Impact of Psychological Correlates, Social Isolation and Loneliness on the Management And Self Care Behaviors of Cardio-Vascular Disease After COVID- 19 Pandemic

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Abstract

The present research paper examines the impact of psychological correlates (stress, anxiety and depression), social isolation and loneliness in the management and self care behaviors of cardiovascular disease after Covid 19 pandemics. According to World Heart Federation 2023 report shows that more than half a billion people around the world continue to be affected by cardiovascular diseases, which accounted for 20.5 million deaths in 2021 – close to a third of all deaths globally and an overall increase on the estimated 121 million CVD deaths. Over three quarters of Cardiovascular disease deaths take place in low- and middle-income countries. Out of the 17 million premature deaths (under the age of 70) due to non-communicable diseases in 2019 (World Health Organization), 38% were caused by cardiovascular diseases. Most cardiovascular diseases can be prevented by addressing psychologically, socially, behavioral and environmental risk factors such as anxiety, anger, stress, depression, social isolation, loneliness, tobacco use, unhealthy diet and obesity, physical inactivity, harmful use of alcohol and air pollution. Anxiety is associated with a variety of physical and psychological symptoms that can negatively impact the health outcome. Anxiety can lead to increased blood pressure, heart rate, and cortisol levels, which can contribute to the development and progression of Cardio vascular disease. Psychological interventions can help individuals with Cardio vascular disease better cope with the disease, improve their quality of life, and reduce the risk of adverse health outcomes. It is important to detect cardiovascular disease as early as possible for the management and prevention of it.

Research involves 300 participants with cardiovascular disease during 2021 to 2024. The data was collected by the participant of Chhattisgarh and Madhya Pradesh visited to the private clinics and hospital for their routine checkups. Using standardized questionnaire following information was gathered i.e. Demographic, biomedical information, anxiety, depression, stress, as well as feelings of social isolation and loneliness, self health care inventory for cardio vascular disease and their lifestyle related information for preventing from the diseases. The data was analyzed using descriptive statistics, and one way ANOVA. The results revealed a significant relationship with psychological correlates, social isolation and loneliness in the management and care of cardiovascular diseases participants after Covid 19 pandemic. The results of the study are fruitful for Health Care Professionals and Health Care Providers for the management of cardiovascular diseases; also it's useful for Ministry of Health to make a policy related to the control the death rate which is caused due to cardiovascular diseases.

Hence it is important to "Identifying sustainable ways to work with communities to take action to prevent and control modifiable risk factors for heart disease is essential for reducing the global burden of heart disease," said George A. Mensah, MD, FACC, director of the Center for Translation Research and Implementation Science at the NHLBI.

Keywords: Psychological Correlates (Anxiety, depression, Stress, anger, personality), social isolation and loneliness, lack of social support, Cardio-vascular diseases(CVD), Coronary Heart Diseases(CHD), Covid 19 Pandemic.

Introduction

India has one of the highest burdens of cardiovascular disease (CVD) worldwide. The annual number of deaths from CVD in India is projected to rise from 2.26 million (1990) to 4.77 million (2020) (Murray CJ, 2020). Coronary heart disease prevalence rates in India have been estimated over the past several decades and have ranged from 1.6% to 7.4% in rural populations and from 1% to 13.2% in urban populations (Gupta R, et al; 2008).American Heart Association (2024) cardiovascular disease can refer to a number of conditions included Heart disease, atherosclerosis, heart attack, stroke, heart failure, arrhythmia, heart valve problems. CVD risk factors such as abdominal obesity, hypertension, and diabetes are higher among Indians, even at young ages, than among other ethnic groups (Yusuf S et al., 2004). The prevalence rates of CVD risk factors have been rapidly rising within India over the past 25 years, particularly within urban communities (World Health Organization, 2010).

