Addis Ababa University College of Health Sciences School of Public Health

Health care services utilization and its determinant factors among health professionals, Addis Ababa, Ethiopia, 2018 G.C: Health facility based mixed study.

A thesis submitted to school of public health for the partial fulfillment of the requirement for the degree of master in public health.

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Research project submission form

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Abbreviation/acronym

AARHB-ERC- Addis Ababa Regional Health Bureau Ethical and Research Committee

EDHS- Ethiopian Demographic and Health Survey

ETB- Ethiopian Birr/ currency

FMOH- Federal Ministry of Health

FMHACO- Food, Medicine Health Administration and Control Office

G.C- Gregorian Calendar

GDP- Gross Domestic Product

HC- Health Center

HEW- Health Extension Worker

HRQOL- Health Related Quality of Life

MPH- Master of Public Health

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Summary

Background: The main function of health system is ensuring the availability and accessibility of health service. Service provision is an immediate output of the health system, but health service utilization in sub Saharan Africa is very low. Similar to that the health service utilization in Ethiopia also is low. Dimensions that are barrier for health service utilization are geographic accessibility; availability of health workers, drugs and equipment; affordability and acceptability.

Objective: To explore pattern of health service utilization and its determinant factors among health professionals in Addis Ababa, Ethiopia, 2018 G.C.

Methods: Institutional-based cross-sectional study supplemented with a qualitative study was conducted to explore patterns of health service utilization and its determinant factors among health professionals by using stratified sampling technique. The total sample size for the study was 634 using single population sampling technique methods with 10% non-response rate. Data was collected using structured questionnaire for quantitative data and in depth interview was conducted on 12 respondents for qualitative data. To increase the quality of data training was provided to the data collectors to familiarize with the questionnaire, at the time of data collection data was checked for completeness and consistency by principal investigator and data was transcribed in full text and response in all interview sessions was reviewed and combined. EPI-info version 7 and SPSS version 20 for quantitative and open code version 3.6.2.0 for qualitative data was employed for analysis. Logistic regression was used and odds ratio was calculated to ascertain association between dependent and independent variable at p values of less than 0.05. The result had presented in tables, graphs, words and charts.

Result: The final multivariate logistic regression model has shown that satisfaction on skill and competency of health care provider, having unhealthy perceived health status and having known chronic illness were found to have a statistically significant association with utilization of health care service. While participants who were satisfied with skill and competency of health care provider were 2.265 more likely utilize health service than not satisfied (AOR=2.265, 95% CI: 1.112, 5.627). Also respondents who perceived that their health status was healthy were 0.035 times less likely utilized health service than unhealthy (AOR=0.035, 95% CI: 0.009, 0.132). the

final multinomial regression shows that respondent that perceived that high cost of health care service are 7.902 more likely preferred health center than private clinics(AOR=7.902, 95% CI:2.301,27.141)) The qualitative part of this study shown that majority of the respondents first they had observed within their health facility. But, they preferred advanced health facility in order to get advanced health care service. And also shown that there is free health care service for health care providers within government health facility but there is specific of amount of money planned annually to get health care service for staffs that are worked within non-governmental for non-profit health facility.

Conclusion: In conclusion the level of health services utilization rate was found to be low. There is no uniform payment trend to utilize health care service employees among private, governmental and NGOs. Efforts have to be made to increase utilization of modern health services through establishing uniform payment trend among health facilities for health work forces.

Introduction

1.1 Background

Strong health systems are fundamental to maintaining good health throughout the life cycle and managing threats to health. Ensuring availability and access to health services is one of the main functions of a health system (1). Provision of quality health services entails instituting patient centered health care delivery system (2). Improved quality of health care has in turn improved citizens' perceptions of health services, improved the performance and satisfaction of health professionals, and enhanced the overall functioning and performance of the health system (3).Service provision or delivery is an immediate output of the inputs into the health system, such as health workforce, procurement and supplies and finances. Increased inputs should lead to improved service delivery and enhanced access to services. The primary goal of any health system is to improve population health. Strategic policy formulation in all health care system should be based on information relating to health promoting, seeking and utilization behavior and factor determining this behavior (4).

In health system around the world, countries are going universal. According to WHO definition universal health coverage as ensuring that all people can use promotive, preventive, curative, rehabilitative and palliative health service they need of sufficient quality to be effective, while also enabling that the use of these service does not the user to financial hardship (5,6).

People obviously want effective health care when they are sick or injured. They want it to come from providers with the integrity to act in their best interests, equitably and honestly, with knowledge and competence. In a number of countries, the resulting inequitable access, impoverishing costs, and erosion of trust in healthcare constitute a threat to social stability (7).

Additionally, the dimensions that are barrier for health service utilization are geographic accessibility; availability of health workers, drugs and equipment; affordability and acceptability (8).

1.2 Statement of the problem

Health service utilization has much variation across countries due to difference in service availability and efficiency of public health facility (9). In various studies that were conducted on health service utilization showed that there was a discrepancy on utilization of health service between developed and developing countries. Level of health service utilization is high in developed countries than developing one. The level of health service in Germany, which is one of the developed countries, is 98% (10). But, in developing nations the level of health service utilization is almost below half among the community (11, 12).

Health service utilization in sub Saharan Africa is very low and it does not match with their need (13). Increasing utilization is difficult due to multiple choice of health service available to the significant number of population (14). Factors has been identified as the leading cause of poor utilization of primary healthcare service, including poor socio-economic status, lack of physical accessibility, cultural belief and perception, low literacy level mother and large family size (15). Regarding to the utilization of outpatient service, the poorest quintile were more likely to use public provided service as compared to the rich (9).

Health service utilization in sub Saharan Africa; mostly determined by wealth of the household which is the component of socio economic determinant factor. Wealth explains more of the socio economic inequality in health service utilization than all other factors together. Socio-economic disparity in need contributes negative to socio-economic inequality in any health care utilization (13, 15). Individuals demand for health service utilization depends on their socio-economic status (16). Even though, it is high in developing countries inaccessibility for medical service observed in both developing and developed countries (16). But, the under-utilization of the health service in public sector has been almost universal in developing countries (15). Due to the inability to pay for health service the poor people are utilize less health care service basically (13,16). Also there is a variation on health service utilization among population that resides in urban and rural area of the nation (11, 12). Also other studies showed that health service had been determined by self-treatment practice among households (17-21).

According to Ethiopian health service utilization and expenditure survey, April 2014 shows that, Under the perception of the respondent, 90% of them believed that their household health status as good or very good. Also 12% of respondents sought some form of outpatient health care (curative and preventive/ promotive one). Not using of health care service upon illness was common. The rationales of not utilize health care during illness were scarcity of money (41%), perception of the respondents that the illness was not severe (25%) use of self-medication (15%) and to travel long distance to a facility (9%). Seventy seven percent (77%) of respondents were utilize out patient service from the government facility, 20% from private health facility, and 2% from traditional and religious healer and from NGO (1%). Reasons for by passing nearest provider were health facility's proximity to their home (35%), lack of alternative provider (18%), better supply pharmaceutical (18%) and perceived quality of health professional (6%) (22).

The literature on health care utilization in Ethiopia is surprisingly thin. Majority of earlier works have focused mainly on access to maternal and child care (23-26) and adolescent and youth reproductive health (27, 28) or intervention for specific condition. And also much was not done so far on the overall utilization of health service, especially among health professionals. Service provided by health care workers depends on HRQOL of them. Also according to the study that was done on job satisfaction and its determinant factors among health professionals in Jimma University specialized hospital shows that free health care service in their organization was one of the determinant factors of job satisfaction. (29') Ill health of health care workers produced morbidity, absenteeism, decreased the quality of the service provision and satisfaction on their job. One of the major determinants of these consequences is their pattern of health care service utilization. Since health professional to population ratio in our country is low as similar as other developing nations, knowing the pattern of health service utilization used as an input to reduce problems related to human resource for health through improving HRQOL among health care workers. This project aims to address the gap in our current knowledge by exploring pattern of health service utilization and its determinant factors among health professionals.

1.3 Significant of the study

The pattern of health service utilization among health professional may determine job satisfaction on their working environment, the quality of health service provided by them, on the implementation of health system reform like healthcare finance reform, their willingness to pay for health insurance and also it determines the health service utilization of the community directly and indirectly.

Hence, knowing the pattern of health service utilization among health professional used as an input for policy makers to prepare strategic plan to alleviate the barrier of health service utilization among health professional, for the federal ministry of health to prepare guideline how to utilize the service provided with in their health facility and also used for federal health insurance agency to prepare specific financial model for health professionals.

Literature review

2.1 Ethiopia in brief

Ethiopia is situated in the northeastern segment of the African continent, commonly known as the Horn of Africa, with a land mass of 1.14 million square kilometers. Ethiopia is the second most populous country in Africa (22). According to EDHS 2016 regarding to household population nearly half of the Ethiopians are under age 15 (47%), while 4% are age 65 and older with average household size of 4.6 person per household. in this survey related with health insurance showed that 95% of women and 94% of men are not covered by any type of health insurance (29). Regarding to density of health work force per 10,000 population in 2007-2013, shows that 0.3 physician per 10000 population in Ethiopia. Also the report shows that in 2013 there were 0.2 hospitals per 100,000 populations in Ethiopia (30).

Ethiopia has continued to register relatively high economic growth over the past decade, with annual average real GDP growth rate of 10.8% since 2004/05, one of the highest in Africa (31). The national GDP at constant price and GDP deflator in 2014/15 was 10.2 and 6.4 respectively (30). Also Real GDP growth in 2015/16 and 2016/17 were 8.1 and 7.7 respectively (31). Initially, agriculture was the predominant sector contributing to GDP growth, accounting for 54.9% of GDP growth in 2004/05. In 2014/15, the contribution of the services sector to GDP growth, on the other hand, rose from 37.5% to 46.1% over the same period. The contribution of the industrial sector to GDP in terms of both growth and share has been increasing, albeit from a low base. The sector's growth rate and its share to GDP were 21.7% and 15.2% in 2014/15, respectively (32).

2.2 Health system in Ethiopia

The Ethiopian health service is restructured into a three tier system; primary, secondary and tertiary level of care. The Primary Health Care Unit which is composed of a health center (HC) and five satellite health posts (HPs). These provide services to approximately 25,000 people altogether. A HC is staffed with an average of 20 staff. It provides both preventive and curative services. It serves as a referral center and practical training institution for HEWs. A HC has an

inpatient capacity of 5 beds. A primary hospital provides inpatient and ambulatory services to an average population of 100,000. In addition to what a HC can provide, a primary hospital provides emergency surgical services, including cesarean sections and gives access to blood transfusion service. It also serves as a referral center for HCs under its catchment areas, a practical training center for nurses and other paramedical health professionals. A primary hospital has an inpatient capacity of 25-50 beds and is staffed by an average number of 53 persons. A general hospital provides inpatient and ambulatory services to an average of 1,000,000 people. It is staffed by an average of 234 professionals. It serves as a referral center for primary hospitals. It serves as a training center for health officers, nurses and emergency surgeons categories of health workers (2, 33). A specialized hospital serves an average of five million people. It is staffed by an average of 440 professionals. It serves as a referral for general hospitals (2, 33).

