

FACTORS ASSOCIATED WITH CAREGIVERS BURDEN: DO COPING STRATEGIES MAKE ANY DIFFERENCE?

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Contribution

SS, SK did literature review and research design and also finalized the manuscript. SF, FK helped in collection and analysis of data. SS helped in final draft. All authors contributed significantly to the submitted manuscript.

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ABSTRACT

Objective: The main objective of the study was to see the moderating effects of coping strategies on caregivers burden that they incurred while caring the CHD patients.

Methodology: This cross sectional study was conducted at Cardiology Centre Multan from 1st February to 31st August, 2016. As the study was of particular importance for examining the significance of coping strategies used by caregivers to cope with their burden during treatment of CHD patients; the gender, age, relationship with recipient, and duration of disease were taken as independent variables. Information about independent variables, coping strategies, and burden were collected using scales; Way of Coping Scale and Zarit Burden Interview Scale respectively.

Results: A total of 312 care givers were included. The analyses from structure equation model affirmed the moderating roles of different coping strategies. Findings showed that female caregivers used emotion focused strategies and male caregivers used problem focused strategies. Results demonstrated that effects of age, relationship with recipient, and duration of disease were moderated by coping strategies; emotion focused ($B = .31, p > .01$) and problem focused ($B = .25, p > .01$).

Conclusion: Based upon the statistical analyses, present findings added to the literature by affirming the role of caregivers coping ways in dealing with their burden. Effects of caregivers' gender, age, relationship with patient, and duration of CHD are significant and are moderated by coping strategies.

Key Words: Caregiver Burden, Care-recipient Relationship, Coping Strategies, Coronary Heart Disease

INTRODUCTION

Coronary heart disease (CHD) is one of the most principal health concerns of present century and is one of the most significant reason of death in any society.¹ According to the 2014 World health statistics by WHO death due to CHD in Pakistan reached 111,367 or 9.87% of total deaths. Increasing statistics of CHD prevalence, the number of patients' family members who provide care at home to these patients is increasing.² Although family caregivers are pivotal in the care of any patient with cardiac disease, caregiving unfortunately can have adverse effects including physical, emotional, social, and financial problems. Caregivers of patient with cardiac disease have been found to have higher risk of social isolation, emotional burden that often results in stress, health problems, and depression.

Caregiver burden refers to the negative feelings and subsequent strain experienced as a result of caring for a chronically sick person such as cardiovascular diseases cancer etc.³ Caregiving burden is a caregivers' emotional distress regarding the impact of caregiving on their physical, psychological, and social life, including the experience of poor health, isolation, feeling of end-of-hope, loss of control on life and personal time, fatigue, and being nervous or depressed, burden of providing regular assistance to a disabled or an elderly person is seen to be a chronic stressor for the care giver.⁴ Hence care giver burden, particularly that of closely involved family members such as parents or spouse, is important as an outcome measure in mental health care, so as to assess and reduce it for the well-being of both the survivors and care givers. Indeed the measurement of care giver burden has been shown to enhance worker and administrator awareness of the need to reduce such burden in health care field in general.⁵

Family care givers have many functions including, but not limited to, domestic chores and household tasks, providing personal care and assisting the dying person with activities of daily living, managing symptoms such as pain and constipation providing emotional and social support to the dying person, being a spokesperson, advocate and proxy decision maker and coordinating all aspects of the dying person's care.⁶ While family care giving has considerable rewards including allowing care givers to facilitate closure after death and helping them and meaning in their experiences, it is physically exhausting difficult to recover from and fraught with emotional and financial burdens.^{7,8} Therefore, it is not surprising that the health and well-being of family care givers often suffer when they provide end of life care at home.^{6,9}

When individuals face a traumatic event, they must use a variety of strategies to cope with negative experience and stress. One of the most popular models for coping with stress is given by Lazarus and Folkman which used in the

field of stress caused by something life threatening.¹⁰ Lazarus and Folkman have defined coping with stress as an attempt to manage the demand of external and internal environment that are deemed to exceed the subject's normal request. The model suggests that coping with stress is a process and not a single event. A primary focus of coping is on the management of the situation and the reduction of stress, and is referred to as problem-focused coping.¹⁰ Problem-focused coping is the management of the problem that is causing the distress including acting on the situation to reduce the problem, seeking social support, or quitting. Otherwise, emotion-focused coping may be employed, which refers to "the regulation of distress" resulting from the problem.¹⁰ According to Lazarus and Folkman, possible emotional coping includes denial, avoidance, distraction, self-blame, reinterpretation, reappraisal, wishful thinking, minimization of the problem, or magnification of the problem.¹⁰ The purpose of coping is to reduce or avoid stress, however, Lazarus and Folkman have noted that coping efforts used by individuals may either reduce or increase emotional distress.¹⁰ Effective coping includes both the management of negative feelings or emotions and the alteration of the problem, but the problems that underlie certain types of stressful encounters are not amenable to change.