Most of the research studies on CHD are mainly focused on the biological risk factors and life style, some evidences have revealed that psychological and psychiatric factors have a significant role in the etiology, development, duration, and outcome of this disease.(Twisk JW et al., 2000, Albus C , 2010) The most important factors are depression,(Frasure-Smith N et al., 1995, Brezinka V et al., 1996) anxiety,(Lane D, et al., 2000, Stafford L et al., 2009,) and stress.(Leon GR et al., 1988; Cramer D., 1991) Increasing evidence suggests that psychological factors, as independent risk factors, have an important part in physical chronic diseases, particularly coronary heart disease.(Roest AM, et al.,2010, Strike PC, 2004)

Psychological Risk factors of Cardio Vascular Diseases
Anxiety, Depression and Stress

Numerous researches in this field suggests that anxiety has an adverse impact on prognosis in CHD patients independent of depression, the role of anxiety as an etiological risk factor is less clear (Lett HS, et al., 2004, Rudisch B, et al., 2003, Rothenbacher D, et al., 2007, Shibeshi WA, et al., 2007, Strik JJ et al., 2003;). Roest et al. (2010) in their meta-analysis found the connection between anxiety and the risk factors of coronary artery disease, and found that anxiety is an independent risk factor for CHD and cardiac deaths. A survey conducted about physical and psychological symptoms of anxiety in CHD patients revealed that anxiety is correlated with physical factors such as palpitation without any physical exercise, anger and redness in the face, abnormal heart beat, and muscle tension that increases the risk of CHD especially in women.(Suls J, et al., 2005)

A research showed that somatic symptoms of anxiety were associated with an increased risk of CHD in women. This finding lends support to the physiological pathway for the relation between psychological factors, anxiety in particular, and CHD.(Nabi H, et al., 2010) A longitudinal research study conducted

by Janszky et al. over a period of 37 years on 49321 young Swedish men aged 18-20 years evaluated the effects of anxiety and early depression on risk factors of coronary artery disease. This research shows that both anxiety and depression are significantly associated with low physical activity and high rate of cigarette smoking. Depression was also associated with high levels of alcohol consumption and anxiety had a connection with high blood pressure. Janszky I, et al., 2010 study indicated that anxiety independently predicted subsequent CHD events such as morbidity and mortality. In contrast, it found no support for such an effect concerning early onset of depression in men.

In another study, Expressing and inhibiting styles of anger did not have a different effect on cardiovascular reactions, but anger expression and management styles and trait anxiety levels had an opposite effect on cardiovascular reactions. Its means that the outward (behavioral) expression of anger with high level of anxiety is associated with low cardiovascular reaction (heart beat), and the outward expression of anger with low level of anxiety is associated with high cardiovascular reaction. In contrast, inner expression of anger with high level of anxiety is associated with high cardiovascular reaction, and inner expression of anger with low level of anxiety is associated with low cardiovascular reaction. (Farhadi M., 2009) In addition to depression, other psychological factors such as anger, hostility and anxiety are associated with increase in risk factors of cardiovascular disease. (Yousefy AR et al., 2006; Zafar MU, et al., 2010; Farhadi M., 2009)

Major depression is sometimes the cause of psycho-behavioral disturbances such as a loss of interest in carrying out simple tasks (preparing meals, physical activity), which explains the poor lifestyle habits of depressed patients, who cannot summon up enough energy or motivation to consider stopping smoking or changing to a well-balanced diet or maintaining regular physical activity. Depression may occur at any time during a person's history of heart disease, and is a behavioral factor in the development or aggravation of heart disease as the patient adopts a prolonged sedentary lifestyle, experiences a decline in psychological and physical motivation and tends not to respect the therapeutic regimen. From a biological viewpoint, the stress response could be responsible for cardiac disturbances. During an episode of characterized depression, which in itself is a major factor of stress, the hypothalamic-pituitary-adrenal axis is strongly activated; an increase in serum levels of cortisol and cortisol urinary derivatives indicate the initiation of anti-inflammatory processes that try to restore the disturbed homeostasis (J.C. Chauvet-Gélinier et al., 2013; A.J. Grippo, A.K. Johnson, 2009)

A number of research results revealed that those variables that are commonly regarded as components of stress include: depression and anxiety, social isolation and lack of social support, acute and chronic life events, psychosocial work characteristics, and type A behavior and hostility. (Kubzansky LD et al, 2000).

