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Prevalence of Psychological Distress among the Patients with Cardiac Issues: Gender & Marital-Status are in Focus

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ABSTRACT

Aim of the Study: Number of psychological issues has been noticed in the cardiac, kidney, diabetic and digestive patients. In fact, the psychological issue is being ignored while doing the diagnosis of medical patients. Such practice of addressing psychological distress is an ignored field particularly in Pakistan in medical settings. This research was conducted to check the prevalence of psychological distress among the individuals with cardiac issues.

Method of the Study: This study was conducted in Hospital settings with the patient belong to diversified demographic characteristics. In this research a cross-sectional research design was used. For this purpose a sample of (N=150) cardiac patients recruited by purposive sampling. The severity of psychological distress was checked by applying DASS-21 scale developed by Lovibond & Lovibond (1995). Data was analyzed by using descriptive and inferential statistics.

Findings of the Study: The study findings reported a higher prevalence of psychological distress among the cardiac patients. A gender wise comparison showed that male individuals with cardiac issues showed sever prevalence of mental distress whereas the level of anxiety was same among both genders. Furthermore, the findings showed a significant severity of distress among the individuals with Congenital Heart Disease. Similarly, the severity of depression was high among the individuals with Heart Valve Disease. Moreover, the level of anxiety was higher among individuals with Pericardial Disease.

Conclusion: Hence, it concluded that the Psychological distress is linked with the medical and cardiac issues among the patients. So it is necessary to address the psychological distress of medical patients to reduce the medical issues.

Keywords: Cardiac Issues, Anxiety, Stress, Depression, Socio-economic Status.

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Introduction

Psychological distress refers as an uncomfortable feelings or emotions that are experienced by an individual in an overwhelming state. It can also be reported as “A set of throbbing psychological and physical symptoms that are linked with normal changes in mood in most people”. Moreover, in some

instances it may lead to other psychological problems like depression, anxiety, and schizophrenia and somatization disorder. Such distress critically affects the daily life activities of the patient. This can results in negative symptoms like anxiety, sadness, and lack of interest in daily activities (Ferrara & Mark2021). When a person goes through these negative symptoms or stress, it causes adverse health outcomes and a source of different other diseases and the most common are the risk of heart diseases like strikes and ischemia. There are many sources of psychological distress such as the traumatic events like death of loved one, natural disasters, or a severe accident, work-life stress, and relationship stress. They exceed the individual's ability to cope and cause them incompetent which cause stress and then it affects physiological functioning and ultimately to the diseases that may be medical or psychological (Sherwood, 2015).

Effects of Psychological Distress

In fact life stressors, environmental changes and traumas are core cause to triggers psychological distress. Every person has a different and unique way of reacting towards distress and definitely a different coping style. Some people face the situation and use active coping strategies while other use avoidant coping style and develop anxiety and fear. The significant effects of psychological distress are Poor work performance, Hard to stay on a task, Isolation from family and friends, Poor health specially related to heart, Increase in blood pressure caused by high levels of stress, Inflammation in body, Poor or slow digestion and Increased risks of cancer, cardiovascular problems and injuries (Hussain, Mir & Ahmad , 2017).

Symptoms of Psychological Distress

Many studies reported that symptoms of psychological distress vary from person to person according to their personality, upbringing and coping styles differ from each other. Some common symptoms of psychological distress are Physical symptoms without any organic cause, Weight gain, Anger issues, Obsessions, Compulsions, Disturbed sleep, Dysfunctional working, Avoidance behaviors (Darby & Faubian. 2022).

Major Types of Stress

One realistic difference is between acute stress and chronic. Acute stressors are those threatening events that have comparatively short duration and a clear endpoint. For example, challenge of major exam. On the other hand, chronic stressors are those threatening events that have long duration and have no obvious time limit. There is a realistic difference while defining acute and chronic type of psychological distress. Acute stress refers to those causing threats for a short period of time. These include the challenging tasks, exams or achievements. On the contrary, as the time passed the acute stress transformed into chronic stress. Such stressors are long lasting without any cutoff time. Ultimately, these stresses lead to other psychopathologies such as anxiety and depression. Such as, huge credit card debts and sick family member over period of years of stress (Stowell, 2008). Psychological distress come out in different forms with physical and psychological symptoms and fear of avoidance, fatigue, lack of interest in activities, numbness, headache, loss of pleasure and many more. The types of psychological distress are Stress, Anxiety, Mood swings and neurotic disorders (Sherwood, 2015). Keeping in view the topic of exploration of this study, the most important types of psychological distress are discussed in detail.

