ADDIS ABABA UNIVERSTY
COLLEGE OF HEALTH SCIENCE
SCHOOL OF NURSING AND MIDWIFERY
CARDIOVASCULAR NURSING GRADUATE PROGRAM

Assessment of Knowledge Attitude and Practice Regarding Coronary Artery Disease Prevention among Out Patients attending in Cardiac Clinic at TikurAnbessa Specialized Hospital

By: HewanSibhatu (BSc)

Research thesis Submitted to School of Nursing and Midwifery, College of Health science, Addis Ababa University for Partial Fulfillment of the Final Requirement of Master of Science in Cardiovascular Nursing

June, 2023

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APPROVAL SHEET

This research thesis is my original work in the partial fulfilment of the requirement for the degree of Master of Science in Cardiovascular Nursing.

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Date of submission:

This thesis has been submitted with my/our approval as university examiner and advisor(s).

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Table of content

List of Figures

List of Tables

Abstract

Background:-Coronary artery disease is the leading cause of death globally and one of the major health burdens worldwide. Smoking, dyslipidemia, hypertension diabetes and physical inactivity are some of the modifiable and preventable risk factors. The prevalence of coronary artery disease in Ethiopia is increasing steadily irrespective of age and gender. This study attempted to quantify knowledge, attitude and practice to wards preventive measures regarding coronary artery disease among patients attaining cardiac out-patients.

Methods:-an institution based cross sectional study was conducted in Tikur Anbessa Specialized Hospital between March and- April 2022. A total of 402 patients were selected through Simple Random Sampling method. Interviewer guided standardized Questioners was used to gather the information from participants. Descriptive statistics was utilized to describe participant's characteristics and logistics regression analysis was employed to examine the relationship between independent and outcome variables. Level of significance was determined at $p<0.05$ and 95% CI.

Result:-A total of 402 participants were included in the study with response rate of 79.6%.The mean age was 46.74±14.15SD.Mean score of knowledge was 58.±15.96 SD. Most (67.2%) of the respondents demonstrated good knowledge. Mean of attitude score was 60.4 ±25.33SD. More than half of the respondents (54.4%) had good attitude. The mean practice score of the study participants were 55.13±17.365 and equal number of respondents had both good and poor practice. Upon logistic regression, variables namely; sex (AOR) of 0.540 95%CI=0.332-0.879), and presence of co-morbidity (AOR=2.818, 95%CI=1.029-7.713), had significance association with knowledge. Similarly occupation (AOR=0.66, 95%CI=0.330-0.968) and marital status (AOR=0.545, 95%CI=0.333-0.893) were significantly associated with attitude towards CAD and sex (AOR=0.506, 95%CI=0.313-0.819),of the respondents had significant association with practice of the respondents.

Key words: Addis Ababa; Attitude; Coronary Artery disease; Ethiopia; Knowledge; Practice; Preventive measures; Risk factors.

1. Introduction

1.1 Background

Cardiovascular disease (CVD) is a non-communicable disease that has become the ultimate cause of death worldwide. Coronary artery disease is the single largest cause of death in developed countries and one of the main contributors to the disease burden in developing countries(1)

Coronary artery disease is now the leading cause of death worldwide. An estimated 3.8 million men and 3.4 million women die each year from CAD. In developed countries, heart disease is the leading cause of death in men and women. In Europe CAD accounts for an estimated 1.95 million deaths each year (1)

Countries in Africa and the Middle East bear a heavy burden from cardiovascular disease. The prevalence of coronary heart disease is promoted in turn by a high prevalence of cardiovascular risk factors particularly smoking, hypertension, dyslipidemia, diabetes, and sedentary lifestyles. Patients in Africa and the Middle East present with myocardial infarction at a younger age, on average, compared with patients elsewhere (2).

Coronary artery disease affects around 126 million individuals (1655 per 100,000) which are approximately 1.72% of the world's population. The global prevalence is rising it is expected to exceed 1845 by the year2030. Nine million deaths were caused by coronary artery disease globally(3).

For health policymakers to develop effective and timely strategies to address coronary artery disease, an up-to-date analysis is needed. According to the latest WHO data published in 2018 coronary heart disease death in Ethiopia reached 47,712 or 7.81% of total deaths (4).

Assessment of a populations knowledge attitude and practice(KAP) towards its preventive measures has been effective means of providing key baseline information that helps design primary and secondary prevention programs in other countries, such surveys have proven low level of KAP which leads to poor cardiovascular outcomes (5,6)

The status of CAD in developing countries is worse with increasing trends of mortality. Increased implementation of primary and secondary prevention methods are intended to prevent cardiovascular events with high risks but no previous history, secondary prevention methods are therapies that prevent the further cardiac damage to those with a history of CAD (7).

Prevention is the most effective way of combating its epidemic in developing nation's knowledge attitude and practice on prevention measures of coronary artery disease has been identified as a prerequisite for change in behavior.

There is no sufficient research done regarding KAP towards prevention of coronary artery disease in Ethiopian populations. This study was designed to assess the knowledge, attitude and practice regarding coronary artery disease prevention.

1.2 Statement of the problem

Cardiovascular diseases are the leading cause of mortality in Ethiopia, of all the CVDs coronary artery disease (CAD) is highly prevalent in low income countries. Mortality and Morbidity related to CAD have become the leading cause of disease burden over taking the burden due to infectious diseases (8).

According to the global burden of disease (GBD) study, coronary artery disease is responsible for 1.685 million deaths annually in developing regions, and 18.51 million disability-adjusted life years are lost due to CAD in this region. Coronary heart disease is the most common type of heart disease killing 360,900 people in 2019,about18.2 million adults aged 20 and older have CAD about6.7%(5).

Treatment of coronary artery disease is more expensive than its prevention; if appropriate measures are implemented early it will be preventable, it develops slowly usually over decades; so we have a huge opportunity for prevention through a good life style and health habits (4). Coronary artery disease has huge socio-economic implications on societies, early retirement due to CAD accounted for most of the estimated loss in productivity(65.4%) followed by presents(at work but not fully functioning 20.3%) absenteeism(8.4%), and premature death (7) On the other hand CAD affects the emotional development of patients by difficulty in coping with stress, depression, and negative emotions, like anger or frustrations (9). Coronary artery disease is

associated with adverse patient outcomes, and contributes to patient pain, depression expense for medication, and additional surgical intervention, it may extend from pain and suffering to end of life. Despite the increased prevalence of coronary artery disease and the necessity of the public's knowledge of risk factors, no comprehensive investigation was found in the literature. A study conducted in Egypt in Oct 2018 shows that assessment of KAP of CAD and the association of these three components with the educational level could be one of the most important factors in planning how to prevent CAD (10). Another study conducted in Bangladesh in 2016 showed that assessment of KAP has been an effective means of providing key baseline information that helps in designing primary and secondary prevention programs (11), in other countries such survey has proven low level of KAP lead to a poor cardiovascular outcome (5,6). These appears to be a gap in the of Ethiopian statistics regarding knowledge ,attitude , practice and its preventive measures of coronary artery disease despite the increased trend in the prevalence of this disease, which is steady increasing, even in younger age ,both male and females.

1.3 Significance of the study

The study will be supposed to describe the level of patients' knowledge, attitude, practice and its preventive measures regarding coronary artery disease. It will provide awareness about level of KAP for health care providers and encourage them to be engaged in to an efficient process of creating awareness and prevention as it would allow for a more tailored education program appropriate to the needs of the community. The finding of the study would also contribute to further planning and implementation of appropriate educational programs to patients, and used as a reference for future research in nursing.

2. Literature Review

2.1 Definition and Pathophysiology of coronary artery disease

The coronary circulation consists of coronary arteries the micro circulation and the coronary veins. Its function is to supply oxygen and nutrients to the myocardium and remove carbon dioxide and waste product. The importance of this function is exemplified by the act that a 50% or more reduction in this blood supply to the myocardium is incompatible with life. Thus not surprisingly, dysfunction of the coronary circulation may result in significant in morbidity and mortality. Disturbance of the coronary circulation may involve dysfunction within the micro circulation as well as the coronary arteries. Thus, the all-encompassing term, 'coronary heart disease 'includes both CAD and micro vascular dysfunctions. CAD is more readily identifiable and the most common underlying pathophysiological process in coronary atherosclerotic disease this may be identified by imaging techniques such as coronary angiography (12). There are many risk factors for CAD and some can be controlled but others may not. The risk factors that can be controlled (modifiable) are; high blood pressure, high blood cholesterol levels smoking, diabetes, overweight, or obesity, lack of physical activity, unhealthy diet and stress. Those that cannot be controlled (conventional) are, Age,(simply getting older),sex(men are generally at greater risk of coronary artery disease) family history and race (13).

2.2 Atherosclerotic Coronary Syndromes

Coronary atherosclerotic disease involves the pericardial coronary arteries and may manifest as an acute or chronic syndrome. Acute Coronary Syndrome (ACS) typically arises from atherosclerotic plaque rupture with subsequent coronary thrombosis and/or spasm. The resulting coronary occlusion give rises to myocardial ischemia or even myocardial necrosis there by manifesting as unstable angina or myocardial infarction on occasions, the ischemia/infarction may manifest sudden cardiac death from malignant arrhythmia or acute pulmonary edema in the compromised left ventricle. Hence, ACS may have spectrum of clinical manifestations ranging from stable angina, acute myocardial infarction, acute pulmonary edema or even sudden death, all arising from the same underlying patho-physiological process (12).