Social Isolation, loneliness and lack of social support

In many research studies lack of social support was indicated as a predictor of onset and prognosis of CHD, and mortality among both sexes; however, it was more consistent in males. (Bunker SJ, et al., 2003; Sorensen EA, et al., 2009, Gaston M. , 2003) The risks are increased 2-3-fold and 3-5-fold for females and males, respectively. The association between social isolation and lack of social support with CHD exists for subjects who live in different countries and are of various age groups.(Bunker SJ, et al., 2003) A study aimed to investigate and identify psychological factors in patients with ischemic heart disease within 4 months after discharge. (Frasure-Smith N, 2000) This study indicated that coping style, social network and social support, within 4 months after discharge, caused these patients to be less

focused on their illness and feel less threatened in comparison with the control group that did not have these types of support. These patients were also less excited and benefited more from the health services provided by the professionals. Moreover, people who suffered from this disease for the first time were seeking social support and coping style more in comparison to those that had previous history of hospitalization due to ischemic heart disease. (Bunker SJ, et al., 2003) In another study, loneliness and social support were studied in patients with heart failure (CHF). They realized that loneliness is one of the important risk factors for patients with heart failure, and the more the patients feel lonely the more severe the chances of heart failure(Lofvenmark C, et al., 2009).

"It is everyone's responsibility to realize it, that to take action to reduce the global burden of cardiovascular disease".

The health system in India is experiencing different problems such as unfair and inadequate access to health services for the society, high cost of health care, emphasis on health care and neglect of preventive care, intervention on the individual level and neglect of community intervention, lack of balance between the interests of patients, society and the health system, and especially little attention to mental health. Therefore, the age of exposure to cardiovascular disease, mainly heart failure, is increasing in India after Covid 19 pandemic and is reaching the teenage years also some impact of Covid 19 vaccination might be seen. This is mostly due to reasons of psychological and life style changes, hence, a new psychological perspective to CHD is important. It is obvious that today one of the main aims of psychology is the prevention of psychosomatic disease, that results in decreasing expenses and improving health and quality of life. The new trend in psychology under the name of Positive and health psychology, and extensive research and publications in this field are a confirmation of these problems. Thus, by knowing the psychological risk factors and protective factors of cardio vascular disease, prevention, control and adjustment can be performed. These performances result in a decrease in risk factors, decrease in treatment expenses, improvement in life quality, and eventually decrease in illnesses and inabilities. (Lett HS, et al., 2004; Barnett PA, et al., 1988; Yousefy A, et al., 2011; Gupta R, et al., 2011)

Research Objectives

To examines the impact of psychological correlates, social isolation and loneliness in the management and self care behaviors of cardiovascular disease after Covid 19 pandemics.

Research Question

In the research study following research questions related to the impact of psychological correlates and social isolation and loneliness in the management and self care behaviors of cardiovascular disease after Covid 19 pandemics were addressed in the present study.

1. Are individual with cardio vascular diseases differing in terms of their psychological correlates, social isolation and loneliness in the management and self care behaviors of cardiovascular disease after Covid 19 pandemics?

Research Hypothesis

The research hypothesis will examine the relationship between psychological correlates (Anxiety, Stress, depression) and social isolation and loneliness as predictors of outcome (i.e. Cardio vascular disease self health care behavior). Thus the following hypothesis were proposed and tested in the present study.

1. Individual with cardio vascular diseases with low level of anxiety, depression and stress and social isolation and loneliness will exhibits better cardio vascular disease self care behavior with moderate and high levels of anxiety, stress, depression and social isolation and loneliness.

Methodology

Participants

Participants for the present study were adults (170 Males and 130 females) with cardio vascular diseases randomly selected from different hospital, nursing home and clinics located in different districts of Chhattisgarh States. The age ranged from 25 to 75 years.

Measures

The following measure were used in this research study

1. **Hamilton Depression Rating Scale:** The HDRS also known as the Ham-D is the most widely used clinician administered depression assessment scale. The original version contains 17 items pertaining to the symptoms of depression experienced over the past week.

2. **Hamilton Anxiety Rating Scale:** The HAM-A was one of the first rating scales developed to measure the severity of anxiety symptoms, and is still widely used today in both clinical and research settings. The scale consists of 14 items, each defined by a series of symptoms and measures both anxiety (mental agitation and psychological distress) and somatic anxiety (Physical complaint related to anxiety). Each item is scored on a scale of 0 not present to 4 severe with a total score range of 0-56, where<17 indicate mild severity, 18-24 mild to moderate severity and 25 to 30 moderate to severe.