Stress, Anxiety and Depression

Stress refers to as a non specific response of the body to virulent stimuli. Stressor is defined as any stimulus that threatens the individual homeostasis (Koolhas et al., (2011). Stress is a psychopathological response which involves biological, cognitive, and emotional components. Many human systems become permanently and temporarily disabled as a result of excessive stress, which also triggers the central nervous system's defense mechanism. The physiological reactions of the individual and the type of stress affect how the body reacts to stress. These physiological responses make changes in the functions of our immune system. The most common physiological changes are the changes in hormones and

neurotransmitters or neuro-endocrine responses (Han et al., 2012). On the other hand, anxiety refers to the unrealistic apprehension usually linked with the future or also known as an emotional state associated with fear or fearful emotions (Carlson, 2014). The most common disorder of anxiety is generalized anxiety disorder which is chronic, prevalent and debilitating disorder. It is highly prevalent disorder. It more often affects women as compared to men and occurs less in childhood. (Wittchen & Hoyer, 2001). In fact depression is prevailing throughout the world. A study revealed that millions of individuals are suffering in depressive symptoms such as sleep issues, lack of appetite, paranoid of suicidal ideations. Depression can strike in all age groups. The individuals suffering from depression usually facing social or adjustment issues (Altar, 2002). It is also called as a mood disorder characterized by extreme sadness, loss of joy, lack of motivation and feelings of worthlessness. A research reported that the depressed individuals usually socially isolated and they lose their interest in daily life activities. They cannot perform their routine activities such as job related activities and ultimately doomed in psychotic symptoms such as delusion and paranoid thinking (Mirowsky & Ross, 2003).

Literature Review

Psychological distress is recurrent mental health problem affecting people of all ages. Such distress is related with the emotions of the individuals. When the emotions disturbed this leads to the sadness, fear and other mental pathologies. Psychological distress also becomes a cause of somatic disturbances and many other chronic illnesses or syndromes which further leads to medical complications.

Among chronic illnesses, cardiac problems are becoming common now a day. In this relationship there is an intensive literature that support the variables of the study such as Hossain et al. (2020) evaluated the current corroboration on prevalence of mental disorders among cardiac people from meta-analyses. In this connection about 1277 citation and 15 reviews meet their criteria. High prevalence rates of depressive, schizophrenia and neuro-cognitive disorders were found. Furthermore, high burden of co-occurring psychological and physical health problems were also reported by this meta-analysis.

A study examined the mental issues among the individuals who were suffering in cardiac issues. For this purpose a sample of (N=130) patients with coronary issues were selected and studied. By administering different assessment scales this revealed a higher level of mental distress particularly among those with heart issues. Moreover, they also reported a sever social isolation, self negative schemas, social avoidance and also reported negative life exposure (Pignalberi et al.,2018).

A research was conducted to check the flow of mental disturbance among the individuals with various types of cardiac issues. In this regard responses were collected by doing a survey method. The core aim of this study was to assess the psychological disturbances among diagnosed individuals with heart disease. Results of their research revealed that Psychological distress was estimated to be present in 2.8% of healthy people, 10.64% of people with congestive heart failure (CHF), 6.44% of people with myocardial infarction (MI), and 4.1% of people with coronary heart disease (CHD), respectively. Moreover, the logistic regression model results showed that Myocardial Infarction and Chronic Heart Failureare remarkably associated with psychological distress. They concluded that cardiovascular disease has notable co-occurring symptoms with psychological distress Findings have implications for medical and mental health care professional to alter these outcome in case of distress intervention (Ferketich & Binkley 2005).

A study reported that the pervasiveness of psychological disorders among depressed coronary heart disease (CHD) patients having and without Type-D personality. 570 CHD patients were included. The findings showed that 84.8% of patients and among people without Type-D personality were suffered from at least one psychogenic disorder. Moreover, mental issues like social phobia , dysthymia, compulsive or avoidant personality disorder were reported by patients with Type-D personality. It was concluded that Type-D personality is linked to more severe and long-lasting mental issues in depressed CHD patients (Lambertus et al., 2017).

A study investigated the prevalence and associations between psychological distress and cardio vascular diseases to check the gender differences. During follow-up 2.8 years mean showed 18% subjects developed Cardio Vascular Disease events. Results showed that The psychological distress score and CVD events did not correlate in the general population, Higher frequency of cardiovascular disease events was related to Greater psychological distress in women, Furthermore it was concluded that women are more vulnerable to cardiovascular events in future due to higher psychological distress in past (Pimple et al., 2019).