2.3. Chronic Coronary Syndrome

Chronic Coronary Syndrome may also arise from coronary atherosclerotic disease. This typically manifest as exertional angina arising from coronary atherosclerotic lesion that has progressed to the extent that it compromises coronary blood flow to the myocardium during the increased oxygen demand associated with exercise. At this obstructive lesions is non-occlusive, adequate oxygen supply is restored once the excess myocardial oxygen demand is removed with the cession of exercise and thus the resolution of the ischemic chest pain. Hence the principal manifestations of CCS is angina pectoris, which can be monitored in epidemiologic studies (12).

2. 4 Knowledge of patients towards CAD Prevention

A Research conducted in Bangladesh showed that those with higher level of education in the sample were better to identify hall mark symptoms of CAD younger age with associated decrease ability to identify CAD prevention strategies of the survey population92% was able to recognize chest pain as a hall mark symptoms nausea (30%), dizziness (35%) arm (35%) and jaw pain (20%) were less often recognized. The majority of the sample (71%) were not able to demonstrate an appropriate level of proficiency by recognizing two symptoms 78% of patients believing avoiding fatty foods and 63% believing smoking cessation were effective ways to prevent CAD, only 27% of this sample believed praying could prevent CAD (11).

Across sectional study conducted in Namibia showed that 10% of the respondents were well informed about myocardial infarction (MI) and 34% knew something about myocardial infarction, while42% knew very little about MI and 14% knew nothing. Results revealed that respondents had limited knowledge about CAD, but were able to recognize the related symptoms. (14).

A study conducted in Saudi ArabiaTabuk city among 126 adult subjects revealed,2.4% had a past history of heart attack 3.2% were known case of diabetes mellitus, and 6.3% were known case of hypertension(10). The commonest risk factors identified by the participants were smoking (81%), those who could identify hypertension, obesity, smoking and diabetes mellitus were 65.9%, 77.8%. 81% and 37.3% respectively. Less than 2/3(64.3%) of individual could identify stress as a risk factor, less than half (44.4%) could identify the genetic tendency as a risk factor

of CAD. The majority of participants (72.2%) know that lack of exercise or sedentary life style is a risk factor for CAD; however, only 3.16%were fully aware of the principle five modifiable risk factors of heart disease. The study showed critical deficiency in CAD risk factors knowledge and perception that could result in under estimation of the disease severity(10).

Across sectional study conducted in Nepal showed the knowledge was found to be average with only 51.5% realizing that family history of CVD increases the risk of CADs,similarly,46% didn't know that coronary artery disease could be preventable (15).

A study conducted in Kiruk-city showed that smoking, hypertension and high blood cholesterol were the most popular risk factors that most of the patient mentioned it spontaneously. The educational level significantly associated with knowledge and attitude of CHD. The degree of knowledge about the risk factor of coronary heart disease in comparative way between male and females in Kirkuk city showed significant relationship(16).

A study conducted in Malaysia showed that about 87% of women knew that smoking is risk factors. However less than 20% knew about menopause, more than 80% knew typical symptoms, whereas less than half realized atypical symptoms less than 20% of them knew the cholesterol risk target (17).

2.5 Attitude of patients towards CAD Prevention

A study conducted in Bangladesh showed that the patients had a higher attitude towards the prevention of CAD than knowledge and practiceof CAD. While some patients reported that, it was their first time seeing a doctor.52.3% had a routine medical checkups had better level of attitude, practice and overall KAP scores (11).

A study conducted in Namibia showed that respondents appeared to have positive attitude regarding self-imaging. This was based on their self-rating on being overweight or not and the objective body mass index (BMI) obtained from each respondents.The subjective self-rating did not correlate with the objective data obtained during data assessment of BMI. Many were overweight but they considered themselves as having normal weight (14).

A study conducted in Nepal showed that the attitude towards physical exercise, changing eating habits and quite smoking were 90.4%, 93.6%, 90.6% (15).

A cross sectional study conducted in Kirkuk city showed that the attitude of coronary artery disease is mainly associated with the educational level(16).

2.6. Practice of Patient regarding CAD Prevention

A research conducted in Bangladesh, Dhaka showed that greater levels of physical inactivity with only about 33% exercising more than 20 minutes three times a week and around 43% of the sample engaged in less or no physical activity. A majority of the sample not only failed to make time for dedicated exercise, but only 22% believed an active life style could prevent CAD. Nearly 47% of the sample believed food consumption required no restriction (11).

A research conducted in Namibia showed that practice did not always correlates with knowledge, as the majority of the respondents were aware of the adverse effect of smoking and alcohol consumptions, but still indicate to have been smoking and consuming alcohol (14).

A study conducted in Nepal showed that people visit traditional healers when they are ill and drink alcohol to fight cold despite knowing it as a risk factor for CAD. The knowledge of people of Pakhrribas Municipality regarding CAD was average, however the attitude was good. Regarding the practice people have mixed practice (15).

A study conducted in Kirkuk city showed that practice of coronary heart disease is 72%, this 71% male and 78% female. Percent of knowledge about the practice of coronary heart disease in Kirkuk city by gender was not significant (16).

A study conducted in Malaysia showed that only 13% of women practiced exercise as required the mean (SD) or knowledge and practice score were 70.6 and 63.7 accordingly (17).

2.7 Associated Factors that affect Knowledge, Attitude and Practice towards CAD Prevention

A study conducted in Bangladesh showed that patients with high level of education have a good knowledge towards CAD prevention. Respondents with low level of socio economic status have a limited access to resources, younger age demonstrated less proficiency in knowledge where as men demonstrated more proficiency in knowledge (68%) than women (32%), in regard to attitude and practice a majority of the sample failed to make time for dedicated exercise, only 22% believed an active life style could prevent CAD. Nearly 47% of the sample engaged in unhealthy diet (11).

A study conducted in Kirkuk city showed that Smoking, Hypertension, and high blood cholesterol were the most popular risk factors that most of the patient mentioned it there is also significant association between hyperlipidemia, hypertension, DM genetic diet sedentary life style, emotional stress and CAD. The educational level significantly associated with knowledge and attitude for CAD, the degree of knowledge about the risk factor of coronary heart disease was in comparative way between male and female. Knowledge of the respondents about the practice of coronary heart disease was good (72%)(16).

A study conducted in Namibia showed that many of the patients reported on co-morbidity of hypertension, elevated cholesterol levels and diabetes(10).

2.7 Conceptual Framework:

This conceptual framework is developed by the principal investigator. This shows the effect of independent variables on dependent variables. The study will examine knowledge attitude and practice regarding coronary artery disease prevention as dependent variable and age, sex,race, educational level, socioeconomic status, obesity, physical in activity, high blood pressure,dyslipidemia,DM,smoking,alcohol intake and unhealthy diet as an independent variables.

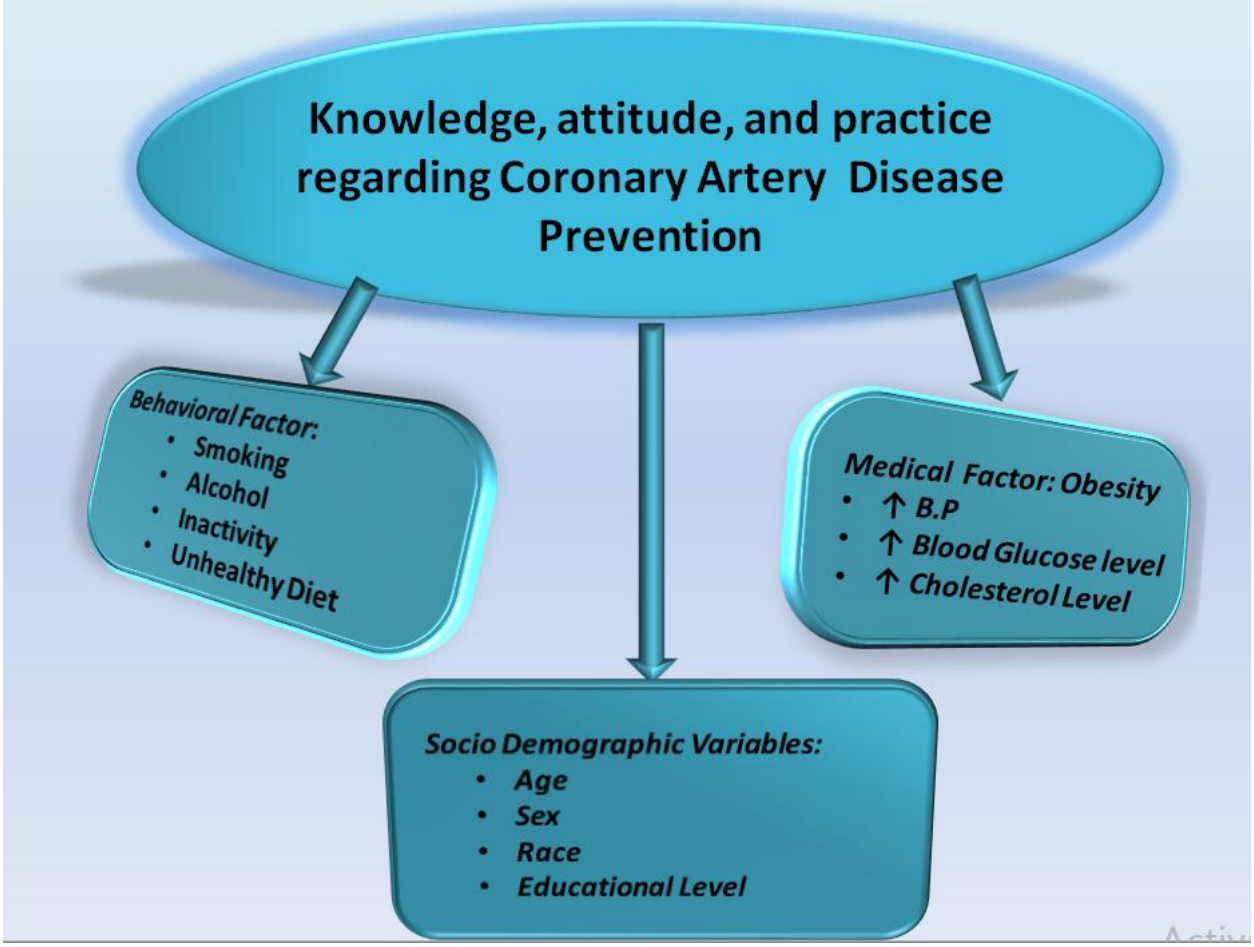

Figure 1: Conceptual framework

Conceptual framework on knowledge attitude and practice Regarding Coronary Artery Disease Prevention among Out Patients attending in Cardiac Clinic at TikurAnbessa Specialized Hospital, constructed from literatures (10-16). [This conceptual framework is developed by the researcher.]

