

THE EXTENT OF BURDEN AND WELLBEING AMONG CAREGIVERS OF CARDIAC PATIENTS: PERCEIVED SOCIAL SUPPORT AS MEDIATOR

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Contribution

SS conceived the idea, planned the study and drafted the manuscript. SF & FK collected data, did statistical analysis and critically reviewed manuscript. All authors contributed significantly to the submitted manuscript.

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ABSTRACT

Objective: To explore the mediating effects of social support on caregivers' burden and wellbeing they experienced while caring for cardiovascular patients.

Methodology: This study was conducted at Cardiology Centre Multan from 23rd May to 15th September, 2016. Caregivers of cardiovascular patients were approached to assess the mediating role of social support between the burden experienced by caregivers and their level of wellbeing. The caregivers of only those cardiovascular patients who were hospitalized were included in the study. The caregivers of patients at home were not the participants of this study. Thus caregivers of cardiac patients provided data on Zarit Burden Interview scale, Caregiver Wellbeing Scale, and Medical Outcomes Study Social Support Survey.

Results: A total of 257 caregivers of cardiovascular patients provided data on study measures. Pathway analysis on structure equation model supported the mediating effect of social support between burden and wellbeing of caregivers. Results demonstrated that caregivers' burden is negatively associated with their wellbeing ($r = -.48, p > .01$) and social support ($r = -.37, p > .01$); while perceived social support is positively related with wellbeing of caregivers ($r = .41, p > .01$). Findings also reported the mediating effects of social support (emotional support .39, tangible support .22, positive social interaction .20, affectionate support .35, and overall social support .44) caregivers' wellbeing.

Conclusion: Present findings supporting the hypothesized model confirmed that social support mediated the relationship of burden with wellbeing of caregivers. It implied that if caregivers of cardiac patients receive social support in forms of emotional, tangible, positive social interaction, affection may experience low impact of care-giving burden on their wellbeing.

Keywords: Caregiver burden, Wellbeing, Social support, Cardiovascular disease

INTRODUCTION

One of the major global reasons for death is cardiovascular disease. About 17.3 million deaths occur per year and it would increase to 23.6 million by the year 2030. Thus caregivers of patients with chronic illness such as cardiovascular disease, may experience problems in the form of health and mental issues, financial burden, etc. caring for chronically ill patient is also related with decreasing level of wellbeing in caregiver, it would be even more alarming if the caregiver is one of the family member. Numerous studies have reported that caring for an elderly cardiac patient is often related to depression and feeling of burden, because caregiver experience stress in looking after and managing the physical and behavioral problems of patient. However the key factor associated with in keeping a patient out of a hospital or nursing home is wellbeing of caregiver, and also understanding the issues linked with burden may help out the caregiver to improve his/her relationship with the care-recipient.

Regardless of the number of literature present on caregivers, and particularly related to burden and its association with wellbeing isn't explored well. Even though some researches states that most caregiver are unable to deal with this situation or most use coping technique to handle it.^{1,2} However burden and wellbeing are often associated with care giving process, as burden is used as a predictor of overall wellbeing.³⁻⁵ This proposes that burden of care giving will be associated with overall wellbeing either high or low. Montgomery stated that in literature of care giving there are various terms may define the meaning of burden such as strain effects, cost of care giving, impact of care giving.⁶ George and Gwyther described Burden of caregiving as "the physical, psychological or emotional, social, and financial problems that can be experienced by family members caring for impaired older adults."⁷

According to Vitaliano, Young, & Russo burden contains objective as well as subjective components.¹ Objective burden is consisted of care giving duties associated with patient, whereas caregiver subjective burden results from the disruptive behaviors of the patients in care giving conditions. In Sometime studies burden is used as and some researches it is studies as a predictor of other variables.⁸⁻¹¹ Stull et al. studied burden and wellbeing, in form of finance, health and social activities, as an outcome variable and suggested that burden is very much associated with the patient daily routine activities and cognitive impairment when compared with wellbeing.⁴ However when burden is studied as independent variable it effectively predicted the services outcomes such as homemaking, doing chores etc when compared with wellbeing. On the other hand wellbeing play major role in care giving an elderly ill patient, particularly in the use of institutional placement and the course of the illness.¹² In fact mostly used conceptual models in care

giving include burden as a predictor of other outcome.