In connection to gender an international research explored the mental distress among the cardiac patients. This was an experimental study with three months of follow-up in Sweden. Mental health status was judged by using valid and reliable tools sent to them. On the basis of the responses it revealed that women obtained lower score as compared to men. Furthermore, the men were lower on anxiety and depression score as compared to women. Greater psychological discomfort and worse health status were also substantially correlated with gender. Age and gender did not interact in any way. Researchers concluded that women need more support because adverse health status and more psychological distress was reported by them as compared to men (Issraelsson et al., 2017).

A study was conducted to address the emotional disturbances among the individuals with Atrial Fibrillation. This was a cross-sectional study and the result showed a higher level of mental and psychological disturbances among the heart patients with Atrial Fibrillation. Moreover, these patients also reported guilt feelings or negative thinking about self or others (Kupper et al., 2013).

Rationale of the Study

As stressful life events are common now a days and many individuals are becoming prey to them which cause them to develop chronic diseases and among these long term diseases, heart diseases are the most common. The increasing prevalence of cardiac problems can be explained by the role of stressful life events that aggravate chronic illnesses and make individuals unable to cope (Vierto et al. 2021). As in Pakistani perspectives rare studies are available to address this increasing issue of psychological distress among the patients. In Gilgit-Baltistan a study reported a severe depression and anxiety among the individuals with cardiac issues. Generally, it has been observed that in Pakistan the element of stress is not being addressed while diagnosing the patients whereas the stress is a silent killer or is a contributing factor in the onset of cardiac, kidney, digestive or diabetic issues. Moreover, when stressful life events happen the people become more prone to cardiac disease which further increases the chances or prevalence of psychological distress among those patients (Pignalberi et al., 2018)

As psychological distress also taking toll on human lives and their health. The aim of this study is to prospect the out-turn of stressful life events in causing psychological distress among patients with cardiac diseases. Moreover, this study also explores the prevalence of psychological distress among cardiac patients with particular focus on gender and marital status.

Implication of the Study

The current study was conducted to check the prevalence of psychological distress among cardiac patients. The results of this study revealed a higher level of psychological distress among the cardiac patients with particular emphasis on gender and marital status. The results of this study are helpful for physicians and health care professionals to address the phenomenon of psychological distress while doing diagnosis. The researches proved that stress is a contributing factor in heart, kidney and diabetic patients. Due higher level of psychological distress many individuals are suffering from heart, kidney, stomach or diabetic issues. Hence, dealing with stress will be good for managing the medical health of the patients.

Objectives of the Study

1. To find out the level of stress, depression and anxiety among individuals with cardiac problem.
2. To check the severity of stress, depression and anxiety according to the types of cardiac disease.

3. To compare the severity of stress, depression and anxiety as per gender and marital status of cardiac patients.

Hypotheses of the Study

1. Level of stress, depression and anxiety would be higher among the individuals with cardiac problems.
2. Level of stress, depression and anxiety would vary as per the type of cardiac issue.
3. Level of stress, depression and anxiety would vary as per their gender and marital status.

Method of the Study

This study was aimed to check the prevalence of psychological distress among the cardiac patients with particular focus on gender, marital status and their socio-economic status. In this connection the following is the methodology used to carry out the study.

Participants

In this study more than two hundred patients with cardiac issues were approached out of which only were (N=150) including both male and female with equal percentage of (50%).

Research Design

It was a quantitative research in which cross-sectional research design was used in order to investigate the prevalence of psychological distress among people with cardiac diseases. To calculate the sample of interest, purposive sampling strategy was used.

Research Instruments

The data was collected by using the following research tools.

Depression Anxiety Stress Scale (DASS-21)

Depression, anxiety and stress scale (DASS-21) was developed by Lovibond and Lovibond (1995). This research tool was used to asses these three forms of psychological distress in cardiac patients. It has 21 items with internal consistency of 0.81, 0.89 and 0.78 with respect to three subscales respectively. Scoring of the scale was done by the manual.

The Holmes-Rahe Life Stress Inventory

The Holmes and Rahe stress scale was developed by Thomas Holmes and Richard Rahe (1967). It is a 43 items scale that is related to stressful life events that further can contribute to illness. The risk of illness assessed by accumulation score. The accumulation score of 300 or more indicates 80% chances of illness. This scale was used to assess the risk of psychological distress and chronic illness by stressful life events. The scale has internal consistency of 0.91.