As far as role of coping strategies in caregivers is concerned, some studies have highlighted the role of effective coping in reinforcing cohesion and improving relationships within family context. Other studies have pointed out negative impact of caregiving on health status and psychological conditions.¹¹ It is essential to understand the extent of burden and usual coping strategies adopted by caregivers of stroke survivors for strategic home rehabilitation and smoothen day to day functioning of caregivers. Thus, the present study aimed to assess the burden and coping strategies among caregivers and find the relationship between burden and coping.

Researcher did not find empirical research looking at the coping strategies specifically for CHD care givers; therefore, in the present study, the coping strategies for other types of care givers or other groups of people are discussed. Lilly and Graham-Bermann found emotion-focused coping to positively correlate with depression but did not know whether or not the depression came first.¹² Billings and Moos found that emotion-controlling, a technique classified as emotion-focused coping, was related to lower levels of depression.¹³ Therefore, not all individual techniques classified as emotion-focused coping are positively related to depression, despite the overall coping strategy's positive relationship with it.¹²⁻¹⁴

Studies investigating the role of coping strategies in experiencing the stress and burden always consider the gender differences. Though the subject of gender and

coping strategy usage is contradicted between studies.^{10, 15} Ali and Askari reported that women used emotion-focused coping more and men used task-focused coping more.¹⁶ Billings and Moos reported a non-significant difference between men and women utilizing emotion-focused coping with a Hotelling's *T* statistic of .03¹³. When contrasted using one-variable analysis, women were found to be more likely to release emotions.¹³ Findings on association of burden with demographic variables suggested that the care giver burden is higher when care giver is female and care recipient is male, when care giver is not educated and also have low-socioeconomic background.¹⁷⁻²¹

Considering the findings on gender effects in using coping ways and burden, the present study is an extension towards exploring not only the gender influences but also some other factors; age, relationship with care-recipient, and duration of disease that are likely to cause differences in adopting coping strategies and ultimately burden among care givers of CHD patients. This study further aimed to examine the moderating effects of coping strategies on burden of care givers through their gender, age, care recipient- care giver relationship, and duration of disease.

METHODOLOGY

This cross sectional study was completed with care givers of CHD patients after obtaining consents from them. Care givers of CHD patients were evenly divided into gender contacted at Institute of Cardiology Multan, from 1st February to 31st August 2016. Prior to asking the questions, all participants were assured about the use of information sought from them only for research purpose. All the data was collected by the researchers in personal meetings with caregivers at hospital surrounding.

This conveniently approached sample was then requested to fill out the questionnaires. They provided answers about their gender, age, relationship with patient, and duration of disease. Coding was done by assigning 0 to male and 1 to female; 0 to daughter/son and 1 to husband/wife. Age and duration were treated as continues variables.

Zarit Burden Interview Scale was used to assess the care giver burden. It was 22 items scale rated on 5-points; 0=never to 4=nearly always. The alpha reliability for this data was found .78. The Ways of Coping used by care giver in this study was measured by Ways of Coping questionnaire, included 66 items mainly divided into two major types; problem focused and emotion focused coping. Problem focused is based on solving problem or doing something to change the source of stress and emotion focused is based on reducing or managing the emotional distress related to the situation. Under two categories this questionnaire has eight subscales, emotion focused included Distancing, Self-controlling, Escape-Avoidance, and Positive Reappraisal; and Problem focused comprised of Confrontive Coping, Accepting Responsibility, and Planful Problem-Solving; Seeking Social Support links to both problem focused and emotion focused coping strategies. response format was based on a 4-point likert scale; 0 = not used; 2= used somewhat; 3 = used quite a bit;4= used a great deal. Analysis was done with SPSS 21.

