

# **Burden and Quality of Life Among Caregivers of Patient Suffering with Cardiovascular Diseases at IMS & Sum Hospital, Bhubaneswar, Odisha**

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## **ABSTRACT**

**Introduction:** Burden is a termed make use for the care-giver & it is a kind of agony, that caregiver suffers from a result of caring for the client. A family member or relative who regularly looks after the patients. Care giver may involve in personal care, financial support, helping with medical procedure, transportation etc. The cardiovascular disease patients caregivers will experience significant level of burden that influence their QOL. The main aim of the study to find out the level of burden and QOL of caregivers.

**Methodology:** A descriptive co-relational research design was used & purposive sampling technique were used to pick a total of 200 samples., (n=200). Self-structured socio demographic questionnaire was used to collect the socio demographic data & standardized Caregiver Burden Inventory Scale and standardized WHOQOL- BREF scale was used to collect the data in IMS & SUM Hospital, Bhubaneswar, Odisha.

**Result:** The study result showed the Karl Pearson's correlation co-efficient reveals that there is burden have a significant negative correlation (-0.306, p=<0.01) with QOL. The ANOVA test & t test reveals that significant difference between burden & QOL with socio-demographic variables.

**Conclusion:** The present study concluded that majority are in 30-40 years age group are having high burden . Care givers require more counselling to cope-up with the burden & to manage the burden of care giving for the cardiovascular patients. QOL was worst affected due to the burden & care giving to the cardiovascular patients. The QOL of young people is more affected than the elderly due to care giving.

**Keywords:** Caregiver burden, Cardiovascular diseases, Quality of life.

## **INTRODUCTION**

Burden is a state or the condition of proper functioning of a human in certain situation genetic and environment & disease is a state of body or its organs which either interferes with the functioning of the body or deranges its functions. The cardiovascular disorder are the most health illness difficulty in all

around the world. Cardiovascular disorder is a universal phrase for a illness of the heart and blood vessels. India has one of the excessive burdens of cardiovascular disorder worldwide. The annual number of deaths arise from Cardiovascular illness in India is forecast to increase from 2.26 millions in the year of 1990 to 4.77 millions in the year of

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2021. Over 1 crore annual deaths are reported in India. Cardio-vascular disorders are most causes 20.3% of death in the male and 16.9% of deaths in female respectively.<sup>1</sup> Care-givers are the peoples who through the progress of the diseases & treatments are the maximum engaged persons in care for clients & help out them to adjust & accomplish their long-term diseases. Care-givers are usually relatives of client who will take care of the patient on a regular basis & care for clients in socially, physically, mentally, but do not accept any type of compensate for the care of client. The long-term nature of cardiovascular diseases various difficulties and significant changes in life style of clients which causes the excessive level of burden.<sup>2</sup>

Burden is a termed used for care-giver & it is a kind of agony, that caregiver suffers from a result of caring of the client. A family member or relative who regularly looks after the patients. Care giver may involve in personal care, financial support, helping with medical procedure, transportation etc.. The cardiovascular disease patients caregivers will experience significant level of burden. Raising of burden & diminishing QOL can lead to complications such as depression<sup>3</sup>. Burden influence the care-giver QOL & it may result in decreased care facilities & decay health condition of clients with long-term disease.<sup>4</sup>

As a result, the purpose of this study is to find out the level of burden and quality of life of caregivers of patients suffering with cardiovascular diseases.

## OBJECTIVES

1. To assess the level of burden and quality of life among caregivers of patients with cardiovascular diseases.
2. To find out the co-relation between burden & quality of life among caregiver of patients with cardiovascular diseases.
3. To find out the association between burden and quality of life with selected socio demographic variables.

## MATERIAL & METHODS

The Study included Descriptive co-relational research design. Before conducting the main study, a pilot study was carried out for the period of 1week with 20 samples. As a result, 200 caregivers was chosen by using the Purposive sampling technique. The data was collected using the following tools 1. Socio demographic questionnaire, 2. standardized Caregiver Burden Inventory Scale to find out the burden and 3. standardized WHOQOL-BREF Scale to assess the QOL. "Ethical clearance and permission were obtained from the institutional ethical committee, Siksha 'O' Anusandhan and written permission was obtained from medical superintendent of IMS & SUM hospital and administrative permission was obtained from the institutional review of board. The sample characteristics were analyzed using frequency and percentage".