2.3 Theoretical model

There are various models of behavior that could be applied to health care utilization provide guidance for defining, specifying the relationship between variables and evaluating programs and policies concerned with access to and utilization of health care service. The major types of utilization models are: First, models of patient decision making, grounded in sociological theory and research. Second, the health belief model, it is based on psychological. Third, Economic model of the demand for medical care and Fourth, the behavioral model of health service utilization that was guided much health service research on access to and utilization of health care service.

In this study Andersen's behavioral mode will be employed, which has been used almost exclusively in the literature to conceptually organize the factors that influence health service utilization.

2.3.1 Andersen's behavioral model of health service utilization

In 1960's to understand why a family use health service and predict and explain the use of health service; behavioral model of health service utilization had been employed for the first time

(34,35). Even though the behavioral model unchanged; after various modifications an individual's access to and use of health service posits to function of three factors: predisposing, enabling and need factors. These factors related to individual determinants have received most research attention (34).

The predisposing factor includes the socio-demographic characteristics (age, gender, marital status), social structural characteristics (education, employment status and culture), and health belief (attitude, value, knowledge of health and health service). These predisposing factors are thought to influence person's propensity to use services. Enabling factors are family or community level characteristics which refer to resources or means that enables or impede individuals to access health service. Examples of enabling factors include income level, health insurance, availability, accessibility and affordability of services. The need factors are the most immediate predictor of health service utilization. Perceived and evaluated health statuses are included in this factor and these factors are the most important factors in determining whether an individual seeks help (34).

The Andersen's behavioral model of health service utilization will be evaluated as the most frequently used and widely applied framework for studying health service utilization (34, 35).

2.4 Overview of research literature

To create effective program for improving health service and medical contact, identifying factors that influence health service utilization is crucial. Understanding why people of a given nation use or do not use health service, could seek to improve the quality of human life. There are various factors such as age, gender, social and economic roles, knowledge, health service trust, and culture, which determines both the decision to seek health care and to utilize for preventive, promotive, curative and rehabilitative services.

According to Andersen's model of health the factors, which influencing health service utilization can be classified as predisposing, enabling and need factors and each group of factors is considered separately. In this study Andersen's model adds behavior variables and health care

payment system also included. Therefore literature review on the health behavior factors and payment scheme will be presented in this session.

2.4.1 Predisposing factors

Gender and age of the respondents are the major component of predisposing factors that determine utilization of health care service (10, 18, 21, 34, 36-38). There is some conflicting evidence exists as predictors for health service utilization. Some study revealed that being young determines the utilization of health healthcare service positively (21). In the study that was conducted by Bach Xuan Tran et al. in Vietnam focused on the assessment of health-related quality of life (HRQOL), health status and healthcare access and utilization showed that respondents the older they were the less they used outpatient service (21). But on the other hand studies that were conducted in various studies showed that being young determine the utilization of health service negatively (18,36,37).Regarding to gender of the respondents, being male had negatively associated with utilization of health service among societies (18,21). However, gender and age of the respondents determine utilization of health care service, there was discrepancy on health service utilization among various age groups.

Educational status, location of residence and marital status are another group of predisposing factor that determines the health care utilization of the given community (18, 21, 37-41). According to studies that were conducted in health care utilization in different scenario commonly agreed that married respondents have high level of health service utilization than unmarried (18, 21). This is supported by WHO report on Health services utilization and out-of-pocket expenditure at public and private facilities in low-income countries showed that married people used eight times more outpatient service than the single one(9). In the studies that were conducted in Iran and Ecuador revealed that higher proportion of urban residents received public health service than rural (37, 39).

Regarding to educational status, some studies reported that it determines the health service utilization of the society (37, 40). According to the study that was conducted by Rizwanul M. Karim, Mamun S et al. in Bangladesh showed that less educated utilize community health service than educated ones (41). But, under the study that was conducted by AmarsanaaGan-Yadam, Ryoji Shinohara et al. focused on to examine patterns of health service utilization among

residents of Ulaanbaatar, Mongolia revealed that less educational status and location of residence had no statistical significant association with health service utilization (18). Even though, majority of the studies revealed that being married and urban dweller had a positive association with utilization of health care service, some study reported educational status and location of residence had no association with health service utilization.

Additionally, household size had been determined the utilization of health care service within the community (18, 38). The study that was conducted by AmarsanaaGan-Yadam, Ryoji Shinohara et al. focused on to examine patterns of health service utilization among residents of Ulaanbaatar, Mongolia revealed that household with a size of more than five peoples influences health care service utilization positively (18). So, socio-demographic factors are the important predictors of health service utilization.

Studies that were done in Ethiopia showed that health service utilization also determined by those predisposing factors. On the study that was conducted in Dessie North East Ethiopia the overall health service utilization was found to be 41.8%. In this study female were 4.071 times more likely to utilize modern health service than male (42). On the other study that was conducted in Jimma zone, south west Ethiopia regarding to the utilization of health service 48.7% of the respondents had visited health care facility including the traditional medicine in the previous 12 months. In this study male were 0.46 times likely to use the service than female. Also respondents with primary and below level of education were 2.0 times more likely to use the government health institutions. Also married respondents were 2.2 times more likely to utilize than unmarried ones (19). Similarly, as predisposing factors determines health service utilization of various nations, it also affect the utilization of health care service in Ethiopia.

2.4.2 Enabling factors

The enabling factor includes that support an individual's decision to seek as health service, such as occupation, income, quality of life related with health care, geographic region and health insurance usage. Regarding to income status of the household; it has an association with utilization of health care service (11, 12, 18, 19, 23, 37, 41-44). But its impact could be observed in three parts; first, it impact on the preference between private and government health facility. Studies that were conducted in Bangladesh, Iran and Vietnam showed that households with high

level of income preferred private health facility than government (community) health facility (21, 37, 41). Also poor mothers were utilized the community clinic more than the wealthier counterpart (41).

Second, income status has an impact on the overall utilization of health care service. As income of the household increased, the utilization of health care service increased too (11, 12, 18, 19, 37,41-44). Various study showed that an obvious inequity in the distribution of health care utilization across the socio-economic groups. Study that was done by AmarsanaaGan-Yadam, Ryoji Shinohara et al; in Ulaanbaatar, Mongolia, to examine pattern of health service utilization showed that 44.1% of respondents had visited a physician during the previous 12 months. It also showed that respondent with low income status was 0.5 times likely utilization of health service compared with other income of the respondents (18).

Third, the impact of household income had been different based on the level of health care facility and type of health service offered. Study that was done by Chaofan li, Lei Dou et al in china, to measure inequity in health care utilization showed that 26.5% of the richest utilized outpatient care during previous month, while only 18.19% of the poorest did so. The probability of inpatient care utilization in the richest was 0.1725 likely during the previous year (43).

According to the study that was done by Irene Subirats Garcia, Ingrid Vargas et al reported that at primary care level, per capita income does not figure as a source of inequality in Columbia but it does in Brazil, where individual with higher per capita income makes less use of this care level. Also in outpatient service in secondary care, per capita income is a source of inequity in Brazil and Colombia (11).

Additionally the study that was done in Ulaanbaatar, Mongolia reported that medium socio-economic status was associated with a 1.9 time higher chance of utilization of the government health service as compared to the high socio-economic group (18). Also it showed that household annual income had been associated with health service utilization; where the low income group was 0.26 time likely to use the health service (18). So, household income not only

determines health service utilization, but also it determines the preference of health facility they use and the type of health care they offered to utilize.

Regarding to health insurance usage, household participation level in health insurance scheme had determined the health service utilization of households. Various studies that was done in Korea, Ecuador and central Colombia and north east Brazil showed that lack of health insurance had been one of the major barriers on health service utilization (11, 39, 44). So, having a health insurance will increase the chance of utilizing health care service.

According to studies that were done in Ethiopia, income was one of the determinants of health service utilization. Regarding to household income, study that was done in Dessie, north east, Ethiopia showed that adult above the poverty line were 4.026 times more likely to use the health service as compared to those below the poverty line (42). Also households with monthly income greater than 1,170 birr were three times more likely to seek health care as completed to their counterpart (12).

2.4.3 Need factors

According to Andersen's model the need factor includes perceived and evaluated status (34, 35). regarding to these factors; various studies that was conducted on health service related scenarios reported that health seeking behavior had been determined by perceived health status, presence of chronic disease, physician abilities and skill, satisfaction with health care service, distance to the health facility and availability of demanding service and drugs (12,18-21,36,37,41,43-46).

Studies that were done on health service utilization showed that the presence of chronic illness had determined health service utilization (18, 36, 38, 42-44). According to the study that was conducted in Switzerland showed that patients with two or more than two disease were 5.6 times more likely to visit hospital for health care service (36). Also consultation for health care increased 3.25 times when the patient developed additional chronic condition (36).

Regarding to the study that was done in Mongolia and Bangladesh showed that physician ability and skill had determined utilization of health care service (18, 14). Regarding to satisfaction with health care service, respondents who had high level of utility with health care service reported

that more likely to attend and utilize health service (20, 36, 41). Also perceived health status of the respondents was one of the determinant factors of health service utilization (12, 18, 42, 43). Under the Study that was done by GetawWalle and MihretTeshome in Dessie, north east, Ethiopia showed that adults who perceived that their health status was poor were 76.923 times more likely to utilize the health facility than those who perceived their health status was good (42). Commonly the health status of the respondents had an association with utilization of health care service.

With regarding to barriers to health service utilization various studies reported that long distance to health facility, lack of documentation, self-medication, unable to pay and unavailability of demanding service and drugs were the major ones (12,18,21). In the study that was done by Abdul Nazer Ali et al. in Malaysia to evaluate and analyze the prevalence of self-medication practice among health care provider showed that 77.6 % of the respondents replies that they had practice self-medication to get relief to their pain(47).

Among those determinants of health service utilization self-treatment practice was taken its part. According to study that was conducted by AmarsanaaGan-Yadam, Ryoji Shinohara et al on Factors Associated With Health Service Utilization in Ulaanbaatar, Mongolia: showed that self-medication during illness was 0.4 likely to utilize health service. In another study that were conducted by Daniel F López-Cevallos and Chunhuei Chi more than 20% of the respondents reported that they had self-treatment practice without consultation to health worker (39). Also 12.1% of the respondents in Argentina, 51.63% in Ulaanbaatar, Mongolia and 47.0% in Jimma, south west, Ethiopia had utilized self-medication at the time of illness(18,19,48). Study that was conducted in southwest, Ethiopia self-treatment was practiced by 35.5% in urban and 46.1% among rural households; of those respondents more than half (54.0%) were unsuccessful in terms of curing (12). Self-medication was one of the determinants of health service utilization related with health seeking behavior.

