



ST. PAUL'S HOSPITAL MILLENNIUM MEDICAL COLLEGE

SCHOOL OF NURSING

DEPARTMENT OF MEDICAL-SURGICAL NURSING

**HEALTH-RELATED QUALITY OF LIFE AND ASSOCIATED
FACTORS AMONG PATIENTS WITH ISCHEMIC HEART
DISEASES ATTENDING SELECTED TERTIARY
HOSPITALS, ADDIS ABABA, ETHIOPIA, 2023**

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ADDIS ABABA, ETHIOPIA

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**Assessment of Health-Related Quality of Life and Associated
Factors among Patients with Ischemic Heart Diseases Attending
Selected Tertiary Hospitals, Addis Ababa, Ethiopia, 2023**

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**A Thesis Paper to be Submitted to Department of Medical-Surgical
Nursing, School of Nursing, Saint Paul's Hospital Millennium Medical
College in Partial Fulfillment of the Requirements for Master's Degree of
Cardiovascular Nursing**

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Abstract

Introduction: The incidence of non-communicable diseases such as ischemic heart diseases is increasing globally. In developing countries such as Ethiopia, the impact of the disease is substantial. Although it is well recognized as a chronic disease with a serious morbidity burden, its impact on the health-related quality of life among affected Ethiopians is not well explored yet.

Objective: To assess health-related quality of life and associated factors among patients with ischemic heart disease seeking care at Tikur Anbessa Specialized Hospital and St. Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia

Methods: An institution-based, cross-sectional study was conducted. Simple random sampling was employed to recruit patients with ischemic heart disease at each study site. Data were collected using an interviewer-administered Amharic version of the abbreviated World Health Organization Quality of Life-Brief Version (WHOQOL-BREF) instrument. The collected data were entered into Epi-info version 7.2.2.2, and then exported to Statistical Package for Social Sciences version 26 for further processing and analysis. Descriptive analysis was used to summarize the baseline characteristics. Bivariable and stepwise multivariable logistic regression analyses were employed to determine factors associated with poor health-related quality of life. Odds ratio with 95% confidence interval were calculated, and a p-value <0.05 was considered to declare significance. Texts, tables and figures were used to present results.

Results: A total of 404 patients were successfully included in this study, making a response rate of 95.5%. The mean global quality of life raw score of the patients was 79.7 ± 16.8 , with more than half (51.5%; n=207) scoring below the mean. Multiple regression analysis showed that age ≤ 45 years [AOR=4.99(95%CI:1.85,12.80)], no educational [AOR=3.62 (95%CI:1.36,9.68)], primary educational level [AOR=4.36(95%CI:1.75,10.86)], monthly household income <1500 Ethiopian Birr [AOR=5.77 (95%CI:2.11,15.80)], lack of exercise [AOR=4.65 (95%CI:2.34,9.23)], disease duration <5 years [AOR=5.56 (95%CI:1.79,17.94)], disease duration of 5–10 years [AOR=9.25 (95%CI:2.70,31.71)], poor social support [AOR=16.42(95%CI:6.27,42.99)], moderate social support [AOR=4.38 (95%CI:1.69,11.36), borderline anxiety level [AOR= 4.76 (95%CI:2.04,11.10)], and abnormal anxiety level [AOR= 16.86(95%CI:7.00,40.64)] contributed to lower health related quality of life.

Conclusion: More than half of patients with ischemic heart disease has poor health related quality of life, which was contributed by younger age, lower educational status, low income, lack of regular physical exercise, shorter disease duration, lack of social support, depression, and anxiety independently.

Keywords: Ischemic heart disease, Health-related quality of life, Tikur Anbessa Specialized Hospital, St. Paul's Hospital Millennium Medical College

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Abbreviations

AMI	Acute Myocardial Infarction
CAD	Coronary Artery Disease
EQ-5D-5L	European Quality of Life Five Dimension Five level scale
ETB	Ethiopian Birr
HADS	Hospital Anxiety and Depression Scale
HRQOL	Health Related Quality of life
IHD	Ischemic Heart Disease
MI	Myocardial infarction
QOL	Quality of life
SPHMMC	St. Paul's Hospital Millennium Medical College
SPSS	Statistical Package for Social Sciences
TASH	Tikur Anbessa Specialized Hospital
VAS	Visual Analogue Scale
WHO	World Health Organization
WHOQOL-BREF	World Health Organization Quality of life Questionnaire-Brief Version

Table of Contents

Abstract	III
Acknowledgements.....	V
Abbreviations	VI
List of Tables	IX
List of Figures.....	X
1. Introduction	1
1.1 Background	1
1.2 Statement of the problem	2
1.3 Significance of the study.....	3
2. Literature review.....	4
2.1 Quality of life among patients with ischemic heart disease.....	4
2.2 Factors affecting quality of life among patients with ischemic heart disease.....	6
2.3 Conceptual framework.....	10
3. Objective of study	11
3.1 General objective.....	11
3.2 Specific objectives	11
4. Methods and Materials	12
4.1 Study area.....	12
4.2 Study period	12
4.3 Study design	12
4.4 Source population	12
4.5 Study population.....	13
4.6 Eligibility criteria.....	13
4.6.1 Inclusion criteria	13
4.6.2 Exclusion criteria	13
4.7 Sample size determination	13

4.8 Sampling technique	14
4.9 Data collection tools and procedures	15
4.10 Study variables	15
4.10.1 Dependent variable.....	15
4.10.2 Independent variables.....	15
4.11 Operational definitions.....	16
4.12 Data processing and analysis.....	16
4.13 Data quality management.....	17
4.14 Ethical consideration.....	17
4.15 Dissemination of the study findings	17
5. Results	18
5.1 Socio-demographic characteristics of participants.....	18
5.2 Clinical, psychosocial and related profile of patients.....	20
5.3 Quality of life profile	22
5.4 Factors influencing quality of life profile	23
6. Discussion.....	26
7. Strengths and Limitations.....	29
7.1 Strengths.....	29
7.2 Limitations	29
8. Conclusion and Recommendations.....	30
8.1 Conclusion.....	30
8.2 Recommendations.....	30
9. References	31
Annex	35
Annex I: English version questionnaire	35
Assurance of Investigator	62
Approval of Advisors	62

List of Tables

Table 1. Distribution by socio-demographic characteristics of patients with IHD attending at TASH and SPHMMC, Addis Ababa, Ethiopia, 2023 (n=402)	19
Table 2. Clinical and related characteristics of patients with IHD attending at TASH and SPHMMC, Addis Ababa, Ethiopia, 2023 (n=402).....	21
Table 3. Factors affecting the quality of life of patients with IHD attending TASH and SPHMMC, Addis Ababa, Ethiopia, 2023	24

List of Figures

Figure 1. Conceptual framework for <i>Health-Related Quality of Life and Associated Factors among Patients with Ischemic Heart Diseases</i> (Source: Imam et al.(27) and Ali et al.(39)) .	10
Figure 2. Schematic representation of sampling procedure for this study in two tertiary hospitals of Addis Ababa, Ethiopia, 2023	14
Figure 3. Psychological profiles [Hospital Anxiety and Depression Scale (HADS)] patients with IHD attending at TASH and SPHMMC, Addis Ababa, Ethiopia, 2023 (n=402).....	22
Figure 4. Quality of life of patients with IHD attending TASH and SPHMMC, Addis Ababa, Ethiopia, 2023 (n=402)	23

1. Introduction

1.1 Background

Ischemic heart disease (IHD), often used interchangeably with coronary artery disease (CAD) and coronary heart disease (CHD), refers to the pathologic process affecting the coronary arteries (usually atherosclerosis). It encompasses clinical entities such as angina pectoris, myocardial infarction (MI), and silent myocardial ischemia (1). It represents an important clinical and public health issue as it has become a common and leading cause of death throughout the world (2). IHD has been recognized as an emerging health threat among African nations (3). Currently, IHD (45%), stroke (34%) and hypertensive heart disease (HHD) (11%) are the three leading causes of cardiovascular disease associated deaths in Ethiopia, claiming the lives of about 170 Ethiopians each day (4).

Quality of life (QOL) is defined by the World Health Organization (WHO) as “an individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (5,6). Besides the efforts taken towards alleviating morbidity and mortality, QOL assessment has potential to explore physical, social and psychological impact of the disease. Measurements of health related quality of life, particularly in chronic diseases such as IHD are essential (7). In fact, assessment of QOL is an important health outcome for measuring the efficacy of treatments and interventions for CAD (8).

The American Heart Association recommends HRQOL to be routinely assessed as a part of health status evaluation among patients with cardiovascular diseases (9). Owing to several factors including smoking and sedentary lifestyles, the incidence of noncommunicable diseases such as ischemic heart diseases are increasing across the world, particularly in Africa(10). Again, ischemic heart disease continued to be the leading cause of death in adults on a worldwide basis (1). Moreover, developing countries were described to face great economic challenges associated with the burden of these cardiovascular diseases (10).

Patients with IHD, in addition to the common clinical symptoms and the treatment-related side effects they experience, have to deal with a complex of physical, social, psychological and environmental issues, impacting the their overall well-being (11). HRQOL has gained higher attention as an outcome measure of interventions and treatments in patients with

established cardiovascular disease, partly because the fact that HRQOL outcomes can help select therapeutic options (12).

Over recent years, developing countries such as Ethiopia has been experiencing epidemiological transition from communicable diseases to non-communicable diseases (NCDs) (13,14). Despite the increasing prevalence of IHD in regions such as Ethiopia and the implication that HRQOL can be promoted by identifying the modifiable factors, there are rather limited published data regarding HRQOL in such group of patients, with only few reports existing. As a consequence, this study seeks to assess the quality of life and its determinants among patients with IHD attending Tikur Anbessa Specialized Hospital and St. Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia.

1.2 Statement of the problem

HRQOL is an important tool to evaluate the impact of a disease and the effects of medical interventions and pharmacological therapies on people with chronic illnesses (15). Patients with IHD have been observed to have impaired HRQOL than the general population (8,16). Further, such impairment in HRQOL is significantly linked to increased risk of hospitalizations, major cerebrovascular events and death (15,16). Despite the increased survival associated with advances in medical technology, morbidities such as psychosocial disorders might still occur, limiting patients' wellbeing and their productivity, particularly in countries with compromised health access (10). Also, a quarter of patients with IHDs experience a significant decline in their HRQOL over the 5-year period (8).

Understanding HRQOL profile among patients with IHDs may help individualize prognostic information, identify patients and HRQOL domains on which clinical interventions are most beneficial, and guide interventional decisions for patients with IHD (8). Despite the documented implication that knowledge of HRQOL helps in managing patients systematically, only limited substantive HRQOL-related study among patients with IHD has been reported in the literature from Ethiopia.

In Ethiopia, existing evidence indicates that patients with history of AMI had compromised health-related quality of life (17) although the study investigated included only patients with MI. Even so, the conventional care for patients with IHD primarily focuses on pharmacological treatment in the current study set up, with negligible emphasis on the psychosocial dimension of the disease. And such gaps in the care of the patients can

potentially worsen the impact of this health problem. Again, only occasionally, healthcare workers are observed to involve patient and family in the therapeutic plans as a measure to enhance physical functioning, pain relief, to estimate the effectiveness of therapies. However, clinician-led educational interventions targeting on cardiac rehabilitation programs with proper stratification modalities are not well established in the study setting. So, keeping the above information in view, that the current study is designed to investigate quality of life and its associated factors among patients with ischemic heart disease seeking care at two tertiary hospitals, Addis Ababa, Ethiopia.

1.3 Significance of the study

This study will be important to capture the health-related quality of life of patients with IHD in the study setting. The findings of this study will provide insight for clinicians taking care of such patients. Having a better understanding of health-related quality of life as well as the factors associated with poor quality of life has a benefit in terms of improving the physical and psychosocial burden associated with the disease, ultimately reducing associated costs, morbidity and mortality. More specifically, it helps nurses to deliver individualized, person-centered care with emphasis on identified physical and emotional care spaces (dimensions of HRQOL) to boost HRQOL, including educating on coping mechanisms and other rehabilitative strategies. Moreover, the current study will provide an input to practitioners and local planners to devise mechanisms to deal with the factors associated with poor HRQOL and maximize the health-related quality of life. Finally, this study will also serve as an additional information to other interested researchers in similar settings.

2. Literature review

2.1 Quality of life among patients with ischemic heart disease

During June 2013–November 2014, the prospective, observational global study enrolled 8978 patients within 1–3 years post-MI from 25 countries in four continents. HRQOL was assessed at enrolment and 6-month intervals using the patient-reported European Quality of Life Five Dimension (EQ-5D) questionnaire, with scores ranging between 0 (worst possible) and 1 (perfect health). Among the patients, 52% reported ‘some’ or ‘severe’ problems on one or more health dimensions (18).

Recently, Mei and others analyzed a total of 1247 patients with CHD from the Henan Rural Cohort Study, with the aim of identifying the possible influencing factors of HRQOL and its domain-specific scores in patients with IHD using the Chinese version of the European Quality of Life Five Dimension Five level scale (EQ-5D-5L) and Visual Analogue Scale (VAS). In their study, the mean utility index of people with CHD was 0.914 (SD, 0.164). The pain/discomfort dimension of the EQ-5D-5L was the most frequently reported problem (34.9%), followed by the mobility (21.8%), usual activities (12.6%) and anxiety/depression (12.5%) dimensions. Problems with self-care were the least reported (8.0%). A state of 11,111 (no problem in any dimensions) was reported by 55.6% of these Chinese patients (19).

In the period between October 2017 and March 2018, Du et al. surveyed 326 patients with MI after returning to work in three tertiary hospitals in Zhengzhou, China. A short-form health Survey-8 (SF-8) was used to assess patients’ quality of life. Consequently, the mean scores of 8 items ranged between 2.22 and 4.09. The mean total score of HRQOL was 28.03, more than half of the studied patients suffered from poor HRQOL who reported low scores (less than 25). Emotional roles showed lowest score followed by mental health and social functions (20).

