------- تاریخ

--------- عمر

پچھلے ایک ماہ میں اپ نے جیسا محسوس کیا ہے اس کے مطابق ہر سوال کے لکھیے اور اگر اپ کے ساتھ ایسی کوئی بات نہیں ہوئی Xدرست جواب کے سامنے تو بھی اپنی سمجھ کے مطابق ایسی صورت میں اپ کا جو جواب ہوتا وہ لکھئے

نمبرشما	سوالْ	بالکلْ غلطْ	شاذوْ نادرْہیْ درست	کسیْ حدْتکْ درست	اکثرْ درست	تقریبا مکملْ درست
1	میں تبدیلیوں کے ساتھ ڈھلنے کی صالحیت رکھتا /رکھتی ہوں	0	1	2	3	4
2	میرے پاس کم از کام ایک ایسا قریب اور محفوظ رشتہ ہے جو ذہنی دباؤ کی صورت میں میری مدد کرتا /کر تی ہے	0	1	2	3	4
3	بعض اوقات میرے مسائل کا کوئی اور حل نہیں ہوتا تو خدا اور قسمت میر ی مدد کر سکتے ہیں	0	1	2	3	4
4	میں اپنے سامنے آنے والی کسی بھی مشکل سے نمٹ سکتا /سکتی ہوں	0	1	2	3	4
5	پچھلی کامیابیاں مجھے آگے آنے والی مشکالت اور آزمائشوں میں حوصلہ فراہم کرتی ہیں	0	1	2	3	4
6	جب میرا سامنا مشکالت سے ہوتا ہے تو میں ان کے دلچسپی کے پہلوؤں کو دیکھنے کی کوشش کرتا/کرتی ہوں	0	1	2	3	4

7	ذہنی دباؤ سے چھٹکارا پالینے پر میں مضبوط تر محسوس کر سکتا /سکتی ہوں	0	1	2	3	4
8	کسی بیماری ، زخمی حالت یا مشکالت کے بعد جلد ہی بہتری کی طرف راغب ہو جاتا جاتی/ ہوں	0	1	2	3	4
9	میرا یقین ہے کہ چاہے اچھا ہو یا برا، کچھ بھی بال وجہ نہیں ہوتا	0	1	2	3	4
10	نتیجہ کچھ بھی ہو لیکن میں اپنی طرف سے بھرپور کوشش کرتا/ کرتی ہوں	0	1	2	3	4
11	مجھے اعتماد ہے کہ میں مشکالت کے باوجود اپنے مقاصد حاصل کر سکتا/سکتی ہوں	0	1	2	3	4
12	ناممکن نظر آنے والے معامالت میں بھی میں امید کا دامن ہاتھ سے نہیں چھوڑتا/چھوڑتی	0	1	2	3	4
13	ذہنی دباؤ یا کسی مشکل کی صورت میں مجھے معلوم ہوتا ہے کہ میں کہاں سے مدد حاصل کر سکتا /سکتی ہوں	0	1	2	3	4
14	دباؤ کی صورت میں میری توجہ مقصد پر قائم رہتی ہے اور درست سمت میں سوچتا سوچتی/ ہوں	0	1	2	3	4
15	میں دوسروں کی طرف سے فیصلہ کرنے کی بجائے مسائل کے حل خود تالش کرنے کو زیادہ مناسب سمجھتا /سمجھتی ہوں	0	1	2	3	4
16	میں آسانی سے ناکامیوں کی وجہ سے ہار ماننے واال/والی نہیں	0	1	2	3	4
17		0	1	2	3	4
18	میں زندگی کی مشکالت اور آزمائشوں کے سامنا کرتے وقت خود کو مظبوط تصور کرتا	0	1	2	3	4

					کرتی ہوں/	
4	3	2	1	0	میں ناخوشگوار اور تکلیف دہ احساسات مثلاً اداسی، خوف، اور غصہ پر قابو پا سکتا سکتی/ ہوں	19
4	3	2	1	0	زندگی کے مسائل حل کرتے وقت بعض اوقات اندازے کا سہارا لینا پڑتا ہے	20
4	3	2	1	0	میں یہ سمجھتا /سمجھتی ہوں کہ زندگی کا ایک خاص مقصد ہے	21
4	3	2	1	0	مجھے اپنی زندگی کے معاملات پر قابو حاصل ہے	22
4	3	2	1	0	مجھے چیلنجز پسند ہیں	23
4	3	2	1	0	چاہے جتنی مشکالت ہوں میں اپنا مقصد حاصل کرنے کی جستجو کرتا /کرتی ہوں	24
4	3	2	1	0	مجھے اپنی کامیابیوں پر فخر ہے	25

Annexure F

Depression, Anxiety And Stress Scale (Dass-21)