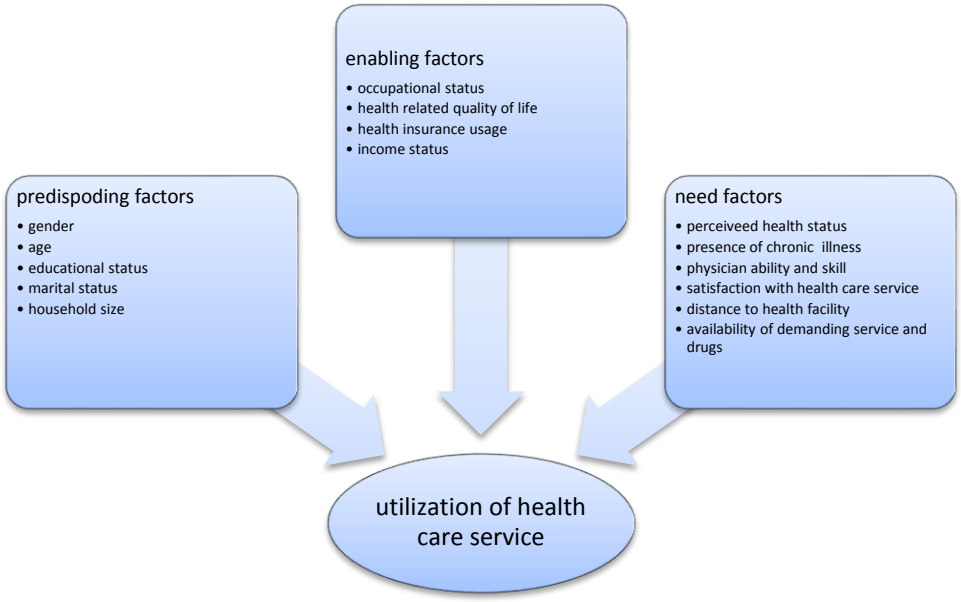

Figure 2.3 Andersen's conceptual models on patterns of health service utilization.

Even though there are some conflicting evidences exist as determinants of health service utilization, the pattern of healthcare service utilization among the general population had determined by predisposing, enabling and need factors. However, the extent and impact of these factors might be differing among health professionals; but there is no tangible evidence to say that. Additionally, other factors like self-medication practice and way of payment to seek health care service vary between the general population and health professionals. Even though studies show that self-medication among health care providers are higher than the general population, studies on its impact on pattern of health service utilization was not done yet among health professionals. So, in this study how this practice will determine health service utilization among health professional will be studied in addition to other factors.

However, the cost of health service had determined the pattern of health service, how the way of payment had determined the health care service utilization of the population was not done much. In this study in addition to the impact of service cost on pattern of health service utilization, how the health care provider pay to seek health care and how this payment mechanism has been determine their pattern of health service utilization will be explore.

Generally, much was not done so far on the overall utilization of health service, especially among health professionals. And also health care service utilization had been determined by the major classification of factors. Such factors are need, predisposing, and enabling factors. Need factors includes perceived health status, presence of chronic disease, physician abilities and skill, satisfaction with health care service, distance to the health facility and availability of demanding service and drugs. Predisposing factors includes health status, gender, Educational status, location of residence, marital status and age of the respondents. Enabling factors includes occupation, income, quality of life related with health care, geographic region and health insurance usage. But the determinant of health care service utilization might be different among health professionals, since, there are others factors that affect health service utilization differ from the community. This paper aims to fill the gap in our current knowledge by exploring pattern of health service utilization among health professionals.

Objective

3.1 General objective

To explore health service utilization and its determinant factors among health professionals, Addis Ababa, Ethiopia, 2018 G.C.

3.2 Specific objective

1. To explore health service utilization among health professionals, Addis Ababa, Ethiopia, 2018 G.C.
2. To examine factors that determines health service utilization among health professionals, Addis Ababa, Ethiopia, 2018 G.C.

Methodology

4.1 Study area

The study was conducted in Addis Ababa, which is the capital city of Ethiopia, with the estimated total population of 5,706,000(49, 50). The city has 10 sub-cities with 116 woredas (districts). In this area there are a total of 33 hospitals with 11 governmental hospital and 22 private hospitals and 95 Health centers. The study area had been selected due to the presence of all types health facility under the health system tier of the nation except health post, the presence of all types of health professionals under the standard of the country (from sub specialist to health extension professional that are equivalent to health extension worker on the other regional health system), and it will takes low cost to conduct this study.

4.2 Study design

Institutional based cross sectional study design was conducted to explore utilization of health service and determinant factors among health professionals, Addis Ababa, Ethiopia, 2018 G.C.

4.3 Study period

The study was conducted from March 2018 G.C to April 2018 G.C.

4.4 Source population

All health professionals currently they are employed in Addis Ababa, Ethiopia.

4.5 Study population

All health professionals that work in the selected health facility were the study subject of this survey.

4.6 Inclusion and exclusion criteria

4.6.1 Inclusion criteria

Health professionals that were permanent staff of the selected health facility within irrespective of the level and type of profession.

4.6.2 Exclusion criteria

Health professionals that were employed as contract, temporary, has incomplete data form and who are employed with in outsourcing system.

4.7 Sampling procedure

4.7.1 Sampling procedure for quantitative

Stratified random sampling technique with three stages was employed to identify the respondents of the study. With this technique first, health facilities was stratified into three such as private (for profit), NGO and governmental. Second, each stratum was stratified hospital, health center and clinic and 20% of health facilities were selected from each stratum by using simple random sampling. Third, size of the respondents in each health facility was determined by proportional allocation. Finally, the ultimate respondent was gained through systematic random sampling technique.

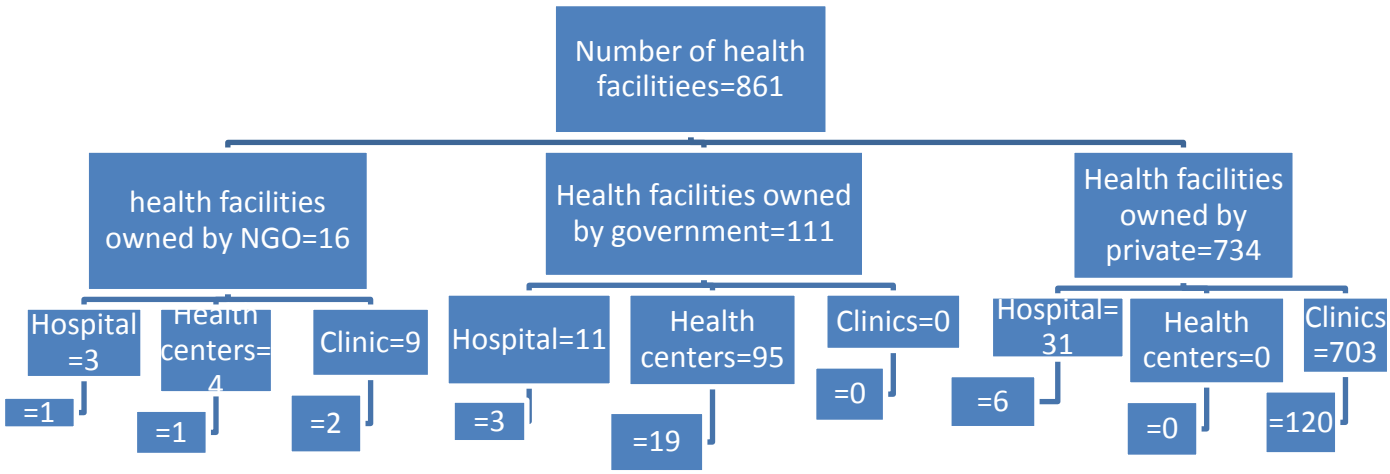

Figure 4.1 Sampling procedure for quantitative

4.7.2 Sampling procedure for qualitative

Selecting for interviews a random sample of provider to describe pattern of health service utilization of health professional; purposeful technique was employed to increase the breadth of understanding afforded by quantitative data and to identify common important pattern that cut across variation.

4.8 Sample size determination

Single proportion formula was employed to calculate the total sample size. Since in the study that was done previously showed that 48.7% of the respondents utilized any type of health care service in the health facility, the proportion (p) will be 0.487. With the confidence level of 95% ($z_2^{\alpha} = 1.96$) and margin of error (d=5% (0.05)) the total sample size was 381.

$$n_1=\frac{\left\{\left(z^{\alpha}/_2\right)^2\right)(p)(1-p)\}}{d^2}=\frac{(1.96^2)(0.487)(0.513)}{0.05^2}=384$$

Since, stratified sampling technique was employed the sample size becomes 576 with design effect of 1.5.

$n_2=n_1*1.5=384*1.5=576$

Then by adding 10% of non-response rate the final sample size was 634.

4.9 Data collection procedure

4.9.1 Quantitative

First, the questionnaire was developed in English and then translated into Amharic. To check for its consistency the questionnaire was back into English by other translator who has the experience of similar works. Before the data collection, the study participants were identified. Then data had been collected by second year MPH students of Addis Ababa University. Before data collection data collectors had taken data collection procedure/techniques from the principal investigators. They were used self-administered standardized questionnaire that are adopted from previous studies to address the necessary information. The principal investigator was supervised

the data collection process by checking completeness of the required type of data and correcting for errors. To address respondents those are absence and busy at the time data collection; data collector was collected data at night and weekends when the flow of patient is relatively low according to the pattern of patient flow within the facility.

4.9.2 Qualitative

Data had been collected by principal investigator using anonymous questionnaire. In depth interview had been held to explore patterns of health service utilization among health professional in Addis Ababa, Ethiopia. In depth interview session was held with respondents in the selected health facilities. To reduce selection bias participants had been selected randomly from health care service provider within the selected health facilities.

4.10 Data quality management

4.10.1 Quantitative data

Training was provided to the data collectors to familiarize with the questionnaire. At the time of data collection data had been checked for completeness and consistency by principal investigator. Appropriately completed questionnaire was coded. Afterward data cleanup had been performed by running frequency of each variable to check for accuracy, outlier and consistencies.

4.10.2 Qualitative data

To keep the quality of data all session of in depth interview had been held by principal investigator then the interview was transcribed the same day as the data collection conducted. Finally, data were transcribed in full text and response in all interview sessions was reviewed and combined to enhance the trustworthiness and increase the credibility of the study. Also to increase trustworthiness triangulation on place and person has been done.

4.11 Data analysis

4.11.1 Quantitative data analysis

After the data collection, the quantitative data were entered into Epi info version 7 and coded then it was exported to SPSS version 20 to cleaned and verified. Following this the data were analyzed using three techniques. First, descriptive statistics such as demographic and socio-economic will be employed to determine some respondents' characteristics. Second, patterns of health service utilization among health professional were explored. Third, factors and barriers that determine their health service utilization were identified. Finally, two variable correlations were established to test the relationship between respondents' pattern of health service utilization and other independent variables at p value of less than 0.05.

4.11.2 Qualitative data analysis

Data were analyzed through statistical package for qualitative data analysis "open code'' version 21. First, listening to taped in depth interview, reading and re-reading was held to be familiarizing with the data. Second, transcription was held and ideas of common concept will be labeled according to the content of interview. Third, quotes cut from the transcription and place alongside the content it represents. Finally, the quotes were being analyzed and reviewed within the content.

4.12 Study variables

4.12.1 Dependent variables

The pattern of healthcare service utilization

4.12.2 Independent variables

Independent variables were selected based on the conceptual model of the study. In this study a total 13 of variable will be considered.

