

FACTORS AFFECTING
UTILIZATION OF HEALTH STATIONS
IN YERERNA KEREYU AWRAJA

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in Yererena Kereyu Awraja

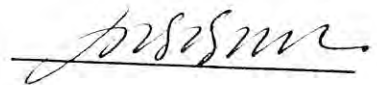
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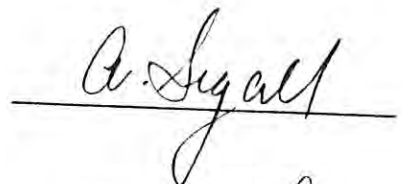
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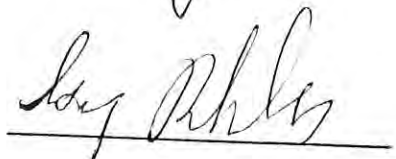
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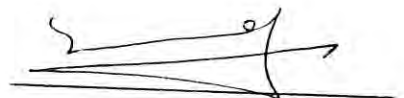
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ABBREVIATIONS

1. AAU - Addis Ababa University
2. ANC - Antenatal Care
3. CHAs - Community Health Agents
4. CI - Confidence Interval
5. edu - Education
6. eg - Example
7. EPI - Expanded Programme on Immunization
8. Govt - Government
9. hsta - Health Station
10. KM - Kilometer
11. MCH - Maternal and Child Health
12. MOH - Ministry of Health
13. NGO - Non Governmental Organization
14. No - Number
15. PHC - Primary Health Care
16. que - Question
17. TBAs - Traditional Birth Attendants
18. Vs - Versus

SUMMARY

This case control study was conducted on a sample of 1000 users of services of health stations (cases) and 1000 non-users of the services (controls) during the study period which was between October 17 and November 26 1988. The study was done in 6 randomly selected health stations and villages within a 5 km radius of the health stations in Yererna Kereyu Awraja, central Ethiopia, where the author is the district health manager. The major objective of the study was to determine factors influencing the utilization of health stations in the Awraja. Information from the study population was collected on different factors which possibly affect utilization, including demographic factors, such as age, sex, occupation, ethnicity and education; Socio-cultural factors, such as people's attitude toward the health workers and services; and economic status of the people. The mean age of the study population was 20.8 years and 60.9% of the subjects were women. Farmers constituted 53.3%, the Oromo ethnic group 59.7% and the literacy rate was 48.3%. Case control analyses of the 2 groups showed that non-utilizers were more likely than utilizers to come from the younger or older age groups, to be female, to be a farmer, to be from

the Oromo ethnic group, & to have a lower level of education. There was also a difference between cases and controls in perceived travel time to the health units, perceived quality of the services, knowledge about free services, knowledge about the importance, and availability of some of the services, and the income pattern. There was no significant difference between the users and non-users with regard to religion, marital status of the respondents, or who advised the individuals to use or not to use the services. These differences indicate a need to teach communities about health & health services and to reduce socio-cultural barriers to utilization of the services.

INTRODUCTION

The Alma-Ata declaration, aiming at health for all by the year 2000, proposes that basic preventive and curative health services should be made available to all the people of the world by the beginning of the next century (1). At present, many developing countries are far from achieving this goal because of a variety of constraints, such as severely limited budgets, shortages of supplies, unmet training needs, and lack of transportation, which limit both the effective delivery of health services and the utilization of the few resources (2,3).

In many instances, a large proportion of the rural population in the developing world has no access to modern health services (2,4,5). In Ethiopia, for example, it is estimated that only about 45 percent of the population have access to any kind of governmental health institution, when access is defined as living within a 10 km. radius of the health institution (7,14).

A health station is the lowest governmental health unit. It is a small clinic, staffed with one to three health assistants, and is supposed to serve a population of about 10,000 (24). In addition to supervising community health workers (CHAs and TBAs), the health assistants at

health station provide regular outpatient clinics, health education, environmental sanitation, and basic mother and child health services. In most of the units they also provide outreach EPI services within a radius of about 15 km from the health station. Except for the preventive services, users are asked to pay a small fee, unless they have a letter from their Kebele (Peasant or Urban Dwellers Association) stating that they earn less than 50 Birr and thus cannot afford it. For most rural Ethiopians, the health station is their first (and often only) contact with government health services.

The geographic proximity of services to people's home is one of the most important factors that affect the utilization of health services. As distance increases the level of utilization decreases (3,5,9). Poor people are particularly affected by this, as they often cannot afford any other transportation than walking. In addition, where there is no means of transport people who are feeling very ill have to travel on foot to go to a modern health care facility, or have to have themselves carried there by fellow - villagers . Recognizing the importance of distance, in Ethiopia the Ministry of Health has been actively engaged in constructing more health institutions, particularly those at the health station level, in order to improve geographic accessibility.