## ANALYSIS AND INTERPRETATION

After the data was collected through demographic profile, descriptive statistics were used to find out the level of burden and assess the QOL of caregivers. Find out the co-relation between burden and quality of life through Karl Pearson's correlation coefficient and comparison between burden and QOL with socio-demographic variables through ANOVA test and t test.

### Section - I

The data in the above table shows that descriptive statistics of caregiver burden. The mean Caregiver burden was for time dependency items score was  $61.5 \pm 16.0$  and median was 60.0 Corresponding value for Development items, Physical health items, Emotional health items and Social relationship items were  $54.3 \pm 10.3$  with median was 55.0,  $56.1 \pm 10.7$  with median was 56.3 and  $50.1 \pm 11.5$  with median was 50.0 and 48.8- 10.1 and median 50.0 respectively. This implied the burden on the caregiver was very high due to the role of caregivers for cardio vascular patients.

**Table 1: Descriptive statistics of burden of caregivers of patients with cardiovascular disease.****n = 200**

<i>Descriptive statistics of Burden of caregiver</i>					
<i>Descriptive Statistics</i>	<i>Score in percentage</i>				
	<i>Time dependency items</i>	<i>Development items</i>	<i>Physical health items</i>	<i>Emotional health items</i>	<i>Social relationship items</i>
Mean	61.5	54.3	56.1	50.1	48.8
SD	16.0	10.3	10.7	11.5	10.1
Median	60.0	55.0	56.3	50.0	50.0

**Table 2: Descriptive statistics of QOL of caregivers of patients with cardiovascular disease.****n = 200**

<i>Descriptive statistics of Quality of life of caregiver</i>				
<i>Descriptive Statistics</i>	<i>Score in percentage</i>			
	<i>Physical health</i>	<i>Psychological health</i>	<i>Social relationship</i>	<i>Environmental health</i>
Mean	21.6	17.1	8.7	23.4
SD	2.9	2.9	1.9	3.8
Median	22	17	9	23

The data in the above table shows that descriptive statistics of caregiver QOL. The mean Caregiver quality of life was for physical health score was  $21.6 \pm 2.9$  and median was 22, Corresponding value for Psychological health, social relationship and environmental health were  $17.1 \pm 2.9$  with median was 17,  $8.7 \pm 1.9$  with median was 9 and  $23.4 \pm 3.8$  with median was 23 respectively. This implied the QOL was worst affected due to the role of care givers for cardio-vascular patients.

## Section – II

The data in the above table shows that the Karl Pearson's correlation co-efficient reveals that burden have a significant negative correlation ( $-0.306$ ,  $p < 0.01$ ) with QOL. This implied higher the burden score poorer is the QOL.

## Section – III

Table -4 reveals that the comparison of mean score of burden, quality of life by socio demographic profile of care givers. The mean burden score did not have significant variation by age groups with  $p = 0.571$ . However, the

**Table 3 : Co-relation between level of burden & QOL of caregivers of patients with cardiovascular disease.****n = 200**

<i>Correlation of burden, QOL</i>		
<i>Variables</i>	<i>Burden</i>	<i>Quality of life</i>
Burden	1	$-0.306^{**}$
Quality of life		1
<b>** Correlation is significant at the 0.01 level (2-tailed).</b>		

quality of life score significantly varied with age group ( $p=0.010$ ). The mean quality of life score is higher for younger age groups depicting that younger age people are more affected due to their role as care givers because of their other roles get restricted due to the care giving. The factors like gender, income per month, duration of disease condition, dependency of patients with ADLs and relationship with patient did not significantly affect the burden, QOL due to the role as caregivers ( $p>0.05$ ). The educational status significantly affect the burden and QOL. The care givers with higher education level have lower mean burden score ( $p=0.030$ ) and higher QOL score ( $p=0.002$ ). The mean burden score was significantly higher