Another cross-sectional survey was conducted in the General Hospital of Tianjin Medical University, China, from April to September 2019. The study included a total of 305 patients (mean age was 62.9) with CHD who were selected through convenience sampling framework. The mean health state utility (HSU) scores of EQ-5D-5L and 15D were 0.85 (SD=0.14) and 0.89 (SD=0.07), respectively. For EQ-5D-5L, pain/discomfort was the most frequently reported, followed by anxiety/depression. As for 15D, discomfort and symptoms

was the most severely impaired dimension. For Seattle Angina Questionnaire, more limitations were found in the domains of angina stability and disease perception. For WHO-5, the mean score was 16.93 (21).

In Iraq, Arrar et al. evaluated quality of life among ischemic heart disease patients attending the Misan center for the cardiac diseases and surgery between November 9th, 2020 and April 25th, 2021. The authors showed a moderate level of HRQOL on all domains (Physical health; Psychological health; Social relationship; Independence level; Environment aspect; and Spiritual health domain) (22). In Indonesia, Komalasaria et al. 94% of patients with history of heart diseases had good HRQOL (23).

In 2014, a convenience sample of 210 adults from the cardiovascular center of a tertiary hospital in South Korea was recruited for a cross-sectional study. The study included patients with coronary artery disease who received percutaneous coronary intervention (PCI) more than a month prior to the study period. The overall mean HRQOL score of the participants was 71.71 (24). Another South Korean study analyzed 105 post-MI patients with left ventricular dysfunction (ejection fraction < 50%), and HRQoL was moderately poor, with a mean score of 44.38 ± 27.66 on the Minnesota Living with Heart Failure Questionnaire (MLHFQ) (25).

In Poland, Kołpa and colleagues studied a hundred post-AMI patients visiting Outpatient Clinic of St. Luke Regional Hospital from September to December 2017, using World Health Organization Quality of Life Questionnaire-Brief Version (WHOQOL-BREF) standardized questionnaire. The average quality of life assessment made by the included subjects was 3.52 ± 0.86 points, indicating that means that patients' quality of life neither good nor bad (26).

In 2017, another Polish study analyzed HRQOL of 332 patients after ST-elevation MI, with stable coronary artery disease, and heart failure using the MacNew Heart Disease Health-related Quality of Life Questionnaire. Patients with MI had significantly higher scores than patients with stable coronary artery disease or heart failure on the MacNew global scale and the physical, emotional, and social subscales. The anxiety scores (measured by Hospital Anxiety and Depression Scale) were significantly higher in the group of patients with stable coronary artery disease than in patients with myocardial infarction. The depression scores were significantly higher in patients with heart failure (27).

Imam and Jitpanya underwent a correlational study involving 186 patients with acute coronary syndrome purposively selected in the outpatient clinics of the referral public hospital of Bandung, West Java, Indonesia. In the study, MacNew Health-Related Quality of Life was used to assess HRQOL, and it was indicated that the overall health-related quality of life in patients with acute coronary syndrome was high (mean=4.97, SD=0.92), including in its subscales: emotional (mean=4.94, SD =0.88), physical (mean=5.07, SD=1.12), and social (mean=5.05, SD = 1.55) subscales (28). Another Indonesian cross-sectional study was conducted among purposively-selected 90 patients diagnosed with CHD in 2019. The study found that the quality of life of patients an average value 36-Items Short Form Health Survey (SF-36) of 63.29, with as many as 88.9% of the patients been categorized as having a good quality of life (29).

On the other hand, in Nigerian setting, a cross-sectional study was carried out among purposively selected eighty patients with coronary artery disease using Short Form Health Survey 36-Item. The Nigerian scholars found that sixty-two percent (62.5%) of respondents were seriously limited in strenuous activities, with only small proportion (2.5%) were not limited in vigorous activities (30).

In 2020, Endalew along with coauthors conducted an institution-based cross-sectional study to assess health-related quality of life using WHOQOL-BREF and associated factors among myocardial infarction patients at Cardiac Center, Ethiopia. The authors included 421 adult patients post-MI having at least three months of follow-up. The mean score of the overall health-related quality of life was found to be $49:29 \pm 14:83$, and the mean score for the physical domain was $47:96 \pm 16:50$; for the psychological domain, it was $50:91 \pm 16:07$, and for environmental and social relationship domains, it was $48:30 \pm 16:54$ and $52:02 \pm 24:61$, respectively (17).

2.2 Factors affecting quality of life among patients with ischemic heart disease

Previous studies conducted over different settings indicated that various modifiable and non-modifiable factors influence HRQOL among patients with IHD (31). Among these factors, age, gender, marital status, educational level, occupation, religious beliefs, social support, and history of substance use and disease characteristics were shown interplay to affect health-related QOL among patients with CAD (24,26,27,30,32). Additionally, HRQOL in acute myocardial infarction (AMI) survivors were shown to be affected by diabetes mellitus,

hypertension, renal disease, and physical exercise and medication adherence (12,33). Arrar et al. added that duration of disease was a significant factor associated with HRQOL (22).

The previous large scale study documented that factors associated with a lower index score were: female sex, older age, obesity, smoking, higher heart rate, less formal education, presence of comorbidity (eg, angina, stroke), emergency room visit in the previous 6 months and non-ST-elevation MI as the index event (18). Moreover, Tromp et al. reiterated that younger patients had worse quality of life compared with older patients (34). In Korean context, Kang and others observed that patients with a higher education level and better financial status had better HRQOL. On the other hand, diabetes, history of stroke, other heart disease and a higher score of the Depression, Anxiety and Stress (DAS-21) Scale were adversely associated with HRQOL among the Korean patients (35).

The above-mentioned Chinese study of Mei et al. showed that CHD patients had lower per capita monthly actual income, and higher rates of diabetes mellitus, stroke, anxiety and poor sleep quality, which significantly decreased EQ-5D index and VAS scores. In addition, sex, older age, education, not having a spouse, ever drinking alcohol, a high-fat diet, physical activity, hypertension and depression affected the various domain-specific EQ-5D scores in CHD patients (19). Also, another Chinese study indicated that marital status, disease state and comorbidity were influencing factors associated with HRQOL, and patient's subjective well-being had a positive impact on HRQOL (21). Araújo et al showed that patients' QOL was contributed by low income patients and rural residence (36).

Du and others found that health behavior, coping strategies, social support are factors which can affect HRQOL. Specifically, younger age, higher income, less co-morbidity, the longer time taken to return to work, fewer stents installed, participation in cardiac rehabilitation, complete CR, better health behaviors such as more health responsibility and exercise, better nutrition and self-realization, stress response, more social support such as more objective support, subjective support and better utilization of social support, positive coping strategies such as more coping and less yield were associated with better HRQOL (20). This was supported by the report of Chollou et al., who documented that patients with higher perceived social support have a better quality of life than the other patients (37). In contrast, Imanuna and colleagues documented no any relationship between the independent variables and the quality of life among Indonesian patients (29).

The previous study conducted in South Korea observed that HRQOL was significantly higher among cardiac patients aged ≥ 55 years than among younger patients. Also, a higher HRQOL was documented among those who were married than among those who had never married or were widowed. Again, the study documented a better HRQOL among those who perceived their economic status to be moderate and among those who practiced self-care or relied on nonfamily caregivers (24). In addition, the study reported that HRQOL was significantly higher in those classified as NYHA class I than those with advanced class (24).

A cross-sectional study was carried out among purposively selected one hundred and three Indonesian patients with coronary artery disease using Short Form Health Survey 36-Item (SF-36). The study reported that there were no statistically significant factors affecting quality of life in patients with CAD. However, it showed that relatively better quality of life among patients with higher educational status, and income, unmarried, no comorbidity, and history of alcohol use (38). In an Iranian context, Soleimani et al. found that the important predictors of HRQOL were educational status, socioeconomic status, main source of income, age, religious belief, social support, and hope (32). Wang et al. found that advancing age and the presence of heart failure, anxiety, and depression were significant predictors of overall HRQL, and more specifically, smoking and hypertension were significant predictors of the physical aspects of HRQL (39).

The Polish authors found that increased age of patients lowered the quality of life in each of the functional areas while men scored higher in terms of overall quality of life and health as well as in psychological and environmental areas, compared to women. Married patients presented a higher overall quality of life and their own health and in physical, psychological and environmental areas. A higher level of education was associated with a better quality of life and health as well as quality in all areas of functioning. Moreover, the authors noted that professionally active people had a higher quality of life and health as well as quality of life in each of the areas, compared to retired people or pensioners (26).

In the aforementioned Nigerian report, factors such as hypertensive disorders, depressive disorder and history of cigarette smoking were the major factors that contributed to poor quality of life (30). The above-mentioned Ethiopian study revealed that increased age, living in a rural area, heart failure, and hypertension were significantly but negatively associated with overall health-related quality of life, while higher educational status was associated with better overall health-related quality of life among MI survivors (17).

In summary, the reviewed literature showed that most of the existing literature with regard to HRQOL of patients with IHD are concentrated in developed regions and were not done using WHO-BREF. The literature showed that quality of life significantly varied as a result of different sociodemographic and clinical factors. Moreover, a large proportion of the studies employed nonprobability such as purposive sampling technique. And in the Ethiopian context, there are only few studies in this regard, all of which primarily focused on MI patients. Thus, the present study was conceived to narrow the knowledge and methodology gap.

2.3 Conceptual framework

This is the conceptual framework developed specifically for this study by the principal investigator through reviewing related literature such as the study done by Ali et al. and Imam et al. (28,40) in which this study aimed to focus. The framework tries to figure out factors associated with affecting quality of life among patients with IHD in one way or another, and believed to support the study entitled '*Health-Related Quality of Life and Associated Factors among Patients with Ischemic Heart Diseases Attending Selected Tertiary Hospitals, Addis Ababa, Ethiopia, 2023*'.

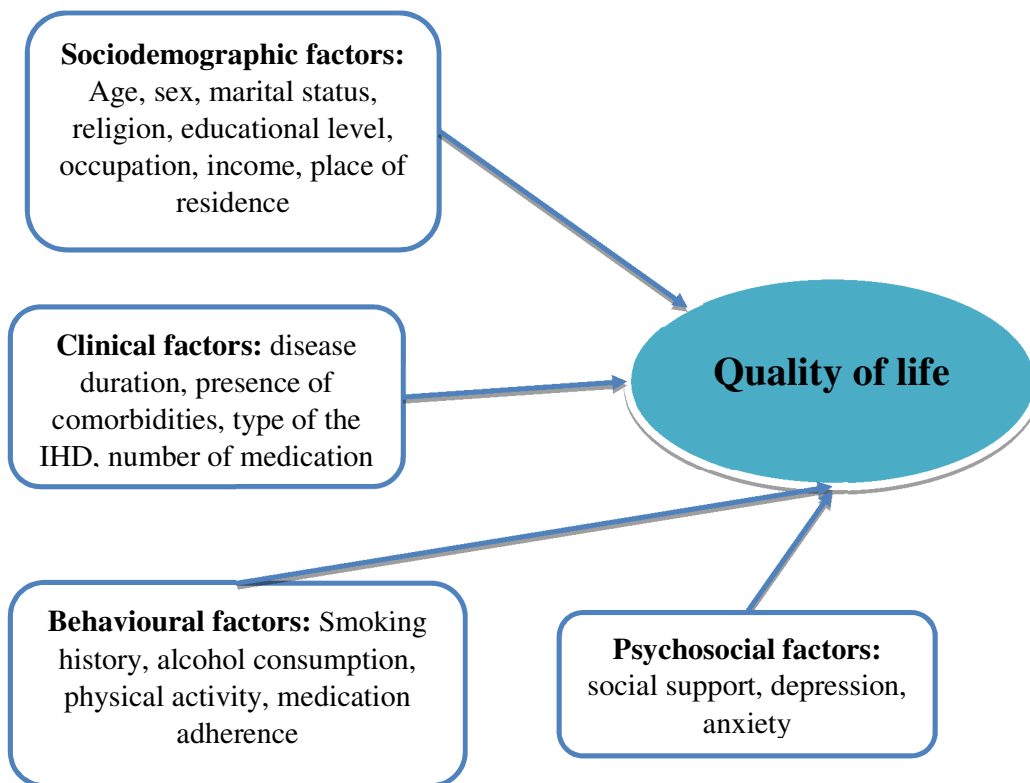


Figure 1. Conceptual framework for *Health-Related Quality of Life and Associated Factors among Patients with Ischemic Heart Diseases* (Source: Imam et al.(28) and Ali et al.(40))

3. Objective of study

3.1 General objective

- To assess health-related quality of life and associated factors among patients with ischemic heart diseases attending selected tertiary hospitals in Addis Ababa, Ethiopia, 2023

3.2 Specific objectives

- To assess health-related quality of life among patients with ischemic heart disease seeking care at selected tertiary hospitals, Addis Ababa, Ethiopia, 2023
- To identify factors associated with health-related quality of life among patients with ischemic heart disease seeking care at selected tertiary hospitals, Addis Ababa, Ethiopia, 2023

4. Methods and Materials

4.1 Study area

The study was conducted at Cardiology Unit of Tikur Anbessa Specialized Hospital (TASH) and St. Paul's Hospital Millennium Medical College (SPHMMC), two leading tertiary government hospitals located in Addis Ababa, the capital city of Ethiopia. TASH is the largest and oldest public hospital of the country. It offers high level of clinical care for millions of people in its catchment and training to health science students coming from different parts of the country and from the Horn of Africa. On top of this, the hospital delivers clinical service in a variety of activities including inpatient and outpatient cardiac care. Likewise, built in 1969, SPHMMC serves about 200,000 patients annually on average and a catchment population of more than 5 million people from different parts of the country. On top of this, this referral hospital is a teaching center for both undergraduate and postgraduate health science students. It delivers clinical service in a variety of activities including cardiovascular care.