Ethical Considerations

All the subjects of current study were protected by all kinds of harms. It was totally ensured to respect their nobility. The researcher told them that the result will be kept as confidential. Their consent was taken before collecting data for the current study. It was clearly told to them that their information will not be disclosed. They were completely informed about the purposes of study and potential benefits of that this study contains. Misleading information and biasness was eluded. It was make sure to answer all their questions. Deception regarding aims and exaggerations of the study findings were also eluded. The participant's names were not used in any of the research analysis procedure. All participants participated in the research study on voluntary basis and were allowed that they are free to withdraw at any time from the study would in no way negatively impacts the participants.

Results of the Study

The collected responses were analyzed by using SPSS and the results are tabulated as under:

Table 1: *Analysis of study variables (n=150)*

Demographic variables		**Frequency**	**Percentage**
Gender	Male	75	50.0
	Female	75	50.0
Qualification of respondents	Illiterate	40	26.7
	Under Matric	25	16.7
	Matriculation	25	16.7
	Intermediate	16	10.7
	Graduation	17	11.3
	Masters	23	15.3
	M.Phil and PHD	4	2.7
Socio Economic Status	Lower class	36	24.0
	Middle class	76	50.7
	Upper class	38	25.3
Marital Status	Unmarried	48	32.0
	Married	102	68.0
Illness (Disease)	Coronary Artery Disease	34	22.7
	Heart valve Disease	47	31.3
	Pericardial Disease	30	20.0
	Congenital Heart Disease	39	26.0
Nature of Disease	Normal	46	30.7
	Mild	13	8.7
	Moderate	44	29.3
	Severe	45	30.0
	Extremely Severe	2	1.3
Duration of Disease	1 Month or Less	37	24.7
	1 Month to 6 Month	42	28.0
	6 Month to 1 Year	29	19.3
	1 Year to 5 Years	35	23.3
	5 Years or More	7	4.7
Inheritance	Yes	68	45.3
	No	82	54.7

Note: A detailed analysis of the demographic information about the participants of the study.

Table 2 : *Descriptive statistical results of the variables used in this research (n=150)*

Variables	**Mean**	**Std. Deviation**	**Range**
Age	36.47	16.20	11-80
Monthly Income	17547	26696	0-200000
Depression	23.57	9.51	2-34
Anxiety	16.46	3.41	8-24
Stress	24.51	7.61	12-45
Stressful Life Events	26.75	10.25	6-43
	Level	**Frequency**	**Percent**
Depression Level	Normal	5	3.3
	Mild	27	18.0
	Moderate	49	32.7
	Severe	13	8.7
	Extremely Severe	56	37.3
Anxiety Level	Normal	0	0.0
	Mild	10	6.7
	Moderate	29	19.3
	Severe	102	68.0
	Extremely Severe	9	6.0
Stress Level	Normal	6	4.0
	Mild	30	20.0
	Moderate	34	22.7
	Severe	58	38.7
	Extremely Severe	22	14.7
Stressful Life Events	Low	54	36.0
	High	96	64.0

Note: The above table shows the descriptive statistics of overall study variables discussed by the researcher under study in research work.

Table 3: *Showing the comparison of study variables as per Gender using T-test*

Clinical Variables	**Gender**	**N**	**Mean**	**Std. Deviation**	**T-Test Comparison**	
					T-Score	**P-value**
Stress	Male	75	25.91	7.25	2.286	0.024*
	Female	75	23.11	7.75		
Depression	Male	75	25.67	8.54	2.765	0.006**
	Female	75	21.47	10.01		
Anxiety	Male	75	16.08	3.52	-1.368	0.173
	Female	75	16.84	3.28		

*. $p < 0.05$ and **. $p < 0.01$

Note: This table shows the comparison of study variables under study of the overall respondents according to Gender of respondents to check the significance of difference using T-test.

Table 4: *Showing the comparison of study variables as per marital status using T-test among cardiac patients (Non-Equivalent Sample)*

Clinical Variables	Marital status	N	Mean	Std. Deviation	T-Test Comparison	
					T-Score	P-value
Stress	Married	102	23.50	7.36	0.884	0.378
	Un-married	48	22.33	7.91		
Depression	Married	102	23.10	9.80	2.174	0.031*
	Un-married	48	19.46	9.03		
Anxiety	Married	102	16.42	3.55	-0.200	0.841
	Un-married	48	16.54	3.13		

*. p< 0.05 and **. p< 0.01

Note: The above table portrayed the detail results of study variables under study of the overall respondents according to marital status to check the significance using T-test.

