

Impact of Self Care Behaviour on Quality of Life Among Patients with Coronary Artery Disease

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ABSTRACT

Introduction: Coronary artery disease is a major global health concern. In India, coronary artery disease impacts 2–4% of the population, with the risk being six times greater than in the Chinese population and twenty times more than in the Japanese population. According to the WHO's Global Atlas (2011), CAD caused 17.3 million deaths in 2008, with 80% occurring in low- and middle-income countries. Urban India is seeing a big increase in CAD, highlighting a serious public health problem.

Materials and Methods: The present study assessed the impact of self-care behaviour on quality of life among patients diagnosed with coronary artery disease in selected hospital, Ernakulam. A non-experimental descriptive design was used, and 200 CAD patients were selected through the purposive sampling method. Data were collected using a demographic proforma, the SC-CHDI Version 3 and the WHOQOL-BREF Scale.

Results: Results showed that 87% exhibited moderate self-care behaviours, while 62% reported high quality of life. A positive correlation was found between self care behaviour and quality of life ($r = +0.220$, $p = 0.002$) indicating that as when selfcare behaviour increases, quality of life also increases.

Conclusion: The present study showed the self care behaviour among CAD patients and their impact on quality of life. Intentional and effective self-care can reduce hospitalizations and invasive procedures while improving physical functioning and emotional well-being, ultimately enhancing overall life satisfaction and quality of life. The results suggested that the majority of patients with coronary artery diseases had a moderate level of self care behaviour. The findings indicated that when selfcare behaviour increases, quality of life also increases.

Keywords: Self care behaviour, Quality of life, coronary artery disease

INTRODUCTION

The heart is a vital organ essential for a healthy life. Cardiovascular diseases are the leading cause of early sickness and death worldwide, making them a major global health concern.¹ Coronary artery disease (CAD) is a common cardiovascular disorder responsible for significant morbidity and mortality, accounting for about one-third of all fatalities.² It occurs due to a reduction in blood supply to a portion of the heart caused by atherosclerotic plaque formation.¹ Both non-modifiable and modifiable risk factors contribute to its development.³ Early

revascularization through percutaneous coronary intervention (PCI) and appropriate medications reduces mortality.⁴ Indians are the ethnic group most at risk for CAD globally.⁵ Self-care, defined as the practice of preserving health and managing illness, plays a crucial role.⁶ Quality of life is a key outcome in CAD management.¹

Cardio vascular diseases (CVDs) constitute one of the main causes of death world-wide. World Health Organization (WHO) anticipates that 17.9 million individuals pass away from cardiovascular diseases (CVD) each year.⁷ prevalence of coronary artery disease (CAD) in India varies, ranging from 1.6% to 7.4% in rural areas and 7% to 13.2% in urban areas.⁸ In Kerala, the crude and age-adjusted prevalence of CAD was 3.5%, with women 2.6% and males 4.8%. heart disease including myocardial infarction, is a leading cause of death in Kerala, accounting for 32.75% of deaths.⁷

The term self-care is the practice of preserving one's health, avoiding disease, promoting wellbeing and managing illness, either on one's own or in conjunction with medical professionals. According to the Middle range theory of self-care of chronic illness, self-care includes three core elements such as the self-care maintenance, self-care monitoring and self-care management. Self-care maintenance refers to practices followed by people which are necessary to preserve their emotional and physical stability. Self-care monitoring refers to the process of looking at oneself for changes in signs and symptoms. People use self-care management as they react to symptoms as they arise.⁶

QOL is an essential component in the assessment and follow up of CAD patients.¹ People with cardiovascular conditions often face numerous obstacles when trying to return to a more active and regular life, including resuming work and participating in social and recreational activities. By understanding the link between self-care and QOL, healthcare professionals can develop cardiac rehabilitation programs that incorporate new strategies to improve

adherence to treatment regimens and self-care practices.

The study aims to assess the existing self-care practices and quality of life among patients with coronary artery disease and also find out the impact of self-care behaviour on quality of life among patients diagnosed with coronary artery disease.