Questionnaire No. 3

سوالنامہ نمبر 3

نوٹ : مندرجہ ذیل بیانات میں سے ہر گزشتہ ایک ہفتے کے دورا ن آپ پر صحیح ثابت ہوں ا ن کے سامنے سد0سدسس،2،1،د 3سددمیں سے ی ا ایک کے ہندسہ پر نشان لگائیں واضح رہے کہ آپ کے جوابات کو صحیح یا غلط تصور نہیں کیا جائے گا ی ا بھی بیان پر زیادہ وقت ضائع نہ کریں

نمبر شمار	بیانا ت	کبھی نہیں 0	کبھی کبھار 1	زیادہ تر وقت 2	ہر وقت 3
1	میرے لیے پر سکون ہونا مشکل ہوتا جا ر ہا ہے				
2	مجھے یہ احساس ہوتا ر ہا ہے جیسے میرا گلہ خشک ہو رہا ہے				
3	مجھے ی ا قسم کے مثبت جذ بات محسوس نہیں ہوئے				
4	مجھے سانس لینے میں دشوا ری محسوس ہوتی رہی ہے)بغیر ی ا جسمانی مشقت والے کام کے (				
5	مجھے ی ا کام کے کرنے کے لیے آغاز کرنا مشکل ہو تا ر ہا ہے				
6	میں نے بعض حالات میں غیر ضر وری رد عمل کا ا ظہار کیا				
7	مجھے کپکپاہٹ محسوس ہوتی رہی ہے)مثلا ہاتھوں میں(				
8	میں نے محسوس کیا کہ میں بہت زیادہ ذہنی توانائی استعمال کر رہی /ر ہا ہوں				
9	میں ایسے حالا ت سے گھبراتی /گھبراتا ر ہا جن میں میرے لیے احمق بننے ا ور میر ی ے جبی بڑھنے کا خدشہ تھا				
1 1	میں اپنا مستقبل تاریک محسوس کرتی /کرتا ر ہا				
1 1	مجھے اپنے آپ میں چڑ چڑا پن محسوس ہوتا ر ہا				
1 2	میں ذہنی طور پر بے سکونی محسوس کرتا/کرتی رہی				
1 3	میں اداسی محسوس کرتی /کرتا ر ہا				

Annexure G

Permission letters

Bahria University
Discovering Knowledge

April 11, 2022

Dr. Akbar Niazi Teaching Hospital
Main Murree Road
Bara Kahu
Islamabad

REQUEST FOR DATA COLLECTION

It is stated that **Ms. Tabinda Quddus** Enrollment No. 01-171182-044 is a student of BS Psychology (8th Semester) Bahria University Islamabad Campus conducting research on "**Perceived social support, resilience and psychological distress in cardio vascular patients**" under kind supervision of Ms. Sundas Shakoor. It is requested that kindly allow her to collect the data from your esteemed institution.

Regards,

Rizwana Amin 11/4/2022

Dr. Rizwana Amin
Head of Department
Professional Psychology
Bahria University
Islamabad

Department of Professional Psychology Shangrilla Road E-8 Islamabad
Tel: 051-9260002 Ext. No. 1406 Fax: 051-9260889

Bahria University
Discovering Knowledge

April 11, 2022

The Executive Director
Rawalpindi Institute of Cardiology
Rawal Road
Rawalpindi

REQUEST FOR DATA COLLECTION

It is stated that **Ms. Umama Fatima** Enrollment No. 01-171182-046 is a student of BS Psychology (8th Semester) Bahria University Islamabad Campus conducting research on "**Perceived social support, resilience and psychological distress in cardio vascular patients**" under kind supervision of Ms. Sundas Shakoor. It is requested that kindly allow her to collect the data from your esteemed institution.

Regards,

Dr. Rizwana Amin
Head of Department
Professional Psychology
Bahria University
Islamabad

Department of Professional Psychology Shangrilla Road E-8 Islamabad
Tel: 051-9260002 Ext. No. 1406 Fax: 051-9260889

Annexure H

Plagiarism Report

ORIGINALITY REPORT

17%	12%	10%	8%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Higher Education Commission Pakistan Student Paper	4%
2	www.science.gov Internet Source	1%
3	core.ac.uk Internet Source	1%
4	www.ncbi.nlm.nih.gov Internet Source	<1%
5	journal.iaimnumetrolampung.ac.id Internet Source	<1%
6	d-scholarship.pitt.edu Internet Source	<1%
7	www.researchgate.net Internet Source	<1%
8	Kimberly R. Laurene, Geethika Kodukula, William V. Lechner, Chelsea Grega, Evelyn Lumpkin, Deric R. Kenne. "Assessment of psychological distress as a function of positive	<1%