At each hospital, the department provides specialized cardiovascular care to a wide range of population with varying demographic and clinical characteristics of cardiac diseases, at which this study is focused. The hospitals were selected purposively for this study due to their large patient load with relatively representative patients' demographics. Currently, there are about 1800 patients with IHD having regular clinical follow up at the outpatient cardiac unit of TASH and 1320 at SPHMMC. On daily basis, 60 to 80 patients are seen on average, with a monthly flow of 240 to 320. The outpatient cardiac units of each study hospital is staffed by subspecialists, specializing residents, and trained nurses, with four days a week being dedicated to provide specialized outpatient care.

4.2 Study period

The study period was from March 1st to April 30th, 2023

4.3 Study design

An institution-based, cross-sectional study was employed.

4.4 Source population

All patients with IHD attending to TASH and SPHMMC for follow up

4.5 Study population

All patients with IHD attending to TASH and SPHMMC for follow up during the study period

4.6 Eligibility criteria

4.6.1 Inclusion criteria

- Patients with confirmed diagnosis of ischemic heart disease
- Patients aged 18 years or more
- Patients who can understand either Amharic or Oromo languages
- Patients who had follow up for at least three months for IHD

4.6.2 Exclusion criteria

- Patients with emergency clinical conditions such as advanced heart failure or unstable hemodynamic conditions
- Those with a documented serious psychiatric disorder

4.7 Sample size determination

The sample size for this study is calculated using a single population proportion formula. Taking the population proportion of patients with IHD having poor QOL to be 50% due to absence of previous study done in an Ethiopian setting using WHOQOL- BREF and with the intention of obtaining maximum sample size:

$$n = \frac{z^2 p(1 - p)}{e^2}$$

n = the required sample size

p = the proportion of patients with IHD having poor QOL=0.5

$Z_{\alpha/2}$ = the critical value at 95% confidence level = 1.96

e = precision (margin of error) = 5%

Accordingly,

$$n = \frac{(1.96)^2 * 0.5(1 - 0.5)}{0.05^2}$$

$$n = \frac{(1.96)^2 * 0.5(0.5)}{0.05^2}$$

$$n = 384.16$$

Then, considering a 10% of contingency for invalid response and nonresponses, the total sample size of for this study becomes 422 patients.

4.8 Sampling technique

Currently, there are thirteen public hospitals in Addis Ababa, of which two hospitals (TASH and SPHMMC) were selected purposively. The two hospitals were selected for their high patient load and with the conception that there are relatively representative patient population coming from different corners in their respective catchment population. There are roughly 1020 (620 at TASH and 400 at SPHMMC) adult patients with IHD that are expected to have follow up in the cardiac referral clinics during the study period. As the total required sample size is 422, proportional stratified sampling technique was employed after the preparing a sampling frame at each study site. The samples were then taken from each stratum proportionally (256 from TASH; 166 from SPHMMC) using simple random sampling technique (Figure 2).

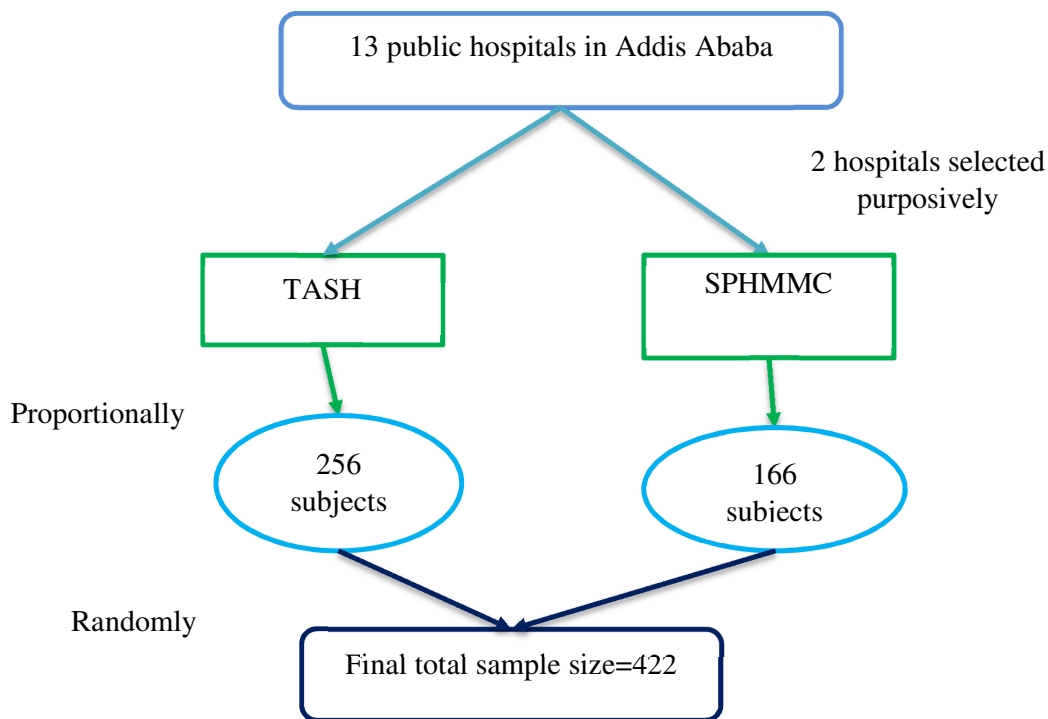


Figure 2. Schematic representation of sampling procedure for this study in two tertiary hospitals of Addis Ababa, Ethiopia, 2023

SPHMMC: St. Paul's Hospital Millennium Medical College; TASH: Tikur Anbessa Specialized Hospital

4.9 Data collection tools and procedures

Data were collected via face-to-face interview using structured, short version data collection questionnaire, namely WHOQOL-BREF (World Health Organization's quality of life questionnaire) (41). The WHOQOL-BREF consists of 26 questions: two stand-alone questions assess the domains on perception of quality of life and perception of health of the patients; and the rest of the 24 questions are categorized into another 4 major domains: physical health with 7 items; psychological health with 6 items; social relationship with 3 items; and environmental health with 8 items. All questions are scored by Likert scale of 5-points. The total score of each domain is calculated according to the scores tables guidelines provided by WHO in the original WHOQOL-BREF (41). A higher score means a higher quality of life. The validated Amharic version of the tool is obtained from earlier studies done among diabetic patients (28). Additionally, the instrument contains sociodemographic and clinical profile assessing items. Social support is was assessed using the three-item Oslo Social Support Scale (OSSS) while the Hospital Anxiety and Depression Scale (HADS) was used to measure symptoms of anxiety (HADS Anxiety) and depression (HADS Depression) (42).

Two onsite professional healthcare workers were recruited and trained on data collection procedure. For data collectors and supervisors, relevant two-day training was given by the investigator to make them familiar with the data collection tool. Before data is collected, purpose of the study was explained to the potential study participants by trained interviewers.

4.10 Study variables

4.10.1 Dependent variable

- Health-related quality of life (dichotomized as poor and good)

4.10.2 Independent variables

- **Socio-demographic characteristics:** such as age, gender, residence, marital status, religious affiliation, educational level, occupational category, monthly income
- **Clinical characteristics:** such as duration of illness, presence of comorbidity, type of comorbidity, number of medications
- **Behavioural factors:** smoking history, alcohol intake, physical activity, medication adherence
- **Psychosocial factors:** social support, psychological distress as measured by HADS

4.11 Operational definitions

- **Quality of life:** refers to an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns, as measured by WHOQOL-BREF (43)
- **Good quality of life:** represents patients scoring above mean (79.7) of the raw total scores from the 26-item containing WHOQOL-BREF (41)
- **Poor quality of life:** stands for patients scoring no more than the mean (79.7) of the raw total scores from the 26-item containing WHOQOL-BREF (41)

4.12 Data processing and analysis

Data entering, coding and cleaning were performed using Epi-info version 7.2.2.2 and statistical analysis was done using SPSS (Statistical Package for Social science) version 26. Frequency and cross tabulation was used to check for missed value and variables. The demographic and clinical characteristics of participants were computed using descriptive statistics such as mean $\pm$ standard deviation for normally distributed continuous data, median + interquartile range for non-normally distributed continuous data, frequencies and percentages. Multicollinearity between the independent variables was checked by pearson's correlation coefficient.

Domain scores for the WHOQOL-BREF were calculated by taking the mean of all items included in each domain and multiplying by a factor of four. These scores were then transformed to a 0-100 scale. The physical domain includes items Q3, Q4, Q10, Q15, Q16, Q17, Q18; the psychological domain Q5, Q6, Q7, Q11, Q19, Q26; the social domain embodies Q20, Q21, Q22; and the environmental domain includes Q8, Q9, Q12, Q13, Q14, Q23, Q24, Q25. In so doing, the negatively-phrased items (i.e., Q3 Q4 Q26) are reverse before direct computation for domain scores (41). Similarly, the HADS subscales were categorized as normal for scores not more than 7, borderline for those scoring between 8 and 10 while those with scores spanning from 11 to 21 were classified as abnormal or cases.

Finally, binary and multivariable logistic regression analyses were applied to determine the potential factors associated with outcome variable, that is, quality of life among patients with IHD. To determine the association between outcome and explanatory variables, odds ratios with 95% confidence intervals were calculated using a stepwise multiple regression (with a forward conditional method). Independent variables that yielded p value of ≤ 0.25 in binary logistic regression were exported to multiple regression model to compute adjusted odds

ratio. A p value was considered significant at the level of <0.05 . Finally, the study findings were presented using texts, diagrams, tables and figures.

4.13 Data quality management

To ensure data quality, brief training was given for data collectors and supervisors. Data were collected by means of a previously standardized Amharic and Oromo version WHOQOL-BREF, which yielded adequate reliability and validity characteristics (44). Data collection from the participants was carried out in their comfortable area individually. Close supervision was maintained during data collection, and filled questionnaires were double-checked daily for consistency and completeness by data collectors and principal investigator before data entry and analysis.

4.14 Ethical consideration

Ethical clearance was obtained from Institutional Review Board (IRB) of Saint Paul's Millennium Medical College (Ref. number: pm23/439). A support letter was taken from the Medical-Surgical Nursing Department, and it was submitted to the Internal Medicine Department and Research Directorate of TASH to conduct the study. Following this step, the data collectors were introduced with the onsite health care professionals. Before approaching each client for interview, the purpose of the study was briefly explained and written informed consent was obtained in local language. During data collection, the study participants were informed that the information collected would be kept anonymous and confidential.

4.15 Dissemination of the study findings

The findings of this study will be submitted to the Department of Medical-Surgical Nursing of SPHMMC as a partial fulfillment for the Master's Degree of Cardiovascular Nursing as well as to the Chief Clinical Officer of TASH. The gross results will be briefed to onsite healthcare workers to take care of patients with low quality of life. Apart from this, the outcome of this study will be presented at national and international conferences. Finally, the manuscript will be submitted to a reputable scientific journal for possible publication.

5. Results

5.1 Socio-demographic characteristics of participants

For this study, 422 patients with IHD who were visiting the two study hospitals (TASH and SPHMMC) were approached, and of these, 402 agreed to the study, giving a response rate of 95.3%. Shapiro–Wilk test indicated a non-normal distribution of respondents (p value=0.008), and their age ranged from 26 to 86 with a median age (IQR) of 60 (52 to 69.25) years, and well more than half ($n=212$;52.6%) of them aged from 46 to 65 years by the time of data collection. Of all patients studied, majority ($n=288$;71.6%) were males, with a male-to-female ratio of 2.5:1. Three hundred twenty-eight (81.9%) of the studied patients reported to be urban dwellers (Table 1).

On the other hand, majority ($n=226$;56.2%) of the respondents included in this study were orthodox Christians while two-thirds were currently married ($n=262$;65.2%). In addition, close to a third of the respondents (29.6%; $n=119$) were unemployed. In relation to household income category (wealth index quintile), well more than a fifth (92;22.9 %) reported to have a family income between 1500 and 3000 Ethiopian Birr a month (Table 1).

Table 1. Distribution by socio-demographic characteristics of patients with IHD attending at TASH and SPHMMC, Addis Ababa, Ethiopia, 2023 (n=402)

Variable	Frequency	Percent (%)
Age group		
≤45 years	60	14.9
46–65 years	212	52.6
>65 years	130	32.3
Sex		
Male	288	71.6
Female	114	28.4
Residence		
Urban	328	81.6
Rural	74	18.4
Religion		
Orthodox	226	56.2
Muslim	93	23.1
Protestant	59	14.7
Catholic	16	4.0
Other	8	2.0
Current marital status		
Unmarried	34	8.5
Married	262	65.2
Divorced/separated	35	8.7
Widowed	71	17.7
Educational status		
Cant read and write/No education	87	21.6
Primary education	87	21.6
Secondary education	132	32.8
College diploma +	96	23.9
Occupational category		
Unemployed	119	29.6
Employee	109	27.1
Housewife	41	10.2
Retired	39	9.7
Merchant	27	6.7
Farmer	23	5.7
Daily laborer	8	2.0
Other	36	9.0
Household income category: wealth index quintile*		
Lowest (≤1500)	88	21.9
Lower (1501–3000)	92	22.9
Middle (3001–4000)	64	15.9
Higher (4001–6080)	78	19.4
Highest (>6080)	80	19.9

*Household income is expressed in Ethiopian Birr

5.2 Clinical, psychosocial and related profile of patients

Most (n=356;88.6%) of the patients claimed not to consume alcoholic beverages regularly. Most (91.5%; n=368) of the patients stated not to smoke cigarettes. Only a quarter of all patients (n=100;24.9%) reported to do regular physical exercise. Besides, majority (81.6%; n=328) of the respondents had good self-reported medication adherence (Table 2).

The vast majority (93%; n=374) of patients had history of myocardial infarction previously. Considering the duration of the illness as reported by participants, nearly two-thirds (259;64.4%) of the patients stated to have a disease duration less than five years while hundred and nine (27.1%) patients had a disease duration that spanned from five to ten years' period before the time of interview. Most of the studied patients (n=327;81.3%) had certain comorbid medical condition, with hypertension (n=250;62.2%) and diabetes mellitus (n=148;36.8%) being the most frequent comorbidities. Further, more than three-quarters (315;78.4%) of the patients were on polypharmacy as they were taking at least 5 different medications (Table 2).