Patient having chronic illness (like heart disease) may experience other problem which may need a high amount of physical and social support. As they aged they may experience social isolation. Thus caregivers of these patients also experience social isolation in adopting the adequate role of caregiving.¹³ In care giving Decreased Social support is one of the key feature to understand how caregivers adjust in their roles. Sarason and Pierce, stated that social circle offer emotional support that boost one self-esteem and enhances sense of belongingness and also provide guidance related to patient illness.¹⁴ Several studies have been conducted on caregiver burden and wellbeing, their findings suggest that social support is integral to wellbeing. Literature on caregiver burden, wellbeing suggested that caring for a week elderly family member is a complicated task which may create financial problems, emotional distress or physical health issues.^{15,16} However burden become less severe when a caregiver has powerful social support available.¹⁷

Extensive literature is available on exploring the association between caregiver burden and wellbeing. Thus this study investigates that how social support will mediate the relationship between burden and wellbeing of caregiver of cardiovascular disease.

METHODOLOGY

This study included caregivers of cardiovascular disease patients, age ranging from 30 to 45 years with a mean age of 41.55 ± 4.32 . Convenient sampling was used to approach the caregivers from Cardiology center Multan from 23rd May to 15th September, 2016. Prior collecting information from caregivers, informed consent was taken. Participants were assured that confidentiality will be maintained.

Caregiver burden was evaluated through Zarit Burden Interview Scale.¹⁹ ZBIS is a likert scale consisted of 22 items, ranging from 0 = never to 4 = nearly always. It had internal consistency and Cronbach's $\alpha = 0.83$ & 0.89 , and test-retest reliability was also good i.e. 0.71 . The wellbeing of the caregiver was assessed using the shorter version of Caregiver wellbeing Scale developed by Tebb, Berg-Weger and Rubio.²⁰ This scale consisted of two subscales i.e. activities and needs of caregivers on a five point scale, each subscale has eight items. The CWBS has excellent coefficient alpha i.e. 0.94 . The mediating effect of Social Support was assessed using Medical Outcomes Study (MOS) Social Support Survey.²¹ It consisted of 20 items, first item is open ended question and rest of the 19 items are scored on a 5 point scale, ranging from none of the time (1) to all of the time (5). MOS Social Support Survey is comprised of four subscales, these are emotional/informational support (eight items), tangible support (four items), positive social interaction (three items), and

affectionate support (three items) and 1 additional item. The overall score is calculated through the mean of 19 items. High scores represent high level of perceived social support.

To examine the simple direct relationships among all independent, dependent, and mediating variables were computed on SPSS-21. The fitness of hypothesized model was examined through structure equation model on AMOS-21, and assumed paths were tested in main analysis.

RESULTS

A total of 257 caregivers were included in the study .The means and standard deviations of the variables which explain that caregivers of cardiac patients reported high level of psychological burden and low extent of wellbeing. Correlation coefficients demonstrate that caregivers' burden is negatively associated with their wellbeing ($r=-.48$,

$p>.01$) and social support ($r=-.37$, $p>.01$); while perceived social support is positively related with wellbeing of caregivers ($r=.41$, $p>.01$) (Table 1). Goodness of fit for assumed model was analyzed through SEM and was found satisfactory.

All the assumptions for the present hypothesized model were met;hence the Bollen-Stine bootstrap chi-square is significant and the normed Chi-square ranged between 2-3 which is also satisfactory and affirms the normality of data; and shows fit for paths analysis. Therefore, the hypothesized paths in model adequately fit to the data (Table 2) .

The statistics for the mediating effects of perceived social support on the relationship between caregiver' burden and wellbeing demonstrated that effect of caregivers' burden on their wellbeing is significant and is mediated by perceived social support (Table 3).