Table 5: *Showing comparison of clinical variables in case of cardiac disease*

Clinical variables	Socio economic status	N	Mean	S.D	95% CI	
					LL	UL
Stress	Coronary Artery Disease	34	22.65	6.923	20.23	25.06
	Heart valve Disease	47	24.96	7.997	22.61	27.31
	Pericardial Disease	30	23.67	6.920	21.08	26.25
	Congenital Heart Disease	39	26.23	8.018	23.63	28.83
	Total	150	24.51	7.606	23.28	25.73
Depression	Coronary Artery Disease	34	23.79	9.688	20.41	27.17
	Heart valve Disease	47	24.34	9.381	21.59	27.09
	Pericardial Disease	30	22.03	10.601	18.07	25.99
	Congenital Heart Disease	39	23.89	8.764	21.01	26.78
	Total	150	23.64	9.498	22.10	25.18
Anxiety	Coronary Artery Disease	34	16.15	3.586	14.90	17.40
	Heart valve Disease	47	16.26	3.686	15.17	17.34
	Pericardial Disease	30	17.73	2.164	16.93	18.54
	Congenital Heart Disease	39	16.00	3.584	14.84	17.16
	Total	150	16.46	3.413	15.91	17.01

Note: The table is showing comparison of stress, depression and anxiety level of the respondents according to cardiac disease.

Discussion and Findings of the Study

The core aim of this research was to check the prevalence of psychological distress among cardiac patients with particular focus on comparison among gender, marital status and socio-economic status. In this connection the first hypothesis was aimed to check the level of psychological distress among cardiac patients. The aim of first hypothesis was to check and compare the level of psychological distress among cardiac patients. So it was assumed that "Level of stress, depression and anxiety would be higher among the individuals with cardiac problems". The results of this hypothesis revealed a higher level of psychological distress among the individuals with cardiac issues. The results of this study are in line with

the past studies. Such as a study showed that depression anxiety and stress are tremendously common in patients with cardiac diseases. Moreover, increased risk of cardiac events and worse outcomes are related with stress, anxiety and depression. A causal relationship exists between anxiety or depression and cardiac diseases (Silverman et al., 2019).

The second hypothesis of this study was developed to check the severity of psychological distress as per the types of the cardiac issue. It was hypothesized that "Level of stress, depression and anxiety would vary as per the type of cardiac issue". The results of this hypothesis showed the level of stress was higher among the individuals with Congenital Heart Disease. Similarly, the level of depression was higher among the individuals with Heart Valve Disease. Moreover, the level of anxiety was higher among individuals with Pericardial Disease. The results of this hypothesis are similar with the previous researches such as the discussed results were also supported by literature in which congenital heart disease was tested in combination with trait anxiety. A challenging computer task was completed by 25 sick and 24 healthy volunteers. After both stress and relaxation, participant's heart and non-heart symptoms were measured. Continuous monitoring was done of the heart rate, blood pressure, breathing rate, and arterial partial pressure of CO2. Results showed that a high trait anxiety level and ConHD led to an enhanced impression of particular cardiac symptoms during stress. Furthermore, acute cardiac malfunction did not account for the heightened perception of heart symptoms (Karsdrop et al., 2007).

The third hypothesis of the study was generated to check the level of psychological distress in relation with the gender, marital status and socio-economic comparison among cardiac patients. It was hypothesized that "Level of stress, depression and anxiety would vary as per their gender and marital status". The results of this hypothesis showed that the overall level of psychological distress like stress and depression was higher among male individuals and anxiety level was equal among both genders. On the other hand in a non-equivalent sample, it revealed that stress and depression was higher among married individuals but anxiety was equal among both married and unmarried individuals. These results were partly supported by literature and the results of previous studies reported that more stressful life change experienced by men mostly and more severity of stress is experienced by women. Men have greater cognitive distorted content while women experience higher depression. Depressive mood in men was seems to be insulated by cognitive distortions (Sowa & Lustman, 2005).

Conclusion

This study concluded that stress is a silent killer not only for mind but also eradicate the body organs such as heart, liver, kidney etc. On the other hand it also revealed that the man are more prone to stress and depression as compared to female. Similarly, the un-married individuals less likely respond to the stress and depression and female shows the anxiety symptoms. Hence, addressing the psychological distress of cardiac patients is necessary to recover their medical symptoms. More the individual mentally healthy more he will enjoy physical and medical health.

Limitations of the Study

This study was limited to check the prevalence of psychological distress only among cardiac patients and the only gender and marital status was the focus of study.

Suggestions for Future Research

As this study revealed a higher level of psychological distress among cardiac patients so this is suggested that this psychological phenomenon further explored among other medical patients such as diabetic, digestive, kidney and cancer. Furthermore, experimental studies should be conducted explore the relationship of stress in the onset of medical issues.

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Conflict of Interest

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