Table 2. Clinical and related characteristics of patients with IHD attending at TASH and SPHMMC, Addis Ababa, Ethiopia, 2023 (n=402)

Variable	Frequency	Percent (%)
Alcohol consumption		
No	356	88.6
Yes	46	11.4
Cigarette smoking		
No	368	91.5
Yes	34	8.5
Regular physical exercise		
No	302	75.1
Yes	100	24.9
Adherence		
Poor	74	18.4
Good	328	81.6
Main diagnosis		
Post MI	374	93.0
Unstable angina	22	5.5
Stable angina	6	1.5
Duration		
<5 years	259	64.4
5–10 years	109	27.1
>10 years	34	8.5
Comorbidity		
Yes	327	81.3
No	75	18.7
Type of comorbidity		
Hypertension	250	62.2
Diabetes mellitus	148	36.8
Dyslipidemia	68	16.9
Heart failure	35	8.7
Stroke	27	6.7
HIV/AIDS	11	2.7
Other	17	4.2
Pill burden		
<5 medications	87	21.6
≥5 medications	315	78.4
Social support		
Poor	188	46.8
Moderate	153	38.1
Strong	61	15.2

Regarding the psychosocial profile of the patients, about half (n=188;46.8%) had poor social support according to the three-item Oslo Social Support Scale while 153 (38.1%) had moderate level of social support. Likewise, one hundred sixty-nine (42%) had borderline

depression on HADS scale while one hundred sixty-five (41%). On the other hand, only 111 (27.6%) and 82 (20.4%) had normal scores on HADS depression and anxiety scores, respectively (Figure 3).

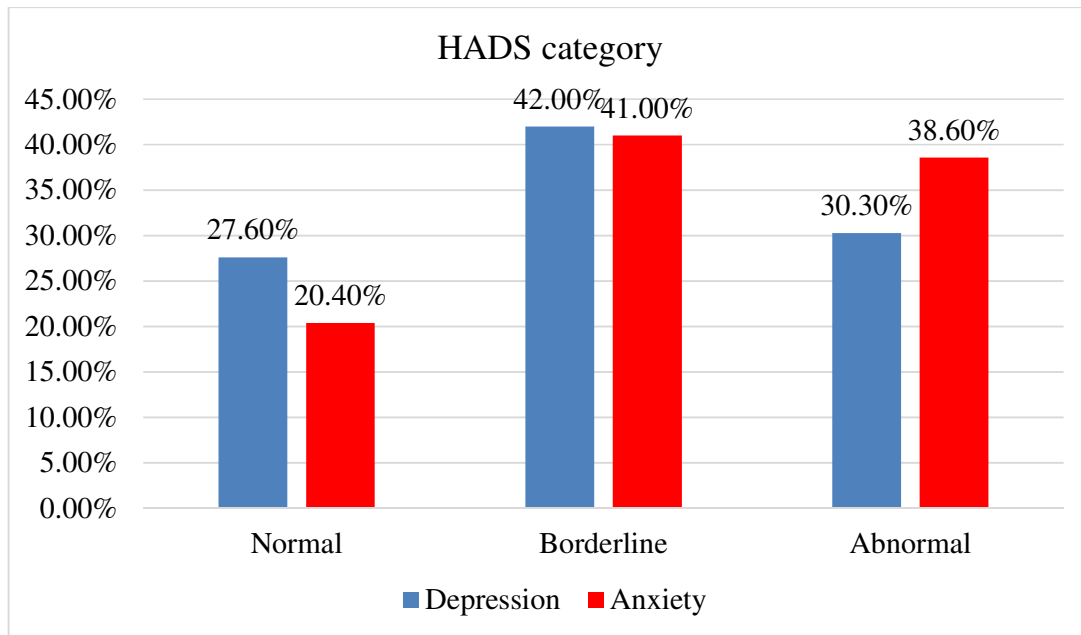


Figure 3. Psychological profiles [Hospital Anxiety and Depression Scale (HADS)] patients with IHD attending at TASH and SPHMMC, Addis Ababa, Ethiopia, 2023 (n=402)

5.3 Quality of life profile

The mean global health status (quality of life) raw score of the study participants was 79.7 with standard deviation of 16.8, whereas the lower and upper bounds of the bootstrapped mean were 78.09 and 81.26, respectively. Well more than half (51.5%; n=207) of the participants had scores lower than the mean (95% confidence interval: 45.6%–56.4%), while the remaining 195 (48.5%) had relatively better quality of life, scoring above 79.7 (the mean global health status) (Figure 4). Moreover, the mean score $\pm$ standard deviation for the two stand-alone items of HRQOL (perception of quality of life and perception of health of the patients) were 3.05 ± 1.06 and 3.14 ± 1.09 , respectively. More than a quarter (n=110; 27.4%) perceived their quality of life as either poor or very poor while 102 (25.4%) responded to be dissatisfied or very dissatisfied when asked about perception of their own health.

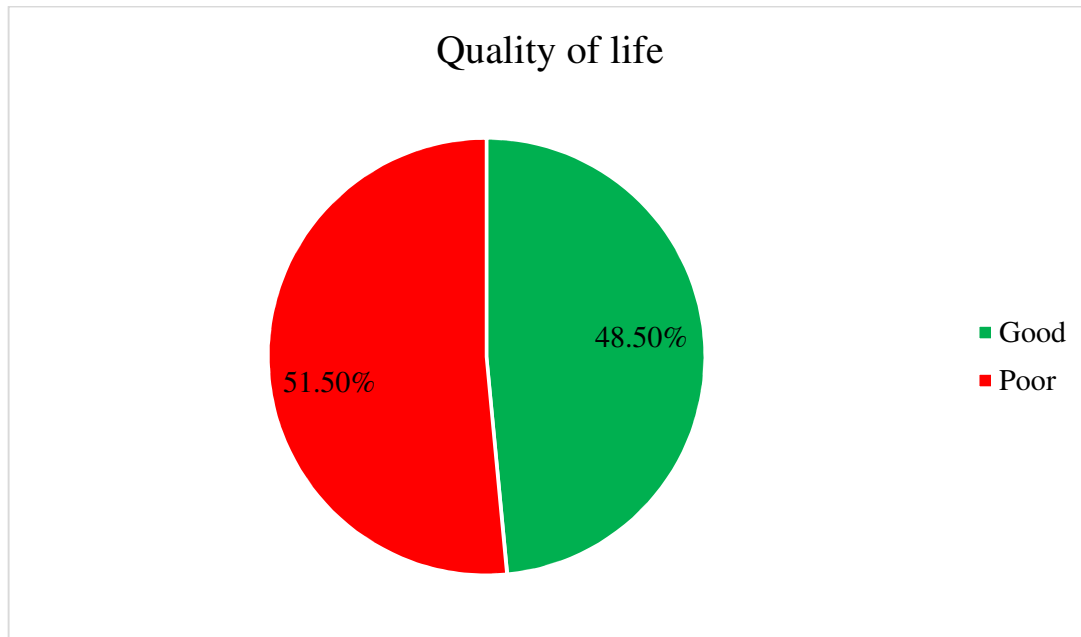


Figure 4. Quality of life of patients with IHD attending TASH and SPHMMC, Addis Ababa, Ethiopia, 2023 (n=402)

5.4 Factors influencing quality of life profile

In this study, nineteen variables, namely age group, sex, place of residence, religion, current marital status, educational status, occupational category, household income category (wealth index quintile), alcohol consumption, cigarette smoking, regular physical exercise, medication adherence, main diagnosis, duration since diagnosis, presence of comorbidity, pill burden, social support, depression and anxiety were considered in the regression analysis. In order to determine the factors associated with HRQOL while controlling possible confounders, independent variables that yielded p value of ≤ 0.25 in binary logistic regression were exported to multiple regression model to compute adjusted odds ratio.

Accordingly, fourteen factors, namely age group, sex, place of residence, current marital status, educational status, household income category (wealth index quintile), cigarette smoking, regular physical exercise, medication adherence, duration since diagnosis, pill burden, social support, depression and anxiety were observed in the bivariable analysis to be associated with quality of life among the respondents (Table 3). To control for possible confounders, further multivariate analysis was performed, the only factors that showed statistically significant association with HRQOL were age group, household income category, regular physical exercise, duration since diagnosis, social support, depression and anxiety.

Table 3. Factors affecting the quality of life of patients with IHD attending TASH and SPHMMC, Addis Ababa, Ethiopia, 2023

Variable	Quality of life		COR (95%CI)	AOR (95%CI)	P value
	Poor (%)	Good (%)			
Age group					
≤45 years	37(61.7)	23(38.3)	1.47(0.79,2.74)	4.99(1.85,12.80)	0.001
46–65 years	102(48.1)	110(51.9)	0.84(0.55,1.31)	1.31(0.67,2.57)	0.435
>65 years	68(52.3)	62(47.7)	1	1	-
Educational status					
Cant read and write/No education	63(72.4)	24(27.6)	7.46(3.87,14.35)	3.62(1.36,9.68)	0.010
Primary education	55(63.2)	32(36.8)	4.88(3.60,9.17)	4.36(1.75,10.86)	0.002
Secondary education	64(48.5)	68(51.5)	2.67(1.51,4.72)	1.63(0.72,3.73)	0.245
College diploma +	25(26.0)	71(74.0)	1	1	-
Household income category*					
Lowest	66(75.0)	22(25.0)	12.00(5.78,24.9)	5.77(2.11,15.80)	0.001
Lower	53(57.6)	39(42.4)	5.44(2.74,10.80)	1.44(0.53,3.95)	0.475
Middle	31(48.4)	33(51.6)	3.76(1.80,7.84)	2.55(0.89,7.30)	0.081
Higher	41(52.6)	37(47.4)	4.43(2.19,8.97)	1.61(0.60,4.31)	0.344
Highest	16(20.0)	64(80.0)	1	1	-
Regular physical exercise					
No	178(58.9)	124(41.1)	3.51(2.16,5.73)	4.65(2.34,9.23)	0.001
Yes	29(29.0)	71(71.0)	1	1	-
Duration					
<5 years	128(48.4)	131(51.6)	2.71(1.22,6.04)	5.56(1.79,17.24)	0.003
5–10 years	70(64.2)	39(35.8)	4.99(2.12,11.74)	9.25(2.70,31.71)	0.001
>10 years	9(26.5)	25(73.5)	1	1	-
Social support					
Poor	139(73.9)	49(26.1)	11.58(5.69,23.57)	16.42(6.27,42.99)	0.001
Moderate	56(36.6)	97(63.4)	2.36(1.16,4.80)	4.38(1.69,11.36)	0.002
Strong	12(19.7)	49(80.3)	1	1	-
HADS-Anxiety					
Normal	13(15.8)	69(84.2)	1	1	
Borderline	73(44.2)	92(55.8)	4.21(2.16,8.21)	4.76(2.04,11.10)	0.001
Abnormal	121(78.1)	34(21.9)	18.89(9.34,38.20)	16.86(7.00,40.64)	0.001

Only variables with p value <0.05 in multiple logistic regression are shown here

HADS: Hospital Anxiety and Depression Scale; 1: Reference category

*Lowest: ≤1500 ; Lower: 1501–3000; Middle: 3001–4000; Higher: 4001–6080; Highest:>6080 ETB

In particular, the likelihood of having poor HRQOL were about five times as much among those who were 45 years or younger compared to those who were older than 65 years (AOR=4.99; 95% CI=1.85,12.80). Lower educational status was associated with HRQOL such that those who were illiterate (AOR=3.62; 95% CI=1.36,9.68) and those who attended upto primary school (AOR=4.36; 95%CI=1.75,10.86) had higher odds of having poor HRQOL compared to those with a college degree or more, Furthermore, the likelihood of having poor HRQOL was about six times as much among patients having an average household income ≤ 1500 ETB in comparison to those reporting an income category greater than 6080 ETB [AOR=5.77 (95%CI:2.11,15.80)]. Moreover, in reference to those who exercise regularly, patients who claimed not to do regular physical exercise showed higher likelihood of poor HRQOL [AOR (95%CI) = 4.65 (2.34,9.23)] (Table 3).

Additionally, when compared to those with a disease duration of more than 10 years, patients with disease duration of less than five years and those with a 5–10 years' duration had higher odds of having poor HRQOL, with AOR=5.56 (95%CI:1.79,17.94) and AOR= [AOR=9.25 (95%CI:2.70,31.71)], respectively. Besides, patients with poor or moderate social support were more likely to have poor HRQOL [AOR=16.42 (95%CI:6.27,42.99) and AOR=4.38 (95%CI:1.69,11.36), respectively] in reference to their counterparts with a strong social support. In comparison with patients with normal HADS-anxiety scores, those with scores equivalent to borderline or abnormal yielded higher odds of having poor HRQOL AOR=4.76 (95%CI: 2.04,11.10) and AOR=16.86(95%CI:7.00,40.64)], respectively (Table 3).

6. Discussion

The present study was conducted with the purpose of assessing health-related quality of life and its associated factors among patients with ischemic heart diseases attending selected tertiary hospitals, Addis Ababa, Ethiopia. Among the pertinent findings rendered by the study, it was shown that more than half of the participants had poor quality of life, the composite of all domains of HRQOL. Moreover, it was revealed that HRQOL was affected by age, educational status, average household income, physical exercise, disease duration, social support, and anxiety.

Specifically, the median age of subjects in this study is 60 years, similar demographic observation was reported in Nigeria (30) and Brazil (36), where the corresponding age was 70 years and 64.96 years (36), respectively. The possible reason for this observation can be the fact that ischaemic heart diseases mainly affect older people, partly due to the increase in the incidence of chronic medical conditions such as hypertension and diabetes mellitus in the segment of the population, which are established risk factors for ischemic heart diseases (45).

