ORIGINAL ARTICLE

PSYCHOSOCIAL CORRELATES OF MENTAL DISORDER SYMPTOMS IN CARDIOVASCULAR PATIENTS

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ABSTRACT

OBJECTIVE
To investigate the psychosocial predictors of mental disorder symptoms (anxiety and depression) in cardiovascular diseases (CVD) patients.

STUDY DESIGN
Correlational research design

PLACE AND DURATION OF STUDY
The data was collected from Feb 2017 till June 2017 from cardiac units of three government sector hospitals of Lahore.

SUBJECTS AND METHODS
Participants were 174 CVD patients who were assessed on self-report measures of self-efficacy, perceived social support, depression, and anxiety symptoms.

RESULTS
It was found that self-efficacy and perceived social support were negatively associated with depression and only self-efficacy was negatively associated with anxiety among CVD patients. Results from regression analysis demonstrated that self-efficacy was the significant negative predictor of depression and anxiety, while perceived social support was the significant negative predictor of depression only among CVD patients.

CONCLUSION
It was concluded that self-efficacy and perceived social support are a significant protective factors against mental health problems among CVD patients.

KEY WORDS
Anxiety, Depression, CVD

INTRODUCTION

Cardiovascular disease (CVD) is one of the frequently reported cause of mortality around the globe. The CVD resulted into 29.2% of worldwide deaths in 2003[1]; eighty percent of which were from developing countries[2] and in the next few decades, half of the world's cardiovascular burden is estimated to occur in South Asian regions[3]. More than 30% of Pakistani adult population is reported to be at high risk of CVD. There is evidence from previous literature for co morbidity of CVD with anxiety and depressive disorder[4].However, many psychosocial factors such as self-efficacy and social support are described in literature to be positive resources that are likely to protect CVD patients from developing the risk of mental health disorders[5].

Mental health is described as a state of wellness, ability to cope with life stressors, and fruitful and productive contribution in the community1. Mental disorders share a large proportion of burden among medical setup or hospitals,particularly,when health resources are limited[6]. Like other aspects of health, mental health can be affected by a number of social and psychological factors. Notably, self-efficacy and perceived social support are documented as positive resources having a strong buffer effect against the unstable mental health symptoms. These two factors are collectively described as individuals' perception of self-ability and perception of available social support to cope with challenging situations[6]. As the chronic physical health conditions like CVD may enhance the risk of developing depression and anxiety symptoms among CVD patients as compared with general population, therefore, the protective roles of self-efficacy and perceived social support appears more important in CVD patients in minimizing the associated mental disorder symptoms[5].

Social support and self-efficacy are powerful mechanisms against the devastating mental health outcomes including anxiety and depression symptoms. Evidence from previous findings indicates that among social factors perceived social support is found to be the negative predictor of anxiety and depression symptoms demonstrating low levels of symptoms in patients perceiving high level of social support[6]. Similarly, among psychological factors, general and specific self-efficacy is also described to be the negative predictor of depression and anxiety symptoms among normative sample of students (e.g., worry and social avoidance)[6]. Notably, the protective roles of perceived social support and self-efficacy against the negative effects of mental disorder symptoms have been widely recognized in the context of routine life stressors among normative samples[5,8,9], however, there is a need to assess these psychosocial protective factors in relation to mental disorder symptoms particularly in CVD patients given the high prevalence rate of CVD and its co morbidity with anxiety and depression. To address this research gap, our study purports to examine (i) the relations between psychosocial factors (perceived social support & self-efficacy) and mental disorder symptoms (depression & anxiety), and (ii) the predictive power of psychosocial factors in mental disorder symptoms.

SUBJECTS AND METHODS

Participants

Participants were 174 under treatment CVD patients (men = 75%, women = 25%), ages between 22 to 60 years (M = 45.55, SD = +15.33) recruited from cardiac units of three government sector hospitals (Jinnah Hospital =34%, Mayo Hospital =31%, & Punjab Institute of cardiology =35%). The study participants were mostly with low educational qualification (M=4.8, SD=+2.59) and married (84%). Only those patients were selected who were under treatment and with a diagnosed duration of minimum one month (32%) and maximum of five years (22%).

Instruments

A self-constructed demographic questionnaire was used to assess age, gender, education, marital status, ethnicity, date of first diagnosis, and duration of CVD treatment.

Assessment of Self Efficacy: The Urdu version of General Self-efficacy Scale6 was administered to assess a general sense of self-efficacy for controlling and dealing with challenging life tasks. It is a 10 item scale with 4 points response format (1=not at all true to 4= exactly true) with composite score ranging between 10 and 40. A higher score represents greater perceived self-efficacy. Cronbach's alpha as obtained in the current study was =.98.

Assessment of Perceived Social Support: The Urdu version of the Multidimensional Scale of Perceived Social Support (MSPSS)7was used to examine the perceived social support from three sources (i.e., family, friends, and significant others). MSPSS contains 12 items measuring responses across 7 response options (1=very strongly disagree to 7= very strongly agree) with potential composite scores of 12 to 84 with higher scores showing higher levels of perceived social support. Internal reliability coefficient of the scale in the current study was =.90.

Assessment of Depression and Anxiety Symptoms: The Urdu version of The Hospital Depression Anxiety Scale12 was administered to assess the depression and anxiety symptoms in CVD patients. It is a 14 items scale comprising two sub scales (depression= 7, anxiety=7) with 4 points response options yielding a likely composite score from 0 to 21 for each sub scale. The current study illustrated Alpha coefficients for depression and anxiety as .68 and .73 respectively.

