

## PERCEIVED AUTONOMY SUPPORT AND PSYCHOLOGICAL PROBLEMS AMONG CARDIAC PATIENTS: INTERCEDING ROLE OF TREATMENT MOTIVATION

Fatimah Khakwani<sup>1</sup>, Sarwat Sultan<sup>2</sup>, Safia Rashid<sup>3</sup>

<sup>1,3</sup>Department of Psychology, The Women University, Multan - Pakistan

<sup>2</sup> Department of Applied Psychology, Bahauddin Zakariya University Multan, Pakistan

Address for Correspondence:

### Sarwat Sultan

Department of Applied Psychology  
Bahauddin Zakariya University, Multan

Emails: sarwatsultan@hotmail.com,  
drsarwat@bzu.edu.pk

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### Contribution

FK,SS conceived the idea and planned study. SR helped in collection, assembly & interpretation of the data. SS did critical revision of the article for important intellectual content. All authors contributed significantly to the submitted manuscript.

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### ABSTRACT

**Objective:** To investigate the mediating effect of treatment motivation between the relationship of autonomy support and psychological problems among cardiac patients.

**Methodology:** This cross sectional study consisted of cardiac patients recruited from Chaudry Pervaiz Elhai Institute of Cardiology Multan from June 2014 to June 2015. Patients were requested to provide the data on three scales about autonomy support, treatment motivation, and psychological problems; depression, anxiety, and stress.

**Results:** A total of 212 patients were included in the study. Findings from regression analyses demonstrated that autonomy support predicted treatment motivation ( $B=.120, p>.05$ ) and treatment motivation then predicted depression ( $B=.028, p>.01$ ) anxiety, ( $B=.055, p>.05$ ) and stress ( $B=.037, p>.05$ ) significantly. Treatment motivation mediated the effects of perceived autonomy support on depression, anxiety, and stress ( $B = 2.73, 3.42, 1.47$  respectively).

**Conclusion:** Level of motivation for treatment of cardiac patients mediated the effects of perceived care and attention received from physicians on their levels of depression, anxiety, and stress.

**Keywords:** Autonomy support, Cardiac patients, Psychological problems, Treatment motivation

## INTRODUCTION

Studies have been conducted on coronary heart patients (CHD) focusing their life patterns and biological risk factors and many studies have provided evidence in the previous literature that progression, symptoms, duration and consequences of this illness are affected by the psychiatric and psychological factors.<sup>1,2</sup> Most of the common factors are depression, anxiety, and stress.<sup>3-9</sup> Some studies also have proposed that psychological factors play part as independent risk factors in physical chronic illnesses; such as CHD.<sup>10,11</sup>

For both men and women in developed countries, CHD is the main leading cause of death, and cardiac patients report the cardiac treatment or surgery as life distressing event of their lives.<sup>12</sup> Moreover, though the failure of emotion regulation, psychological problems of depression and anxiety are difficult to recognize and handle in cardiac older patients, psychopathology is also another significant component that contributes as an independent risk factor for cardiac morbidity.<sup>13,14</sup> Therefore within conventional cardiac care, psychosocial factors such as lack of social support, life distress, anxiety, and other psychopathology are need to be explored.<sup>15</sup>

Considering the main tenets of self-determination theory (SDT), patient's motivation level towards treatment and his/her experiences of illness should be observed and controlled carefully during hospitalization because these factors play roles as behavioral mediators of health outcomes.<sup>16</sup> Role played by autonomy support provided by physicians in cardiac patient's treatment is quiet important. Clinical researches have examined the diverse aspects of individual's autonomy and treatment motivation.<sup>17</sup>

SDT being the general motivation theory postulated through empirical studies that perceived autonomy support influenced patient's depression and stress and in turn on treatment motivation.<sup>16</sup> Since the last two decades, most of the studies conducted on physical illnesses incorporated SDT.<sup>17</sup> These findings indicated the role of factors associated with patient's perception of autonomy support and treatment motivation and then their influences on lowering psychological problems and its consistency over time.

Feelings of autonomy and competence - an essential component of internalization and incorporation helps to regulate and maintain behaviors contributing to the wellness and health. Therefore, the environment where the intervention being done can allow autonomy and provide assurance which in turn increases the adaptability and thus improve health outcomes.<sup>16</sup> Autonomy-supportive environment provided by the health care influence the patients depression, which affects the choice and order of treatment.<sup>18</sup> Perception of the psychological motives being supported helps individuals in improvement of their mental

health i.e. low depression, anxiety, and somatization, better prime of life, further more improved health related outcomes.<sup>19</sup>

Researchers studying health behaviors explain results in a constant and interesting pattern. Autonomy encouraged by the health care in patients promotes more voluntarily treatment involvement and show consistency in improvement of their illness.<sup>19</sup> Keeping the considerable role of patient's perception towards clinicians during treatment at hospital in treatment motivation and then for treating psychological problems, we designed a hypothesized model to explore the mediating effects of treatment motivation between autonomy support and depression, anxiety and stress among cardiac patients.