Moreover, the study showed that a little more than half (51.5%) of the studied patients with IHD had poor health related quality of life, indicating that these patients had a moderate level of overall HRQOL. This observation is compatible with the findings of Arrar and others who found moderate level on all aspects of health related quality among Iraqi patients (22). In contrast, the present study showed a relatively a better overall HRQOL score (79.7 ± 16.8) among IHD patients in comparison to the low health related quality of life obtained among Ethiopian MI patients, with overall score of 49.29 ± 14.83 (17).

Also, the present finding was higher than the South Korean study, which recorded that the HRQOL of post-MI patients was moderately poor HRQOL, with a mean score of 44.38 ± 27.66 (25). It was comparatively higher than the observation in Brazil, where the mean score of HRQOL was 13.19 ± 2.55 (36). However, the current finding was quite different from that of Komalasari et al. in Indonesia, where 94.5% had good HRQOL (23).

The possible explanation for such discrepancies in HRQOL profiles among patients can be the differences in clinico-demographic characteristics of the studied population, differences in the HRQOL-assessing tools used, and the quality of cardiac care across settings, with the current setting having compromised access to state-of-the-art cardiovascular care. Moreover, the absence of a control group could be another factor responsible for the discrepancy. In

fact, direct comparisons with the findings of other studies are difficult because there are no other comprehensive HRQOL models of patients with IHD using the WHOQOL-BREF. For example, the study population included in this study are those with IHD while those included in the previous Ethiopian study were only post-MI ones.

In this study, younger age independently contributed to poor quality of life in patients with cardiac disease. This finding is different from previous observations obtained in other settings, and hence it requires a further study. However, it can be explained by possibility that younger adults might have an intense desire to be active in their sexual and job life even after sustaining ischemic heart disease, which may negatively affect psychological adaptation and resilience, resulting in compromised quality of life.

In keeping with the work of Gutama and others (31), this study found that lower educational level is associated with poor HRQOL. This can be due to the general notion that education enhances happiness and quality of life and that educated people are likely to have clearer understanding of their diseases, which would help them enrich their HRQOL (46). The current study found that lower household income negatively affected HRQOL, and a supportive evidence for this finding was provided by Arrar et al. in Iraqi setting, where lower average household income contributed to lower HRQOL (22). Besides, younger patients had worse quality of life compared with older patients in the present, which is in keeping with the observation of Tromp and others among cardiac patients (34).

On the other hand, disease duration was inversely associated with HRQOL level among patients with IHD. This is supported by Mirsha and others (47) who indicated a negative association between disease duration and quality of life. Individuals with longer duration of the disease has direct association with HRQOL due to their long term exposure to health-related information, the support they get from their families and friends to adjust their lifestyle in comparison to those with short disease duration who may need time to develop coping mechanisms to live in harmony with the newly diagnosed chronic medical condition.

Additionally, this study highlighted that lack of social support was a major contributing factor to poor overall quality of life in patients with IHD. This finding is in agreement previous study which documented that perceived social support is significant predictor of quality of life (37). This can be explained by the fact that social support can improve mood, encourage

people to engage in different social activities, increase healthy behaviors, thereby resulting in overall improves quality of life.

Consistent with what was observed in Indonesia by Santoso et al. in Trinidad and Tobago by Bahall et al., self-reported lack of exercise was associated with lower HRQOL scores in the current study (33,38). In line with the work of Bashall et al. (48) and Kim (24), this study indicated that comorbid depression was an important factor positively associated with poor health related quality of life. Additionally, in agreement with the pattern noted in Korean context (24), this study elucidates that higher anxiety scores were significantly associated with reduced HRQOL in patients with IHD. This can be attributed to the fact that psychological distress can impair daily functioning and productivity, resulting in compromised HRQOL.

7. Strengths and Limitations

7.1 Strength

- The study employed a previously validated, user-friendly WHOQOL-BREF, a tool that has been described as the most useful instrument to assess HRQOL.

7.2 Limitations

- This study design was a cross-sectional, and hence findings must be interpreted with caution as the design employed assesses associations and may not reveal causality.

8. Conclusion and Recommendations

8.1 Conclusion

The present study showed that more than half of patients with ischemic heart diseases have poor health related quality of life. Moreover, it was revealed that younger age, lower educational level, lower average household income, lack of regular physical exercise, shorter disease duration, lack of social support, and anxiety independently contributed to poor quality of life in patients with IHD.

8.2 Recommendations

On the basis of the findings obtained in this study, the following recommendations can be forwarded.

To health professionals,

Whenever possible, health professionals including nurses should be alert enough to assess the quality of life of patients with IHD to better enhance their overall clinical care. Health education and psychosocial support should be delivered to patients integrated with orthodox treatment plan, with special attention directed towards those with predisposing factors such as younger age, lower average household income, regular physical exercise, lack of regular physical exercise, lack of social support, depression, and anxiety.

To local health policy makers,

Concerned stakeholders including local policy makers should consider establishing cardiac rehabilitation support whereby IHD patients are paired with trained volunteers who have had similar diagnoses and treatment plans to provide peer-to-peer support on everything from practical and emotional issues to helping them better cope with their disease, treatment, and long-term survivorship issues.

To researchers,

Further studies should be carried out to validate the current findings, and they should employ stronger study designs including qualitative data to have an in-depth and better understanding of the different domains of quality of life.

9. References

1. Ahmad M, Batcha MS. Coronary Artery Disease Research in India: A Scientometric Assessment of Publication during 1990-2019. *Libr Philos Pract*. 2020;2020:1–22.
2. Severino P, Amato AD, Pucci M, Infusino F, Adamo F, Birtolo LI, et al. Ischemic Heart Disease Pathophysiology Paradigms Overview : From Plaque Activation to Microvascular Dysfunction. *Int J Mol Sci*. 2020;21(8118).
3. Keates AK, Mocumbi AO, Ntsekhe M, Sliwa K, Stewart S. Cardiovascular disease in Africa: Epidemiological profile and challenges. *Nat Rev Cardiol*. 2017;14(5):273–93.
4. Yadeta D, Walelgne W, Fourie JM, Scholtz W, Nel G, Scarlatescu O, et al. PASCAR and WHF Cardiovascular Diseases Scorecard project. *Cardiovasc J Afr*. 2021;32(1):37–46.
5. Skevington SM, Lotfy M, Connell KAO. The World Health Organization 's WHOQOL-BREF quality of life assessment : Psychometric properties and results of the international field trial A Report from the WHOQOL Group q. 2004;299–310.
6. Vahedi S. World Health Organization Quality-of-Life Scale (WHOQOL-BREF): Analyses of Their Item Response Theory Properties Based on the Graded Responses Model. 2010;
7. Megari K. Quality of life in chronic disease patients. *Heal Psychol Res*. 2013;1(e27).
8. Sajobi TT, Wang M, Awosoga O, Santana M, Southern D, Liang Z, et al. Trajectories of health-related quality of life in coronary artery disease. *Circ Cardiovasc Qual Outcomes*. 2018;11(3):1–11.
9. Lawton JS, Tamis-Holland JE, Bangalore S, Bates ER, Beckie TM, Bischoff JM, et al. 2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization: Executive Summary: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. 2022;145(3):E4–17.
10. Gaziano TA. Cardiovascular disease in the developing world and its cost-effective management. *Circulation*. 2005;112(23):3547–53.
11. Keles R. The Quality of Life and the Environment. 2012;35(December 2011):23–32.
12. Ludt S, Wensing M, Szecsenyi J, van Lieshout J, Rochon J, Freund T, et al. Predictors of health-related quality of life in patients at risk for cardiovascular disease in European primary care. *PLoS One*. 2011;6(12).
13. Monwarul Islam AKM, Majumder AAS. Coronary artery disease in Bangladesh: A review. *Indian Heart J [Internet]*. 2013;65(4):424–35. Available from: <http://dx.doi.org/10.1016/j.ihj.2013.06.004>
14. Tefera YG, Abegaz TM, Abebe TB, Mekuria AB. The changing trend of cardiovascular disease and its clinical characteristics in Ethiopia: Hospital-based observational study. *Vasc Health Risk Manag*. 2017;13:143–51.
15. Dixit J, Jyani G, Prinja S, Sharma Y. Health related quality of life among Rheumatic Fever and Rheumatic Heart Disease patients in India. *PLoS One [Internet]*. 2021;16(10)

- October):1–15. Available from: <http://dx.doi.org/10.1371/journal.pone.0259340>
16. Djärv T, Wikman A, Lagergren P. Number and burden of cardiovascular diseases in relation to health-related quality of life in a cross-sectional population-based cohort study. *BMJ Open*. 2012;2(5):1–7.
 17. Endalew HL, Liyew B, Baye Z, Ewunetu Tarekegn G. Health-Related Quality of Life and Associated Factors among Myocardial Infarction Patients at Cardiac Center, Ethiopia. Pati S, editor. *Biomed Res Int* [Internet]. 2021 Mar 28;2021:1–15. Available from: <https://www.hindawi.com/journals/bmri/2021/6675267/>
 18. Pocock S, Brieger DB, Owen R, Chen J, Cohen MG, Goodman S, et al. Health-related quality of life 1-3 years post-myocardial infarction: Its impact on prognosis. *Open Hear*. 2021;8(1):1–11.
 19. Mei Y xia, Wu H, Zhang H yun, Hou J, Zhang Z xiang, Liao W, et al. Health-related quality of life and its related factors in coronary heart disease patients: results from the Henan Rural Cohort study. *Sci Rep* [Internet]. 2021;11(1):1–10. Available from: <https://doi.org/10.1038/s41598-021-84554-6>
 20. Du R, Wang P, Ma L, Larcher LM, Wang T, Wang T, et al. Health-related quality of life and associated factors in patients with myocardial infarction after returning to work: A cross-sectional study. *Health Qual Life Outcomes*. 2020;18(1):1–10.
 21. Dou L, Mao Z, Fu Q, Chen G, Li S. Health-Related Quality of Life and Its Influencing Factors in Patients with Coronary Heart Disease in China. *Patient Prefer Adherence*. 2022;16(March):781–95.
 22. Arrar AA, Al-Abedi GA. Quality of life among ischemic heart diseases patients in misan center for the cardiac diseases and surgery in Al-Amara city. *Bahrain Med Bull*. 2021;43(3):571–5.
 23. Komalasari R, Nurjanah, Yoche MM. Quality of life of people with cardiovascular disease: A descriptive study. *Asian Pacific Isl Nurs J*. 2019;4(2):92–6.
 24. Kim Y. Health-Related Quality of Life in Patients with Coronary Artery Disease Undergoing Percutaneous Coronary Intervention: A Cross-Sectional Study. *J Nurs Res*. 2022;30(1):E186.
 25. Kim HM, Kim JS, Hwang SY. Health-related quality of life in symptomatic postmyocardial infarction patients with left ventricular dysfunction. *Asian Nurs Res (Korean Soc Nurs Sci)* [Internet]. 2015;9(1):47–52. Available from: <http://dx.doi.org/10.1016/j.anr.2014.11.004>
 26. Kołpa M, Grochowska A, Damasiewicz-Bodzek A. Demographic factors and quality of life of patients after myocardial infarction. *Med Stud*. 2020;36(3):172–80.
 27. Morys JM, Bellwon J, Höfer S, Rynkiewicz A, Gruchala M. Quality of life in patients with coronary heart disease after myocardial infarction and with ischemic heart failure. *Arch Med Sci*. 2016;12(2):326–33.
 28. Imam H, Jitpanya C. Factors related to health-related quality of life in patients with acute coronary syndrome in West Java, Indonesia: A correlational study. *Belitung Nurs J*. 2022;8(4):349–56.

29. Imanuna M, Eko Wardani H, Dwi Tama T. Factors Related to the Quality of Life of Patients with Coronary Heart Disease at Saiful Anwar General Hospital, Malang. *KnE Life Sci.* 2021;2021(ISMoPHS 2020):278–88.
30. Mijinyawa M. Health Related Quality of Life among Patients with Ischaemic Heart Disease in Kano, Nigeria. *J Vasc Med Surg.* 2016;4(4):4–7.
31. Gutama F, Barliana MI, Puspitasari IM. Factors associated with health-related quality of life in patients with coronary heart disease. *Pharmacia.* 2022;69(3):771–7.
32. Soleimani MA, Zarabadi-Pour S, Huak Chan Y, Allen KA, Shamsizadeh M. Factors Associated with Hope and Quality of Life in Patients with Coronary Artery Disease. *J Nurs Res.* 2022;30(2):E200.
33. Bahall M, Khan K. Quality of life of patients with first-time AMI: A descriptive study. *Health Qual Life Outcomes.* 2018;16(1):1–10.
34. Tromp J, Shen L, Jhund PS, Anand IS, Carson PE, Desai AS, et al. Age-Related Characteristics and Outcomes of Patients With Heart Failure With Preserved Ejection Fraction. *J Am Coll Cardiol.* 2019;74(5):601–12.
35. Kang K, Gholizadeh L, Han HR. Health-related Quality of Life and Its Predictors in Korean Patients with Myocardial Infarction in the Acute Phase. *Clin Nurs Res.* 2021;30(2):161–70.
36. Araújo HVS de, Figueirêdo TR, Costa CRB, Silveira MMBM da, Belo RM de O, Bezerra SMM da S. Quality of life of patients who undergone myocardial revascularization surgery. *Rev Bras Enferm.* 2017;70(2):257–64.
37. Chollou KM, Shirzadi S, Pourrazavi S, Babazadeh T, Ranjbaran S. The Role of Perceived Social Support on Quality of Life in People with Cardiovascular Diseases. *Ethiop J Health Sci.* 2022;32(5):1019–26.
38. Santoso T, Sujianto U, Susilawati D. Factors Affecting Quality of Life in Patients with Coronary Artery Disease. *Indones J Nurs Pract.* 2017;1(3).
39. Wang W, Thompson DR, Ski CF, Liu M. Health-related quality of life and its associated factors in Chinese myocardial infarction patients. *Eur J Prev Cardiol.* 2014;21(3):321–9.
40. Ali M, Simin S, Huak ZY, Shamsizadeh KAM. Factors Associated With Hope and Quality of Life in Patients With Coronary Artery Disease. 2022;30(2):1–9.
41. World Health Organization. User Manual. Data Base. 2012;3304(January):1–148.
42. Stern AF. The Hospital Anxiety and Depression Scale. *Occup Med (Chic Ill)* [Internet]. 2014 Jul 1;64(5):393–4. Available from: <https://academic.oup.com/occmed/article-lookup/doi/10.1093/occmed/kqu024>
43. Post MWM. Definitions of Quality of Life : What Has Happened and How to Move On. 2014;167–80.
44. Reba K, Birhane BW, Gutema H. Validity and reliability of the Amharic version of the world health organization's quality of life questionnaire (whoqolbref) in patients with diagnosed type 2 diabetes in felege hiwot referral hospital, Ethiopia. *J Diabetes Res.*

2019;2019.