- ✓ age
- ✓ sex
- ✓ marital status

- ✓ profession
- ✓ level of education
- ✓ family size
- ✓ income
- ✓ health insurance
- ✓ self-assessed health status
- ✓ satisfaction with health facility's staff skills and overall health care facility services
- ✓ health service cost

Additionally, self-medication practice and the presence of especial payment system for staffs like free of charge health care service or price discrimination for staff was included.

4.13 Operational definition

Health service: health services in this study include public, private and NGO licensed health institutions (Hospitals, health centers, clinics and private non-for-profit organizations)(2).

Health service utilization: Health services utilization in the study refers to a measure of the health of the population whether the respondent went to health institutions in the last 12 months prior to the study. It is a dichotomous variable based on the survey question. "Did you go for health care in the last 12 months?" Yes = 1 and No = 0(2).

4.14 Ethical consideration

The proposal was submitted to the school of public health research and ethics committee, college of health science of Addis Ababa University for approval and Addis Ababa city administration regional health bureau ethical and research committee (AARHB-ERC). Following the approval Official letter had been written to the concerned bodies by school of Public Health Addis Ababa University and AARHB-ERC. Informed consent was obtained from each respondent immediately before the interview and data collection. When a participant chooses to withdraw from the research process, they were not pressured or coerced in any way to try and stop them

from withdrawing. No personal identifiers were used on data collection forms. The recorded data were not accessed by a third person except the principal investigators and kept confidentiality and anonymous. The study participant was not subject to any harm from this study.

4.15 Dissemination of the study result

The finding of this survey will be communicated to school of public health through soft copy, hardcopy and presentation. It will also communicate to Ethiopia FMOH, Federal health insurance agency, Addis Ababa city administration regional health bureau and each studied health facilities. Attempt will be made to publish the finding of this paper.

5. Results

5.1 Socio- Demographic Characteristics

Out of the predetermined sample size of 634 participants a total of 613 responded with response rate of 96.7%. Out of this 269 (43.9%) were males and 344 (56.1%) were females. Twenty eight (4.6%) respondents were under 24 years of age while 27 (4.4%) were above the age of 45 years of age. About 56 (9.1%) of respondents had second degree and above. Regarding to specific field of study taken by respondents 84(13.7%) are medical doctors.

Table 5.1 Socio economic characteristics of the respondents (N=613)

Variable	description	frequency	percentage
Age	<25 years	28	4.6%
	25-34	430	70.1%
	35-44	128	20.9%
	>45 years	27	4.4%
	Total	613	100.0%
Sex	Male	269	43.9%
	Female	344	56.1%
	Total	613	100.0%
Marital status	single	296	48.3%
	married	281	45.8%
	divorced	23	3.8%
	widowed	13	2.1%
	Total	613	100.0%
Household size	1-4 persons	552	90.0%
	5-8 persons	61	10.0%
	Total	613	100.0%
Educational status	Diploma	162	26.4%
	First Degree	395	64.4%
	Second Degree and above	56	9.1%
	Total	613	100.0%
Specific field of profession	medical doctor	84	13.7%
	nurse	199	32.5%
	public health	119	19.4%
	laboratory	71	11.6%
	pharmacy	61	10.0%
	others	79	12.9%
	Total	613	100.0%
Average monthly income of household	<5000 ETB	188	30.7%
	5000-8000ETB	161	26.3%
	8001-11000 ETB	112	18.3%
	>11000	152	24.8%
	Total	613	100.0%
Health insurance utilization status	Yes	36	5.9%
	No	577	94.1%
	Total	613	100.0%

Concerning respondents' place of work 230 (37.5%) were employed in private health facility, 306 (49.9%) in governmental health facility and 77 (12.6%) works in non-governmental health facility.

When health status was self-assessed by participants of the study, only 136 (22%) perceived their health status to be very good.

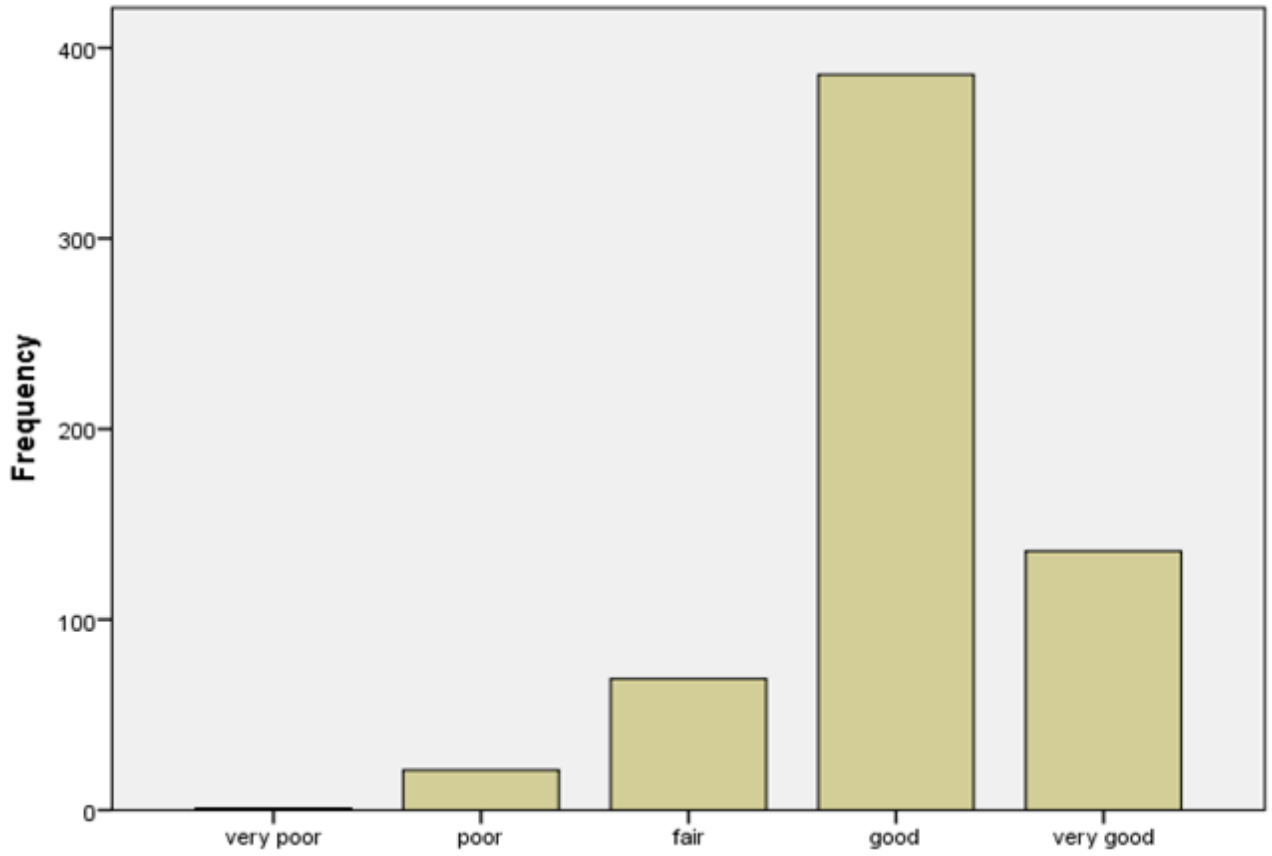

Figure 5.1 Perceived health status of the study participant.

5.2 Utilization of healthcare service

Regarding to preferable health facilities where respondents wants to get health care service, 316 (51.6%) respondents preferred to get the services from hospitals while 100 (16.3%) preferred to get from clinics.

"….when I have faced health related problems…….First, I went to health center… after that I had referred to hospital if the service couldn't provided in the health center level….."

Perceived cost of health care service was rated to be very expensive and very cheap in 149 (23.8%) and 27(4.4%) respectively. Regarding to payment trend to seek health care service within their health facility, 270 (44.0%) of respondents could get free of charge, while 172 (28.1%) through out of pocket payment (OOP) system. While 44 (7.2%) had taken inpatient health service within the last 12 months. Thirty seven (6.0%) of participants had also known chronic illness.

Table 5.2 Utilization of health service among health professionals (N=613)

		Frequency	Percentage
Health service utilization (N=613)	Yes	472	77.0%
	No	141	23.0%
Ownership of facilities visited (N=141)	Governmental	40	28.4%
	Non-governmental	30	21.3%
	Private	71	50.4%
Types of facilities visited (N=141	Hospital	84	59.6%
	Health center	40	28.4%
	Clinic	17	12.1%
Number of visit (N=141)	Once	100	70.9%
	Twice	26	18.5%
	Three times and above	15	10.6%

Concerning episode of illness 396(64.4%) of participants had a history of illness episode within the last 12 months. Health service utilization rate in the previous 12 months was found to be 141 (23%). Of those that had utilized health service 81 (57.15%) utilized within their health facility.

Concerning the payment trends of respondents 60 (42.6%) of respondents had utilized free of charge in their own facility. while 6 (4.3%) utilized through co-payment system. These are supported with the finding from in depth interview. These interviewees were from different health facility among hospitals, health centers and clinic. Three fourth of the respondents had utilized free of charge within their health facility but, others had covered by copayment mechanism.

".....we had been utilized health care service free of charge if it is in our health facility, since we are health professionals. But there are some problems at the time of service utilization. Such as we could utilize health care service if and only if the services were available in our facility, but if it is not available in our health facility and the service is mandatory we must pay through out of pocket mechanism to take health care service from other health facility."

Participant 3

"*I had taken the service most of the times in this clinic and it were satisfactory. The payment was free of charge."*

"It is free of charge to get health service in our facility.....there was no problem related with payment but, the problem was related with supply such as inject able medications that were prescribed couldn't get easily."

Participant 2

".....the payment was very expensive but it had covered by our health facility till 3000 ETB …… but it is expensive for one who can't to pay. But if it is surgical service it will up to 5000 ETB."

Participant-1

Sixty (42.6%) respondent had utilized health care service free of charge within their health facility. Among participants that have utilized health care service through out of pocket payment within their facility, 87.7% of the respondents' utilized health care service within other health facility.

Table 5.3 payment trend to seek healthcare during the last visit versus choice of health facility to seek health care (N=141) among health professionals, Addis Ababa, 2018 G.C.

		Where did you go to take health care? (choice of health facility to seek health care)		Total
		In our health facility	In other facility	
Payment trend on the last episode of illness	free of charge	60	0	60 (42.6%)
	Out of pocket payment	8	57	65 (46.1%)
	Discount system	10	0	10 (7.1%)
	Co-payment	3	3	6 (4.3%)
Total		81	60	141

Considering illness of the participant was not severe is one of the major reasons not visiting health care facility secondary to self-medication (self-treatment) at the time when respondents had develop episode of illness in the last 12 months.

Seventy six (53.9%) of the respondent have a choice of governmental health facility to seek health care service. Also ninety three (66 %) of the study participant had chosen hospital to get health care service.

Table 5.4 choices of health facility and reasons not visiting health facility among health professionals, Addis Ababa, 2018 G.C.

