

Original Article**Quality of Life among Patients with Cardiovascular Diseases at Birat Medical College Teaching Hospital****Madhab Bista¹, Surya Bahadur Parajuli², Ram Kumar Mehta³, Prashant Shah¹**¹Department of Cardiology, Birat Medical College Teaching Hospital, Morang, Nepal²Department of Community Medicine, Birat Medical College Teaching Hospital, Morang, Nepal³Department of Internal Medicine, Birat Medical College Teaching Hospital, Morang, NepalArticle Received: 10th April, 2023; Accepted: 26th June, 2023; Published: 30th June, 2023DOI: <https://doi.org/10.3126/jonmc.v12i1.56345>**Abstract****Background**

Modern healthcare delivery needs to take care of the quality of life of patients. The burden of cardiovascular disease is increasing each year affecting the quality of life. So, we aimed to examine the quality of life of patients with cardiovascular diseases (CVD) at Birat Medical College Teaching Hospital.

Materials and Methods

A hospital based cross sectional study was conducted among cardiovascular disease patients at Birat Medical College Teaching Hospital from 2023 Jan 27 to 2023 March 27. Ethical clearance was taken from the institutional review committee. The collected data was entered in Microsoft Excel 2019 and analyzed by IBM SPSS statistics 2025.


Results

Among 256 patients, the majority 67(26.2%) were in the age of 61-70 years and male 156(60.9%). Majority 91(35.5%) had coronary artery diseases. The quality of life domains ranging from least to most affected were bodily pain (81.04±26.02), mental health (76.4±15.18), social functioning (68.1±24.2), role limitation due to emotional problems (67.9±43.56), physical functioning (59.02±28.9), vitality (53.67±15.45), general perception of health (50.19±15.7) and role limitation due to physical health (46.39±44).

Conclusion

Patients with cardiovascular disease had their quality of life affected based on their physical health, general perception of health, energy and vitality, physical functioning, role limitation due to emotional problems, social functioning, mental health and bodily pain.

Keywords: *Hospitals, Patients, Quality of Life, Teaching*

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Introduction

Conditions that damage the heart or blood vessels are referred to as cardiovascular disease [1]. The World Health Organization (WHO) estimates that every year CVD accounts for 17.9 million global fatalities or 31% of all fatalities [2]. Quality of life (QoL) is described by WHO as "individuals' perceptions of their position in life in the context of the value systems and culture in which they are living and with relation to their expectations, goals, standards and concerns [3]." QoL can be determined from the condition of the physical, psychological, social relationships, and environmental aspects [4]. Healthy lives lost due to CVD disability make people experience poor quality of life (QoL) [5]. Various physical and emotional symptoms, such as dyspnea, fatigue, edema, sleeping difficulty, depression, and chest pain affiliated with CVD may limit activities of daily life [6]. Poor quality of life is related to higher hospitalization and mortality rates [6]. The increase in the burden of CVD jeopardizes the quality of life of people. The quality of life matters for the effective treatment of CVDs.

Therefore, the QOL of people with CVD should be assessed appropriately to determine its impact on their daily lives. Cardiovascular diseases are frequently encountered in our hospital. There is a gap in the knowledge for the quality of life of these groups of patients in our setting. Hence this study was conducted with the objective to examine the quality of life of patients with cardiovascular diseases (CVD) at Birat Medical College Teaching Hospital.

Materials and Methods

A hospital based cross sectional study was conducted at the department of internal medicine and department of cardiology at Birat Medical College Teaching Hospital from 2023 Jan 27 to 2023 March 27. Ethical clearance was taken from the institutional review committee (IRC-PA-277/2078-79). Each study participant was enrolled after getting informed written consent. All the cardiovascular disease patients who presented in our study period were included. The cardiovascular disease was operationalised as any patient presented with any of the diseases (Hypertension, Coronary Artery Disease, Heart

Arrhythmias, Heart Failure, Heart Valve Disease, Pericardial Disease, Cardiomyopathy and Congenital Heart Diseases).