45. Steyn K, Sliwa K, Hawken S, Commerford P, Onen C, Damascene A, et al. Risk factors associated with myocardial infarction in Africa: The INTERHEART Africa Study. *Circulation*. 2005;112(23):3554–61.
46. Zhan Z, Su ZW, Chang HL. Education and Quality of Life: Does the Internet Matter in China? *Front Public Heal*. 2022;10(March).
47. Mishra SR, Sharma A, Bhandari PM, Bhochhibhoya S, Thapa K. Depression and health-related quality of life among patients with type 2 diabetes mellitus: A cross-sectional study in Nepal. *PLoS One*. 2015;10(11):1–13.
48. Bahall M, Legall G, Khan K. Quality of life among patients with cardiac disease: The impact of comorbid depression. *Health Qual Life Outcomes*. 2020;18(1):1–10.

Annex

Annex I: English version questionnaire

St. Paul's Hospital Millennium Medical College

Department of Medical Surgical-Nursing

Questionnaire that was used to assess quality of life and its determinant factors among patients with ischemic heart disease seeking care at Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia

Participant Information Sheet and Informed Consent Form

Hello dear respondents, my name is _____, I am here to collect data for the research purpose which is conducted to complete a thesis for master's degree in Cardiovascular Nursing at SPHMMC.

The purpose of this study is to assess quality of life and its determinant factors among patients with ischemic heart disease seeking care at Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia

You are selected to be one of the participants in the study. I would like to ask you to fill this questionnaire that takes your time. No harm is imposed to you except the time you commit for interview but some of the question may look too personal but it is helpful for the study. In addition, there is no payment for participation even though the result of the study may benefit as a citizen. The Participation in this study is voluntary, you have the right to refuse or withdraw from the study at any time for any reason without penalty. However, your honest answers to these questions are important since it provide relevant information to design interventions that aims to improve the quality of life of cardiac patients

The information you provide is confidential and it will be used only for study purpose and it will not be disclosed to anyone. A code number will be used to identify the participant therefore, writing your name is not needed.

If you have something that is not clear about the study please contact the principal investigator, Mrs. Hanan Solomon (Mobile 0913-008969, email: umuhibba3@gmail.com) at any time.

Are you willing to participate in this study? 1. Yes 2. No

Signature of data collector certifying verbal informed consent _____

Thank You!!!

001. Data collector: code ____/____/____ Name _____

002. Date of data collection ____/____/____ Time _____

003. Checked by Supervisor: Signature _____ day _____ month _____ year _____

Part I. Socio-demographic data of the patient

This section is about socio-demographic and general personal characteristics of the respondent. Please circle on the responses from the given alternatives.

SN	Question	Response	Skip
101	Age in years	-----	
102	Sex	1.Male 2.Female	
103	Marital status	1. Single 2. Married 3.Divorced/separated 4.Widowed	
104	Religion	1. Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Other (specify)----	
105	Residence	1.Urban 2.Rural	
106	Educational level	1. Illiterate 2. Primary education (1-8) 3. Secondary education (9-12) 4. Higher	
107	What is your job?	1. Employee 2. Farmer 3. Merchant 4 Daily laborer 5. Unemployed 6. House wife 7. Other (specify)...	
108	What is your average household monthly income?	_____ETB	

1.2 Behavioural factors			
109	Do you take alcohol?	1. Yes 2. No	
110	Do you smoke cigarette?	1. Yes 2. No	
111	Do you do any activity involving physical effort for at least 30 minutes a day for a minimum of 5 days a week?	1. Yes 2. No	
112	How do you see your habit of adhering to prescribed medications and follow up visits?	1. Poor 2. Good	
1.3 Social support items (OSSS-3)			
113	How many people are you so close to that you can count on them if you have great personal problem?	1. None 2. 1-2 3. 3-5 4. 5+	
114	How much interest and concern do people show in what you do?	1. None 2. Little 3. Uncertain 4. Some 5. A lot	
115	How easy is it to get practical help from others if you should need it?	1. Very difficult 2. Difficult 3. Possible 4. Easy 5. Very easy	

(Hospital Anxiety and Depression Scale (HADS))

Tick the box (number) beside the reply that is closest to how you have been feeling in the past week.

Don't take too long over you replies: your immediate is best.

116	I feel tense or 'wound up'	0. Not at all 1. From time to time, occasionally 2. A lot of the time 3. Most of the time
117	I still enjoy the things I used to enjoy	0. Definitely as much 1. Not quite so much 2. Only a little 3. Hardly at all
118	I get a sort of frightened feeling as if something awful is about to happen	0. Not at all 1. A little, but it doesn't worry me 2. Yes, but not too badly 3. Very definitely and quite badly
119	I can laugh and see the funny side of things	0. As much as I always could 1. Not quite so much now 2. Definitely not so much now 3. Not at all
120	Worrying thoughts go through my mind	0. Only occasionally 1. From time to time, but not too often 2. A lot of the time 3. A great deal of the time
121	I feel cheerful	0. Most of the time 1. Sometimes 2. Not often 3. Not at all
122	I can sit at ease and feel relaxed	0. Definitely 1. Usually 2. Not Often 3. Not at all
123	I feel as if I am slowed down	0. Not at all 1. Sometimes 2. Very often 3. Nearly all the time
124	I get a sort of frightened feeling like 'butterflies' in my stomach	0. Not at all 1. Occasionally 2. Quite often

		3. Very Often
125	I have lost interest in my appearance	0. I take just as much care as ever 1. I may not take quite as much care 2. I don't take as much care as I should 3. Definitely
126	I feel restless as if I have to be on the move	0. Not at all 1. Not very much 2. Quite a lot 3. Very much indeed
127	I look forward with enjoyment to things	0. As much as I ever did 1. Rather less than I used to 2. Definitely less than I used to 3. Hardly at all
128	I get sudden feelings of panic	0. Not at all 1. Not very often 2. Quite often 3. Very often indeed
129	I can enjoy a good book or radio or a TV program	0. Often 1. Sometimes 2. Not often 3. Very seldom

Part II: Clinical characteristics

This section is about clinical characteristics of the respondent. Please circle on the responses from the given alternatives

201	What is the specific type of IHD?	1. Post-MI 2. Unstable angina 3. Stable angina 4. Other (specify_____)	
202	Duration since diagnosis?	_____years	
203	Do you have any chronic medical condition diagnosed by a health professional?	1. Yes 2. No	
204	If your answer to question 202 is 'yes', what type(s) of comorbidity do you have?	1. Hypertension 2. Diabetes mellitus 3. Heart failure 4. Dyslipidemia 5. HIV/AIDS 6. Stroke 7. Other (specify.....)	

205	How many drugs do you regularly take?	_____	
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Part III. Information about quality of life

WHOQOL-BREF

The following questions ask how you feel about your quality of life, health, or other areas of your life. I will read out each question to you, along with the response options. Please choose the answer that appears most appropriate. If you are unsure about which response to give to a question, the first response you think of is often the best one.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life in the last four weeks.

		Very poor	Poor	Neither poor nor good	Good	Very Good
1.	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2.	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about how much you have experienced certain things in the last four weeks.

		Not at all	A little	A moderate amount	Very much	An extreme amount
3	To what extent do you feel that physical pain prevents you from doing what you need to do?	5	4	3	2	1
4	How much do you need any medical treatment to function in your daily life?	5	4	3	2	1

5	How much do you enjoy life?	1	2	3	4	5
6	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
7	How well are you able to concentrate?	1	2	3	4	5
8	How safe do you feel in your daily life?	1	2	3	4	5
9	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about how completely you experience or were able to do certain things in the last four weeks

		Not at all	A little	moderately	mostly	Completely
10	Do you have enough energy for everyday life?	1	2	3	4	5
11	Are you able to accept your bodily appearance?	1	2	3	4	5
12	Have you enough money to meet your needs?	1	2	3	4	5
13	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very poor	Poor	Neither poor nor good	Good	Very Good
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15.	How well are you able to get around?	1	2	3	4	5
		Very dissatisfied	dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16.	How satisfied are you with your sleep??	1	2	3	4	5
17.	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18.	How satisfied are you with your capacity for work?	1	2	3	4	5
19.	How satisfied are you with yourself?	1	2	3	4	5
20.	How satisfied are you with your personal relationships?	1	2	3	4	5
21.	How satisfied are you with your sex life?	1	2	3	4	5
22.	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23.	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24.	How satisfied are you with your access to health services?	1	2	3	4	5
25.	How satisfied are you with your transport?	1	2	3	4	5
The following question refers to how often you have felt or experienced certain things in the last four weeks.						
		Never	Seldom	Quite often	Very often	Always
26.	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	5	4	3	2	1

II የአማርኛ መጠይቅ

የቅዱስ ጳውሎስ ሆስፒታል ጤና ሳይንስ ኮሌጅ የህክምና ቀዶ ጥገና ነርሲንግ ክፍል በጥቁር አንበሳ እስፔሻላይዝድ ሆስፒታል አዲስ አበባ ኢትዮጵያ በሚገኘው የልብ ህመም ተካሚዎች ለመገምገም የሚያገለግል የህይወት ጥራት እና የሚወስኑትን ሁኔታዎች ለመገምገም የሚያገለግል መጠይቅ፡፡

የተሳታፊ መረጃ ወረቀትና በመረጃ የተደገፈ የስምምነት ቅፅ

ጤና ይስጥልን ወድ ምላሽ ሰጪዎች ስሜ -----ነው በቅዱስ ፖውሎስ ሚኒሊዬም ሚዲካል ሆስፒታል ውስጥ የካርዲዮቫስኮላር ነርሲንግ የማስተርስ ዲግሪያቸውን ለማጠናቀቅ ለሚደረገው የምርምር ዓላም መረጃ ለመሰብሰብ ከዚህ ወጥቻለሁ፡፡

የጥናቱ ዓላማ በጥቁር አንበሳ ሆስፒታል እና ቅዱስ ጳውሎስ ሆስፒታል አዲስ አበባ ኢትዮጵያ በሚገኘው የልብ ህመም ተካሚዎች ላይ ያለውን የህይወት ጥራት እና የሚወስኑትን ሁኔታዎች ለመገምገም ነው በጥናቱ ውስጥ ከተሳታፊዎች አንዱ ለመሆን ተመርጠዋል፡፡ ጊዜህን የሚወስድ ይህን መጠይቅ እንድትሞሉ ልጠይቅህ እፈልጋለሁ፡፡ ቃለ መጠይቅ በሚፈፅሙበት ጊዜ በስተቀር ምንም አይነት ጉዳት አይደርስብዎትም ነገር ግን አንዳንድ ጥያቄዎች በጣም ግላዊ ሊመስሉ ይችላሉ ነገር ግን ለጥናቱ ጠቃሚ ነው፡፡ በተጨማሪም የጥናቱ ውጤት እንደ ዜጋ ሊጠቅም ቢችልም ለተሳትፎ የሚከፈል ክፍያ የለም፡፡በዚህ ጥናት ውስጥ ያለው ተሳትፎ በፍቃደኝነት ነው፡፡ በማናቸውም ጊዜ ያለ ምንም ምክንያት ጥናቱን ያለመቀበል ወይም ለመተው መብት አለዎት፡፡ ነገር ግን የልብ ህመምተኞችን የህይወት ጥራት ለማሻሻል አላማ ያላቸውን ጣልቃ ገብነቶች ለመንደፍ አግባብነት ያለው መረጃ ስለሚሰጥ በእነዚህ ጥያቄዎች እውነተኛ መልስዎን አስፈላጊ ነው፡፡ ያቀረቡት መረጃ ሚስጥራዊ ነው እና ለጥናቱ አላማ ብቻ ጥቅም ላይ ይውላል እና ለማንም አይገለፅም ተሳታፊውን ለመለየት የኮድ ቁጥር ጥቅም ላይ ይውላል ስለዚህ ስምዎን መፃፍ አያስፈልግም፡፡

ስለጥናቱ ግልፅ ያልሆነ ነገር ካለዎት በማንኛውም ጊዜ ዋና መርማሪዎን ወ/ሮ ሀናን ሰለሞን ሞባይል ቁጥር 0913008969 ኢሜል umuhibb3@gmail.com ያግኙ፡፡

በዚህ ጥናት ለመሳተፍ ፍቃደኛ ነህ፡፡ 1. አዎ 2. አይደለሁም

በቃላት ላይ የተመሰረተ ስምምነት የሚያረጋግጥ የመረጃ ሰብሳቢ ፊርማ -----

አመሰግናለሁ፡፡

ይህ ጥናት ስለ ማህበራዊ ስነ-ህዝብ እና ስለ ተጠሪ አጠቃላይ ገላጭ ባህሪያት ነው፡፡ እርስዎም ከተሰጠዎት አማራጭ ምላሾች ላይ ክብ ያድርጉ፡፡