3. **Revised UCLA loneliness Scale:** A 20 items scale designed by Russell, D., Peplau, L. A., & Cutrona, C.E. in 1980 to measure ones subjective feeling of loneliness as well as the feeling of social isolation. Participants rate each item on a scale from 1 never to 4 often. The measure has high internal consistency coefficient alpha =.96 and a test-retest correlation over a 2 month period of .73 concurrent and preliminary construct validity are indicated by correlation.

4. **The Standard Stress Scale:** The standard stress scale developed by Gross, C. & Seeba, K., in 2014 for measuring stress in the life course.

5. **Self care of Coronary heart disease inventory (SC-CHDI V2.1):** Developed by Victoria Vaughan Dickson for assessing the self health care behavior of CVD and CHD.

Procedure

Persons with Cardio vascular diseases were identified through hospital, nursing home and clinics. Participants were invited to participate in the study when they were visiting the hospitals or nursing hope. They were informed of the purpose and objectives of research study and requested them to participate in the study. The informed consent and the contact number were obtained from selected patients directly. Those who are agree to participate in the study given the questionnaire and asked them while filling the questionnaire if you have had any problems please consult to the data collectors. The responses of some of the participants who had difficulty in reading questions were collected by interviews. All the participants were thanked for their actively participation in the research work. Responses of the participants who did not fill the questionnaire properly were excluded from the analysis.

Analysis of Data

At the present study was a cross sectional descriptive statistics were used to characterize the demographic variables for this sample of individual with cardio vascular disease. These include age, gender, religion, and residence, duration of illness and severity of CVD. One way Analysis of variance were performed to determine the relationship among the variable of anxiety, stress, depression and social isolation and loneliness on the self care behavior of CVD on the different level of the following variables. Data was analyzed using IBM SPSS Statistic 27 version software.

Table 1: Characteristics of Sample

	N	%
Age		
25-50	150	50
51-75	150	50
Gender		
Male	170	56.66
Female	130	43.34
Marital Status		
Single	58	19.33
Married	242	80.67
Religion		
Hindu	135	45
Muslim	47	15.67
Sikh	21	7
Christian	58	19.33
Others	39	13
Family Type		
Nuclear	162	54
Joint	138	46
Area of Residence		
Urban	198	66
Semi urban	58	19.33
Rural	44	14.67
Duration of Illness		
1 to 3 years	112	37.33
4 to 6 years	86	28.67
>7years	102	34
Family History of CVD		
Yes	132	44
No	168	56
Seriousness of the disease		
Mild	121	40.33
Moderate	116	38.67
Severe	63	21

Results

Psychological Correlates, Social Isolation and loneliness on Cardio Vascular Disease Self Care behaviors

It was hypothesized that participants with low stress, low anxiety and low social isolation and loneliness will exhibit better cardiovascular self care and adherence to cardiovascular regimen in comparison to the participants with moderate and high stress, anxiety and social isolation and loneliness. Results of one way analysis of Variance shows, the significant effect of level of stress, anxiety and social isolation on self health care behaviors of Cardio vascular disease participants. Mean scores, Standard deviation along with one way analysis of variance F value presented in table 2 clearly indicated significant effect of stress level on cardio vascular disease self care behavior of the participants, $F_{(2,297)} = 53.55$, $p<.01$. Participants with low level of stress showed better health care behavior on CVD (M = 46.00, SD = 8.93) than the participants with moderate (M = 37.18, SD = 8.60) and high (M = 33.77, SD = 8.32) level of stress.

In regards to the effect of anxiety level on the CVD self health care behavior there is significant effect of level of anxiety on the CVD health care behavior $F_{(2,297)} = 87.49$, $P<.01$. Participants with low level of anxiety exhibit better health care behavior on CVD (M = 44.96, SD = 8.74) than the participants with moderate (M = 39.16, SD = 8.61) and high (M = 31.56, SD = 6.49) levels of anxiety.

In the same way the effect of depression level on the CVD self health care behavior there is significant effect of level of depression on the CVD health care behavior $F_{(2,297)} = 67.49$, $P<.01$. Participants with low level of depression exhibit better health care behavior on CVD (M = 46.72, SD = 6.59) than the participants with moderate (M = 39.25, SD = 8.12) and high (M = 32.15, SD = 9.27) levels of depression.