Choice of provider (health facility) (N=141)	percentage
*Based on ownership	
Private	28 (19.9%)
Governmental	76 (53.9%)
Non-governmental	37 (26.2%)
*Based on level of health facility	
Hospital	93 (66.0%)
Health center	34 (24.1%)
Clinic	14 (9.9%)
Reasons not visiting health facility (N=255)	
Lack of documentation	6 (2.35%)
Self-medication	185 (72.55%)
Unable to pay	4 (1.57%)
Considering illness was not severe	60 (23.53%)

Respondents had received health care service first from their own health facility then referred to other health facility. In governmental facility they had referred from their health facility to hospital then they had taken health care service free of charge too. The payment mechanism is different among private, governmental and NGO health facilities. Most of the respondents in this study from governmental health facility had taken health care service within their health facility free of charge, but from NGO had used specific amount of money per year.

"…while I did not get laboratory service and drugs (medication) in that facility, I would refer to private facility to get health service."

Participant-3

"*….if the service is could not provide in this facility, we would go to health facility like hospital which has an agreement with our facility. It is covered up to 3000 ETB."*

Participant-2

"*personally there is no any problem to take health care from health center…. but sometimes there is no laboratory service like blood chemistry, EKG in health center…. so as a health*

professional we know the available health care service in health center so I prefer to take health care in hospital."

Participant-1

5.2 Factors associated with health service utilization

Bivariate analysis and selection of variable for multivariate analysis

According to the chi-square test, there were some significant relationship between some independent variables and health service utilization, except sex, marital status, specified field of study, perception on the cost of health care service and family size. It could be seen that young participant ($p=0.017$), diploma ($p=0.001$), having known chronic illness ($p<0.001$), using of health insurance ($p<0.001$) were more likely to utilize health care service.

Table 5.5 some independent variable and health service utilization of the participant (N=613)

	Variables	Category	Did you go for health care in the last 12 months?		X^2	P value
			Yes	No		
1	Age	<25 years	11 (7.8%)	17 (3.6%)	10.176	0.017
		25-34	94 (66.7%)	336 (71.2%)		
		35-45	25 (17.7%)	103 (21.8%)		
		>45 years	11 (7.8%)	16 (3.4%)		
2	sex	Male	58 (41.1%)	211 (44.7%)	0.561	0.454
		Female	83 (58.9%)	261 (55.3%)		
3	Marital status	Single	71 (50.4%)	225 (47.7%)	6.894	0.75
		Married	62 (44.0%)	219 (46.4%)		
		Divorced	2 (1.4%)	21 (4.4%)		
		Widowed	6 (4.3%)	7 (1.5%)		
4	Educational status	Diploma	54 (38.3%)	108 (22.9%)	13.275	0.001
		First degree	76 (53.9%)	319 (67.6%)		
		Second degree and above	11 (7.8%)	45 (9.5%)		
5	Specific field of study	Medical doctor	20 (14.2%)	64 (13.6%)	10.106	0.072
		Nurse	54 (38.3%)	145 (30.7%)		
		Public health	15 (10.6%)	104 (22.0%)		
		Laboratory	18 (12.8%)	53 (11.2%)		
		Pharmacy	13 (9.2%)	48 (10.2%)		
		Others	21 (14.9%)	58 (12.3%)		
6	Having any known chronic illness?	Yes	24 (17.0%)	13 (2.8%)	38.964	<0.001
		No	117 (83%)	459 (97.2%)		
7	Do you have any type of health insurance?	Yes	21 (14.9%)	15 (3.2%)	26.957	<0.001
		No	120 (85.1%)	457 (96.8%)		
8	Satisfaction on overall health facility	Very satisfied	30 (21.3%)	94 (19.9%)	16.259	0.003
		Somewhat satisfied	71 (50.4%)	294 (62.3%)		
		neutral	22 (15.6%)	49 (10.4%)		
		Somewhat dissatisfied	5 (3.5%)	22 (4.7%)		
		Very dissatisfied	13 (9.2%)	13 (2.85)		
9	Perception on the cost of health care service	Very expensive	32 (22.7)	114 (24.2)	2.510	0.643
		expensive	29 (20.6)	86 (18.2)		
		It is ok	45 (31.9)	153 (32.4)		
		cheap	26 (18.4)	101 (21.4)		
		Very cheap	9 (6.4)	18 (3.8)		
10	Availability of free health care service within their health facility	Yes	95 (67.4%)	271 (57.4%)	4.477	0.034
		No	46 (32.6%)	201 (42.6%)		
11	Category of resp. health status (perceived health status)	healthy	99 (70.2%)	423 (89.6%)	58.830	<0.001
		fair	23 (16.3%)	46 (9.7%)		
		unhealthy	19 (13.5%)	3 (0.6%)		
12	Average monthly income of households	<5000 ETB	54 (38.3%)	134 (28.4%)	7.038	0.071
		5000-8000ETB	30 (21.3%)	131 (27.8%)		
		8001-11000 ETB	20 (14.2%)	92 (19.5%)		
		>11000	37 (26.2%)	115 (24.4%)		
13	Satisfaction on skill and competency of the health care provider.	satisfied	106 (75.2%)	411 (87.1%)	12.552	0.002
		Neutral	23 (16.3%)	45 (9.5%)		
		Not satisfied	12 (8.5%)	16 (3.4%)		
14	Household size	1-4	122 (86.5%)	430 (91.1%)	2.538	0.111
		5-8	19(13.5%)	42(8.9%)		

Multivariate analysis

After controlling for confounders on multivariate logistic regression, satisfaction on skill and competency of health care provider, having unhealthy perceived health status and having known chronic illness were found to have a statistically significant association with utilization of health care service. Participants who were satisfied with skill and competency of health care provider were 2.265 more likely utilize health service than not satisfied (AOR=2.27, 95% CI: 1.112, 5.627). Respondents who perceived that their health status was healthy were 0.035 times less likely utilized health service than unhealthy (AOR=0.035, 95% CI: 0.009, 0.132). Also participants who have known chronic illness were 0.235 less likely utilized health services than who has chronic illness (AOR= 0.235, 95% CI: 0.098, 0.566).

Table 5.6 factors associated with health service utilization (N=613)

	Variables		Health service utilization		COR(95% CI)	AOR(95% CI)	P-value
			Yes	No			
1	Health insurance usage	Yes	21	15	0.188 (0.094, 0.375)	0.212 (0.094,0.478)	< 0.001
		No	120	457	1		
2	Age	<25 years	11	17	1.062 (0.361, 0.312)	0.427 (0.102,1.784)	0.105
		25-34	94	336	2.457 (1.103, 5.475)	1.143 (0.102,1.784)	
		35-44	25	103	2.832 (1.171, 6.852)	1.543 (0.472,5.044)	
		>45 years	11	16	1		
3	Chronic illness status	Yes	24	13	0.138 (0.068,0.279)	0.235 (0.098,0.566)	0.001
		No	117	459	1		
4	Satisfaction on skill and competency of healthcare provider	satisfied	106	411	2.908 (1.335,6.333)	2.265 (1.112,5.627)	0.048
		neutral	23	45	1.467 (0.596,3.614)	1.194 (0.422,3.381)	
		not satisfied	12	16	1		
5	Perceived health status	healthy	99	423	1		<0.001
		fair	23	46	0.468 (0.271,0.808)	0.536 (0.286,1.004)	
		unhealthy	19	3	0.037 (0.011,0.127)	0.035 (0.009,0.132)	
6	Specific field of study	Medical doctor	20	64	1		0.076
		nurse	54	145	0.839 (0.465,1.516)	1.201 (0.599,2.405)	
		public health	15	104	2.167 (1.035,4.534)	2.766 (1.204,6.357)	
		laboratory	18	53	0.920 (0.442,1.916)	1.549 (0.634,3.787)	
		pharmacy	13	48	1.154 (0.523,2.548)	2.105 (0.830,5.341)	
		others	21	58	0.863 (0.425,1.752)	0.952 (0.434,2.091)	
7	Educational status	Diploma	54	108	0.489 (0.234,1.020)	0.927 (0.352,2.591)	0.837
		First Degree	76	319	1.026 (0.507,2.077)	1.115 (0.457,2.717)	
		Second Degree and above	11	45	1		

A multinomial logistic regression was performed to model the relationship between predictors and choice of level of health facility to seek health care service. The p-value <0.05 criterion of statistical significance was employed for all cases. As shown in the table 5.7 below perceived health status, having known chronic illness and perception on cost of healthcare service contributes on choice of healthcare facility to seek healthcare service.

Respondents perceptions of having poor health status were 0.289 times likely chosen health center than private clinic to seek health care service (AOR=0.289, 95% CI: 0.085, 0.981). But participants having known chronic illness were visited 13.6 more likely chosen health center than private clinic to get health care service (AOR=13.6, 95% CI: 1.161, 159.532). Also study participants perception of high cost were 7.92 visited health center than private clinic (AOR=7.92, 95% CI; 2.301, 27.141). But satisfaction on skill and competency of health care provider, level of education, Availability of free health care package within their facility and family size has no significant association with choice of health facility.

Table 5.7 Multinomial logit of choice of different level of health facility (clinics are the default group)

Respondents choice		X^2	p-value	OR	95% Confidence Interval for OR	
					Lower Bound	Upper Bound
	**Choice1 Hospital Intercept	.000	.999			
	Satisfaction on skill and competency of health care provider	2.339	.126	.429	.145	1.269
	Perceived health status	.890	.346	.616	.226	1.685
	Having known chronic illness	1.015	.314	2.382	.440	12.902
	Level of education	.644	.422	1.589	.513	4.918
	Availability of free health care package within their facility	.017	.897	1.136	.165	7.818
	Family size	.193	.660	.691	.133	3.590
	Perception on cost of health care service	3.522	.061	2.831	.955	8.396
	**Choice 2 Health center Intercept	.570	.450			
	Satisfaction on skill and competency of health care provider	2.990	.084	.321	.089	1.164
	Perceived health status	3.963	.047	.289	.085	.981
	Having known chronic illness	4.322	.038	13.611	1.161	159.532
	Level of education	.697	.404	.544	.130	2.270
	Availability of free health care package within their facility	.772	.380	.256	.012	5.348
	Family size	.079	.778	.747	.098	5.699
	Perception on cost of health care service	10.782	.001	7.902	2.301	27.141

6. Discussion

Ill health of health care workers produced morbidity, absenteeism, decreased the quality of the service provision and satisfaction on their job. One of the major determinants of these consequences is their pattern of health care service utilization. Since health professional to population ratio in our country is low as similar as other developing nations, knowing the pattern of health service utilization used as an input to reduce problems related to human resource for health through improving HRQOL among health care workers. This health facility based study aims to address the gap in our current knowledge by exploring pattern of health service utilization and its determinant factors among health professionals.

In this study revealed that health service utilization rate in the previous 12 months was found to be 23%. The magnitude of health service utilization was different from previous findings. The finding is larger when compared with the national level utilization rate which is 12 % (22). This might be due to high familiarization to health care service among health provider than the general population. The finding was lower than studies that were done in Dessie city and Jimma. On the study that was conducted in Dessie, North East Ethiopia the overall health service utilization was found to be 41.8%.(42) And also on the other study that was conducted in Jimma Zone, south west Ethiopia regarding to the utilization of health service 48.7% of the respondents had visited health care facility including the traditional medicine in the previous 12 months (19). This might be due to high level of self-medication practice which is more than 70% of respondents with episode of illness utilize medication themselves without consulting other health care provider.