3 Research Objectives

3.1 General Objective

To assess knowledge, attitude, and practice of patients regarding coronary artery disease-prevention in cardiac clinic of TikurAnbessa Specialized Hospital.

3.2 Specific Objective

1. To examine the level of patient's knowledge regarding coronary artery disease prevention in cardiac OPD,atTikurAnbessa Specialized Hospital
2. To determine the attitude of patient's towards coronary artery disease prevention in cardiac OPD, atTikurAnbessa Specialized Hospital.
3. To identify the level of patient's practice towards coronary artery disease prevention in cardiac OPD, at TikurAnbessa Specialized Hospital
4. To determine factors associated with KAP of coronary artery disease prevention among patients attending in cardiac clinic at TikurAnbessa Specialized Hospital.

4. Study methodology

4.1. Study area and period

As Addis Ababa is the capital city of Ethiopia, the city holds the largest and the last referral hospitals in the country. TikurAnbessa Specialized Hospital is one of the tertiary referral hospitals among the five hospitals under the federal ministry of health in Ethiopia. More over the hospital is an academic center that provides education for many recruited medical, nursing and other professionals which is availing its service having been organized under the umbrella of Addis Ababa University. Since TikurAnbessa hospital is a general referral hospital it increases the study generalizability and representativeness and also it has enough turnover of patients(18).

Total patients seen in cardiac referral clinic are about 2000 per month. The study was undertaken at TikurAnbessa Specialized Hospital Patients who are on follow up in adult cardiac clinic from March2022- April 2022.

4.2Study Design

An institutional based cross sectional study was conducted at TikurAnbessa Specialized Hospital cardiology clinic during the study period.

4.3. Source and study population

4.3.1. Source population

All patients who were on follow up in TikurAnbessa Specialized Hospital.

4.3.2. Study Population

All patients who were on follow up in cardiology unit in TikurAnbessa Specialized Hospital.

4.4. Sample Size Determination

$$n = Z^2 \times \frac{p(1-p)}{d^2}$$

P=50% =0.5 since there is no similar research conducted in Ethiopia

Z=1.96 (i.e., for a 95%CI)

D=0.05

$n = (1.96)^2 \times \frac{0.5 \times 0.5}{0.05 \times 0.05}$ =384.16

N=7873, since the total population is less than 10,000, I used correctional formula

$$n = \frac{n}{1 + \frac{n}{N}}$$

$$= \frac{384}{1 + \frac{384}{7873}} = 366$$

10% of non-respondent rate, 36.6

=366+36.6=<u>402</u>

4.5. Sampling technique

Simple random sampling method was used to select the study units who have follow up in cardiac referral clinic.

4.6. Eligibility criteria

Inclusive criteria

1. Patients who have follow up in cardiac OPD

2. Those were willing to participate in the study

Exclusive criteria

1. Those patients who were critically ill

2. Those patients who were not willing to participate in the study.

4.7 Data Collection Instrument

A structured and pretested interviewer administered questionnaire was first prepared in English and then translated to the local language Amharic by linguistic professionals. The questionnaire was adopted and selected from different literatures.

This instrument has been widely used among nurses in Bangladesh to evaluate KAP preventive strategies regarding CAD. The Author of the tool is Muhammad (19). The survey had 45 questions the initial demographic variables contains 10 questions it assessed the general information of the patients, Knowledge questions contain 10 items it assessed the level of understanding risk factors, and sign and symptoms of CAD. The response was present in yes/no or in multiple choices, each question may have correct answer that refers to one point for positive response and zero for negative response. Attitude questions also contain twelve items to assess the level of socio-behavioral perspectives and pre conceived notions about CAD. They are measured using Likert scale scoring such as (Strongly Agree=5, Agree=4, Uncertain=3, Disagree=2, strongly Disagree=1).Mean attitude score was calculated and used as a reference for classifying level. Those who scored mean and above mean were consider having good attitude

and those below the mean were considered to have poor attitude. Practice questions contain thirteen items to assess health seeking behaviors and preventive behaviors. Each question contains 1 point for positive life style practice and 0 point for negative life style practice and the score will be classified in to levels, good Practice for those who score mean and above and poor practice for those who scored less than the mean

4.8 Data Collection Procedure

The questionnaires contain variables related to: Socio-demographic, Knowledge, Practice, attitude and preventive measures regarding CAD.

Nurses working on the selected hospitals were recruited, those who have experience on data collection and BSC nurses were selected as data collectors and trainingwas provided by the principal investigator for data collection facilitators before the actual data collection time.The data collection instrument was pretested among 5% of the sample size in Zewditu Memorial hospital. Each of the patients available during the time of the study in the selected unit was approached and explanation

Pertaining to the purpose of the study was clearly provided in a way that provides simplicity as to what is to be achieved so that each of them is requested for participation. Then the patients who wish to participate will read and sign a consent form.

4.9. Study variables/Measurements

4.9.1. Dependent variables

- Knowledge regarding coronary artery disease prevention
- Attitude regarding coronary artery disease prevention
- Practice regarding coronary artery disease prevention

4.9.2. Independent variables

- Socio demographic factors age, sex, level of education, marital status, place of residence, religion.
- Behavioral factors:-smoking, alcohol intake, inactivity, unhealthy diet

- Medical factors:-obesity, high blood pressure, high blood glucose level, high cholesterol level, DM

4.10. Theoretical definitions.

Coronary artery disease (CAD), also called ischemic heart disease (IHD) is the reduction of blood flow to the heart muscle due to buildup of plaque (atherosclerosis) in the arteries of the heart.

4.11. Operational definitions.

Knowledge is the level of awareness of patients about coronary artery disease prevention

- Good: Patients who scored mean and above
- Poor: Patients scored less than the mean

Attitude; is the way patients think and feel about coronary artery disease prevention

- Good: Patients who scored mean and above
- Poor: Patients scored less than the mean

Practice; is the performance or act of patients about coronary artery disease prevention

- Good: Patients who scored mean and above
- Poor: Patients scored less than the mean

4.12 Data Quality Assurance

The quality of data was assured through careful design and pretesting of questionnaire. The data was checked frequently during collection and examine for completeness at the end of each day during collection of data. Data collectors and Supervisors were trained on the subjective of the study, questionnaire items, and methods of administration of the interviewer guided questions.

4.13 Data Entry and Analysis Procedure

The data was cleaned, coded and entered in to the statistical package for social science (SPSS) software for analysis. Descriptive statistics including frequencies, Percentages, mean and standard deviations were used to describe participant's characteristics and logistic regression analysis which include bivariate and multivariate analysis were used to examine association between independent and outcome variables. Variables with P- value <0.2 in bivariate analysis were deemed for multivariate analysis and those variables with P- value <0.05 at 95% CI multivariate analysis were considered significant.

4.14 Ethical Consideration

Ethical clearance was obtained from school of Nursing and Midwifery, College of Health Science Addis Ababa University-institution review committee prior to beginning of the study. Official letter of permission from the department was submitted to Tikur Anbessa specialized Hospital in order to conduct the research. Participants were informed about the objectives of the study and those willing to take part in the study were requested to give their consent. Participants were also informed that they can withdraw or stop from the study if they wish. All the collected data was kept confidential and no one except the members of the research team have been accessed to the collected information also name was not mentioned or was attached to anything that you say.

4.15 Dissemination of the Result

The study result will be presented to Addis Ababa University, faculty of medicine; department of nursing and midwifery, and the documents are disseminated to all concerned bodies in the study.

5. Results

5.1.Socio demographic characteristics of the study subjects

Three hundred twenty participants were included in the study making the response rate 79.6%

The mean age with standard deviation of the respondents was 46.74±14.150. Among them one hundred sixty four (51.3%) were between the age of 25-34 years. Majority of the participants were males (66.3%) and majority of them attended formal education (99.7%). More than sixty-six percent (n=222) of the respondents are married and most (70%) were employed (Table 1).