**Table 4: Comparison of burden & QOL care givers of patients suffering from cardio-vascular disease by socio-economic variables**

**n = 200**

Variables	Classification		Score in Percentage			
			Burden		Quality of life	
			Mean $\pm$ SD	F' / 't' value	Mean $\pm$ SD	F' / 't' value
Age group in years	20-30	25(12.5%)	52.7 $\pm$ 6.0	0.761*	63.0 $\pm$ 6.3	3.898*
	30-40	87(43.5%)	53.8 $\pm$ 7.9		59.0 $\pm$ 8.4	
	40-50	70(35%)	54.4 $\pm$ 6.8		58.7 $\pm$ 7.8	
	50-60	18(9%)	55.8 $\pm$ 5.8		54.9 $\pm$ 7.2	
ANOVA 'p' value				0.517	0.010	
Gender	Male	129(64.5%)	54.4 $\pm$ 7.3	0.854#	58.5 $\pm$ 7.9	-1.383#
	Female	71(35.5%)	53.5 $\pm$ 6.8		60.1 $\pm$ 8.1	
Independent sample 't' test 'p' value				0.394	0.168	
Education status	Primary	24(12%)	55.3 $\pm$ 5.5	3.036*	59.0 $\pm$ 7.7	4.475*
	High school	68(34%)	55.6 $\pm$ 5.9		56.5 $\pm$ 7.1	
	UG	65(32.5%)	53.6 $\pm$ 7.5		59.9 $\pm$ 8.6	
	PG	43(21.5%)	51.7 $\pm$ 8.6		61.8 $\pm$ 7.8	
ANOVA 'p' value				0.030	0.005	
Occupation	Government employee	10(5%)	57.9 $\pm$ 7.5	4.468*	52.4 $\pm$ 5.7	5.12*
	Private employee	51(25.5%)	51.5 $\pm$ 8.8		61.9 $\pm$ 8.6	
	Business	54(27%)	55.8 $\pm$ 7.3		58.1 $\pm$ 6.8	
	Un employee	85(42.5%)	54.0 $\pm$ 5.2		58.7 $\pm$ 8.0	
ANOVA 'p' value				0.005	0.002	
Income per month	<10,000	21(10.5%)	54.9 $\pm$ 5.5	0.427*	57.7 $\pm$ 8.2	0.441*
	10,000-30,000	127(63.5%)	54.2 $\pm$ 6.3		59.4 $\pm$ 7.7	
	31,000-50,000	52(26%)	53.4 $\pm$ 9.4		58.8 $\pm$ 8.7	
ANOVA 'p' value				0.653	0.644	
Marital status	Unmarried	65(32.5%)	52.7 $\pm$ 7.2	1.406*	59.5 $\pm$ 8.2	3.048*
	Married	112(56%)	54.6 $\pm$ 7.5		59.1 $\pm$ 8.0	
	Widow	21(10.5%)	55.8 $\pm$ 4.7		56.0 $\pm$ 6.3	
	Divorce	2(1%)	54.2 $\pm$ 0.0		72.3 $\pm$ 2.2	
ANOVA 'p' value				0.242	0.030	
Duration of disease condition	< 5 year	52(26%)	54.2 $\pm$ 7.0	0.193*	59.7 $\pm$ 8.3	0.442*
	6-8 year	122(61%)	54.2 $\pm$ 7.5		58.7 $\pm$ 7.7	
	9-20 year	18(9%)	53.6 $\pm$ 6.4		60.3 $\pm$ 9.0	
	> 20 year	8(4%)	52.3 $\pm$ 2.7		57.2 $\pm$ 8.7	
ANOVA 'p' value				0.901	0.723	