All the eligible 256 study participants as per inclusion criteria during the study period were enrolled through total enumeration technique.

Data were collected using a questionnaire that included; Part I Socio demographic questions and Part II questions related to 36-Item Short Form Health Survey questionnaire (SF-36). The sociodemographic variables included age, sex, education, type of family and pattern of cardiovascular diseases. The 36-item short form health survey questionnaire (SF-36) developed by RAND Health Care [7]. It is a standardized quality of life assessment tool which was already used in nepali context. It has 36 multiple choice questions that measure eight domains of health outcomes: 1. physical functioning (10 items); 2. role limitations due to physical health (4 items); 3. bodily pain (2 items); 4. general perception of health (5 items); 5. energy and vitality (4 items); 6. social functioning (2 items); 7. role limitations due to emotional problems (3 items) and 8. mental health (5 items) [7]. The QoL in each domain was analyzed as per instruction given by RAND Health Care [7]. Scores in each item were converted to a 0-100 scale. Higher scores on the transformed 0-100 scale for each health domain indicate better health status. The higher obtained scores indicate the absence of limitations and disabilities. The low score indicates the lowest state of health which shows functional limitations, severe social and role disability and distress [8]. Data was collected from each study participant and completeness was checked every day. The confidentiality and anonymity of data were maintained. The collected data was entered in Microsoft Excel 2019 and analyzed by IBM SPSS statistics 2025. Descriptive statistics were used to calculate frequency, mean and standard deviation.

Results

Among 256 patients, the majority 67(26.2%) of patients were in the age of 61-70 years followed by 51-60 years 59(23%). Most 156(60.9%) were males. Forty eight percent were illiterate. More than half 145 (56.6%) were from nuclear fami-



lies (Table 1).

Table 1: Baseline variables of participants (n=256)

| Age in years | N(%) |
|------------------------|-----------|
| =20 | 3(1.2) |
| 21-30 | 12(4.7) |
| 31-40 | 14(5.5) |
| 41-50 | 36(14.1) |
| 51-60 | 59(23) |
| 61-70 | 67(26.2) |
| 71-80 | 47(18.4) |
| 81-90 | 18(7) |
| Sex | |
| Male | 156(60.9) |
| Females | 100(39.1) |
| Education | |
| Formal | 113(44.1) |
| Informal | 20(7.9) |
| Illiterate | 123(48) |
| Types of family | |
| Nuclear | 145(56.6) |
| Joint | 111(43.4) |

Majority 91(35.5%) of the patients had coronary artery diseases. Nearly one fourth 60(23.4%) had hypertension and nearly one fifth 50(19.5%) had congestive cardiac failure. The other cardiovascular diseases (CVDs) present in patients are listed in table 2.

Table 2: Patterns of cardiovascular diseases in patients (n=256)

| Types | n(%) |
|---|----------|
| Coronary artery disease (Chronic stable angina, Unstable angina, Myocardial Infarction) | 91(35.5) |
| Hypertension | 60(23.4) |
| Congestive cardiac failure | 50(19.5) |
| Rheumatic heart disease | 27(10.5) |
| Valvular heart disease | 12(4.7) |
| Arrhythmia | 6(2.3) |
| Complete heart block | 5(1.9) |
| Congenital heart disease | 5(1.9) |

The domain with lowest score indicates the lowest state of health and shows functional limitation, severe social and role disability and distress. The domains ranging from highest to least affected were role limitations due to physical health (46.39± 44), general perception of health (50.19±15.7), vitality (53.67±15.45), physical functioning (59.02± 28.9), role limitation due to emotional problems (67.9±43.56), social functioning (68.1±24.2), mental health (76.4±15.18) and bodily pain (81.04±26.02) (Table 3).

