

Original Investigation

Health Related Quality of Life of Patients with Cardiovascular Disease attending Sahid Ganagalal National Heart Center, Janakpurdham, Province 2, Nepal

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ABSTRACT

INTRODUCTION: Individuals' subjective perceptions of their own physical, mental, and social health and functioning make up what is known as "health-related quality of life" (HRQL). The alarming rise in cardiovascular diseases (CVDs) has received little national attention because Nepal's health system places more of an emphasis on maternal, neonatal, and child health as well as communicable diseases. The study was conducted to assess the health related quality of life (HRQL) of patients with cardiovascular disease attending Sahid Gangalal National Heart Center, Janakpurdham, Madhesh Pradesh, Nepal. **MATERIALS AND METHODS:** A descriptive cross sectional study design was adopted for the study. This study was carried out in outpatient department (OPD) of Sahid Gangalal National Heart Center, Madhesh Pradesh, Janakpurdham, Nepal. The instrument used for the study was WHOQOL-BREF, which consists of 26 items. **RESULTS:** 70.4% of the respondents had a good quality of life, 80.8 % patients were dissatisfied with health, 63% of the respondents were with good physical health, 75% had stable psychological health, 67% had active social relationships and 56% were with inadequate environmental status. **CONCLUSIONS:** Despite a history of cardiovascular illnesses, majority of study participants reported a high quality of life. However, the assessment device employed in this study assessed overall quality of life.

Keywords: Health related quality of life, cardiovascular diseases, WHOQOL-BREF

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INTRODUCTION

Individual's subjective perceptions of their own physical, mental, social health and functioning make up what is known as "health-related quality of life" (HRQL) [1]. The World Health Organization (WHO) defines "HRQL" as an individual's perceptions of their place in life in relation to their objectives, aspirations, standards, and concerns within the framework of the culture and value systems where they reside [2]. Coronary heart disease, cerebrovascular illness, rheumatic heart disease, and other ailments all fall under the umbrella of cardiovascular disease (CVD) [3]. Globally, the total deaths percentage as per mortality factors of CVD is 32.84% (IHME Global Burden of Disease) and in the context of Nepal, it was found to be 24.04% [4]. The term, Quality Of Life (QOL) subjectively can be conceptualized in various ways and standards by various experts and concerned groups of people and also for its nature,

which can be influenced by various socio-demographic variables such as by particular individual age, gender, conditions of health status, norms, values, ethics and also cultural factors and practices among each other [5]. Treatment satisfaction among patients in relation to health, is a patient reported outcome metric that takes into account the patients overall view point of medical care along with its health care services [6]. CVDs load of 20% of the world's population is in South East Asian Region [7]. Nepal has a per capita GDP of USD 1048 and CVDs are the leading cause of mortality and disability, [7] with both the absolute and relative numbers of deaths rising over the last 16 years [8]. High systolic blood pressure caused 20% of early deaths and 15% of the total disease burden in persons aged 50-69 years old in 2017, similarly, premature mortality from ischemic heart disease and stroke increased by 40 and

44% respectively [7]. Nepalese adult had high cholesterol 11%, overweight or obese 20%, 30% of them smoked, 11% had high blood pressure, 98% of them ate insufficient fruits and vegetables and 9.1 gram of salt was consumed daily [7]. The alarming rise in CVDs has received little national attention because Nepal's health system places more of an emphasis on maternal, neonatal and child health as well as communicable diseases [8]. Consequently, HRQoL is crucial metric to evaluate the effectiveness of health interventions and a helpful input for appraising medical outcomes in general assessments.

MATERIALS AND METHODS

Study design and setting

The research design selected for the present study were descriptive research design. Quantitative research approach was selected for the study. The study was conducted in outpatient department of Sahid Gangalal National Heart Center, Province 2, Janakpur, Nepal.

Participants, sample size and sampling technique

Cardiac disease patients who visited the outpatient department of Sahid Gangalal National Heart center, Province 2, Janakpur and who provided written consent were included in this study. Patients who had a history of essential hypertension, coronary heart disease, heart failure, and ischemic heart failure were involved in the study.

Data collection procedure and study variables

The investigator read each item in the questionnaire for each participant and recorded their responses in the questionnaire. Each participant took about 15 minutes to complete the questionnaire. Purposive sampling technique was used for the study. The instrument used for the study was WHOQOL-BREF, World Health Organization Quality of Life (WHOQOL). Medical information was retrieved from the participants' most recent medical records.

The data collection tool consisted of three parts; first part assessed the socio-demographic and clinical characteristic of the participants, second part was related to health related quality of life using WHOQoL-BREF, adopted from WHO. WHOQoL-BREF is a 5-point Likert scale questionnaire consisting of 26 items, categorized into four dimensions. These are physical health domain (7 items), psychological health domain (6 items), social relationship domain (3 items), and environmental health domain (8 items), one quality of life and one general health item. The scores were transformed linearly to a 0–100 scale. The higher total score denotes higher health-related quality of life except for Q3, Q4, and Q26 which

were reversely coded, in which lower score denotes the higher quality of life and a higher score denotes the lower quality of life. The tool was converted in Nepali language and Maithili language for data collection. Independent variables of this study was socio demographic factors while the dependent variable was Health Related Quality of Life (HRQOL).