Table1: Socio demographic characteristics of patients who have follow up in Cardiac OPD in Tikur Anbessa Specialized Hospital, 2022

Variable	Response	Frequency	Percentage
Age	18-24	26	8.1
	25-34	164	51.3
	35-44	107	33.4
	45-54	21	6.6
	>=55	2	0.6
Sex	Male	213	66.3
	Female	107	33.4
Marital status	Single	98	30.6
	Married	222	6.4
Educational level	Illiterate	1	0.3
	Write and Read	6	1.9
	Elementary	6	1.9
	Secondary and high school	24	7.5
	Diploma	41	12.8
	Degree	130	40.6
	Above Degree	112	35.0
Occupation	Unemployed	96	30.0
	Employed	224	70.0

5.2 Health related characteristics

This study shows, majority (73.8%) of the respondents said that they usually go to hospital/health center when they feel sick. Similarly most of the participants (61.9%) have a general medical check- up every one year. More than three fourth (75.3% of the respondents reported chest pain as sign and symptom for CAD and only 24.4% reported Pain or Discomfort in the arms, left shoulder, elbows, jaw or back as symptom for CAD (table2)

Table 2: Health related characteristics of patients who have follow up in Cardiac OPD in Tikur Anbessa Specialized Hospital, 2022

Variable	Response	Frequency	Percentage
Presence of current medical illness	Yes	178	55.6
	No	142	44.4
If yes which	Diabetes	8	4.5
	Hypertension	151	84.8
	Coronary artery disease	19	10.7
Firs degree family history of CAD	Yes	145	45.3
	No	175	54.7
Where do you usually go if you are sick?	Hospital/health center	236	73.8
	Traditional healer	84	26.2
How often do you check general check- up	Every six month	122	38.1
	Every one year	198	61.9

5.3 Knowledge of Patients about Coronary Artery Disease prevention

Majority (62.8%) of the respondents said they first hear about coronary artery disease at hospital .about three fourth (75.3%) of the respondents listed Chest pain or discomfort as signs and symptoms of CAD (table 3)

Table 3: Table3Knowledge of Patients about Coronary Artery Disease prevention among patients who have followed up in Cardiac OPD in Tikur Anbessa Specialized Hospital 2022.

Question	Response	Frequency	Percentage
Where did you first hear about coronary artery disease?	Health center	119	37.2
	Hospital	201	62.8
Do you think CAD is a serious disease?	Yes	210	66.2
	No	110	33.8
Do you think CAD is a serious disease in your region/country?	Yes	205	64.1
	No	115	35.9
What are the signs and symptoms of CAD?	Chest pain or discomfort	241	75.3
	Pain or Discomfort in the arms, left shoulder, elbows, jaw or back	78	24.4
	Shortness of breath	1	0.3
How can a person get CAD?	Alcohol consumers	112	35.0
	Dyslipidemia	122	38.1
	First Degree Family history of CAD	37	11.6
	Cigarette smokers	43	13.4
	Fatty diet	6	1.9
How can a person prevent getting CAD?	Avoiding smoking	112	35.0
	Regular physical exercise	144	45.0
	Avoiding fatty foods	24	7.5
	Avoiding Alcohol intake	40	12.5
Can CAD be control?	Yes	233	72.5
	No	87	27.5
How can someone with CAD be helped?	Taking to the health service	245	76.6
	Traditional healer	73	22.8
	Religious center	2	0.6
Do you think aspirin	Yes	219	68.4

can reduce the chance of a heart attack or stroke?	No	101	31.6

The mean knowledge score of the study participants is 5.80±1.596

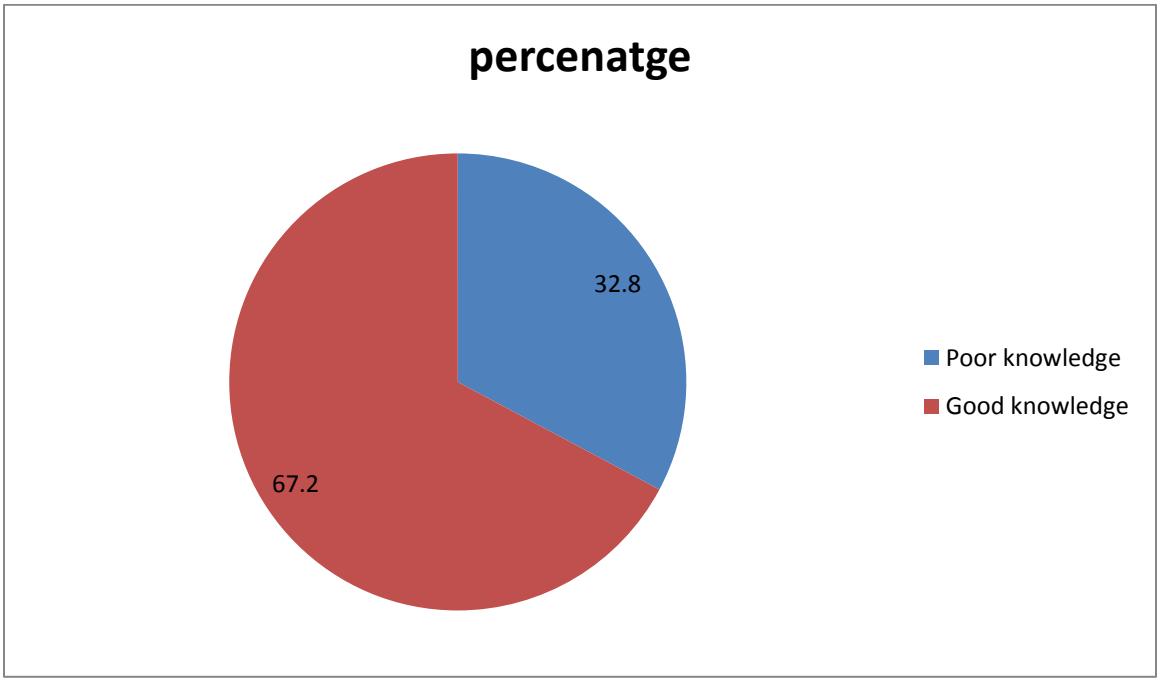

Figure 2: Knowledge percentage of the study participants

5.3 Attitude of patients towards CAD prevention

Slightly more than half (50.9%) of respondents strongly disagreed to the statement “do you accept the diagnosis of CAD", All respondents strongly agreed to the statement ‘You agree to take treatments recommended by doctors?’. (Table 4)

Table 4: Attitude of patients towards CAD prevention among patients who have followed up in cardiac OPD in Tikur Anbessa Specialized Hospital, 2022.

	Question	Response	Frequency	percentage
21	Do you accept the diagnosis of having CAD?	Strongly Disagree	163	50.9
		Disagree	119	37.2
		Uncertain	31	9.7
		agree	3	0.9
		Strongly agree	4	1.3
22	You think you should know about your blood glucose level and your total cholesterol level?	Strongly Disagree	129	40.3
		Disagree	114	35.6
		Uncertain	41	12.8
		agree	31	9.7
		Strongly agree	5	1.6
23	Do you share to others about your illness if you had CAD?	Strongly Disagree	119	40.3
		Disagree	114	35.6
		Uncertain	41	12.8
		agree	40	10.3
		Strongly agree	5	1.0
24	Are you willing to exercise more?	Strongly Disagree	13	4.1
		Disagree	36	11.3
		Uncertain	83	25.9
		agree	120	37.5
		Strongly agree	68	21.3
25	How easily can you change your eating habits?	Strongly Disagree	119	37.2
		Disagree	96	30
		Uncertain	62	19.4
		agree	29	9.1
		Strongly agree	14	4.4

26	You feel well when you eat without restriction?	Strongly Disagree	170	53.1
		Disagree	93	29.1
		Uncertain	31	9.7
		agree	20	6.3
		Strongly agree	6	1.9
27	You think you can enjoy life without a healthy life style?	Strongly Disagree	11	3.4
		Disagree	12	3.8
		Uncertain	64	20
		agree	116	36.3
		Strongly agree	117	36.6
28	You agree to take treatments recommended by doctors?	Strongly Disagree		
		Disagree		
		Uncertain		
		agree		
		Strongly agree	320	100
29	Do you think doing a regular medical check –up is important for your health?	Strongly Disagree		
		Disagree		
		Uncertain		
		agree		
		Strongly agree	320	100
30	You prefer traditional medicine not prescribed by a licensed physician?	Strongly Disagree	11	3.4
		Disagree	11	3.4
		Uncertain	52	16.3
		agree	127	39.7
		Strongly agree	119	38.2
31	You think you should know about your blood pressure?	Strongly Disagree		
		Disagree		
		Uncertain	30	9.4

		agree	14	4.4
		Strongly agree	276	86.3

More than half of the study participants had good attitude towards with the mean attitude score of 6.04±2.533 about CAD. Fig 3