In this study predisposing factors such as age, gender, educational status, marital status and household size has no significant association with health service utilization among respondents. Study that was done in Vietnam revealed that being young determines the utilization of health healthcare service positively (21). In the study that was conducted by Bach Xuan Tran et al. in Vietnam focused on the assessment of health-related quality of life (HRQOL), health status and healthcare access and utilization showed that respondents the older they were the less they used outpatient service (21). But on the other hand studies that were conducted in various studies

showed that being young determine the utilization of health service negatively (18, 36,37).Studies that were done in Ethiopia showed that health service utilization also determined by those predisposing factors.In the study that was done in Dessie showed that female were 4.071 times more likely to utilize modern health service than male (42). In the study that was done in Jimma Zone male were 0.46 times likely to use the service than female.Also married respondents were 2.2 times more likely to utilize than unmarried ones (19). This might be there is no difference of empowerment with these socio economic status among health care provider like other part of the community.

The enabling factor includes that support an individual's decision to seek as health service, such as occupation and income. Regarding to income status of the household; it has an association with utilization of health care service (11, 12, 18, 19, 21, 23, 37, 41-44). But its impact could be observed in three parts; first, it impact on the preference between private and government health facility. Second, income status has an impact on the overall utilization of health care service. Third, the impact of household income had been different based on the level of health care facility and type of health service offered. But in this study enabling factor such as income and occupational status with specific field of study had no significant association with health service utilization. Studies that were conducted in Bangladesh, Iran and Vietnam showed that households with high level of income preferred private health facility than government (community) health facility (21, 37, 41).As income of the household increased, the utilization of health care service increased too (11, 12, 18, 19, 21, 37, 41-44). Various study showed that an obvious inequity in the distribution of health care utilization across the socio-economic groups. Study that was done by AmarsanaaGan-Yadam, Ryoji Shinohara et al; in Ulaanbaatar, Mongolia, to examine pattern of health service utilization showed that 44.1% of respondents had visited a physician during the previous 12 months. It also showed that respondent with low income status was 0.5 times likely utilization of health service compared with other income of the respondents (18).According to studies that were done in Ethiopia; income was one of the determinants of health service utilization. Regarding to household income, study that was done in Dessie, north east, Ethiopia showed that adult above the poverty line were 4.026 times more likely to use the health service as compared to those below the poverty line (42). Also households with monthly income greater than 1,170 birr were three times more likely to seek

health care as completed to their counterpart (12). Reasons of this variation of health service utilization based on income status of the participants might be almost half of the respondent could get free of charge health care service within their own health facility

According to Andersen's model the need factor includes perceived and evaluated status (34,35). In this study need factors such as satisfaction on skill and competency of health care provider; having unhealthy perceived health status and having known chronic illness were found to have a statistically significant association with utilization of health care service. In this study Participants who were satisfied with skill and competency of health care provider were 2.265 more likely utilize health service than not satisfied (95% CI: 1.112, 5.627). This study had been supported by studies that were done in Mongolia and Bangladesh showed that physician ability and skill had determined utilization of health care service (3,4).This due to the fact that every person who attend health facility need to get quality health service. Quality health service also determined by the skill of health care provider so, one who are satisfied with this skill of respondent they had attend health service repeatedly at the time of illness.

Respondents who perceived that their health status was healthy were 0.035 times likely utilized health service than unhealthy (95% CI: 0.009, 0.132).Under the Study that was done by GetawWalle and MihretTeshome in Dessie, north east, Ethiopia showed that adults who perceived that their health status was poor were 76.923 times more likely to utilize the health facility than those who perceived their health status was good (42).

Also in this study; participants who have known chronic illness were 0.235 less likely utilized health service than who has no chronic illness (95% CI: 0.098, 0.566). Result in this study revealed that it is opposite to study that was done previously on the general population. According to the study that was conducted in Switzerland showed that patients with two or more than two disease were 5.6 times more likely to visit hospital for health care service (36).Since in this study participants were health professionals once they know their illness they might be utilized medication by themselves.

In this study respondent who had perceived the cost of health care service was very cheap utilized health center 7.9 more likely than clinic. This might be in our situation the cost of private health facility is higher than governmental health facility. Also respondents who had known chronic illness utilized health center 13.6 times more likely than clinic. This could be due to reduce the cost of health care during follow up visits.

6.1. Strength and limitation of the study

6.1.1 Strength of the study

- ✓ Both qualitative and quantitative methods were used increasing validity of the study.
- ✓ The study used second years MPH students as a data collector which results a high quality data.
- ✓ To minimize selection bias respondents were selected from each stratum proportionally.

6.1.2 Limitation of the study

- ✓ There is a possibility of social desirability bias. For example health professionals who work in hospital might be dislike to visit lower health level like health center and clinics.
- ✓ The second limitation worth mentioning is recall bias since evaluation of self reported behavior patterns was retrospective. We used 12 months of period of recalls that has been used in other similar studies. Similarly, prevalence of illness episode might be underestimated due to recall bias.

6.2. Conclusion and recommendation

6.2.1 Conclusion

In conclusion the level of health services utilization rate was found to be low. Having chronic health problem and respondents' perception of having poor health status was found to have statistically significant association with utilization. The results from both bivariate and multiple analyses confirmed that having poor perceived health status and having chronic health problem the significant Predictor variable for health service utilization. Therefore, it needs to pay attention to person who has known chronic illness and poor health status.

Also related with the cost of health service, respondents' perception on health service cost determines the choice of health care facility to seek health care service. The results from multinomial logistic regression analyses confirmed that the cost of health service determines the preference of health facility to take health care service.

There was no uniform payment trend to utilize health care service employees among private, governmental and NGOs.

6.2.1 Recommendations

Efforts have to be made to increase utilization of modern health services through establishing uniform payment trend among health facilities for health work forces. Our country, Ethiopia should develop policies that will clarify how health professional utilize health care service within their facility.

More efforts should be given to improve health workforce capacity building. In addition, it needs to pay attention and organize awareness rising campaigns for solving demand-side challenges such as self-medication, awareness and understanding about social health insurance.

In addition to that NGO health facilities should prepare not only specific amount of money of payment also should prepare specific health care service provided to their health care workers with in their facility. Private health facilities should allow their health care providers to utilize health care service or assign specific amount of money to utilize annually. Also government should assign specific service with specific amount of money to utilize within a budget year.

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ANNEX

1. Participant information sheet

Title of the study: - patterns of health care service utilization and its determinant factors among health professional, Addis Ababa, Ethiopia, 2018 G.C

I would like to invite you to take part in a research study. Before you decide need to understand why the research is being done and what would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or if you would like more information. Take time to decide whether or not to take part.

The purpose of this study is to explore the pattern of health care service utilization and to find out its determinant factors among health professionals, in Addis Ababa, Ethiopia, 2018 G.C. you are selected randomly among staffs whose experience is one year and above and the permanent staffs of this facility to obtain relevant information about your utilization pattern of health care service and to find out what factors are determined your health care service utilization.

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign consent form. You can withdraw at any time without giving a reason and without it affecting any benefit that you are entitled to.

You will be asked to complete paper based questionnaire which we estimate takes you 15 minute. You may wish to agree to follow up interview to find out more about your pattern of health care service utilization. Please answer the question in the questionnaire. There is no other commitment or lifestyle restriction associated with participating. Participating in the research is not anticipated to cause you any disadvantages or discomfort.

Whilst there are no immediate benefits for those people participating in the project; it is hoped that this work will have beneficial impact on how barrier to health care service utilization will be alleviated. If you have any complaint about the project in the first instance you can contact the

principal investigators. If you feel your complaint has not been handled to your satisfaction you can contact Addis Ababa University, school of public health.

All the information that we collect about you during the course of the research will be kept confidential. You will not be able to identified or identifiable in any report or publications. Your institution will also not be identified or identifiable. Data collected may be shared in an anonymity form to allow reuse by research team and other parties. These data with anonymity will not allow any individual or their institution to identified or identifiable.

Result of the research will be published. You will not be identified in any report or publication. Your institution will not be identified in any report or publication. If you wish to be given a copy of any report resulting from the research, please ask us to put you on your our circulation list.

This project has been approved by Addis Ababa University, college of health science, school of public health research scientific and ethical committee and AAHR-ERC.

Contact for further information

MIRAJ CHERU
Tel. 09-13-04-66-28
E-mail:- miraj5bira@gmail.com

2. Consent for Participation in Interview

I volunteer to participate in a research project conducted by MirajCheru from Addis Ababa university school of public health. I understand that the project is designed to gather information about health service utilization. I will be one of approximately 30 people being interviewed for this research.

1. My participation in this project is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation at any time without penalty.

2. I understand that most interviewees in will find the discussion interesting and thought-provoking. If, however, I feel uncomfortable in any way during the interview session, I have the right to decline to answer any question or to end the interview.

3. Participation involves being interviewed by researchers from Addis Ababa university school of public health. The interview will last approximately 30-45 minutes. Notes will be written during the interview. An audio tape of the interview and subsequent dialogue will be making. If I don't want to be taped, I will not be able to participate in the study.

4. I understand that the researcher will not identify me by name in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions.

5. Administrators from my facility will neither be present at the interview nor have access to raw notes or transcripts. This precaution will prevent my individual comments from having any negative repercussions.

7. I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

8. I have been given a copy of this consent form.

_____ _____

My Signature Date

_____ _____

My Printed Name Signature of the Investigator

3. Questionnaire

***Direction:* -** Circle the number which have appropriate answer related with the question, and write the appropriate answer in the space provided.

1.	What is your age?	…….. years
2.	What sex are you?	1. male 2. female
3.	Marital status	1. single 2. married 3. divorced 4. widowed
4.	What is your current level of education?	1. diploma 2. bachelor degree(BSC) 3. masters degree(MSC) 4. specialty 5. doctor of philosophy(PhD)
5.	In which classification does your place employment assign?	1. private organization 2. government organization 3. non-governmental organization(NGO) 4. Other……..
6.	How many live in your household? (number of persons in your family)	…….
7.	How much is it your house hold average monthly income?	……ETB
8.	Did you have an episode of illness within the last 12 months?	1. yes 2. no

9.	Did you go for health care in the last 12 months?	1. yes 2. No
10.	If you had used health service, how many times did you see or talk to medical doctors or health profession to health care?	1. one time 2. two times 3. three times 4. four times and above
11.	Where did you go to seek healthcare service? (in terms of ownership)	1. private 2. governmental 3. NGO
12.	Where did you to seek healthcare service? (in terms of level of facility)	1. hospital 2. health center 3. clinic
13.	Did you take healthcare service within your own health facility or others?	1. in our own health facility 2. in others health facility

14.	What is your occupation? (specific field)	1. medical doctor 2. nurse 3. public health 4. laboratory 5. pharmacy 6. Other ……
15.	Do you have any known chronic illness?	1. yes 2. no
16.	If you have any known chronic illness, how many known chronic illness do you have?	1. one 2. two 3. three 4. four and above
17.	Do you have any type of health insurance?	1. yes 2. no
18.	Have you been admitted to a health facility for any reason during the last 12 months?	1. yes 2. No
19.	If you had not used health service, what was your main reason not visiting a medical doctor or health professionals?	1. distance to health facility 2. lack of documentation 3. self medication (self prescription) 4. unable to pay 5. unavailability of drugs and service 6. considering the illness was not severe 7. being health 8. Others …….
20.	How did you pay to seek health care within your facility?	1. fee waiver (free of charge) 2. out of pocket payment 3. discount system 4. credit system 5. co-payment 6. Other …….