ይህ ክፍል ለምላስ ሰጪው ክሊኒካው ባህሪያት ነው፡፡

እባክዎ ለተሰጠዎት አማራጮች ምላሾች ላይ ክብ ያድርጉ

፡ የግለሰብ ሁኔታ

ተ/ቁ	መጠይቅ	ምላሽ	ይፃፍ
101	እድሜ በ (አመት)		
102	ፆታ	1.ወንድ 2.ሴት	
103	የጋብቻ ሁኔታ	1. ያላገባ 2. ያገባ 3. የተፋታ/ የተለያዩ 4. በሞት የተለየ	
104	ሀይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ	
105	መኖሪያ	1. ከተማ 2. ገጠር 3. ማይጠቀስ	
106	የትምህርት ደረጃ	1. መፅሐፍና ማንበብ የማይችሉ 2. አንደኛ ደረጃ 3. ሁለተኛ ደረጃ 4. ከፍተኛ ደረጃ ትምህርት	
107	የስራ ሁኔታ	1. ተቀጣሪ 2. ገበሬ 3. ነጋዴ 4. የጉልበት ሰራተኛ 5. ስራ የሌለው 6. የቤት እመቤት 7. ሌላ ይጠቀስ	
108	አማካኝ ወርሃዊ ገቢ ሁኔታ	1. ----- ብር	
109	የሚረዳው አካል ካለ	1. አዎ 2. የለም	
110	አልኮል ይጠጣሉ	1. አዎ 2. የለም	
111	ሲጋራ ያጨሳሉ	1. አዎ 2. የለም	
112	ማንኛውም አይነት የአካል ብቃት እንቅስቃሴ ለ30 ደቂቃ ቢበዛ 5 ቀን በሳምንት	1. አዎ 2. የለም	

ማህበራዊ ድጋፍ አይነቶች

113	ለምን ያህል ሰዎች በጣም ቅርብነት እና ምትላቅ የግል ግርካጋ ጠመዎት በአንድ ላይ መተማመን ይችላሉ	1. ምንም 2. 1-2 3. 3-5 4. 5
114	ሰዎች በምታደርገው ነገር ምን ያህል ፍላጎት እና አሳቢነት ያሳያሉ	1. ምንም 2. ትንሽ 3. እርግጠኛ አይደለም 4. አንዳንድ 5. ብዙ
115	ለፈለጉት ተግባራዊ እርዳታ ከሌላ ሰው ማግኘት ምን ያህል ቀላል ነው	1. በጣም ከባድ 2. ከባድ 3. ይችላል 4. ቀላል 5. በጣም ቀላል

ባለፈው ሳምንት ውስጥ ምን እንደተሰማዎት ከመልሱ አጠገብ ባለው ሳጥን (ቁጥር) ላይ ምልክት ያድርጉ፡፡

ለመመለስ ብዙ ጊዜ አይውሰዱም ለስድስት ወር በጣም ጥሩ ነው

116	ውጥረት ወይም ቁስለት ይሰማኛል	0. ፍፁም አይደለም 1. ከጊዜ ወደ ጊዜ አንዳንዴ አልፎ አልፎ 2. ብዙ ጊዜ 3. በአብዛኛው
117	የምንደሰት ባቸው ነገሮች አሁንም ያስደስቱኛል	0. በእርግጠኝነት 1. በጣም ብዙ አይደለም 2. ትንሽ ብቻ 3. በጭራሽ
118	የሆነ አስከፊ ጊዜ ሊፈጠር እንደሆነ አይነት የፍርሃት ስሜት ይሰማኛል	0. በፍፁም አይደለም 1. ትንሽ ግን አያጨኝቀኝም 2. አዎ ግን በጣም መጥፎ አይደለም 3. በጣም በእርግጠኝነት እና በጣም መጥፎ
119	መሳቅ እና የነገሮችን አስቂኝ ጎንማ የት እችላለሁ	0. ሁል ጊዜ የምችለውን ያህል

	ላለሁ	1. አሁን በጣም ብዙ አይደለም 2. በእርግጠኝነት አሁን በጣም ብዙ አይደለም 3. በጭራሽ
120	የሚያስጨንቁነገሮችበአይምሮዬውስጥ ይመላለሳሉ	0. አልፎ አልፎ ብቻ 1. ከጊዜ ወደ ጊዜ ግን ብዙ ጊዜ አይደለም 2. ብዙ ጊዜ 3. በጣም ብዙ ጊዜ
121	ደስተኛነት	0. ብዙ ጊዜ 1. አንዳንድ ጊዜ 2. ብዙ ጊዜ አይደለም 3. በጭራሽ
122	በተረጋጋሁኔታ መቀመጥ እና ዘናማ ለትእዛዛችሁ	0. በእርግጠኝነት 1. አብዛኛውን ጊዜ 2. ብዙ ጊዜ 3. በጭራሽ
123	ቀስያልኩ እንደሆነ ይሰማኛል	0. በጭራሽ 1. አንዳንድ ጊዜ 2. በጣም ብዙ ጊዜ 3. ሁልጊዜ ማለት ይቻላል
124	በሆዴውስጥ እንደቢራቢሮዎች አይነት ፍርሃት ይሰማኛል	0. በፍፁም አይደለም 1. አልፎ አልፎ 2. ብዙ ጊዜ 3. በጣም ብዙ ጊዜ
125	ስለመልኬ ፍላጎት (ደስታ) አጥቻለሁ	0. ልክ እንደበሬት ጥንቃቄ አደርጋለሁ

		1. ያን ያህል ጥንቃቄ ላደርግ እችላለሁ 2. የሚገባኝን ያህል ጥንቃቄ አላደርግም 3. በእርግጠኝነት
126	በእንቅስቃሴ ላይ እንደሆንኩ ያህል እረፍ ትማጣት ይሰማኛል	0. በፍፁም አይደለም 1. በጣም ብዙ አይደለም 2. በጣም ብዙ 3. በጣም በእርግጥ
127	ነገሮችን በደስታ እጠባበቃለሁ	0. እኔ ከመቼውም ጊዜ እንዳደርገው 1. ከበፊቱ ያነሰ 2. በእርግጠኝነት ከበፊቱ ያነሰ 3. በጭራሽ
128	ድንገተኛ የፍርሃት ስሜት ይሰማኛል	0. በፍፁም አይደለም 1. ብዙ ጊዜ አይደለም 2. ብዙ ጊዜ 3. ብዙ ጊዜ
129	በጥሩ መፅሐፍ ወይም የፊደላዊ ወይም የቴሌቪዥን ፕሮግራም መደሰት እችላለሁ	0. ብዙ ጊዜ 1. አንዳንድ ጊዜ 2. ብዙ ጊዜ አይደለም 3. በጣም አልፎ አልፎ

II. የጤና ሁኔታ

ተ/ቁ	መጠይቅ	ምላሽ	ይፃፍ
201	ምን አይነት የልብ ህመም ነው	1. -የልብ ጡንቻ መድከም 2. በድንገት የተከሰተ የደረት ውጋት 3. በተደጋጋሚ የደረት ውጋት ሌሎች ይገለፁ	
202	ህመሙ ከታወቀ ምን ያህል ጊዜ ነው	1. -----ዓመት	
203	በህኪም የተረጋገጠ የቆየ የጤና ችግር አለበዎት	1. አዎ 2. የለም	
204	የ203 ጥያቄ መልስዎ አዎ ከሆነ የምን አይነት የጤና ችግር አለበዎት	1. የደም ግፊት 2. የልብ ድካም 3. የኮልስትሮል መጨመር 4. ኤች አይ ቪ 5. ለንቅላት ውስጥ ደም መፍሰስ 6. ሌላ ካለ ይጠቀስ	
205	በቃሚነት በቀን ምን ህል መድሀኒት ወስዳለሁ		

III. ካለበዎት የጤና ችግር ያኗር ሁኔታ

የሚከተሉት ጥያቄዎች ስለ እርስዎ የህይወት ጥራት፣ ጤና ወይም ሌሎች የህይወትዎ ዘርፎች ምን እንደሚሰጥዎት ይጠይቃሉ። እያንዳንዱን ጥያቄ ከምላሽ አማራጮች ጋር አነባለሁ።

እባክዎ በጣም ተስማሚ የሆነውን መልስ ይምረጡ። ለጥያቄው የትኛው ምላሽ እንደሚሰጥ እርግጠኛ ካልሆኑ በመጀመሪያ የሚያስቡት ምላሽ ብዙውን ጊዜ የተሻለው ነው።

ተ/ቁ		በጣም ዝቅተኛ	ዝቅተኛ	መካከለኛ	ጥሩ	በጣም ጥሩ
1.	የህይወትዎን ጥራት እንዴት ይገመግሙታል	1	2	3	4	5
2.	በህይወትዎ ምን ያህል ደስተኛ ነዎት እረክታለሁ	በጣም እርካታ የለኝም (በጣም ተከፍቻለሁ)	እርካታ የለኝም ተከፍቻለሁ		ረክቻለሁ ይስተኛ	በጣም ደስተኛ ነኝ ረክቻለሁ
		1	2	3	4	5

የሚከተሉትን ጥያቄዎች ባለፉት 4 ሳምንታት ውስጥ ምን ያህል አንዳንድ ነገሮችን እንዲገጠሙት ተጠይቀዋል፡፡

		በጭራሽ አልተከፋሁም	በጥቂቱ	በመካከለኛ መጠን	በጣም በብዛት	ከመጠን በላይ በብዛት
3.	የአካል ህመም ማድረግ ያለበዎትን ነገር እንዳያደርጉ ምን ያህል ይከለክለዎታል					
4.	የእለት ከእለት ህይወትዎ እንቅስቃሴ እንዲያደርጉ ምን ያህል ህክምና ይፈልጋሉ					
5.	በህይወትዎ ምን ያህል ደስተና ነዎት					
6.	ህይወትዎ ትርጉም ያለው እንዲሆን ምን ያህል ሞክረዋል					

		በጭራሽ	በጥቂቱ	በመካከለኛ መጠን	በብዛት	በጣም በከፍተኛ
7.	ምን የያህል በደንብ ማተኮር ይችላሉ					
8.	በእለት ከለት ህይወትዎ ውስጥ ምን ያህል ደህንነት ይሰማዎታል					
9.	አካላዊ አካባቢዎ ምን ያህል ጤናማ ነው					

የሚከተሉት ጥያቄዎች ባለፉት አራት ሳምንታት ውስጥ ምን ያህል ሙሉ በሙሉ እንደተለማመዱ ወይም አንዳንድ ነገሮችን ማድረግ እንደቻሉ ይጠይቃሉ።

		በጭራሽ	በጥቂቱ	በመካከለኛ መጠን	በብዛት	ሙሉ በሙሉ
10.	በእለት ከለት ኑሮዎ በቂ ጉልበት አለህ/ሽ					
11.	የሰውነትዎ ገፅታ መቀበል ይችላሉ					
12.	ፍላጎትዎን ለማሟላት በቂ ገንዘብ አልዎት					
13.	በእለት ተእለት ህይወትዎ ውስጥ ማግኘት የሚፈልጉትን መረጃ ምን ያህል ያገኛሉ					

		በጣም ዝቅተኛ	ዝቅተኛ	መካከለኛ	ጥሩ	በጣም ጥሩ
15.	ምን ያህል መንቀሳቀስ (መዞር) ይችላሉ ?					
14	ለመዝናናት እንቅስቃሴዎች እድሉ ምን ያህል ነው ?					

		በጭራሽ	አልፎአልፎ	በጣም	በአብዛኛው	ጊዜ ሁሉም
26.	እንደ ስዋዊ ስሜት ተስፋ መቁረጥ ጭንቀት ድብርት የመሳሰሉትን አሉታዊ ሰሜቶች ምን ያጋጥመውታል ?					

የሚከተለው ጥያቄ ባለፉት አራት ሳምንታት ውስጥ ምን ያህል ጊዜ እንደተሰማህ ወይም አንዳንድ ነገሮችን እንዳጋጠመህ ያመለክታል።

የሚከተለው ጥያቄ ባለፉት አራት ሳምንታት ውስጥ ምን ያህል ጊዜ እንደተሰማህ ወይም አንዳንድ ነገሮችን እንዳጋጠመህ ያመለክታል።

		በጣም አልረካሁም	አልረካም	በመካከለኛ መጠን	ረክቻለሁ	በጣም ረክቻለሁ
16.	በቂ እንቅልፍ ያገኛሉ (ይረካሉ)?					
17.	የእለት ከለት እንቅስቃሴዎን ለማከናወን ባለዎት ችሎታ ምን ያህል ይረካሉ?					
18.	በመስራት አቅምዎ ምን ያህል ይረካሉ?					
19.	በራስዎ ምን ያህል ረክተዋል?					
20.	በግል ግንኙነትዎ ምን ያህል ይረካሉ?					
21.	በፅዎታዊ ሕይወትዎ ምን ያህል ረክተዋል ?					
22.	ከጓደኞችዎ በሚያገኙት ድጋፍ ምን ያህል ረክተዋል ?					
23.	በመኖሪያ ቦታዎ ሁኔታ ምን ያህል ረክተዋል ?					
24.	በጤና አገልግሎትዎ ምን ያህል ረክተዋል?					
25.	በትራንስፖርት ምን ያህል ረክተዋል ?					

Millinniyeem Kolleejjii Hoospitaala Meedikaalaa Qidduus Phaawuloositti

Muummee barnoota medikaalaa sarjikaalnarsiingii

Bargaaffii gaaruma jireenyaafi dhimmoota murteessoo isaanii waa'ee qulqullina jireenyaafi ga'ee inni qabu namoota xiqur anbassaatti dhukkuba onneen yaalamaa jiranii tilmaamuuf gargaaru.

Waraqaa Odeeffannoo hirmaattotaa

Hello, kabajamtoota deebii kennitoota maqaan koo _____ yoo ta'u asitti kanin argame waraqaa qorannoo digrii 2ffaa, SPHMMC Narsingiif guutachuuf gageessuuf ragaa funnanachuufi. Kayyoon qorannoo kanaas qulqullina jireenyaa isaaniifi ga'ee murteessummaa jireenya namoota Xiqur Anbassaa Finfinnee, Itiyooophiyaa, keessatti dhukkuba onnee qabamanii Yalamaa jiranii irratti inni qabu ilaaluufidha..