MATERIALS & METHODS

Present cross-sectional study was conducted among 200 patients above 30 years clinically diagnosed with coronary artery disease attending cardiology outpatient department in Lourdes hospital, Ernakulam. The sample were selected using non probability purposive sampling technique. The study included widows who above 30 years of age and diagnosed with coronary artery disease since last three months, who were attending cardiology OPD and who were willing to participate in the study and excluded diagnosed with other cardiac diseases and those who had undergone CABG and with physical disabilities. Data regarding self care behaviour were collected using SC-CHDI Version 3, Quality of life was assessed by using WHO QOL - BREF Scale. The data were collected by a structured interview after getting ethical clearance from the Institutional ethics committee.

Statistical Analysis

Data analysis was done using SPSS version 20. Both descriptive and inferential statistics were used for analysis. Frequency, percentage, mean and standard deviation were used as descriptive statistics. To find the correlation between the variables, Karl Pearsons correlation co-efficient was used. Chi square test was used to find association between research variable and demographic variables. All the null hypothesis were tested at 0.05 level of significance.

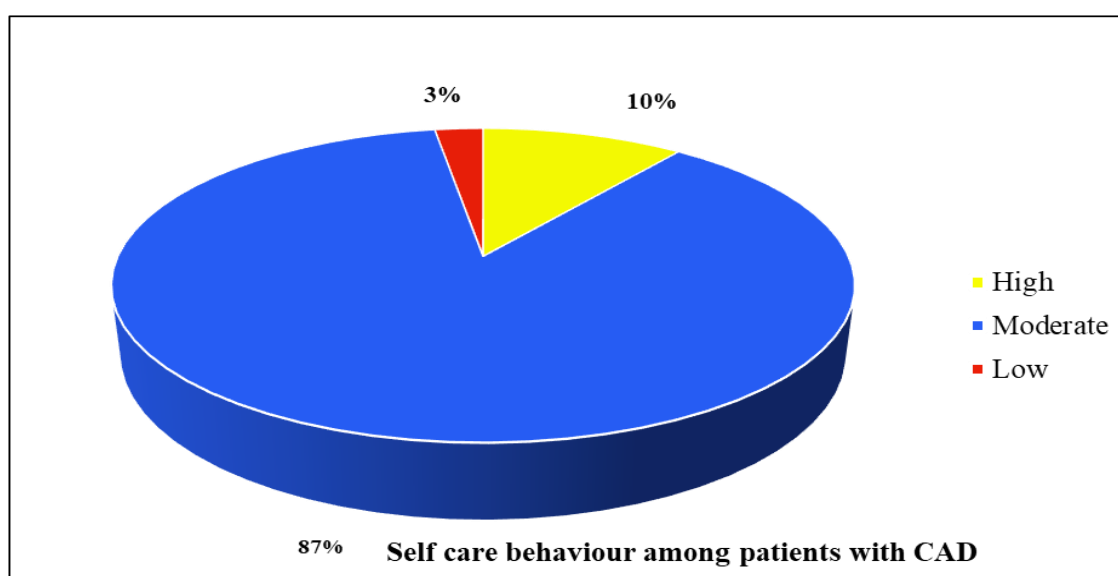
RESULT

The study was implemented among 200 patients diagnosed with coronary artery disease attending cardiology outpatient

department in Lourdes hospital, Ernakulam. The data reveals that among the 200 sample with respect to age, the majority (76%) were aged 61 years and above. While considering gender, the majority (63.5%) were males. With respect to occupation, the majority (51.5%) were unemployed. While considering residence, the majority (62%) belonged to rural areas. Regarding lifestyle factors, the majority (51%) had no lifestyle risk factors. With respect to BMI, the majority (77.5%) had normal body weight. Regarding follow-up practices, the majority (54.5%) regularly attended follow-up. With