Table 1: Correlations Matrix among Factors associated with Caregiver Burden, Caregiver Wellbeing and Social Support (n=257)

Caregiver Variables	M	SD	1	2	3	4	5	6	7
Independent Variable									
1 Caregiver Burden	49.31	7.53	1						
Mediators									
2 Emotional Support	23.14	6.29	-.33**	1					
3 Tangible Support	14.11	4.23	-.37**	.15*	1				
4 Positive Social Interaction	10.10	3.57	-.26**	.26**	.11*	1			
5 Affectionate Support	09.46	4.29	-.21**	.35**	.12*	.28**	1		
6 Overall Social Support	57.26	9.11	-.36**	.42**	.18*	.31**	.41**	1	
Outcome Variable									
7 Caregiver Wellbeing	19.46	7.89	-.48*	.38**	.26**	.38**	.46**	.41**	1

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

Table 2: The Summary of Fit Indices Statistics for the Full Structural Equation Model (SEM) Analyses (n=257)

Overall χ^2	ML p	Normed χ^2	BSB p	CFI	SRMR	RMSEA with 95% CI and P Close
82.15	.002	2.62	.001	.916	.020	.025

Table 3: Mediating Effects from Perceived Social Supports on Caregiver Wellbeing through Structural Equation Model (SEM) Analyses (n=257)

Perceived Social Support	Caregivers' Wellbeing
Emotional Support	.39**
Tangible Support	.22**
Positive Social Interaction	.20**
Affectionate Support	.35**
Total Social Support	.44**

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

DISCUSSION

The structural model of the study was tested through SEM on AMOS, data was adequately found fit. Therefore goodness of fit for assumed model was used to analyze proposed model and was also satisfactory. Hypothesized model indicated caregiver burden as independent variable and wellbeing as dependent variable, while social support was used as a mediator variable.

The present study evaluated the relationship between burden and wellbeing and mediating effect of social support on caregiver of cardiac patients. As chronic diseases, such as coronary heart disease, have a great effect on the overall health of the patient, which may become burden for the caregiver. Caregiver often experience psychological problem such as depression, stress anxiety which deteriorate the overall wellbeing of a caregiver. However the caregiver burden is a predictor of wellbeing.³⁻⁵ An individual caring for a chronically ill patient often experiences multiple challenges to give high quality of care, which may isolate them socially which leads to low social support and high level of burden.²⁰

The previous literature on caregiver burden and wellbeing stated that burden and wellbeing are associated with each other in the care giving process. Thus the analysis of the present study revealed high burden and low wellbeing among caregivers of cardiac patients. Findings demonstrated the significant impact of caregivers' burden on their level of wellbeing, however these were supported by Pearlín, Mullan, Semple & Skaff; Stull, Kosloski & Kercher; Yates, Tennstedt & Chang.³⁻⁵ The current study outcome also confirmed by the Stull, Kosloski, & Kercher; Chappell & Reid; George; Webb, Pfeiffer, Mueser, Gladis, Mensch, DeGiroloam & Levinson, stated negative correlation between caregiver burden and wellbeing.^{2,4,21,22} The study results also affirmed by previous literature that social support was found positively correlated with wellbeing.²²⁻²⁹ The wellbeing of the caregiver often predicted by the Social support. Social support helped to reduce the effect of stressors such as burden on caregiver wellbeing. It had been also stated that social support in the form of affection may lessen the effect of psychological burden.

LIMITATIONS

Although the present study provided significant findings but it should be seen in the light of the limitations. The sample was small and also conveniently selected which may limit generalization of the outcomes. Thus future studies should increase sample size and use random sampling to incorporate participant in the study. This study only used social support as a mediator between caregiver burden and wellbeing, therefore future researches may also include self efficacy, coping strategies as a mediator.

CONCLUSION

The findings of the present study affirmed that the high level caregiver burden depicts low level of wellbeing. While social support was negatively correlated with burden and positively with wellbeing. This study also suggested that social support played important part in meditating caregiver burden and wellbeing of caregiver of cardiac patients. Thus if caregivers of cardiac patients receive social support from family, friends, and relatives may experience low impact of caregiving burden on their wellbeing.

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