RESULTS

Total of 312 care givers with mean age of 37.42+-11.26 years were included. The simple direct relationships among all independent, dependent, and moderating variables were computed (Table2). The fitness of hypothesized model was examined through structure equation model on AMOS-21(2), and assumed paths were tested in main analysis (Table3).

Goodness of fit for assumed model was analyzed through SEM and was found satisfactory.

Table 3 depicts the statistics for the moderating effects of coping strategies on the relationship between caregiver related factors and care giver burden. Findings demonstrated that effects of gender (female), relationship with patient (spouse), and duration of illness are significant for caregiver burden and are moderated by emotion coping strategies. Effect of age is also significant for caregiver burden but is significantly moderated by problem focused strategies.

Table 1: The Summary of Fit Indices Statistics for the Full Structural Equation Model (SEM) Analyses in study population (n=312)

Overall	ML p	Normed	BSB p	CFI	SRMR	RMSEA with 95% CI and P
69 .35	.001	2.37	.001	.921	.027	0.037

Table 1 depicts the significant Bollen-Stine bootstrap chi-square. The normed chi-square is also satisfactory ranged between 2-3. It confirms the normality of data and fit for

paths analysis. The data meet the all assumptions for the present hypothesized model. Therefore, the hypothesized paths in model adequately fit to the data.

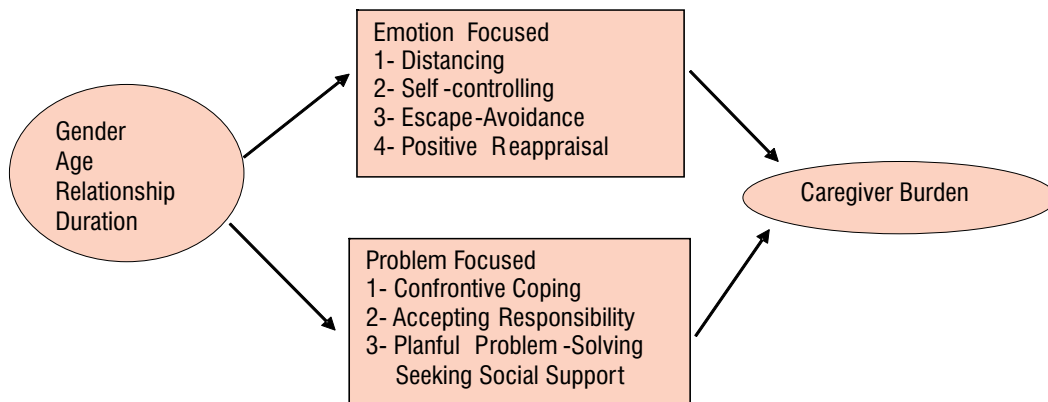
Table 2:Correlations Matrix Among Factors Associated with Caregiver Burden and Coping Strategies in study population (n=312)

	1	2	3	4	5	6	7	8	9	10	11	12
Caregiver Characteristics												
1 Gender (female)	1											
2 Age	.11*	1										
3 Relationship -recipient (spouse)	.15*	.12*	1									
4 Duration of Caregiving	.02	.14*	.06	1								
Coping Strategies												
<i>Emotion Focused Strategies</i>												
5 Distancing	.49**	.17*	.21**	.03	1							
6 Self -controlling	.33**	.28**	.24**	.11*	.36**	1						
7 Escape-Avoidance	.25**	.30**	.17*	.01	.27**	.21**	1					
8 Positive Reappraisal	.31**	.18*	.25**	.14**	.31**	.19*	.20**	1				
<i>Problem Focused Strategies</i>												
9 Confrontive Coping	.07	.19*	.15*	.13*	.17*	.07	.03	.14*	1			
10 Accepting Responsibility	.17*	.23**	.22**	.20**	.11*	.11*	.05	.13*	.05	1		
11 Planful Problem -Solving	.09	.22**	.13*	.10*	.13*	.14*	.06	.06	.17*	.07	1	
12 Seeking Social Support	.27**	.19*	.18*	.22**	.03	.17*	.07	.23**	.15*	.18*	.17*	1
Outcomes												
13 Burden	-.37**	-.28**	-.38**	-.39**	-.23**	-.36**	-.22**	-.17*	-.20**	-.11**	-.15*	-.35**

*p>.05, **p>.01

Table 2 indicates the inter-correlations among all study variables. Gender, age, relationship with recipient, and duration of illness are found correlated with care giver experience of burden. Emotion focused strategies are more connected with burden as compared to problem focus strategies

Figure 1: The Path Diagram of the Hypothesized Model Care gives Burden (n=312).