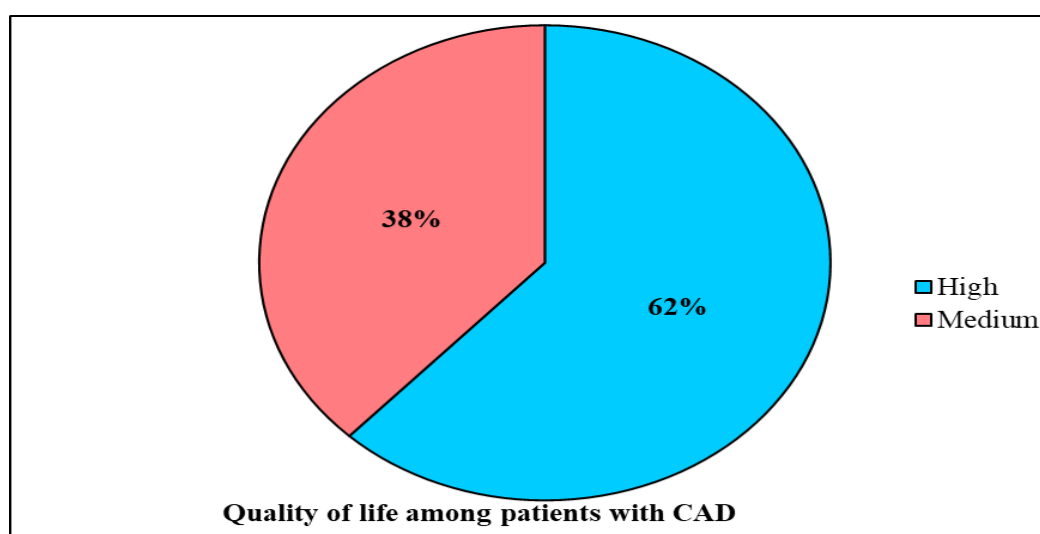
respect to family history of coronary artery disease, the majority (59.5%) had no family history. Regarding type of hospital admission, the majority (74%) had emergency admission due to coronary artery disease. Regarding duration of coronary artery disease, the majority (85%) had the disease for more than 6 months. With respect to treatment, the majority (69%) had undergone PCI. Regarding ejection fraction, the majority (73.5%) had an EF $\geq 50\%$.

Self care behaviour among CAD patients



87% exhibited moderate self-care behaviour, 10% demonstrated high self care and 3% fell into the low self care behaviour.

Quality of life among patients with CAD



Regarding quality of life, 62% has a high quality of life while 38% has a medium quality of life and none has poor quality of life

Table 1: Correlation between research variables

Variables	Mean $\pm$ SD	Pearson Correlation	p value
Self care behaviour	80.56 $\pm$ 9.37	+0.220	0.002
Quality of life	57.46 $\pm$ 5.99		

The study reveals that there is a positive correlation between self care behaviour and quality of life among patients with CAD.

Table 2: Association between Self care behaviour and demographic variables

Variables	χ^2 value	p value
Life style factors	22.85	0.000*

*significant at 0.05 level

The outcome of the study pointed that there was only a significant association between self care behaviour with life style factors which is significant at 0.05 level.

Table 3: Association between Quality of life and demographic variables

Variables	χ^2 value	p value
Age	12.20	0.000*
Gender	3.58	0.049*
Education	7.29	0.007*
Occupation	17.06	0.000*
BMI	6.96	0.031*
Monthly income	12.62	0.000*
Ejection fraction	24.39	0.00*

*Significant at 0.05 level

The outcome of the study highlighted that there was a significant association between quality of life with selected sample variables such as age, gender, education, occupation, BMI, monthly income and ejection fraction.

DISCUSSION

The results showed that there was a positive correlation between self-care behaviour and quality of life ($r=+0.220$, $p=0.002$) at the 0.05 level. it was interpreted that as when self-care behaviour increases, quality of life also increases.