Isinis Qorannoo kanaaf akka hirmaataa tokkotti filatamtanii jirtu. Kanaafuu, bargaaffii yeroo keessan isin jalaa fudhatu kana akka naaf guuttan kabajaan isin gaafadha. Afgaaffiif yeroo muraasa isinirraa fudhachuun alatti wanti dhiibbaa isinirraan gahu tokkollee as keessa hinjiru. Gaaffiiwwan muraasni dhimmoota dhunfaa ilaallatan fakkaatan jiraatanillee qorannichaaf baayee kan fayyadaniidha. Dabalataan, bu'aan qorannoo kanaa akka lammii tokkotti faayidaa qabachuun alatti hirmaattotaaf kaffaltiin kennamu hin jiru. Qorannoo kana irratti kan hirmaattan feedhiidhaan waan ta'eef mirga dhiisuu ykn addaan kutuu yeroo kamiyyuu hin daangofne guutuu qabdu.

Garuu deebiin isin gaaffiiwwan kanniinif amanamummaan kennitan intarvenshinii qulqullina jireenya namoota dhukkuba onnee qabamani foyyeessuf jecha barbaadamee bahuuf odeeffannoo waan kennuuf baay'ee barbaachisaadha. Odeeffannoon isin kennitan murteessaafi dhimma qorannoo kanaaf qofa kan oolu fi qaama kamifuu kan dabarfamee hin kennamneedha. Lakkoofsi koodii eenyummaa hirmaattotaa kan adda baasu waan ta'eef maqaa keessan barreessuun hin barbaachisu.

Qorannoo kana ilaalchise waan ifa hin taane yoo qabaattan gaggeessaa qorannichaa kan ta'e /taate Aadde Hanaan Solomoon (lakk.mobila 0913-008969, email; umuhibba3@gmail.com) yeroo kamiyyuu qunnamuu dandeessu.

Qorannoo kana irratti hirmaachuuf fedhii qabduu? 1. Eeyyee 2. lakki

Mallattoo nama odeeffannoo sassaabee_____

001.Koodii Nama daataa sassaabee ____/____/____/Maqaa_____

002. Guyyaa daataan itti sassaabame ____/____/____ Time_____

003. Supparvaayizara xiinxale; Mallattoo_____guyya____Ji`a _____
waggaa

1. Daataa hawaasummaa Dhukkubsataa

Kutaan kun Amala waliigalaa dhunfaa fi haala hawaasummaa deebii kennaati.

Filannoowwan deebii kennaman keessaa deebii keessan itti marsaa.

Lakk	Gaaffii	Deebii
101	Umrii Waggaadhaan	
102	Saala	1.Dhiira 2.Dubara
103	Haala Gaa`elaa	1.Kan hin fuune 2.Kan fuudhe 3.Kan wal hiikan 4.Kan jalaa du'e
104	Amantaa	1.Ortodoksii 2.Muslima 3.Protestaantii 4.Kaatolikii 5.Kan biroo ibsi
105	Iddoo Jireenyaa	1.Magaalaa 2.Baadiyyaa
106	Sadarkaa Barnootaa	1.Kan hin baranne

		2.Sadarkaa 1ffaa(1-8) 3.Sadarkaa 2ffaa(9-12) 4.Barnoota olaanaa
107	Hojiin keessan maali?	1.Qacaramaa 2.Qotee bulaa 3.Daldalaa 4.Hojjetaa guyyaa 5.Hojii dhabaa 6.Haadha manaa 7.Kan biroo(haa ibsamu)
108	Galiin isin jirenyaaf oolfattan ji`atti giddu galeessaan meeqa?	Birrii-----
109	Alkoolii ni dhugduu?	1.Eeyyee 2.Lakki
110	Sigaaraa ni xuuxxuu?	1.Eeyyee 2.Lakki
111	Sochii gahumsa qaamaa gosa kamuu daay'ate torbanitti guyyoota 5f ni dalagduu?	1.Eeyyee 2.Lakki
112	Amala qoricha ajajame hordofuufi daawwannaa hordoffii akkamitti ilaalta	1.Hiyyeessa 2.Gaarii
113	Rakkoon hamaan yoo isin mudate nama isin waliin dhaabatu meeqa qabdu?	1.Hin qabu 2.1-2 3.3-5 4.5fi isaa ol
114	Waan isin hojjetan tokkotti nama meeqatu fedhii qabaachuu agarsiisa akkasumas yaada itti	1.Homtuu 2.Xiqqoo

	kenna?	3.Hin murtaa'u 4.Muraasa 5.Baay'ee
115	Gargaarsa nama irraa argachuu yoo feetan gargaarsa sana argachuuf hammam isiniif salphata?	1.Baay'ee ulfaataadha 2.Ni ulfaata 3.Ni danda'ama 4.Salphaadha
116	Miira dhiphachuutu natti dhagahama	0. Tasomaamiti 1. yeroo yerootti darbee derbee 2. yeroo baayee 3. yeroo baayyee
117	Wantoonni duraan na gammachiisanu ammas na gammachiisu	0. Dhogaa dha hamma kann 1. guutummaatti hangas miti 2. xigoo gofa 3. tusoumaa rakkisaadha
118	Miira sodaatu natti dhagahama akka wanti nama dhukkubsu tokko ta'uuf jedhutti	0. Tasumaa miti 1. xiggoo, garoo nah in yaaddesso 2. Eetee, guru baayiee hamaa miti 3. Baayyee multaaofa fu baayee hamaa
119	Kallattii wanti tokko ittiin nama kolfisiisu nan arga, nan kolfas	0. Hanga yeroo hunda dandoietti 1. amma baay'ee miti 2. amma hangas akka hin taane beeka maadha 3. tasumaa miti
120	Yaadota dhiphinaatu sammuu koo keessa na deddeema	0. Darbee darbee ofa 1. yeroo yevootti, gavuu yeroo baayiee miti. 2. yeroo baayee

		3. yerco guddaa
121	Gammachuutu natti dhagahama	0. Yeroo baayyee 1. yeroo tokko tokko 2. yevoa baayyee miti 3. tasumaamiti
122	Bakka salphaatti argamuufi boqonnaa namaa kennuu nan taa'a	0. Dhugaa dna 1. yeroo haayyee 2. yeroo baayyee miti 3. tasumaa miti
123	Akka waanan gaddeemaa /kufaa jiruutti natti dhagahama	0. jasumaa mit 1. yeroo tokko tokko 2. yeroo baayyee 3. yeroo hunda jochuun nidandaiama
124	Akka billaachaatti sodaan garaa kootti natti dhagahama	0. Jasuman miti 1. dalbee darbeo 2. yeroo byayyee 3. yeroo byayyee
125	Qaama kiiyyatti fedhii hin qabu/gammadaa miti	0. Akkum ayeroo kamiyyuu ofeeannoo nan godha 1. of eeggannoo hamma kana gochou dhiisuu dandaa 2. hanga of eeggannoo gochou gabohingodhu 3. dhogua dha
126	Akka nama deema jirutti boqonnaa dhabuutu natti dhagahama	0.jasuaa miti 1. boayee mit

		2. boayee baayeedha 3. baayyee dhugoma
127	Wantoot hunda gammachuunan eega	0. akkumayeroo komiyyuugodhe 1. kan doraan ture caalaa xiyyaadha 2. kan doraan ture irraa liygaa taiuun isaa him colo 3. tasumaa rakkisaadra
128	Akka tasaa miira sodaatu natti dhagahama	0. Tasumaa miti 1. yoroo baayyee miti 2. yeroo baayyee 3. yeroo baayyee dhugoma
129	Kitaaba gaggaarii,sagantaa Raadiyoofi TVtti gammaduu nan danda'a	0. yeroo baayyee 1. yeroo tokko tokko 2. yerou haayyee miti 3. baayzee yeroo muraaga

Kutaa 2ffaa:-Amaloota yaalamuu

Kutaan kun haala amala yaalamuu deebii kennitootaa ilaallata .filannoowwan kennaman keessaa deebii kee itti marsi.

201	Gosa dhukkuba onnee kam qabduu?	1,IHD-posti 2.Angina hin tasgabboofne 3.Angina tasgabbaa'aa 4.Kan biroo(haa ibsamu)	
202	Erga dhukkubibichi beekamee hangam ta'a ?	Waggaa-----	
203	Ogeessa fayyaan kan		

	mirkanaa'e dhibee beekamaa isinirra ture qabduu?	1.Eeyyee 2.Lakki	
204	Yoo deebiin kee gaaffii 203 irratti Eeyyee ta'e dhibeen ati qabdu maali?	1.Dhiibbaa dhiigaa 2.Dhukkuba sukkaaraa 3.Dhukkuba onnee 4.Dhukkuba kolestroolii 5.Dhukkuba HIV/AIDS 6.Dhukuba Istrookii(dhiigni sammuu keessatti dhangala'uu) 7.Kan biroo(haa ibsamu)	
205	Qorichoota hammam dhaabbiiidhaan fudhattaniittu?		

Kutaa 3ffaa :-Odeeffannoo waa'ee qulqullina jireenyaa

Gaaffiiwwan armaan gadii miirota waa'ee qulqullina jireenyaa fayyummaa ykn naannoo biroo jireenya kee kan gaafataniidha.Gaaffiiwwan tokko tokkoon dubbisii filannoo keef deebii kenni.Deebii kee irratti sirreessa mijataa godhi .Ilaalcha,sadarkaa,fedhii,gammachuu keef yaadi.kan isin gaafannu waa'ee dhimmoota jireenya keessanii turban afran darbaniiti.

		Baay'ee dadhabaa	Dadhabaa	Dadhabaas miti Gaariis miti	Gaarii	Baay'ee gaarii
1	Rakkoo dhibee isin mudate waliin haala jireenyaa keessanii akkamitti ibsituu?	1	2	3	4	5
		Baay'ee kan hin gammanne	Kan hin gammanne	Giddu galeessa	Gammadaa	Baay'ee gammadaa
2	Fayyaa ta'uu keetti hangam	1	2	3	4	5

	gammadaadha?					
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Gaaffiiwwan armaan gadii Torban afran darbaniif muuxannoo wantootaa murtaa' oo hammam akka argattan /qabaattan gaafatu

		Homaa	Xiqqoo	Giddu galeessaan	Baay'inaan	Baay'inaan(Humnaa ol kan ta'e)
3	Dhukkubni qaama keessan mudate wanta gochuu qabdanu akka hin goone hangam isin dhorkee jira?	5	4	3	2	1
4	Jireenya keessan guyyaa guyyaa keessatti sochii gochuuf yaalii fayyaa hangamiitu isin barbaachisa?	5	4	3	2	1
5	Jireenya keessanitti hangam gammadaadha?	1	2	3	4	5
6	Jireenya keessan hiika akka qabaatuuf(akka yaada keessanii akka ta'uuf) hangam yaaltaniittu ?	1	2	3	4	5
7	Xiyyeeffannoon dhimmooota ilaaluun keesan hangam gaariidha?	1	2	3	4	5
8	Jireenya keessan guyyaa guyyaatti hangam nageenyi sitti	1	2	3	4	5

	dhagahama?					
9	Hangam nageenyi qaamaa isinitti dhagahama?	1	2	3	4	5

Gaaffiiwwan kunniin hangam muuxannoo keessan akka raawwattan kan gaafataniidha ykn torbeewwan afran dabranitti wantoota muraasa hangam raawwachu akka dandeessan kan gaafataniidha.

		Goonkuma a	Xinnoo	Gahaa	Baay'ee	Hanga dhumaa/xumura a
10	Jireenya kee keessatti humna ga'aa qabdaa?	1	2	3	4	5
11	Ijeeta qaamaa keetiitti ni gammaddaa?	1	2	3	4	5
12	Wantoota si barbaachisanu argachuuf qarshii ga'aa qabdaa?	1	2	3	4	5
13	Odeeffannoowwan jireenya keessan guyyaa guyyaaf murteessoo ta'an hangam argatta?	1	2	3	4	5
14	Carraa sochii bashannanaa argachuu keessanii hangami?	1	2	3	4	5
		Baay'ee Dadhabaa	Dadhabaa	Dadhabaas miti Gaariis miti	Gaarii	Baay'ee gaarii
15	Hammam sochii qaamaa (deemsa) gochuu dandeessu?					
		Baay'ee ga'aa miti	Ga'aa miti	Ga'aadhas , ga'aas miti	Ga'aadha	Baay'ee ga'aadha
16	Hirriba gahaa ni argattuu(ni gammadduu hirriba keessanitti)?					
17	Dandeettii dalagaa guyyaa guyyaa raawwachuuf qabdanitti					

	hammam gammadaadha?					
1 8	Humna hojii hojjechuuf qabdanitti hangam gammadaadha?					
1 9	Ofii keessanitti hammam gammadaadha/abdataadha ?					
2 0	Hariiroo (qunnamtii) namaa waliin qabdanutti hangam gammadaadha?					
2 1	Hariiroon Walqunnamtii saalaa qabdanu hammam quubsaadha ?					
2 2	Gargaarsa hiriya keessan irraa argattanutti hangam gammadaadha?					
2 3	Haalli naannoo jireenyaa keessanii jiru jireenyaaf hammam mijataadha?					
2 4	Dhiyeessii tajaajila fayyaa argattanitti hammam gammadaadha?					
2 5	Dhiyeessii tajaajila geejjibaa argattanitti hammam gammadaadha?					

Gaaffiiwwan kunneen kan ilaallatan hangam dhimmoota tokko tokko torban afran dabran keessatti raawwattaniidha ykn yaaddaniidha

		Goonkumaa	Darbee darbee	Baay'ee muraasa	Yeroo muraasa	Yeroo hunda
26	Miirota gadhee kanneen akka aarii,gadaantummaafi kkf hammam isin mudatu?	5	4	3	2	1

Galatoomaa

Assurance of Investigator

I the undersigned resident agree to accept all responsibilities for the scientific, ethical and technical conduct of the research project and for provision of required progress reports as per terms and conditions of the Research and Publication Directorate and /or Department of Public Health of St. Paul's Hospital Millennium Medical College.

Name of the student: _____

Signature: _____

Date: _____

Approval of Advisors

Name of Chief Advisor: _____

Signature: _____

Date: _____

Name of Co-advisor: _____

Signature: _____

Date: _____