21.	Where did you get medical treatment most of the time in the past 12 months? (in terms of ownership)	1. private health facility 2. non-governmental health facility 3. governmental health facility 4. Other……..
22.	Where did you get medical treatment most of the time in the past 12 months? (in terms of level)	1. hospital 2. health center 3. clinic 4. Others……..
23.	How would you rate your level of health?	1. very bad 2. bad 3. fair 4. good 5. very good
24.	How satisfied are you with skill and competency of the staff of the health facility?	1. very satisfied 2. somewhat satisfied 3. neutral 4. somewhat dissatisfied 5. very dissatisfied 6. not sure
24.	How satisfied are you with the overall health care facility?	1. very satisfied 2. somewhat satisfied 3. neutral 4. somewhat dissatisfied 5. very dissatisfied 6. not sure
25.	How do you perceive the cost of health service to you?	1. very expensive 2. expensive 3. it is ok 4. cheap 5. not sure 6. do not pay (write your reason)
26.	Within your health facility, is there any free health care service package for employees?	1. yes 2. No
27.	If there is a package, Mark() the service which is included in this package	1. physical diagnosis/doctors visit□ 2. laboratory service□

3. pharmaceutical service□
4. dialysis□
5. cosmetics denture□
6. Others ……

28. Do you meet a physician before getting sick?
    1. yes
    2. No

4. In-depth Interview Guiding Questions

Date :_____(dd-mm-yy)
Interviewer ……. Start time: - ……
Guides and Probes

Introduction and Background information

- Introduction (Probe: study purpose, background information)
- How would you rate your current health?
- Have you ever been ill in the past 12 months?
- Did you seek any treatment in the past 12 months?
- If yes, where did you seek treatment?

Theme1. Living condition

- What are some barriers that you face in seeking care at health care facility? (Probe: gender, income, age, marital status, education, finance, or residence location)
- What is your biggest concern about your health?

Theme2. Life styles and health behavior

- Do you meet a physician before getting sick?
- What do you do when you get sick? For whom or where do you apply first?
- Within the last 1 month, have you taken any medicine or pills? If yes, is it prescribed by your physician?
- Do you get instruction and advice on your health situation from medical doctors or health professional?

Theme3. Health service satisfaction

- Were you able to get all the treatment they needed? If no, why not?
- How satisfied are you with the skill and competency of the staff of the hospital/health facility?
- What does treatment cost? Are you satisfied with treatment cost?
- How do explain the pattern of payment to get health care service in your facility?
- How did you feel when you were at the other clinic and hospital?
- How long do you have to wait at the clinic before seeing the doctor?

- How about the health insurance system? What kind of medical insurance coverage do you have? Can you get benefits from the health insurance scheme?

Conclusion

- What do you think that the most common reason for not going to the hospital and meet doctor is?
- What needs to be done to empower health professionals in improving their health, local situation and attending health care facility as required?
- Are there any other comments you would like to make?

End time ……..

5. Participant information sheet Amharic version

<u>የጥናታዊ ፅሁፍ ርዕስ</u>፡- የጤና ባለሞያዎች የጤና ወይም ህክምና አገልግሎት አጠቃቀም እና በአጠቃቀም ወቅት የሚያጋጥማቸው ተግዳሮት ኢ.አ 2010 ዓ.ም

/pattern of health care service utilization and its determinant factors among health professionals, A.A 2018 GC

በዚህ ጥናታዊ ፅሁፍ ላይ እንዲሳተፉ እየጋበዝኩኝ ለመሳተፍ ከመወስንዎ በፊት ለጥቂት ደቂቃ ያህል ይህንን የጥናታዊ ፅሁፍ መረጃ መስጫ ቅፅ እንዲያነቡ እና ጥናታዊ ፅሁፉ ለምን እንደሚሰራ እና የእርሶ ተሳትፎ ምን ያህል እንደሆነ እንዲገነዘቡ እያሳሰብኩኝ ማንኛውም ጥያቄ ወይም ከዚህ ጥናታዊ ፅሁፍ ጋር የሚገናኝ የሚያስፈልግዎ መረጃ ካለ ጥያቄዎችን ተቀበዬ ምላሽ ለመስጠት ዝግጁ መሆኔን እገልፃለሁ፡፡

የዚህ ጥናታዊ ፅሁፍ አላማ የጤና ባለሞያዎች የጤና /ህክምና/ አገልግሎት እንዴት እንደሚጠቀሙ ለማወቅና በአጠቃቀም ወቅት የሚያጋጥማቸውን ተግዳሮቶች ለይቶ ለማውጣት ሲሆን እርሶም የተመረጡት በዘፈቀደ/randomly/ መሆኑን እና ስለእርሶ የጤና ወይም ህክምና አገልግሎት አጠቃቀም ሁኔታ እና በዚያ ወቅት ያሉትን ተግዳሮቶች ለመለየት መሆኑን እገልፃለሁ፡፡

እርሶም በዚህ ጥናት ላይ ለመሳተፍ ፍቃደኛ ከሆኑ በዚህ መጠይቅ ላይ ባለው የፍቃደኝነት ማረጋገጫ ቅፅ ላይ እንዲፈርሙልኝ እየጠየኩኝ ነገር ግን በፈለጉት ጊዜ በምንም አይነት ምክያት ማቋረጥ የሚችሉ መሆኑንና ይህ መጠይቅ እስከ 15 ደቂቃ የሚፈጅ እንደሆነ እና በዚህ ጥናታዊ ፅሁፍ ላይ በመሳተፍዎ የሚያጡት ምንም አይነት ጥቅም አለመኖሩን እንዲሁም ምንም እንኳን በዚህ ጥናታዊ ፅሁፍ ላይ የሚሳተፉ ሰዎች በቀጥታ የሚያገኙት ጥቅም ባይኖርም ነገር ግን ይህ ጥናት በጤና ወይም በህክምና አገልግሎት አጠቃቀም ዙሪያ ያለውን ተግዳሮቶች ለማስወገድ እንደግብአት ያገለግላል ብዬ ተስፋ የማደረግ መሆኔን እየገለፅኩኝ ሁሉንም ጥያቄዎች በጥንቃቄ እንዲመልሱልኝ በትህትና እጠይቃለሁ፡፡

እንዲሁም ከእርሶ የሚሰበሰበው ማንኛውም መረጃ ሚስጥራዊነቱ እንደሚጠበቅ እና የእርሶም ሆነ የድርጅቱ ማንነት በማንኛውም ሕትመትም ሆነ ሌላ ሪፖርት ላይ የማይገለፅ መሆኑን እየገለፅኩኝ ነገር ግን የእርሶን መረጃ ማንነቶን በማይገልፅ መልኩ በጥናት ቡድን ውስጥ ደጋግመን ልንጠቀምበት እንደምንችል አሳውቃለሁ፡፡

ከጥናታዊ ፅሁፉ ጋር የተያያዘ ምንም አይነት ጥያቄም ሆነ ተቃውሞ ካሎት መጀመሪያ ጥናታዊ ፅሁፍን የሚያደረገውን ሰው መጠየቅ እንደሚችሉና ነገር ግን አጥጋቢ ምላሽ ካላገኙ አዲስ አበባ ዩንቨርስቲ የህብረተሰብ ትምህርት ቤትን ማነጋገር እንደሚችሉ እገልፃለሁ፡፡

የዚህ ጥናታዊ ፅሁፍ ሊታተም የሚችል መሆኑን እና በዚህ ጥናታዊ ፅሁፍ ላይ የእርሶ እና የድርጅቶ ማንነት የማይገለፅ መሆኑን እየገለፅኩኝ የዚህን ጥናታዊ ፅሁፍ ውጤት በማንኛውም መልኩ ማግኘት እንደሚችሉ አሳውቃለሁ፡፡

ይህ ጥናታዊ ፅሁፍ በአዲስ አበባ ዩንቨርስቲና በአዲስ አበባ ከተማ አስተዳደር ጤና ቢሮ የስነ-ምግባርና የጥናታዊ ፅሁፍ ኮሚቴ ያረጋገጠ መሆኑንን እገልፃለሁ፡፡

አድራሻ፡- ምዕራጅ ቸሩ
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6. Consent for Participation in Interview Amharic version

ይሄ ጥናታዊ ፅሁፍ የተዘጋጀው በጤና አገልግሎት አጠቃቀም ዙሪያ ያለውን መረጃ ለመሰብሰብ የተዘጋጀ መሆኑን እየተረዳው እኔም መዚህ ጥናታዊ ፅሁፍ ላይ ከሚሳተፉ ሰዎች አንዱ መሆኔን እና ይህም ጥናታዊ ፅሁፍ በአዲስ አበባ ዩንቨርስቲ የህብረተሰብ ጤና ትምህርት ቤት ተማሪ የሆነው ምዕራጅ ቸሩ መሆኑን አውቄ ከዚህ ቢታች ያሉትን ቅድመ ሁኔታዎች ከተሟሉ ለመሳተፍ ፍቃደኛ መሆኔን እገልፃለሁ፡፡

1. በዚህ ጥናታዊ ፅሁፍ ላይ ለመሳተፍ ፍቃደኛ መሆኔን እየገለፅኩኝ ነገር ግን ለመሳተፍ ምንም አይነት ክፍያ የማይከፈለኝ መሆንና በአስፈላጊው ሰአት ከተሳትፎዬ ማቋረጥ ሆነ ሙሉ ለሙሉ መውጣት የምችል መሆኑን
2. የዚህ ጥናታዊ ፅሁፍ አነሳሽ እና አስደሳች ይሆናል ብዬ እየጠበኩኝ ነገር ግን በመጠይቁ ውስጥ ያሉት ጥያቄዎች ምችት የማይሰጠኝ ከሆነ ያለመመለስ ወይም የማቋረጥ መብት ያለኝ መሆኑን
3. ይህ መጠይቅ ከ15-20 ደቂቃ ሊፈጅ እንደሚችልና ከኔ የሚገኘው መረጃ ሚስጥራዊነቱ የሚጠበቅ እንዲሁም በምንም አይነት የኔን ማንነት ወይም ስም የማይገልፅ መሆኑን እና
4. ስለጥናታዊ ፅሁፉ ያለውን መግለጫ አንብቤ የተረዳሁኝና በጥናታዊ ፅሁፉ ላይ ለመሳተፍ ያለኝን ፍቃደኝነት በፊርማዬ አረጋግጣለሁ፡፡