Variables	Classification		n(%)	Score in Percentage		
			Burden	Quality of life		
			Mean $\pm$ SD	F' / 't' value	Mean $\pm$ SD	F' / 't' value
Dependency of patient in ADLs	No	59(29.5%)		54.1 $\pm$ 8.3	0.075#	60.1 $\pm$ 8.2
	Yes	141(70.5%)		54.0 $\pm$ 6.6		58.6 $\pm$ 7.9
Independent sample 't' test 'p' value				0.940		0.250
Relationship with patient	Father	27(13.5%)		56.6 $\pm$ 7.5	1.922*	55.2 $\pm$ 7.0
	Son	67(33.5%)		52.4 $\pm$ 7.6		60.3 $\pm$ 8.0
	Daughter	21(10.5%)		53.9 $\pm$ 7.2		60.4 $\pm$ 8.6
	Other relatives	84(42%)		54.6 $\pm$ 6.4		58.9 $\pm$ 7.9
	Friend	1(0.5%)		58.3 $\pm$		59.2 $\pm$
ANOVA 'p' value				0.108		0.068
Number of family member in patient family	2-4	87(43.5%)		52.8 $\pm$ 7.6	-2.255#	60.3 $\pm$ 7.9
	4-7	113(56.5%)		55.1 $\pm$ 6.6		58.1 $\pm$ 8.0
Independent sample 't' test 'p' value				0.025		0.056
* 'F'- value, # - 't' value						

for Govt. employees and business peoples. The mean quality of life score was significantly higher for private employee ( $p=0.002$ ). The marital status did not affect the mean burden score ( $p=0.242$ ). The divorce have significantly higher QOL score ( $72.3 \pm 2.2$ ) with  $p=0.030$ . The higher have the number of family members, the higher is the mean burden score ( $55.1 \pm 6.6$ ) with  $p=0.025$ . The mean QOL & score did not differ significantly with family size ( $p=0.056$ ) respectively.

## DISCUSSION

In the present study it was found that, 200 caregivers were participated in this study, among them maximum 43.5% are in 30-40 years age group and 35% are in 40-50 years. 64.5% caregivers are male & 35.5% were female. A cross-sectional study was conducted in the Valiasr hospital in Zanjan, Iran & he found that A total number of 110 caregivers were participated in this study. The majority of caregivers were males 30.0% and 70.0%. Were females.<sup>5</sup> In the present study the result

shows that, burden on the care giver was very high due to the role of care givers for cardio-vascular patients. A study supported by **Ertekin, Serkan Ozakbas et al. (2014)**, care-giver burden, QOL & walking ability in different disability levels of multiple sclerosis disease, 772 multiple sclerosis patients were recruited,

47 multiple sclerosis patients and their 47 caregivers finished the study. Disability, walking ability, QOL, disease impact of multiple sclerosis participants the burden, QOL, self-efficacy, life satisfaction of the caregivers were evaluated. Multiple sclerosis patients with higher disability had significantly worse scores on the MSWS-12, MUSIQOL, MSIS-29, and PDSS. The caregivers facing with higher disability had significantly worse scores on CBI and CAREQOL. In the present study the results shows that, mean quality of life score was  $59.0 \pm 8.0$  with median 57.7. This implied the quality of life was worst affected due to the role of care givers for cardio-vascular patients.<sup>6</sup>



## LIMITATION

Data were collected from caregivers who were available in the OPD of hospital on the day of the survey, which means participants that were in home were excluded. Limited data collection period due to sudden closing of OPDs. Sample size is reduced. The study is limited to single setting. The tools used are standardized and self-structured tool.

## CONCLUSION

The present study concluded that majority are in 30-40 years age group are having high burden. Care givers require more counselling to cope-up with the burden & to manage the burden of care giving for the cardiovascular patients. Quality of life was worst affected due to the burden & care giving to the cardiovascular patients. The quality of life of young people is more affected than the elderly due to care giving.

**Conflict of interest :** Nil

**Source of funding :** Self

## ETHICAL CLEARANCE

The Ethical consideration of present study was included – Approval of research problem and objectives by the research committee of Sum Nursing College and approval for conducting study from IEC, SOA Deemed to be university. Written permission was obtained from medical superintendent of IMS & SUM hospital and administrative permission was obtained from the institutional review of board. Informed consent was obtained from participants.

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