Table 3: Quality of life among patients with cardiovascular disease (n=256)

| Quality of Life of patients | Mean ± Standard deviation |
|---|---------------------------|
| Physical functioning | 59.02± 28.9 |
| Role limitation due to physical health | 46.39± 44 |
| Bodily pain | 81.04±26.02 |
| General perception of health | 50.19±15.7 |
| Vitality | 53.67±15.45 |
| Social functioning | 68.1±24.2 |
| Role limitation due to emotional problems | 67.9±43.56 |
| Mental health | 76.4±15.18 |

Discussion

The long-term clinical outcome is the better indicator of quality of healthcare. Assessment of quality of life (QoL) of an individual to evaluate patient care is the new tool used in healthcare practice.. Chronic diseases such as cardiovascular diseases (CVDs) assessed through measurement of quality of life (QoL) can be considered as one of the most important outcomes in healthcare. WHO Suggested that quality of life (QoL) assessment must be considered as a substantial health outcome in every disease management [9]. Among various instruments developed for quality-of-life assessment, SF-36 tool is a commonly used tool which is also relevant in our Nepal context. Paucity of research has been conducted with the use of the SF-36 tool in Nepal. This tool is acceptable and valid for assessment of the impact of disease on patients' function, activity, and well-being and so on [9]. With the alarming increase in the prevalence of cardiovascular disease, the measurement of quality of life is vital. Prior studies showed lower QoL among patients with CVD compared to the general population [10]. This research tried its level best to fill the paucity of knowledge on quality of life of cardiovascular disease patients.

We encountered the majority of senior citizens and male sex. Another research also reported senior citizens and male were the most common sufferers of cardiovascular diseases [9]. Similar findings were also reported elsewhere [10]. The majority had coronary artery diseases, hypertension, congestive cardiac failure and so on. Other research reported a similar pattern of cardiovascular diseases (CVDs) [11]. Similar findings were reported in a study where, most of the patients were diagnosed with coronary artery disease (43.8%) followed by heart failure (31.3%) [9]. In the SF-36 tool, the domain with lowest score indicates the lowest state of health and shows



functional limitation, severe social and role disability and distress [9]. The higher the score reflects good quality of life in comparison to a low score [9]. In this research, we found the most affected domains were role limitations due to physical health (46.39±44), general perception of health (50.19±15.7), vitality (53.67±15.45), physical functioning (59.02± 28.9), role limitation due to emotional problems (67.9±43.56), social functioning (68.1±24.2), mental health (76.4±15.18) and bodily pain (81.04±26.02). A previous study reported lower scores in different domains of QoL[9]. This study found that physical functioning (64.75±33.72), role limitations due to physical health (64.38±42.24) were higher than our study which signifies better quality of life but role limitation due to emotional problems (63.75±44.12), vitality (48.44±24.89), mental health (50.95± 18.67), social functioning (64.22±34.55), bodily pain (75.25±32.48) and general perception of health (45.69±21.75) were lower than our study which signifies poorer quality of life[9].

We were limited not to assess the other factors responsible for quality of life. Various social factors, socioeconomic status, healthcare delivery system, health policies of the nation might impact the quality of life among cardiovascular disease patients [12]. Further, we had to assess the quality of life for the current time only, which actually needs longitudinal studies. It would be better to conduct population-based studies in our context for more generalizability of the findings. So, this study highlighted the quality of life among cardiovascular patients attending our hospital. It helps for better understanding of quality of care among cardiovascular disease patients. It has scientific value which enriches better clinical decision making in our hospital setting as well.

Conclusion

Senior citizens and male dominance in cardiovascular disease patients were found. Patients with cardiovascular disease had various levels of their quality of life affected based on their physical health, general perception of health, energy and vitality, physical functioning, role limitation due to emotional problems, social functioning, mental health and bodily pain. Longitudinal measurement of quality of life would help for better quality care and efficient clinical decision making.

Recommendation

The quality of life of cardiovascular disease patients is affected in various domains. So, the multidisciplinary team of HealthWorks need to evaluate their quality of life for better long-term

outcome. The treating physician needs to think about the patient's disease condition and their quality of life as it matters for modern healthcare delivery systems.

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Conflict of Interest

The authors have no conflict of interest to declare.

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