The path Diagram off Hypothesized Model Care gives Burden as shown in figure 1

Table 3: Moderating Effects from Coping Strategies on Care giver Burden Through Structural Equation Model (SEM) Analyses in study population (n=312).

Coping Strategies	Gender	Age	Relationship with Patient	Duration of Disease
Distancing	.38 **	.12*	.37 **	.40 **
Self -controlling	.41 **	.34 **	.32 **	.23 **
Escape -Avoidance	.28 **	.13 *	.38* *	.31* *
Positive Reappraisal	.47* *	.17 *	.34* *	.28 **
Confrontive Coping	.11*	.24* *	.10 *	.11*
Accepting Responsibility	.21* *	.31 **	.21 **	.26* *
Planful Problem -Solving	.10*	.42* *	.14*	.23* *
Seeking Social Support	.37 **	.33 **	.44 **	.34 **

*p>.05, **p>.01

DISCUSSION

Stress and burden are common responses towards any chronic illness. Not only a patient experiences stress and anxiety due to illness but his/her care givers or family members also feel burden. Care givers of heart patients report the high level of stress, burden, depression, and anxiety while caring their close one suffering from CHD at home or in hospital. Care givers use different ways to cope with this burden. Coping strategies encompass the type of response one has toward stress.²⁵ The following two types of coping strategies are discussed and studied in this paper; emotion-focused and problem-focused used by care givers of CHD patients. These coping strategies are used interchangeably or separately. Coping strategies may also change during the course of the stressor.¹⁶ Nearly every care giver combines strategies.²⁵

The present study has proposed the model to test the effects of gender, age, relationship with patient, and duration of illness on care giver level of burden. From review of the literature it was assumed that male and female experience burden differently. Likewise it was further expected that the care givers of different ages, relationship of care giver with patient, and duration of care giving will affect the experience of burden. The hypothesized model proposed that care givers' use of coping strategies will moderate the effects of all independent variables on care giver burden.

Findings from correlation analysis provided the evidence that gender, age, relationship with patients, and duration of illness were found associated with care giver reported burden. Findings indicated that emotion focused strategies were more strongly negatively correlated with burden than problem focused strategies. These findings are consistent with previous studies which evaluated the relationship of burden with coping and suggested that emotion-focused strategies are associated with higher burden.^{19,26,27} Present results related to female care givers are also consistent with earlier researches that female care givers face higher levels of care giving burden.^{28,29} When compared to male care givers, female care givers experience higher levels of burden and depression, and lower well-being and physical health, provide more hours of care, higher number of caregiving tasks, more care giver burden and depression.³⁰ Present results are also in accordance with previous literature that male care givers use problem focused strategies as compare to females.^{14,31,32}

While testing the structure model using SEM on AMOS, the model was found adequately fit to the data. Proposed model was found satisfactory when goodness of fit for assumed model was analyzed. Hypothesized model was designed indicating independent variables of care giver gender, age, relationship with patient, and duration of care giving; caregiver burden was taken as dependent variable; while coping strategies were grouped as moderator variables.

Findings from SEM depicted the significant influences of gender (female), relationship with patient (spouse), and duration of care giving on care giver burden. Most important findings were observed for the role of coping strategies that suggested the moderation employed by emotion coping strategies more than problem focused strategies gender (female), relationship, and duration. Hence the age effect was more explained by the moderation effects from problem focused strategies.

LIMITATIONS

Though study has provided significant findings to the comprehensive understanding of inter-relationships among care giver demographics, coping strategies, and care giver burden, this study also bore some limitations. Hence the goodness of fit for the data has been found satisfactory but for the normality of data, the sample size should be large enough using more appropriate sampling technique from probability approach. Future research can be planned with subject to exploring some other moderators between independent and dependent variables of this study such as caregiver self-efficacy, perceived social support, and personality type.

CONCLUSION

These findings affirmed that the care giver's gender, age, relationship with patient, and duration of caring are the significant factors that determine the level of care giver burden. This study also evidenced the significant role of coping strategies adopted by care givers in insuring the psychological burden that a care giver experiences while caring the patients of CHD.

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