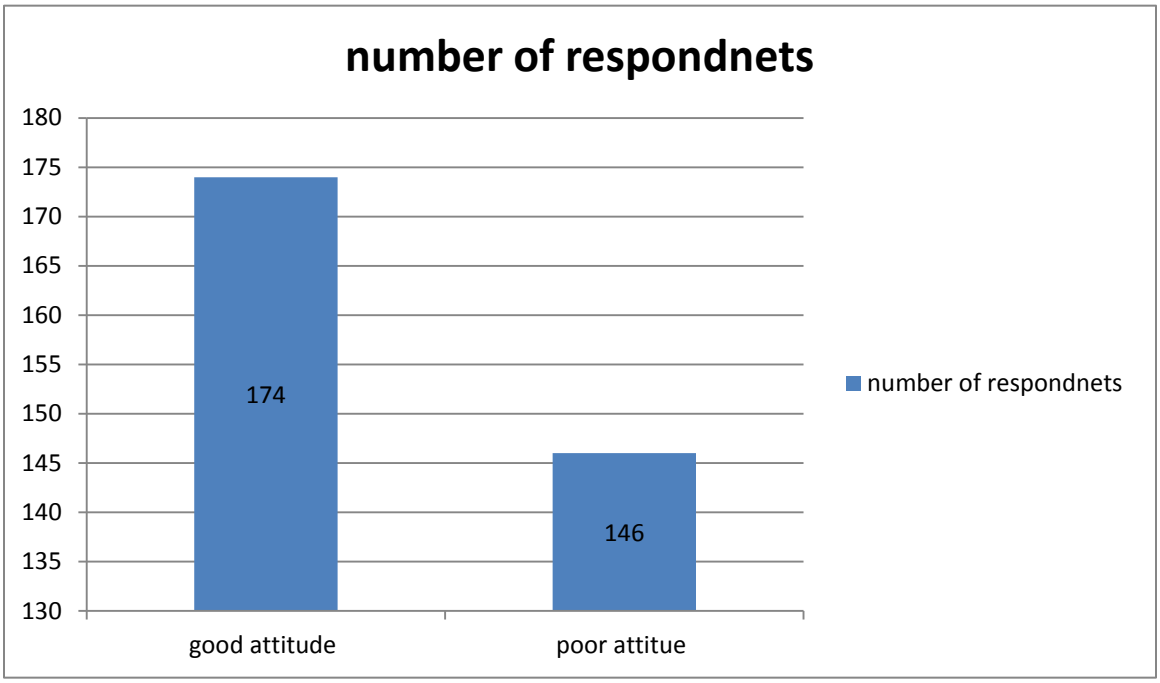

Figure 3 :Attitude towards CAD prevention of the study participants

5.4 Practice of patients towards prevention of CAD among patients who attained cardiac OPD in Tikur Anbessa Hospital, 2022.

Majority of the respondents (70%) said the will go to hospital if they had CAD. Similarly, more than three forth (76.9%) of the respondents say they will go immediately to health facility immediately (Table 5)

Table 5: Practice of patients towards CAD prevention among patients who have followed up in cardiac OPD in Tikur Anbessa Specialized Hospital, 2022

Item no	Question	Response	Frequency	percentage
32	What would you do if you thought	Go to hospital/health	224	70

	you had symptoms of CAD?	center		
		Go to traditional healer	74	23.1
		Stay home until symptoms subside	22	6.9
33	If you think you have symptoms of CAD at what point would you go to the health facility?	Immediately	246	76.9
		After self-treatment failed	74	23.1
34	Do you take aspirin or any other drug daily or every other day to relive pain?	Yes	224	70
		No	96	30
35	If you thought someone was having a heart attack or stroke what is the first thing you would do?	Taking him/her to hospital/health center	224	70
		Taking him/her to traditional healer	74	23.1
		Taking him/her to religious place	22	6.9
36	Exercise vigorously for 20 or more minute 3x/week(such as, walking, bicycling, aerobic dancing, using a stair climber)	Routinely	166	51.8
		Often	92	28.1
		Sometimes	62	19.4
37	Reduce using salt with the food you consumed?	Routinely	184	57.5
		Often	83	25.9
		Sometimes	53	16.6
38	Choose a diet low in fat, saturate fat and cholesterol?	Routinely	198	61.9
		Often	73	22.8
		Sometimes	49	15.3
39	Follow your doctor's prescriptions strictly	Routinely	224	70
		Often	74	23.1
		Sometimes	22	6.9
40	In the past have you ever used any tobacco products?	Yes	12	3.75
		No	308	96.25
41	Did you smoke daily?	Yes	12	100
		No		
42	How many cigarettes do you smoke	1	6	50.00
		2	2	16.7

	daily?	More than 3	4	33.3
43	Do you have a plan to quit smoking?	Yes	12	100
		No		

The mean practice score of the study participants were 55.13±17.365 and equal number of respondents had both good and poor practice .table 8

Table 6: Respondents practice score, 2022.

Scale	Frequency	percent
Poor practice	160	50.0
Good practice	160	50 .0

5.5 Factors associated with knowledge of participants towards CAD.

To determine association of independent variables on knowledge attitude and practice towards CAD, bivariate logistic regression was done. The Crude analysis was done by including Socio demographic factors, and other factors

Upon logistic regression, variable namely; sex, and presence of co-morbidity had significance association with knowledge. Similarly occupation and marital status were significantly associated with attitude towards CAD and sex of the respondents had significant association with practice of the respondents

Variable with P-value < 0.1in an unadjusted logistic regression were taken to multiple logistic regression analysis to see whether there is significant association or not by controlling co-founding factors. During the multiple logistic regressions, only sex and presence of co-morbidity were significantly associated with knowledge of the respondents. Similarly occupational status and marital status were associated with attitude and only sex was associated with practice

Accordingly, males were 2 time less likely to have good knowledge (AOR=0.578; 95% CI (0.340-0.981)) as compared to females.

The odds of good knowledge towards CAD in those patients who doesn't have other co-morbidities was 2.8time higher (AOR=2.818, 95%CI=1.029-7.713) compared to those who had.

Unemployed patients were 1.8 times less likely (AOR=**0.545(0.333-0.893)** to have good attitude as compared to employed patients.

Similarly single patients were1.8 times less likely (AOR=**0.566**, 95%CI=**0.330-0.968**) to have good attitude as compared to married patients.

Regarding practice males were two times less likely (AOR=0.506, 95%CI=0.313-0.819) to have good practice as compared to females.

Table 7: Factors associated with knowledge of coronary artery disease prevention among patients that attained Cardiac OPD in Tikur Anbessa Specialized Hospital 2022

Variables	Category	COR(95%CI)	AOR(95%CI)	P value
Sex	Male	0.540(0340-0.981)	**0.578(0.340-0.981)****	**0.042**
	Female	1	1	
Occupational level	unemployed	1	1	
	Employed	1.704(1.001-2.899)	1.420(0.788-2.577)	0.249
Presence of co-morbidity	Yes	1	1	
	No	5.149(2.974-8.914)	**2.818(1.029-7.713)****	**0.044**
Family history of CAD	No	1	1	
	Yes	0.230(0.136-0.391)	0.554(0.254-1.210)	0.139
Where to go during feeling sick	Hospital/health center	0.590(0.352-0.989)	1.439(0.776-2.668)	0.248
	Traditional healer	1	1	
First hear about CAD	Hospital	1	1	
	Health center	0.254(0.144-0.447)	0.894(0.317-2.524)	0.832

** Significant at p value less than 0.05

Table 8: Factors associated with attitude of coronary artery disease prevention among patients that attained Cardiac OPD in Tikur Anbessa Specialized Hospital 2022

Variables	Category	COR(95%CI)	AOR(95%CI)	P value
Occupational level	unemployed	**0.579(0.340-0.986)**	**0.66(0.330-0.968)****	**0.038****
	Employed	1	1	
Marital status	Single	**0.556(0.340-0.907)**	**0.545(0.333-0.893)****	**0.016****
	Married	1	1	

** Significant at p value less than 0.05

Table 9:Factors associated with practice of patients towards CAD prevention among patients that attained Cardiac OPD in Tikur Anbessa Specialized Hospital 2022

Variables	Category	COR(95%CI)	AOR(95%CI)	p- value
Sex	Male	0.520(0324-0.835)	**0.506(0.313-0.819)****	**0.006****
	Female	1	1	
Family history of CAD	No	1	1	
	Yes	1.684(1.016-2.792)	1.521(0.916-2.526)	0.105
Where to go during feeling sick	Hospital/health center	1.619(1.039-2.522)	1.328(0.749-2.359)	0.332
	Traditional healer	1	1	

** Significant at p value less than 0.05

0.05

6. Discussion

This study revealed that mean of knowledge score was 58.59% (±15.84 SD) and most (67.2%) of the respondents has good knowledge. It is higher than a study done in Oman where only 39.5% had good knowledge and mean score of 13.52 ± 4.59 (20), Kuantan 48.3% had good knowledge (21) and another study in Malaysia where 38.2% had good knowledge regarding coronary heart disease (22). However, the findings of this study are similar with a study done in Malaysia where the good knowledge score were 55.6% (23)

Despite the higher knowledge mean levels in the present study, most of the respondents demonstrated very less knowledge score regarding cardiovascular diseases.

About 75.3% respondents did not recognize the important symptoms of cardiovascular diseases such as Pain or discomfort in the jaw, neck or back, Feeling weak, light-headed, or faint, sudden numbness or weakness of the face, arm, or leg, sudden confusion or trouble speaking or understanding others. This finding is higher than a study in Lucknow city where 50% people did not recognize the important symptoms such Pain or discomfort in the jaw, neck or back , Feeling weak, light-headed, or faint , Sudden numbness or weakness of the face, arm, or leg ,Sudden confusion or trouble speaking or understanding others.(24) another study in n the study in Sweden, the majority of the respondents (79 percent) knew that chest pain, shortness of breath and nausea and vomiting are possible symptoms of a myocardial infarction (25).

In this study slightly less than three fourth of the respondents (72.4%) were willing to change their lifestyle. This finding is less than a study in Namibia where, 84 percent of the respondents indicated that they do want to make some changes (14).

The present study showed a significant association between gender and knowledge where males were 2 time less likely to have good knowledge (AOR= **0.540**.560; 95% CI(**(0.332-0.879**0)as compared to females .This result was consistent with a study by Jensen et al. which indicated that women were more aware of CHD risk factors than their male counterparts(14) . But the finding is in contrast with a study done in Saudi Arabia where there was insignificant difference between males and females in CAD risk factors knowledge (26). The same finding was reported

in the Jordanian survey(27). Similarly a study in Oman where there was no association between gender and knowledge (20).