Similarly we can see the effect of social isolation and loneliness on the CVD self health care behavior there is significant effect of levels of social isolation and loneliness on the CVD health care behavior $F_{(2,297)} = 48.12$, $P<.01$. Participants with low level of social isolation and loneliness exhibit better health care behavior on CVD (M = 46.19, SD = 8.92) than the participants with moderate (M = 38.40, SD = 8.82) and high (M = 32.83, SD = 8.87) levels of social isolation and loneliness. These results clearly supported the hypothesis which stated that CVD individuals with low level of stress, anxiety and social isolation and loneliness will exhibits better CVD health care behavior and adherence to CVD regimen in comparison to moderate and high level of stress, anxiety and social isolation and loneliness. The same things will be depicted through the graphs in figure 1.

Table: 2

Mean scores of cardio vascular self care behavior of participants on the different level of psychological correlates (stress, anxiety and depression) and Social isolation and loneliness.

Variables		N	Mean	SD	F (2,297)
	Low	100	46.00	8.93	
Stress	Moderate	100	37.18	8.60	53.55**
	High	100	33.77	8.32	
	Low	117	44.96	8.74	
Anxiety	Moderate	78	39.16	8.61	87.49**
	High	105	31.56	6.49	

	Low	92	46.72	6.59
Depression	Moderate	102	39.25	8.12	67.49**
	High	99	32.15	9.27
	Low	100	46.19	8.92
Social Isolation and loneliness	Moderate	100	38.40	8.82	48.12**
	High	100	32.83	8.87
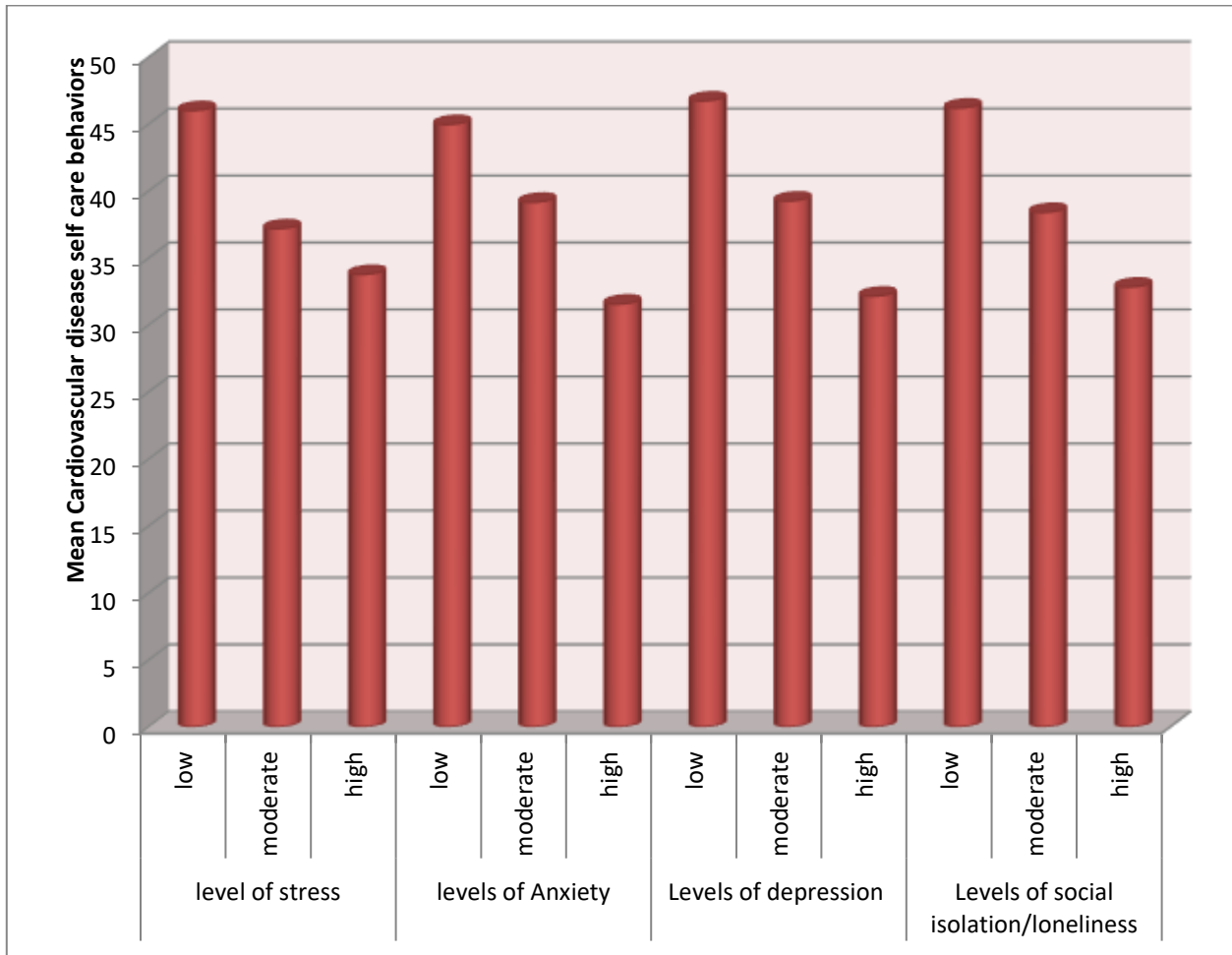
Figure: 1 *Representing Mean scores of cardio vascular self care behavior of participants on the different level of psychological correlates (stress, anxiety and depression) and Social isolation and loneliness.*
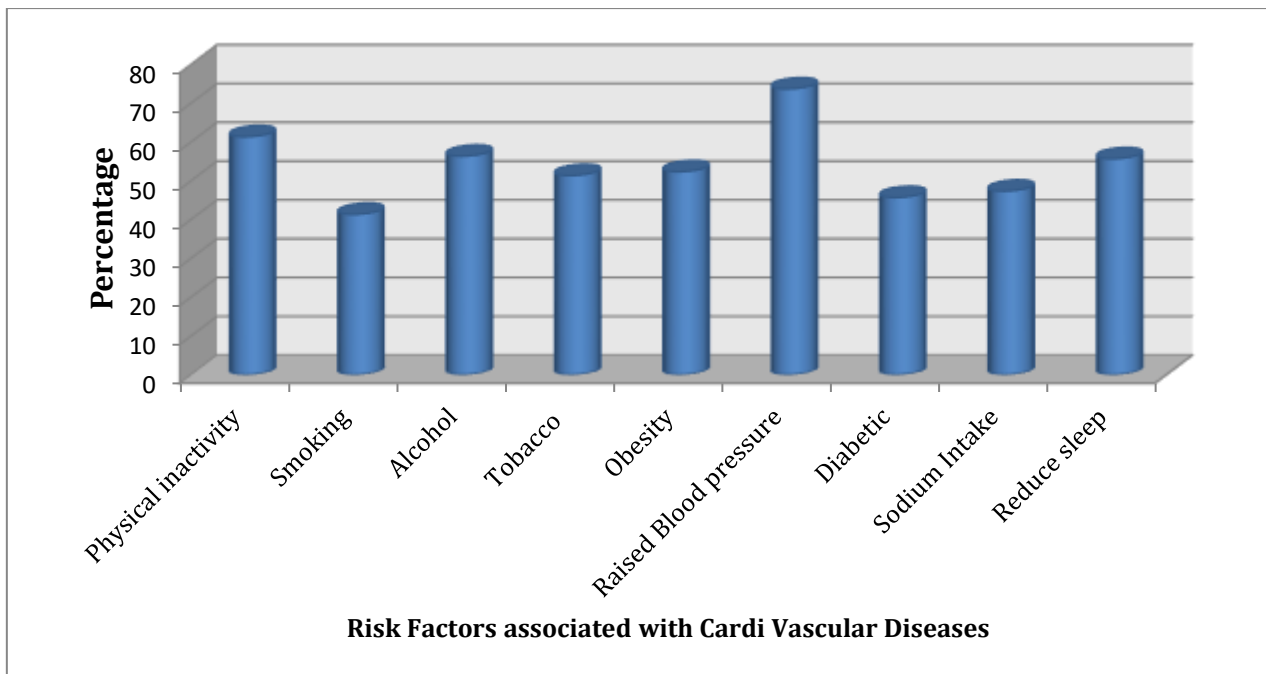
Risk factors associated with Cardio vascular diseases

Table 3 and Figure 2 shows the respondent response on risk factors associated with cardio vascular diseases 61.33% respondent reported they have not doing any kind of physical exercise and walking. 41.33% reported they are using cigarettes for smoking, 56.33% respondent taking alcohol, 51.33 taking tobacco and smoking, 52.33% have obese, 73.66% are having high blood pressure, 45.67 are diabetic, 47.33% having high sodium intake and 55.66 reported they are having sleep difficulty.