Procedure

This research was conducted over the duration of five months from February 2017 to June 2017. Before the conduction of this research, formal approval from Departmental Research Review Committee, COMSATS, Lahore was obtained. The heads of cardiac departments of selected hospitals were contacted and briefed about the objectives, duration and implications of the study. While contacting the participants individually, they were assured of the confidentiality of given information and informed of their right to withdraw from study at any time during research. Later, a formal informed consent was obtained from the participant followed by an informal meeting inquiring the general information (participants' demographic and general medical characteristics). Afterwards, the study tools were administered to the participants. Each participant took on average of 20 minutes to complete these questionnaires. After data collection, participants were cordially obliged for their cooperation in the study and data was processed for analysis.

RESULTS

Out of 180 patients, 174 provided complete and normally distributed responses. Only 1% of sample was eliminated while identifying outliers, missing values and item response patterns. Descriptive statistics and correlation between study variables were calculated and presented in Table 1. Among demographics only age was found to be the significant correlate of anxiety and education was found to be the significant correlate of depression. It was noted that both self-efficacy and perceived social support were significantly and negatively correlated with depression but only self-efficacy was significantly correlated with anxiety among CVD patients.

Table 1
Descriptive Statistics and Correlations between Study Variables

	M	SD	α	Age	Education	SE	SS	Anxiety	Depression
Age	45.55	15.33	-	-	.06	.05	-.11	-.17*	-.01
Education	4.81	4.90	-		-	.28**	.16*	-.07	-.33**
SE	26.79	6.36	.98			-	.11	-.36**	-.67**
SS	59.55	14.84	.90				-	-.13	-.37**
Anxiety	13.47	4.11	.73					-	.52**
Depression	11.26	3.52	.68						-

*Note. *p < .05, **p < .001; SS = social support; SE = self efficacy*

Furthermore, findings from regression analyses showed that after controlling the effect of age and education, when self-efficacy was added in model 2, it turned out to be the significant predictor of depression and anxiety contributing 38 %, and 12% variances respectively. Then, social support was added in the 3rd model, and it was found that after controlling the effects of demographics and self-efficacy, social support was a significant predictor of depression only explaining 8% variance (see Table 2).

Table 2
Standardized Regression Weights Predicting Anxiety and Depression from Self- Efficacy and Social Support in CVD Patients

Predictors	Mental Health Problems					
	Anxiety			Depression		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-.17*	-.16*	-.17*	.01	.03	-.01
Education	-.06	.04	.06	-.33**	-.16*	-.11
SE		-.36**	-.35**		-.64**	-.62**
SS			.12			-.28**
R^2	.03	.15	.16	.11	.49	.57
Incremental R^2	.03	.12	.01	.11	.38	.08
Model fit	F(172,2) =2.91	F(172,3) =9.95**	F(172,4) = .17**	F(172,2) =10.40**	F(172,3) =53.44**	F(172,4) =53.47**

*Note. *p < .05, **p < .001; significantbeta weights are in bold type*
SS = social support;SE = self efficacy; Dis. Dur. = Disease Duration

DISCUSSION

The current study explored the associations of self-efficacy and perceived social support with mental health problems (depression and anxiety) among CVD patients. As hypothesized, self-efficacy emerged to be the significant negative predictor of depression and anxiety indicating the CVD patients with higher self-efficacy levels show less depression and anxiety symptoms. Controlling for age and education, self-efficacy explained 38 % variance in depression and 12% variance in anxiety scores in CVD patients. The literature[13] supports the present findings indicating that self-efficacy is negatively associated with depression and anxiety in cardiac patients.The current results are in line with the previous literature[13,14]documenting that a person's self-efficacy plays an active role in tackling as well as protecting against the negative effects of physical illness on depression and anxiety.It has been described that patients having higher levels of self-efficacy are more likely to adopt behaviors that are beneficial to their health than are those with lower levels of self-efficacy[14,15]. Researchers[16]have also noted that perception of failure to believe in one's ability to carry those behaviors may lead CVD patients to discontinue those behaviors that physicians ponder as being very important for their psychological well-being andphysical function, thereby, increasing the patient's feelings of anxiety and depression[17].

Our study findings also revealed that the higher level of social support was the significant negative predictor of depression as it explained 7% variance in depression. Besides personal resources, social resources may also facilitate patients' psychological functioning as the previous literature[14,14,18,19] has highlighted the importance of social support in the context of chronic illnesses in general, and in CVD patients, in particular. The present results demonstrate that adequate perceived social support acts as a protective factor against mental health problems in CVD patients. The previous studies20 indicate that a supportive interpersonal environment is an important factor that facilitates patients' adaptation to chronic illnesses[18, 21] and improve mental health in cardiac patients[22].

LIMITATIONS AND STRENGTHS

The co relational nature of the study suggests that the direction of causality cannot be determined as it precludes conclusions concerning causal relationships between self-efficacy, social support and mental disorder symptoms. In addition, we did not control the variability in the functional impairment related to specific CVD diagnoses (e.g., coronary artery disease, heart failure, heart attack, arrhythmias, heart valve disease etc.), therefore, this methodological limitation should be focused in future studies. Further, we need to focus not only on the positive social support as a protective factor for mental health problems but also on the negative social support because social relationships can also be negative and unsupportive.

However, potential confounding demographic variables were controlled in the study to obtain more reliable findings .In addition, the findings are particularly important in that the sample was selected from an understudied and culturally diverse population group which is particularly vulnerable to cardiac diseases.

CONCLUSION

It was concluded that self-efficacy and perceived social support are a significant protective factors against mental health problems among CVD patients. The current findings have implications for CVD patients as interventions designed to improve self-efficacy and enhance social relationships may lead to reduced mental health problems in CVD patients. These intervention strategies help mitigate depression and anxiety symptoms in the CVD patients.

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