Females are supposed to show higher awareness because of their less working hours compared to males, which give them free time to increase their knowledge through the mass media or the smart phone applications (28). The study also showed significant association between having other co- morbidities and knowledge of CAD where the odds of good knowledge towards CAD in patients who doesn't have other co- morbidities was 2.8time higher (AOR=2.818, 95%CI=1.029-7.713) compared to those who had. The investigator couldn't find other studies that support or disprove these findings. (Table 6)

In the current study, no association was found between variables like educational status and marital status. This finding is inconsistent with a study in Oman (20)where Educational level is associated with knowledge. similarly marital status was associated with knowledge in a study done in Egypt where married participants also had significantly less knowledge about CHD compared to their single counterparts (20,29)Similarly a study in Australia showed specific marital-related factors, such as family obligations, have been found to result in a lack of time to engage in preventative actions and may therefore contribute to a lack of knowledge about CHD (30)

This study also showed an association between occupational status of the respondents and practice towards CAD where unemployed patients were 1.8 times less likely (AOR=**0.545(0.333-0.893)** to have good attitude as compared to employed patients. Similarly marital status of the respondents were associated with practice where single patients were1.8 times less likely (AOR=**0.566**, 95%CI=**0.330-0.968**) to have good attitude as compared to married patients. This finding couldn't be supported or rejected by similar studies.

The study also showed no association between routine medical checkup, practice and overall KAP score with attitude of the patients. This finding is inconsistent with a study in Bangladesh where Patients who had routine medical checkups had better levels of attitude ($\chi 2$=27.541,

p<0.001), practice ($\chi 2$=15.670, p<0.001), and overall KAP scores ($\chi 2$ = 11.241, P = 0.010). Interestingly, those being treated in government clinics were more likely to have higher levels of attitude ($\chi 2$=11.334, P = 0.003)(11).

7. Conclusion and Recommendation

This survey revealed specific lapses in knowledge, attitude, and practice behaviors in regards to CAD.

Future preventative programs encouraging regular exercise and healthy dietary habits may be more effective if they empower women. Tobacco cessation campaigns and aspirin prophylaxis are needed as they are underestimated and undervalued in this population. CAD is a largely preventable disease but many interventions regarding primary and preventative healthcare services are not feasible due to limited infrastructure and constrained funding in developing countries it also provide awareness about level of KAP for health care providers and encourage them to engage in primary preventive programs. Yet, our survey demonstrates future programs can be more effective if led by government hospitals and local doctors.

8. Strength and limitations

Although the study tried to differentiate how certain factors affect levels of KAP in this population, the sample size was not hundred percent.

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ANNEXES

ANNEX I: Information Sheet

Introduction

My name isHewnSibhatu I am a data collector of a study entitled with" assessment of Knowledge Attitude and Practice regarding coronary artery disease prevention in Cardiology unit at TikurAnbesa Specialized Hospital, Addis Ababa Ethiopia" that conducted by HewanSibhatu who is a master's degree student in Nursing department within the cardiovascular nursing track at Addis Ababa University.

Name of the investigator: HewanSibhatu (BSC.MSC candidate)

Research title: Assessment of Knowledge, Attitude and Practice regarding coronary artery disease prevention among patients in outpatient department (cardiac clinic) in TikurAnebessa Hospital.

Research objective the aim of the study is to assess the level of KAP regarding coronary artery disease prevention in TikurAnbessa Specialized Hospital.

Purpose of the study: The result of the study can be helpful in identifying the problem and planning intervention to solve the problem.

Participant's right: Participation in this study is exclusively voluntarily. If you are not interested to participate or once if you decide not to participate any time you can with draw if you have no interest at a time. There will be no consequences and you will get all the services provided in the hospital with no problem

Confidentiality: the collected information will be kept confidential and used only for research purpose. No one except the members of the research team will have access to the information collected. The personal information of the respondents will not be notified also your name will not be mentioned or be attached to anything that you say.

Person to contact: if the data collectors or other hospital administrative staffs have any question regarding the study they are free to contact me in person or by the following addresses:

HewanSibhatu
Tel. - 0911153417
Gmail –hewanliyom@gmail.com

ANNEX II: Participant Information Sheet (English version)

My name is HewanSibhatu I am a cardio vascular nurse and postgraduate student at Addis Ababa University. Now I am conducting a study entitled assessment of knowledge, Attitude and Practice regarding coronary artery disease prevention in cardiology unit at TikurAnbessaSpecialized Hospital, Addis Ababa, Ethiopia.

After I read and understand the above stated information I agree to participate in this study as part of study subject. I had chance to ask any unclear points. If you agree to be included in this study I request you to sign on a document to show your agreement.

Do you want to continue? Yes…….No……

Thank you in advance for your help.

ANNEX III: English Version Questionnaire

INTRODUCTION: The questioner has four sections

Section 1.is related to socio demographic data

Section 2.is related to knowledge about CAD

Section 3.is related Attitude and belief about CAD

Section 4.is related Practice health seeking behavior and preventive measures.

Part1: Socio-demographic Data

Socio demographic characteristics of patients

Item no	Variable	Response	
01	Age	18-24	
		25-34	
		35-44	
		45-54	
		>=55	
02	Sex	Male	
		Female	
03	Marital status	Single	
		Married	
04	Educational level	Illiterate	
		Write and Read	
		Elementary	
		Secondary and high school	
		Diploma	
		Degree	
		Above Degree	
05	Occupation	Unemployed	
		employed	

Health related characteristics of patients

Item no	Variable	Response	Remark
06	Presence of current medical illness	Yes	
		No	
07	If yes which	Diabetes	
		Hypertension	
		Coronary artery disease	
08	Firs degree family history of CAD	Yes	
		No	
09	Where do you usually go if you are sick?	Hospital/health center	
		Traditional healer	
10	How often do you check general check-up	Every six month	
		Every one year	

Table 3 Knowledge of Patients about Coronary Artery Disease prevention among patients who have followed up in Cardiac OPD in Tikur Anbessa Specialized Hospital 2022.

Item no	Question	Response	remark
11	Where did you first hear about coronary artery disease?	Health center	
		Hospital	
12	Do you think CAD is a serious disease?	Yes	
		No	
13	Do you think CAD is a serious disease in your region/country?	Yes	
		No	
14	What are the signs and symptoms of CAD?	Chest pain or discomfort	
		Pain or Discomfort in the arms, left shoulder, elbows, jaw or back	
		Shortness of breath	
15	How can a person get CAD?	Alcohol consumers	
		Dyslipidemia	
		First Degree Family history of CAD	
		Cigarette smokers	
		Fatty diet	
16	How can a person prevent getting CAD?	Avoiding smoking	
		Regular physical exercise	
		Avoiding fatty foods	
		Avoiding Alcohol intake	
17	Can CAD be control?	Yes	
		No	
18	How can someone with CAD be helped?	Taking to the health service	
		Traditional healer	
		Religious center	
19	Do you think aspirin can reduce the chance of a heart attack or stroke?	Yes	
		No	

Table 4Attitude of patients towards CAD prevention among patients who have follow-up in cardiac OPD in Tikur Anbessa Specialized Hospital, 2022.

	Question	Response	Remark
20	Do you accept the diagnosis of having CAD?	Strongly Disagree	
		Disagree	
		Uncertain	
		agree	
		Strongly agree	
21	You think you should know about your blood glucose level and your total cholesterol level?	Strongly Disagree	
		Disagree	
		Uncertain	
		agree	
		Strongly agree	
22	Do you share to others about your illness if you had CAD?	Strongly Disagree	
		Disagree	
		Uncertain	
		agree	
		Strongly agree	
23	Are you willing to exercise more?	Strongly Disagree	
		Disagree	
		Uncertain	
		agree	
		Strongly agree	
24	How easily can you change your eating habits?	Strongly Disagree	
		Disagree	
		Uncertain	
		agree	
		Strongly agree	
25	You feel well when you eat without	Strongly Disagree	

	restriction?	Disagree	
		Uncertain	
		agree	
		Strongly agree	
26	You think you can enjoy life without a healthy life style?	Strongly Disagree	
		Disagree	
		Uncertain	
		agree	
		Strongly agree	
27	You agree to take treatments recommended by doctors?	Strongly Disagree	
		Disagree	
		Uncertain	
		agree	
		Strongly agree	
28	Do you think doing a regular medical check –up is important for your health?	Strongly Disagree	
		Disagree	
		Uncertain	
		agree	
		Strongly agree	
29	You prefer traditional medicine not prescribed by a licensed physician?	Strongly Disagree	
		Disagree	
		Uncertain	
		agree	
		Strongly agree	
30	You think you should know about your blood pressure?	Strongly Disagree	
		Disagree	
		Uncertain	
		agree	
		Strongly agree	

Table 5 Practice of patients towards CAD prevention among patients who have follow-up up in cardiac OPD in Tikur Anbessa Specialized Hospital, 2022

Item no	Question	Response	Remark
31	What would you do if you thought you had symptoms of CAD?	Go to hospital/health center	
		Go to traditional healer	
		Stay home until symptoms subside	
32	If you think you have symptoms of CAD at what point would you go to the health facility?	Immediately	
		After self-treatment failed	
33	Do you take aspirin or any other drug daily or every other day to relive pain?	Yes	
		No	
34	If you thought someone was having a heart attack or stroke what is the first thing you would do?	Taking him/her to hospital/health center	
		Taking him/her to traditional healer	
		Taking him/her to religious place	
35	Exercise vigorously for 20 or more minute 3x/week(such as, walking, bicycling, aerobic dancing, using a stair climber)	Routinely	
		Often	
		Sometimes	
36	Reduce using salt with the food you consumed?	Routinely	
		Often	
		Sometimes	
38	Choose a diet low in fat, saturate fat and cholesterol?	Routinely	
		Often	
		Sometimes	
39	Follow your doctor's prescriptions strictly	Routinely	
		Often	
		Sometimes	
40	In the past have you ever used any tobacco products?	Yes	
		No	
41	Did you smoke daily?	Yes	

		No	
42	How many cigarettes do you smoke daily?	1	
		2	
		More than 3	
43	Do you plan to quit smoking	Yes	
		No	

Your signature below indicates that you have read /or listened, and understand the information provided for you about the study. Before you sign, please understand purpose of the study, procedure, risks and benefits of participation, right to refuse or withdraw, confidentiality and privacy, and who to contact if you have question. I have read /or listened to the description of the study and I understand what are and what will happen in the study. No need to mention your name. The information records are strictly confidential.