Statistical analysis and data management:

Data was collected based on the questionnaire in a proforma. The data analysed using SPSS version 26. Descriptive and inferential statistics were carried out. The frequency and percentage distribution of subjects according to baseline variables were calculated using 'frequency' (f) and percentage (%) for the HRQoL.

Ethical consideration

This study approval was obtained from the Nepal Health Research Council (Reference no-3372), Kathmandu, Nepal.

RESULTS

Table 1 shows that 59.13% of the respondents were male, 42.6% belonged to the age group of 40-59 years, 49.6 %

Characteristics	Frequency	%	
Gender	Male	68	59.13
	Female	47	40.87
Age	18-39 years	25	21.7
	40-59 years	49	42.6
	60-79 years	41	35.7
Residence	Rural	73	63.5
	Urban	42	36.5
Marital status	Married	114	99.1
	Unmarried	1	9
Education	Illiterate	23	20.0
	Primary level	57	49.6
	Higher level	16	13.9
	Bachelor level	19	16.5
Occupation	Farmer	29	25.2
	Housewife	45	39.1
	Government job	10	8.7
	Private job	17	14.8
	Foreign job	3	2.6
	Business	11	9.6
Monthly income	5000-10000	7	6.1
	11000 -19000	23	20.0
	20000-30000	24	20.9
	31 above	61	53.0
Co-morbidities	Yes	65	56.5
	No	50	43.5

have had primary level of education, 25.2 % of the participants were farmer and 37.4% had a monthly income of Nepalese rupees of 30,000 and 56.5% had co-morbidities.

Majority 70.4% of the respondents had a good quality of life while 80.8 % were dissatisfied to health as seen in Table 2.

Table 3 shows that, 63% of the respondents had good physical health, 75 % had stable psychological health, 67% had active social relationships and 56% had inadequate environmental status.

DISCUSSION

In the present study, the findings related to the demographic variables showed 59.13% of the respondents were male, 42.6% belonged to the age group of 40-59 years, 49.6 % have had primary level of education, 25.2 % of the participants were farmer and 37.4% had a monthly income of Nepalese rupees of 30,000 and 56.5% had co-morbidities. In a similar study conducted by Endalew in Ethiopia, showed that 56.8 were female, and most of them were less than 46 years old. The majority of the study participants (82.2%) were from the urban area. 62.2% were married, and 28.3% had a secondary school education. 28.3% were private workers. Heart failure accounted for 42.5% of the disease and comorbidities among the study participants .94% of the respondents with a history of CVD had a good quality of life [9]. Despite having a history of CVD, most respondents in this study also reported a good quality of life. The study showed 70.4% of the respondents, with good quality of life, 29.5 % with poor quality of life and 80.8 % were dissatisfied to health. Whereas, in a descriptive study, conducted in Indonesia, and 94% of respondents with a history of CVD had a good quality of life [10].

The study showed 63% of the respondents with good physical health, 37 % with poor physical health, 75 % with stable psychological health and 25 % with unstable psychological health, 67% with active and 33% with inactive social relationships, 56% with inadequate and 44 % with adequate environmental status.

ADDITIONAL INFORMATION AND DECLARATIONS

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Table 2| Participants Perceptions on their quality of life and health (n=115)

Variable	Frequency	Percentage (%)
Quality of life		
Poor	34	29.5
Good	81	70.4
Satisfaction to health		
Satisfied	22	19.1
Dissatisfied	93	80.8

Table 3| Quality of Life of patients in four domains (n=115)

Domain	Frequency	Percentage (%)
Physical health		
Good	72	63
Poor	43	37
Psychological health		
Stable	86	75
Unstable	29	25
Social relationships		
Active	77	67
Not active	38	33
Environment		
Adequate	51	44
Inadequate	64	56

In a similar study, within each QOL domain, patients with congestive heart failure showed the lowest QOL in both the physical domain was 51.4%. The magnitude of difference in QOL was highest in the psychological health domain and lowest in the environment domain [11].

CONCLUSIONS

Despite a history of cardiovascular illnesses, the majority of study participants reported a high quality of life. However, the assessment device employed in this study assessed overall quality of life. Future studies ought to think at utilizing a system designed specifically to gauge the quality of life of those suffering from heart conditions

All authors have contributed equally for the concept and design, statistical analysis, writing of the manuscript, data collection, revision and editing. All authors have read and agreed with the contents of the final manuscript towards publication.

Data Availability: Data will be available upon request to corresponding authors after valid reason.

*Note: *This article undergoes expedited fast-track publication*

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