## METHODOLOGY

Employing purposive sampling technique, this cross sectional study consisted of cardiac patients admitted at Chaudhry Pervaiz Elahi Institute of Cardiology, Multan. Duration of the study was of one year that is from June 2014 to June 2015. These patients were undergoing through treatment with medication, angiography, and heart surgery. Urdu-versions of three questionnaires to measure their perceived autonomy support, level of treatment motivation, and psychological problems were administered in hospital settings after obtaining consents from institution and respondents. Treatment Motivation Questionnaire(TMQ) was a 29-item scale rated on 5-point options; strongly disagree (5) to strongly agree (1).<sup>20</sup> The Depression Anxiety Stress Scale (DASS) was a 15-item questionnaire responded on never (0) to almost always (3).<sup>21</sup> The Health Care Climate Questionnaire (HCCQ) was a 15-items scale with 7-point rating scale indicating strongly disagree=1 to strongly agree=7.<sup>22</sup> All the respondents participated in the study voluntarily and no one was paid for their cooperation. They were instructed about how to answer the questions, and were assured about the confidentiality of their responses. To test the hypothesized model of the study, descriptive statistics, Pearson correlations, pathway analyses, and Sobel tests were performed.

## RESULTS

A total of 212 patients were included in the study with mean age of  $32.25 \pm 8.67$  years. Findings indicate the positive significant correlation between autonomy support and treatment motivation while negative relationships with psychological problems; depression, anxiety and stress with a p-value of  $<0.01$ . Means, standard deviations, and correlations coefficients of all study variables shown in Table 1.

Analyses of hypothesized paths indicated the significant beta coefficients and t-values in Table 2. Findings imply that

autonomy support significantly predicts treatment motivation while psychological problems are significantly predicted by treatment motivation with a p-value of <0.01.

Table 3 indicates the significant mediating role of treatment motivation between autonomy support and psychological problems; depression, anxiety, and stress with a p-value of <0.01.

**Table 1: Correlations Matrix for Perceived Autonomy Support, Treatment Motivation, and Psychological Problems in Study Population (n=212)**

Variable	M	SD	1	2	3	4	5
Autonomy Support	2.70	0.14	1				
Treatment Motivation	2.77	0.09	.18*	1			
Depression	2.01	0.49	-.34**	-.31**	1		
Anxiety	1.28	0.32	-.28**	-.20*	.44**	1	
Stress	1.27	1.03	-.17*	-.20*	.65**	.34**	1

\*p < 0.05, \*\*p < 0.01

**Table 2: Standardized Coefficients and t-values from Path Analysis of the Trans-contextual Model in Study Population (n=212)**

Hypothesized Paths	Path Coefficients	t Statistics
Autonomy -> Treatment Support Motivation	.120	2.009*
Treatment -> Depression Motivation	.028	3.468**
Treatment -> Anxiety Motivation	.055	2.049*
Treatment -> Stress Motivation	.037	2.140*

\*p < .05, \*\*p < .01

**Table 3: Sobel Tests for the Relationship Between Autonomy Support and Psychological Burden in Study Population (n=212)**

Paths	B <sub>A</sub>	SE <sub>A</sub>	B <sub>B</sub>	SE <sub>B</sub>	Sobel Test	p
AS → TMQ → Dep	.120	.060	.128	.008	2.73	.04
AS → TMQ → Anx	.120	.060	.155	.027	3.42	.03
AS → TMQ → Stress	.120	.060	.137	.017	1.47	.04

p < .05

## DISCUSSIONS

The major aim of present research was to explore the meditational effects of treatment motivation between the

relationship of autonomy support with psychological problems; depression, anxiety, and stress among cardiac patients. Depression, anxiety, and stress are the common outcomes of this illness (CHD).<sup>13,14</sup> Cardiac patients when perceived their surgeons more supportive during treatment they experience low depression, anxiety and stress.<sup>2,3</sup> These findings have been affirmed by this study as well. Patients perceiving their physicians more helping have been found more motivated for treatment process as this study presented the same findings. Further, it has also been evidenced through several studies that the patients who are highly motivated towards getting treatment they report low levels of depression, anxiety, and stress.<sup>20,22</sup> The consistent findings have been demonstrated by the current study as well.

The most significant findings of the present study were related to the role of treatment motivation as mediator between patient's perception of autonomy support and psychological disorders. Hypothesized model suggested the significant pathways and analyses showed that level of treatment motivation modified the relationship of autonomy support and psychological problems. Study has provided the significant findings that are suggestive of the ways for both patients and physicians to develop the motivation towards treatment that in turn could help in reducing the depression, anxiety, and stress.

Currently in developing countries like Pakistan, the environment of health care centers is not appreciating for the patients. For this reason patients suffer psychological burden along with their physical illness. However, the environment of Chaudhary Pervaiz Elahi Institute of cardiology was very supportive and autonomous for the cardiac patients. The care and attention given by doctors, the hospital environment all motivated the patients for treatment helping them in getting relieved from their psychological issues of depression and anxiety. On the basis of the current findings it is vital to pay more consideration on the health care environment of the patients. Autonomy support and motivation provided by the health care should be given the more attention to increase the people's wellness and better health in the future.

## LIMITATIONS

Besides the significant findings of the present study, some limitations need to be acknowledged. Cardiac patients were of different characteristics and the findings may be confounded by their gender, age, education, income level, and family support. These factors should be kept under consideration in the future replication of the same study and the effects of these factors should be explored for more understanding of mediation from treatment motivation.

## CONCLUSION

Present study contributed to the literature available on psychological states of cardiac patients by providing the significant findings for the mediating role of level of treatment motivation between autonomy support and psychological problems. It implies that when patients are self-motivated towards getting treatment and perceive their physicians more supportive during treatment, they experience low levels of depression, anxiety, and stress.

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