Signature----------Date: ----------

Data collector name: ----------

In case if you have any questions, unclear ideas and doubt about the study contact

Addresses

HewanSibhatu

Tel: 0911153417,

Gmail: hewanliyom@gmail.com

ANNEXE IV: DUMMY TABLES

Socio demographic characteristics of patients who have follow up in TASH, cardiac clinic

Characteristics		Number	Percentage (%)
Age	• 25-35 • 35-45 • 45-55 • >55		
Sex	• Female • Male		
Education	• Illiterate • Primary • Secondary • Diploma • Degree • Masters		
	Total		

Overall knowledge score of patients who attend cardiac clinic in TASH.

Variable	Score	Frequency	Percentage (%)
Knowledge	• Good Knowledge (>58.59%) • Poor Knowledge (<58.59)	215 105	67.2% 32.8%
	Total	320	100%

Variable	Frequency	Percentage (%)
1) Socio demographic factors		
2) Hospital factors.		

3) patient factors(un cooperative and severely ill patient)

Table III: - Overall practice score of patients in cardiac clinic in TASH

Variable		Frequency		
practice	• Good Practice (>55.13%) • Poor Practice (<55.13%)		145 175	45.3% 54.7%
	Total		320	320

Variable		Frequency	Percentage (%)
Attitude	• Good Attitude (>59.12%) • Poor Attitude (<59.12%)	174 146	54.5% 45.5%
	Total	320	100%

ANNEX V: Translated Survey Questionnaire

የ ተሳ ታፊ ሠፎ ጃ ገ ጽ

ስ ሜሌዋን ስ ብዣ ቱደባ ሳ ል በ ጥቁር ሰ ን በ ሳ ስ ፔሻ ል ዴ ዝዳሆስ ፒ ታ ል በ ካ ር ድዩ ቫ ስ ኩ ሳ ር ነ ር ስ በ ሁስ ተ ኛ ድግ ሪ እ የ ተ ሜር ኩሲ ሆ ን በ ታ ካ ሜዎ ችሳ ደ ስ ስ ል ብ ደ ሃሻ ር ቧ ን ቧ በ ሽ ታ እ ሠቀ ተ ስ ሠስ ካ ከ ት ተ ግ ባ ር በ ሽ ታ ሠን ከ ሠፍ ሳ ከ ል ሰ ኳያ ጥና ትእ ያ ጠና ሁ ነ ሡ ፡ ፡

በ ጥና ቱ ስ ሠሳ ተ ፍ ከ ሠስ ሜምትዎበ ፊ ት ከ ዚ ህ በ ታ ችየ ተ ዘ ረ ዘ ረ ት ን ሀ ሳ ቦ ችእ ደ ተ ሠማነ ኛ ሠሃግ ል ጽ ያ ል ሆ ነ ነ ገ ር ካ ስ ደ ጠ ደ ቁ፡ ፡ በ ጥና ቱ ስ ሠሳ ተ ፍ ከ ተ ስ ሜሠሠ ሜምትዎን ስ ሜስ ሠቀ እ ዚ ህ ሠፎ ጃ ሳ ደ እ ን ዲ ፈ ር ሠል ኝእ ጠ ደ ቆ ታ ስ ሡ ፡ ፡

የ ጥና ቱ ሠጤ ት ችግ ሮ ችን ስ ሠፍ ታ ት ሠደ ተ ግ ባ ር ስ ሠቀ የ ር እ ን ዲ ሁ ሃቫ ቀ ድስ ሜሠጣ ት ደ ፈ ዳ ል ፡ ፡

በ ዚ ህ ጥና ት ስ ሠሳ ተ ፍ የ እ ር ሶ ን ሠሉ ፈ ቃ ደ ኝነ ት ደ ጠ ደ ቃ ል ፡ ፡

በ ዚ ህ ጥና ት ሠሳ ተ ፍ ካ ል ፈ ስ ጉ ሠደ ሃኽ ን ዱ ተ ሳ ት ፈ ሠበ ሴ ሳ ጊ ዜ ሜቋ ረ ጥበ ፈ ል ጉ ሃሜ ሃሞ ሜድ ሠጣቦ ችግ ር የ ስ ሠሃባ ዚ ህ የ ጤና ተ ቋሃሜግ ኘ ት ያ ስ ቦ ት ን የ ጤና ግ ል ጋ ሎ ት ሃሜ ሃቶ ግ ር ሳ ደ ፈ ጠ ር ብ ዎሜግ ኘ ት ደ ችሳ ሉ ፡ ፡

በ ጥና ቱ በ ሠሳ ተ ፍ ከ ሠሰ ኑ በ ስ ሃሜ ተ ፎ ር ሠሳ ደ ደ ፈ ር ሜሉ እ ና ሃሞ ዚ ህ ን ሠፎ ጃ ገ ጽ ግ ል ባ ጫሜግ ኘ ት ደ ችሳ ሉ ፡ ፡

ከ ዚ ህ በ ታ ችያ ስ ሠየ እ ር ስ ዎፊ ር ሜጆ ሜድ ሠስ ከ ተ ሠሰ ስ ጥና ቱ የ ተ ሰ ሎ ት ሠፎ ጃ እ ን ብ በ ሠሠደ ሃኽ ሃሖ ሠበ ቂ ግ ን ዛ ቤ ሜግ ኘ ቶ ት ን ነ ሡ ፡ ፡

ከ ሠፎ ረ ሟበ ፊ ት እ ባ ክ ዎን የ ጥና ቱ ን ሰ ሳ ሜሂ ደ ት ሥጋ ት ጥቀ ሃሜጥና ቱ ን የ ሜቋ ረ ጥሠበ ት ሜስ ጥሩ ዊ ነ ት ግ ሳ ዊ ነ ት እ ና ሃሜግ ኛ ሠሃሞ ጥያ ቄ ቢ ኖ ሮ ት ሜግ ን ን ሜግ ኘ ት እ ን ዳ ስ ብ ዎት በ ቂ ግ ን ዛ ቤ ደ ኑ ሮ ት ፡ ፡

የ ጥና ቱ ን ገ ስ ፃ በ ሜሀ ባ ሰ ን ብ ቤ ያ ስ ሁ/ስ ሃቻ ስ ሁ እ ና ሃሟ ጥና ቱ ሳ ደ የ ሜሆ ነ ሠን ሠደ ሃሞ ሜሠጣሠን ነ ገ ር ተ ገ ን ዝ ቤ ያ ስ ሁ ፡ ፡ ስ ሃሜሠግ ስ ጽ ሰ ያ ስ ፈ ል ግ ሃሞ ሠፎ ጃ ሠሠዘ ገ ብ/ቀ ጂ ሜሂ ጥሩ ዊ ነ ቱ የ ተ ጠበ ቀ ነ ሡ ፡ ፡

ፊ ር ሜ____________________________**ቀ ን** ______________________

ሠፎ ጃ ሠን የ ሰ በ ሰ በ ሠሰ ሠሰ ሃሙ____

ሜግ ኛ ሠሃኽ ደ ነ ት ጥያ ቄ ሠደ ሃሜግ ል ጽ ያ ል ሆ ነ ሀ ሳ ብ ካ ል ዎት በ ዚ ህ ሰ ድ ራ ሻ ያ ገ ኙኛ ል ፡ ፡

ስ ል ክ ፡- 0911 15 34 17

ቃ ስ ሠጠ ደ ቅ

ሠግ ቢ ያ - ሠጠ ደ ቁእ ራ ት ክ ፍ ሎ ችእ ሉ ት

ክ ፍ ል 1፡ ግ ሳ ዊ ሠፎ ጃ

1.1	ግላዊመጪጀ	
1	እድሜ	
2	ጾታ	• ወንድ • ሴት
3	ክብደት	
4	የትምህርትደረጃ	• ያልተማረ • መዋፍናማንበብ • መጀመሪያደረጃ • 2ኛደረጃ • ዲፕሎማ • ዲግሪ • ከዛበላይ
5	የስራመስክ	• ስራስጥ • የቤትእመቤት • ተቀጣሪ • የግልስራ
6	መኖሪያቤትዎስቅራቢያ ምላስ መና ጣቢያ ጨያማሞ መና አገልግሎትመ ስጫበ ምንያህልደርቃል?	• < 10ቋባ • 10-20 ቋባ • 21-30 ቋባ • 31+
7	አሁንላያስዎትየመና ችግር	• የስኳርበሽታ • የደምግፊት • የደምቧንቧችግር • ኮልስትሮል • ሌላ