ፊርማ ---------- ቀን ----------
የአጥኚው ስም ---------- የአጥኚው ፊርማ ----------

7. Questionnaire Amharic version

መመሪያ:ተገቢውን መልስለተገቢው ጥያቄ ከተዘረዘሩለት አማራጮች ውስጥ በማክበብ ወይም በተዘጋጀው ክፍትቦታ በመፃፍ ይመልሱ

1.	ዕድሜ	..... ዓመት
2.	ፆታ	1. ወንድ 2. ሴት
3.	የጋብቻሁኔታ?	1. ያገባ 2. ያላገባ 3. አግብታ የፈታች/አግብቶ የፈታ 4. አግብታ የሞተባት/አግብቶ የሞተበት
4.	የትምህርትደረጃ?	1. ዲፕሎማ 2. ዲግሪ 3. ማስተርስዲግሪ 4. ስፔሻሊስት እና ከዚያም በላይ 5. ፒ. ኤች.ዲ
5.	የስራሁኔታ?	1. የግል ድርጅት ተቀጣሪ 2. የመንግስት ድርጅት ተቀጣሪ 3. መንግስታዊ ያልሆኑ ድርጅት ተቀጣሪ 4. ሌላ ካለ (ይጠቀስ).....
6.	የቤተሰብ አባላት ብዛት?	.....
7.	ወርሃዊ አማካይ የቤተሰብ ገቢ (ብር)?	.....ብር
8.	የስራአይነት?	1. ሜዲካል ዶክተር 2. ነርስ 3. ጤናመኮንን/ ፐብሊክ ሄልዝ ፐሮፌሽናል 4. ላብራቶሪ ባለሙያ 5. የፋርማሲ ባለሙያ 6. ሌላ ካለ ይጥቀሱ .....
9.	ለረጅምጊዜየቆየየጤናእክልገጥሞትያውቃል?	1. አዎ 2. አያውቅም

10.	ለረዥም ጊዜ የቆየ የጤና እክል ገጥሞት የሚያውቅ ከሆነ ምን ያህል የጤና እክሎችነበሩ?	1. አንድ 2. ሁለት 3. ሦስት 4. አራት እና ከዚያ በላይ
11.	የጤና መድህን ተጠቃሚ ነዎት?	1. ተጠቃሚ ነኝ 2. ተጠቃሚ አይደለውም
12	ባለፉት 12 ወራት ውስጥ የጤና እክል ገጥምዎት ያውቃል?	1. አዎ 2. አያውቅም
13	በመጨረሻ ጊዜ ህመም ሲያጋጥምዎ የትኛውን የጤና ተቁም ነበር የመረጡት? (ከባለቤት አንጻር)	1. የግል የጤና ተቋም 2. መንግስታዊያልሆነ የጤና ተቋም 3. የመንግስት የጤና ተቋም
14	በመጨረሻ ጊዜ ህመም ሲያጋጥምዎ የትኛውን የጤና ተቁም ነበር የመረጡት? (ከጤና ተቁም ደረጃ አንጻር)	1. ሆስፒታል 2. የጤናጣቢያ 3. ክሊኒክ
15.	ባለፉት አራት (4) ሳምንታት ውስጥ የህክምና አገልግሎት ለማግኘት ወደ ጤና ተቋማት ሄደው ያውቃሉ?	1. ሔጀአውቃለው 2. ሔጀአላውቅም
16.	ሄደው ካወቁ ለምን ያህል ግዜ በዶክተር ወይም በሌሎች የጤና ባለሙያዎች የህክምና አገልግሎት አግኝተዋል ?	1. አንድ ግዜ 2. ሁለት ግዜ 3. ሶስት ግዜ 4. አራት ጊዜ እና ከዚያ በላይ
17.	ባለፉት 12 ወራት ጤና ተቋም ውስጥ ተኝተው የህክምና አገልግሎትአግኝተው ያውቃሉ?	1. አውቃለው 2. አላውቅም
18.	ለህክምና አገልግሎት ወደ ጤና ተቋም ሄደው ካላወቁ ያልሄዱበት ዋና ምክንያቶች ምንድን ናቸው?	1. የጤና ማዕከላትርቀት 2. የመረጃ አያያዝ እጥረት 3. እራስን በማከም 4. ለመክፈል ባለመቻል 5. የመድሐኒት አቅርቦት አገልግሎ እጥረት 6. የጤና እክሌ ለባሰ የጤና ቀውስ ያጋልጠኛልብዬ ስላላሰብኩኝ 7. ጤነኛ በመሆኔ 8. ሌላ ካለ ይጠቀስ……
19.	የጤናእክልበገጠሞትጊዜየህክምናክፍያዎችን በምንዓይነትሁኔታይከፍላሉ?	1. በነፃ 2. በቀጥታ ከኪስ በመክፈል 3. በልዩ ቅናሽ ዋጋ 4. በዱቤ አገልግሎት 5. ከፍያን ከምሰራበት ተቋም ጋር

		በመጋራት 6. ሌላ ካለ ይጥቀሱ..... .....
20.	ባለፉ 12 ወራትውስጥ የጤና ዕክል በገጠሞት ወቅት ብዙውን ግዜ የህክምና አገልግሎት የሚያገኙት ከትኛው የጤና ተቋም ውሰጥ ነበር?	1. የግል የጤናተቋም 2. መንግስታዊያልሆነ የጤና ተቋም 3. የመንግስት የጤና ተቋም 4. ሌላ..... .....
21.	የጤናእክልበገጠሞትግዜበምንዓይነትደረጃላይከሚገኙየጤናተቋማትነበርአገልግሎትየሚያገኙት?	1. ሆስፒታል 2. የጤና ጣቢያ 3. ክሊኒክ 4. ሌላ.....
22.	የእርሶዎን የጤና ሁኔታ እንዴትይገልፁታል?	1. ጤናው በጣም የተጓደለ 2. ጤናው በመጠኑ የተጓደለ 3. ምንም አይልም 4. ጤነኛ 5. በጣምጤነኛ
23.	እርሶዎ አገልግሎት በሚያገኙበት የጤና ተቋማት ያሉትን ሰራተኞችን ብቃትናዕውቀት ላይ ያልዎትን እርካታ እንዴትይገልፁታል?	1. በጣም አርኪ 2. በመጠኑ አርኪነው 3. ምንም አይልም 4. በመጠኑ አርኪ አይደለም 5. በጣም አርኪ አይደለም 6. እርግጠኛ አይደለሁም
24.	እርሶዎየሚገለገሉበትንየጤናተቋምእንዴትይገልፁታል (ቁሳቁስአቅርቦትናአጠቃቀምበተመለከተ)?	1. በጣምአርኪ ነው 2. የተወሰነያህልአርኪነው 3. ምንም አይልም 4. ያንያህልአርኪአይደለም 5. አርኪአይደለም 6. እርግጠኛአይደለሁም
25.	በእርሶእይታለጤናተቋማትየሚከፍሉትከፍያንእንዴትይገልጹታል?	1. በጣምወድነው 2. ውድነው 3. ምንምአይልም 4. ርካሽነው

		5. እርግጠኛአይደለሁም 6. ከፍለውካላወቁ ምክንያቱን ይግለጹ …… …… ……
26.	እርሶዎበሚሰሩበትየህክምናተቋምሰራተኞቹ ሲታመሙየሚታከሙበትነፃየጤናአገልግሎት ስርዓትአለ?	1. አለ 2. የለም
27.	እርሶዎበሚሰሩበትጤናተቋምለሰራተኞችነፃየህክምናአገልግሎትካለየቶቹንነውየሚያካትተው?	1. የጤናምርመራ (በዶክተርመጎብኘት) 2. የላብራቶሪአገልግሎት 3. የመድሐኒትአገልግሎት 4. ዲያሌሲስ 5. ኮስሞቲክስዴንቸር 6. ሌላ…… ……..
28.	ከመታመምዎበፊትህኪምየማማከርልማድአልዎት?	1. አለኝ 2. የለኝም

አዲስ አበባ ከተማ አስተዳደር ጤና ቢሮ

City Government of Addis Ababa Health Bureau

Ref. No A/A/H/B/7902/207

Date 3/7/2012

- **Arada sub city health office**
- **Gulele sub city health office**
- **Addis Ketema s/city health office**
- **Yeka sub city health office**
- **Lideta sub city health office**
- **Kirkos sub city health office**
- **Nifas Silk Lafto s/city health office**
- **Bole sub city health office**
- **Kolfe Keranio s/city health office**

Addis Ababa

- **Akaki Kality sub city health office**
- **Migbaresenay hospital**
- **T/Bejing Hospital**
- **Zewditu memorial Hospital**
- **St.Yared Hospital**
- **ICMC Hospital**
- **MCM Hospital**
- **EthioTebib Hospital**
- **Yekatiti 12 Med.college college**

Subject: Request to access health facilities to conduct approved research

This letter is to support **Miraj Cheru** to **conduct** research, which is entitled as **"Patterns of health care service utilization and its determinant factors among health professionals, Addis Ababa, Ethiopia, 2018 G.C: Health facility based mixed study." A mixed method study".** The study proposal was reviewed and approved by Addis Ababa Health Bureau ethical Clearance Committee, and the investigator is informed with a copy of this letter to report any changes in the study procedures and to submit progressive report once in six months, apply for renewal 30 days prior to the expiry date, and submit technical report within three months of study completion.

Therefore we request the mentioned Facilities and staffs to provide support to the investigator.

With Regards

ካሣዬነው አማረ
የህብረተሰብ ጤና ምርምር
ጉዳይ ቡድን ሂደት አስተባባሪ
Kassayenew Amare
Public Health Research Sub-Process head

cc

- **Miraj Cheru**
- **Ethical Clearance Committee**

Addis Ababa

CURRICULUM VITAE OF THE PRINCIPAL INVESTIGATOR

PERSONAL DETAIL

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EDUCATION

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June, 2007- Recent ADDIS ABABA UNIVERSITY, ADDIS ABABA INSTITUTE OF TECHNOLOGY
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Declaration

I, the undersigned, declare that this paper is my original work and has not been presented for master's degree in this or another university and that all sources used for this paper have been fully acknowledged.

Name: Miraj Cheru Bira (BSc, BA)

Signature: _____

Date: _____

Place: Addis Ababa University, School of Public Health, Department of Public health.

This thesis has been submitted with my approval as University advisor

Berhan Tassew (MPH)

Signature: _____

Date: _____

Place: Addis Ababa University, School of Public Health, Department of public health.

APPROVAL BY THE BOARD OF EXAMINATION

THIS THESIS BY MIRAJ CHERU (BSC, BA) IS ACCEPTED IN ITS PRESENTFORM BY BOARD OF EXAMINERS AS SATISFYING THESIS REQUIREMENT FORTHE DEGREE MASTERS IN PUBLIC HEALTH

Advisor

_____	_____	_____	_____
Full name	Rank	Signature	Date

External Examiner

_____	_____	_____	_____
Full name	Rank	Signature	Date

Internal Examiner

_____	_____	_____	_____
Full name	Rank	Signature	Date

Chairman, Department Graduate committee

_____	_____	_____
Full name	Rank	Signature	Date