Obtained results were supported by the cross-sectional study conducted by Zhang Y et al. (2020) to explore the relationship between self-management behaviours and health related quality of life among CHD patients in Chinese community settings. The study results showed that the CHD patients reported poorer health related quality of life ($p<0.05$). It also showed that positive correlations ($r=0.117-0.328$, $p<0.05$) between self-management behaviours and health related quality of life among the

CHD patients in Chinese community settings.⁹

The findings were consistent with the quasi-experimental study conducted by Cahyaningrat et al. (2019) to identify effect of self-management education on quality of life of clients with coronary heart disease. Mean and standard deviation of quality of life of patients before being given self-management education (38.52,5.53), mean and standard deviation after being given self-management education (59.64,3.06). The results showed mean and SD difference of 21.12,6.26 with p value = 0.000.¹⁰

Regarding the association between self care behaviour and selected demographic variables, The results of the current study showed that there was only significant association between self care behaviour and lifestyle factors ($\chi^2=22.85$, $p=0.000$).

The study findings aligned with the longitudinal study carried out by Svavarsdóttir M H et al. (2017) to describe changes in the disease-related knowledge and educational needs of individuals with

coronary heart disease among 446 patients admitted to two of the largest hospitals in Iceland. Result showed that there was significant association with self-care practices and life style factors (smoking) at the time of discharge ($p=0.06$) and six months later ($p=0.042$).¹¹

Obtained findings were supported with the result of a cross-sectional, correlational study conducted by Ahn S et al. (2010) on effects of self care behaviour on quality of life mediated by cardiovascular risk factors among conveniently selected 130 patients attending cardiology OPD at the cardiovascular centre of a university hospital in Korea. The study results showed that, self-efficacy, self-care health behaviours and modifiable risk factors play a major role in adults with CAD and there was direct effect of self care behaviours on QOL ($r=0.117$, $p = 0.006$). There was significant association between smoking and self-efficacy ($p=0.002$).⁶

Considering the association between Quality of life and selected demographic variables, The study results revealed that there was significant association of QOL with age ($\chi^2=12.20$, $p=0.00$), gender ($\chi^2=3.58$, $p=0.05$), education ($\chi^2=7.29$, $p=0.00$), occupation ($\chi^2=17.06$, $p=0.00$), monthly income ($\chi^2=12.62$, $p=0.00$), BMI ($\chi^2=6.96$, $p=0.03$) and ejection fraction ($\chi^2=24.39$, $p=0.00$).

The study findings were congruent with cross-sectional study conducted by Imani A et al. (2020) to examine the impact of myocardial infarction on patients' quality of life among 220 patients referred to Shahid Madani Medical and Training Hospital in Iran. The results showed that there was statistically significant association of quality of life with educational status ($p=0.006$), income status ($p= 0.000$) and age ($p= 0.046$).¹²

The findings were supported by a descriptive study undertaken by Kim H M et al. (2015) to determine the factors that predict health-related quality of life in symptomatic post myocardial infarction patients with left ventricular dysfunction among 105 patients recruited from

outpatient clinic in South Korea. The study demonstrated that there was significant association of quality of life with gender ($p=0.015$) and occupation ($p= 0.004$).¹³

CONCLUSION

Based on the findings of the current study, it can be concluded that patients diagnosed with coronary artery disease exhibit moderate self care behaviour. Among the three domains of self care, self-care management scored the highest. Regarding quality of life, the majority of patients experienced high quality of life, with some reporting medium quality of life. Among the four qualities of life domains, the environmental domain showed the highest scores. The study highlights the necessity of enhancing self care behaviours in individuals diagnosed with coronary artery disease, particularly in the aspects of self-care maintenance and self-care monitoring. Strengthening those aspects can help to prevent disease recurrence, improve disease management, and ultimately enhance overall quality of life.

Declaration by Authors

Ethical Approval: Approved. Ethical clearance for the study was obtained from the Scientific Review Committee (LCN/08/059/2024, ANNEXURE A)

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Conflict of Interest: The authors declare no conflict of interest.

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