Table 3: Risk Factors associated with Cardio Vascular disease

Risk Factors	N	%
1 Physical inactivity	184	61.33
2. Smoking	124	41.33
3. Alcohol	169	56.33
4. Tobacco and Smoking	154	51.33
5. Obesity	157	52.33
6. Raised Blood pressure	221	73.66
7. Diabetic	137	45.67
8. Sodium Intake	142	47.33
9. Reduce sleep	167	55.66

Figure 2: Risk factors associated with Cardio vascular diseases

Discussion

Anxiety, depression, stress, social isolation and loneliness can have a significant impact on cardiovascular disease (CVD). These psychological factors can influence the onset of heart disease, and can also be a trigger or independent factor that influences cardiac outcomes. Depression is independently predictive of coronary artery diseases in women, along with the hypertension, waist hip ratio and physical inactivity (Vlachopoulou E, et al., 2022).

Some researches emphasized the role of anxiety, observing that women with high levels of phobic anxiety face a greater risk of fatal CHD, and that CVD events can be predicted in women with suspected myocardial ischemia who exhibit co morbid depression and anxiety symptoms (Vlachopoulou E, et al., 2022). There is wide and compelling evidence linking psychological distress with earlier onset of CVD, faster disease progression, worse prognosis, and an increased risk of mortality. Psychological distress is associated with stress-induced cardiomyopathy, which is also known as Takotsubo or "Broken Heart Syndrome". (Pimple P et al., 2019). In a recent study, Pimple et al. demonstrated that high psychological

distress levels were linked to future cardiovascular events among female patients diagnosed with CAD. Psychological distress is the primary characteristic of "Type-D personality", characterized by persistent negative emotions, such as anger, contempt, disgust, fear, guilt, nervousness, and low self-esteem (i.e., negative affectivity), alongside with social inhibition, a stable tendency to inhibit the expression of emotions and behaviors in social interaction (Denollet J., 2005). The results of the study are consistent with the above findings that psychological factors i.e. stress, anxiety and depression will trigger the symptoms of cardio vascular diseases. Psychological intervention will be helpful in prevention and management of the CVD.

De Silva estimated that 20% of the 500,000 cases of sudden cardiac death in the United States each year may be associated with acute psychological stress. Deaths were associated primarily with the emotional stress of the event rather than physical exertion and included both mortality associated with preceding chest pain (indicating the likelihood of coronary plaque rupture leading to arterial occlusion) and primary arrhythmias with no antecedent angina. The researchers estimated that as many as 40% of sudden cardiac deaths may be triggered by emotional stress. The potency of acute psychological stressors as triggering mechanisms for arrhythmias and acute coronary syndromes has been emphasized by Muller et al, (1989. 1994).

A large prospective study recently demonstrated that high levels of phobic anxiety are associated with an increased risk of sudden cardiac death, presumably owing to reduced vagal modulation of cardiac rate and increased ventricular tachyarrhythmias.(I. Kawachi, G.A et al, 1994, 1995)) Several research investigation have pointed to the importance of depression as a risk factor for the development or progression of coronary artery disease. Epidemiologic studies, such as the Stinson County study, showed a higher than expected cardiovascular disease mortality in depressed individuals in the community. (J.M. Murphy, 1987) Booth-Kewley and Friedman,(1987) in a meta-analysis of psychological factors in coronary disease, conclude that the relative risk of incidence of coronary artery disease associated with depression is approximately 2:1.

All the parts of the body, the heart holds a special place of distinction in common thinking as the seat of emotion, feeling, and even of life itself. Our everyday language makes this clear. We speak of heartbreak and heavy-heartedness, of love coming straight from the heart, of putting our heart into our work, of outstanding individuals who are the "heart and soul" of their organizations. Metaphorically, as well as physiologically, the heart is crucial to one's identity and social function. It is not surprising, therefore, that normal emotional reactions to the development of heart disease often include aspects of shock, fear, anger, guilt, sadness, and grief. The onset of illness comes as a narcissistic injury (Peter A. Shapiro, 1996).