8	ወላጆችየልብ ደምስር ቧንቧችግር አለባቸው?	• አዎ • አይደለም
9	ሲታመሙወዲየት ሚሄድወር ጣል?	• ጤና ጣቢያ /ሆስፒታል • የባህልህክምና
10	በየስንትጊዜመቱየጤና ሚዲያ ደርጋሉ ?	• በየስድስትወር • በአመት • በሁለትአመት • ከሁለትአመትበላይ

ክፍል 2፡ አመቀትአናንቃተህሲና

1.2	አመቀትአናንቃተህሲና	
11	ስመጀመሪያገዚአስልብደምስር ቧንቧበሽታከየትሰመ?	• ጤና ጣቢያ • ሆስፒታል • ራዲዮጨምኬቪ • ሚለበራዊድህረገጽ
12	በአርስምአስመላካከትየልብደምስር ቧንቧበሽታከባድነ ው?	• አዎ • አይደለም
13	አርስምበሚሮረበትአካባቢየልብደምስር ቧንቧበሽታስርጭል?	• አዎ • አይደለም

14	የልብደምከር በሽታቢንቢምክንቾቹምንድና ቸው	• የደረትህመም ደረትስካባቢምቾትስሰማት • በክንድ፣ በትከሻ፣ በክረንመንጋጋጨምባ ትከሻላይያስጣህመሙጨምምቾትማጣት • ቀዝቃዛላብማብ/ ስራስባደመሆን ማቅለሽለስና መፍዘዝ • ስላመቀም
15	ስንድስወስንዴትበልብደምክርቢንቢበሽታሲያዝጄችላል?	• የስልኮልመጥተጠቃሚ • የኮስሱትርልመጠንከፍያስሰው • በቀርብቤተሰብበልብቢንቢችግርያስበት • ሲጋራስጫሽ • ቀባትየበዛበትምግብስብዝቶየሚጠቀም • ስላላዊስንቀስቃሴየሚደርግ • የስኳርጨምየደምግፊትታሞሚ • ስላመቀም
16	ስንድስወስንዴትነውልብደምክርቢንቢበሽታራሱንሲከላከልየሚቸለው?	• ሲጋራስስመለስ • መደበኛስካልስንቀስቃሴበሚድረግ • ቀባትየበዛበትምግብመከለጠገድ
17	በትርስምስመላካከተበልብደምክርቢንቢበሽታሲጠቃየሚቸለውምንስደነ ትሰጠላው ?	• በቀርብቤተሰብየልብበሽታያስበተሰው • መፍረት • ስጫሽ • ስልኮልመጥተጠቃሚ • ስላመቀም

18	የልብደምስርቧንቧችግርንመቆጣጠርደችላል?	• አዎ • አይደለም
19	የልብደምስርቧንቧችግርጋርአብሮየሚርንስሜትመረዳትይችላል?	• በጣምተቋም • በባህልህክምና • በሃይማኖተሰዎች • አላውቅም
20	አስንፈንበድንገተኛየልብህመምጊዜቃትንጨምላአንገልጫጥየደምጫፋስንይከላክልብለውያስባሉ?	• አዎ • አይደለም

ክፍል 3፡ አመለካከትናስሜት

1.3.	አመለካከትናስሜት	
21	የልብደምስርቧንቧበሽታሲይዘኝይችላልብለውያስባሉ?	• በጣምአስማማሁ • አስማማሁ • አርግጠኛአይደለሁም • አልስማማም • በጣምአልስማማም
22	የአኗርዘዋሰንናየኮልስትሮልዘዋሰንጣመቅአስብኝብለውያስባሉ?	• በጣምአስማማሁ • አስማማሁ • አርግጠኛአይደለሁም • አልስማማም • በጣምአልስማማም

23	የልብደምስርቧንቧችግርስለብዎትቢባሉስለችግሩከሌሎችሰዎችጋርይወያያሉ?	• በጣምአስማማሁ • አስማማሁ • አርግጠኛአይደለሁም • አልስማማም • በጣምአልስማማም
24	የአካልእንቅስቃሴለሚድረግፈቃደኛነዎት?	• በጣምአስማማሁ • አስማማሁ • አርግጠኛአይደለሁም • አልስማማም • በጣምአልስማማም
25	የአመጋገብስርአትዎንበቀላሉመቀየርይችላሉ?	• በጣምቀላሉ • በቀላል • አርግጠኛአይደለሁም • ያከብዳል • በጣምአከብዳል
26	ምግብንባለመሟሟጥሲመገብጠርነትይሰማዎታል?	• በጣምአስማማሁ • አስማማሁ • አርግጠኛአይደለሁም • አልስማማም • በጣምአልስማማም
27	ያለመጥገንነትሕይወትአለተደሳችናተብለውያምናሉ?	• በጣምአስማማሁ • አስማማሁ • አርግጠኛአይደለሁም • አልስማማም • በጣምአልስማማም
28	በዘኪሞችየታዘዘለትንየህክምናመጨተሊምችለመቀበልፈቃደኛነዎት?	• በጣምአስማማሁ • አስማማሁ • አርግጠኛአይደለሁም

		• አልፎ ሰምሟል • በጣምአልፎ ሰምሟል
29	በቋሚ ተየጠና ምርመሪ ሚድግስጠን ነ ትምስስፈላጊ ነ ሙብስ ጠያ ምና ሱ?	• በጣምአስ ሰምሟል ሁ • አስ ሰምሟል ሁ • አርግጠኛአይደለሁም • አልፎ ሰምሟል • በጣምአልፎ ሰምሟል
30	የባህላ ሚህክ ምና ንከዘመና ሚህክ ምና ይመርጣሉ?	• በጣምአስ ሰምሟል ሁ • አስ ሰምሟል ሁ • አርግጠኛአይደለሁም • አልፎ ሰምሟል • በጣምአልፎ ሰምሟል
31	አስደምግፈትምጠቅስብኝብስ ጠያ ስባሉ?	• በጣምአስ ሰምሟል ሁ • አስ ሰምሟል ሁ • አርግጠኛአይደለሁም • አልፎ ሰምሟል • በጣምአልፎ ሰምሟል

ክፍል 4፡ በተግባርጠና ንየሚመቅል ምሚድና የመካሳከል ል ምሚድ

1.4.	**በተግባርጠና ንየሚመቅል ምሚድና የመካሳከል ል ምሚድ**	
32	የልብደምካርበሽታምክአችችስብኝብስ ጠቢያስብምንያደርጋሉ	• ጠይሆስፒታል/ጠና ጣቢያ • ጠይባህል ህክምና • ህመሞችስኪሽሰሁቤትማሾየት

33	የ ልብደምክ ር ቢን ቢበ ሽታምክ ክ ትችአ ለ ብኝብለ ወቢያ ሰ ብምን ደፈ ጃሳ ዴነ ውወደህ ክምና ተቋምዋ ሚሄድበ ት?	• ወዲያውኑ •በ ራስ የ ሚደረግህ ክምና ካልተሳካ
34	ህ መምን ስ ሜት ታገ ስ አ ስ ንፈ ን ወደ ምኪሳ ወደሀ ኒ ትበ የ ቀኑ ወደ ምክ ን ድቀን እ ያ ስ ፈ ዴወስ ዳሉ?	• አ ዎ • አ ይደለ ም
35	አ ን ድስ ወየ ልብድካ ምወደ ምባ አ ን ጎ ልውስ ጥየ ደምጨፋ ሰ ሱቢያ ጋ ጥ ሙሙሙጀሙፌ ያ የ ሚያ ደር ጉትምን ድነ ው?	• ወደሆስ ፒታል/ጤና ጣቢያ • ወደባ ህ ል ህ ክምና • ወደሃ ይ ማኖ ት ማእ ከ ል መሄ ድ • አ ላ ውቅም
36	የ አ ካ ልብቃትእ ን ቅስ ቃሴበ ሳ ምን ት ውስ ጥሦስ ት ጊ ዜከ ሃ ያ ደቂቃበ ላ ይ ይደረ ሉ? (የ እ ግ ር ጉዞ ደረ ጃመውጣትቀስ ል ያ ሉእ ን ቅስ ቃሴዎች)	• በ ቋሚ ት • ብዙጊዜ • አ ን ዳን ድጊዜ • በ ፍጹም
37	ጫን ቀትን ስ ሙቀነ ስ ምን ያ ደር ጋ ሉ?	
38	በ ሚሠሩ ትምግብውስ ጥየ ጨውመጠን ን ይቀን ሳ ሉ?	• በ ቋሚ ት • ብዙጊዜ • አ ን ዳን ድጊዜ • በ ፍጹም
39	የ ቀባ ትእ ና የ ስ ብመጠና ቸውአ ነ ስ ተኛ የ ሆኑ ምግቦችን ይመር ጣሉ?	• በ ቋሚ ት • ብዙጊዜ • አ ን ዳን ድጊዜ • በ ፍጹም
40	የ ሀ ኪሞችን ትዕ ዛ ዝበ አ ግ ባ ቡይከ ተላ ሉወይምይተገ ብራሉ?	• በ ቋሚ ት • ብዙጊዜ • አ ን ዳን ድጊዜ • በ ፍጹም

41	የ ሚጭ ጨሱ ከ ሆነ ለ ማቆምሚ ቅደስ ሱት?	• ከ ም • ከ ይ