Many patients are forced to confront issues of dependence on others and loss of control. They may become less able to contribute to the support of their families, an important source of self-esteem. Sexual functioning may be adversely affected by circulatory impairment, ischemia, medication, or by fear and other emotional factors, contributing to a further loss of self-esteem that in turn may exacerbate further decline. Smoking, alcohol use, failure to exercise, and non-compliance with medication or diet may have contributed to the development of illness and may result in feelings of guilt. Finally, the issues of progression of disease, recurrence of acute illness, and death are universally present for heart disease patients and may be met with reactions ranging from denial, to attempts (adaptive or maladaptive) to alter one's life, to catastrophic anxiety or depression.

Research studies in this area which supports the present research hypothesis that social isolation and loneliness can affect the self health care of CVD. A recent systematic review followed by a meta-analysis of 16 prospective longitudinal studies showed that loneliness and social isolation were correlated with increased risks of CHD (29%) and stroke (32%) (Valtorta NK, et al., 2016). The association was comparable to anxiety and job stress, which are recognized risk factors for CHD (Valtorta NK, et al., 2016). This finding reinforces existing evidence demonstrating that poor social connections robustly predict morbidity and mortality, and that loneliness and social isolation are additional risk factors of cardiovascular disease (CVD) (Holt-Lunstad J. & Smith TB, 2016). Social isolation and loneliness are associated with health risk behaviors such as reduced physical activity, reduced sleep quality, and smoking (Beutel ME , et al, 2017, Hawkley LC, et al., 2009, Holt-Lunstad J., et al., 2016). Loneliness also has been associated with depression, anxiety, dysphoria, and social withdrawal (Cacioppo JT, 2015).

Psychological determinants are now regarded as important factors that influence health in general and cardio-metabolic pathways in particular. Indeed, the biological, psychological and cognitive response to chronic stress may play a role in heart disease as a trigger or as an independent factor influencing cardiac outcomes. Psychological factors including depression, anxiety, stress and social isolation and loneliness influence the development, clinical expression, and prognosis of cardiovascular disease. Depression and anxiety are especially common problems complicating cardiac disease. The physician must approach the patient with an appreciation of the confounding aspects of diagnosis and a readiness to think flexibly about the nature of the problems encountered. The research study results show a significant relationship with psychological correlates, social isolation and loneliness in the management and care of cardiovascular diseases participants after Covid 19 pandemic. The results of the study are fruitful for Health Care Professionals and Health Care Providers for the management of cardiovascular diseases; also it's useful for Ministry of Health to make a policy related to the control the death rate which is caused due to cardiovascular diseases.

Conclusion

The results of the study shows a Significant role of low level of Anxiety, stress, depression and social isolation in a self health care of cardio vascular disease self care health and management. It's clearly delineated in the most of the research studies and theoretical explanation that in the evaluation of the role of psychological factors in the etiology and prognosis of cardio vascular diseases.

The findings of this study showed that although psychological factors and social isolation and loneliness are independent risk factors for CVD, the diagnostic and therapeutic procedures of this illness had a favorable process. By knowing the psychological risk factors and protective factors of cardio vascular disease, prevention, control and adjustment can be performed. These performances result in a decrease in risk factors, decrease in treatment expenses, improvement in life quality, and eventually decrease in illnesses and inabilities. (Lett HS, et al., 2004; Barnett PA, et al., 1988; Yousefy A, et al., 2011; Gupta R, et al., 2011) Prevention is better than cure; therefore, considering the increase in CVD risk factors during recent years, it is necessary that more attention be paid to psychological factors and preventive actions plan. The results of the study are also fruitful for Health Care Professionals and Health Care Providers for the management of cardiovascular diseases; also it's useful for Ministry of Health to make a policy related to the control the death rate which is caused due to cardiovascular diseases.

Hence it is important to "Identifying sustainable ways to work with communities to take action to preve-

nt and control modifiable risk factors for heart disease is essential for reducing the global burden of heart disease," said George A. Mensah, MD, FACC, director of the Center for Translation Research and Implementation Science at the NHLBI. Without doubt, performing psychological and educational interventions in the community and increasing people's awareness about the psychological factors of Cardio vascular diseases can have an effective role in promoting the people's health in the future.

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