However, even when there is geographic accessibility, a health service may not be used. Many people have noted that most health stations are not busy in Ethiopia. Often, they have finished seeing their patients for the day by 11:00 in the morning. This is in spite of the fact that surveys of morbidity have generally shown rates as high as 30% (10,17,26). There may be non geographic barriers to use, such as the way in which the service is delivered, or socio-economic or other characteristics of the intended users. In Yererena Kereyu Awraja, where geographic accessibility of health facilities is estimated to be 60 percent, EPI (expanded programme of immunization) coverage of the target group under two years of age is only 17% and only 15.7 % of pregnant women attend antenatal clinic (18). This indicates that even when a service is provided, many who should attend, do not.

Thus although proximity is, in most places, the most important determinant of health service utilization, there may also be many other factors significantly influencing utilization. The identification of these factors could help us to utilize more effectively the limited resources available in the country.

II OBJECTIVES

The main objectives of this study were:

1. To investigate factors associated with use and non use of health stations in Yererna Kereyu Awraja. Information was specifically sought on the extent to which different socio-demographic and other related factors of the users and non-users were associated with variation in utilization. To do this, a comparison was made of users and non-users of the health stations.
2. To outline some recommendations to improve the utilization of the few health stations available.

LITERATURE REVIEW

Utilization is defined as the number or proportion of the population using a given service; this can be related to the number or proportion needing the service. Availability of health services is defined as the ratio between the population of an administrative unit and the health facilities and personnel assigned to it (25).

Given that health services are available, the factors influencing the utilization of health services broadly include need, geographic accessibility and acceptability to the consumers. The evaluation of utilization on the basis of these concepts enables management to identify bottle necks in the operation of health services, to analyze the constraining factors responsible for such bottle necks, and to select effective measures for service development.

1. Need and perceived morbidity

It is generally recognized that perceived need is the major prerequisite to the demand for and use of health services. King (9) has noted that perhaps the most important factor of all is the severity of the patient's disease or need. In addition, the international collaborative study (a study done in selected areas of seven developed countries) (4) found that behavioral and social factors had only a modest predictive effect on the

overall patterns of use as compared with the substantial influence of various forms of perceived morbidity and hence demand for medical services.

Perceived morbidity and need alone are not enough for health services to be utilized. Many other factors must be favorable for an individual to use a health service. This was shown by Melake-Brehan Dagne (10) in his study done among 465 household heads living in Addis-Zemen town North West Ethiopia. He reported a perceived morbidity rate of 57.4% , but of those reporting illness, only 27.7% were reported to have contacted the health center which is found in the same town and 64.8% did not seek any external aid for their illness.

2. Geographic accessibility

When there is a need and all the necessary resources are available, the service must be located within reasonable reach. Accessibility, in broad terms, implies the continuing and organized supply of care that is geographically, financially, culturally and functionally within easy reach of the whole community (1,16).

Distance or geographical accessibility has been shown by many studies conducted in the country and abroad to be a major determinant of health service utilization. Because most people have to walk to a health service in developing countries, distance is a critical determinant of utilization, and it is widely realized that only those

close to a medical unit can derive the full benefit from its services (4,9). In Kenya it was found that 40 % of the outpatients attending a health center lived within five miles of it; 30 % lived between 5 and 10 miles away (9). When this is expressed in terms of the areas from which patients were drawn, it will be seen that approximately four times as many people came from each square mile within the 0-5 mile zone as came from one in the 5-10 mile zone.

In Ethiopia, Kloos and his colleagues (3) have conducted a study on the place of residence of 154,444 first visit polyclinic patients of 4 general hospitals, 5 health centers and 4 health stations in Addis Ababa. The results revealed that up to 94% of the utilizers lived within a 2 km radius from the health facilities they used. The journey to the health facilities was made on foot by 70-95 % of those in the four health stations. These proportions increased to 86-99% for patients living within 1km of facilities. This could reveal transport cost and travel time constraints in utilization as the distance people have to travel increases. Kloos et al in their similarly conducted study on 9 health stations in 7 administrative regions of Ethiopia (21) has shown that up to 90% of the polyclinic patients came from the same town or peasant association and nearly 100% from the same Awraja.

A similar situation was observed in a study done by Habib and Vaughan (6). They did a household survey in a sample of 324 households served by five health centers in two different areas of Southern Iraq. In the results the relationship between utilization and distance between place of residence and the nearest health unit showed clearly that utilization rates decline sharply with increasing distance travelled. In Jordan, a study by Adnan A Abbas (12) has showed that when individual and health service access variables were compared to women using and not using MCH care, there were marked differences between the two groups. Distance of place of residence from the services and time and cost involved in travelling to services were all highly significantly associated with non-use of the MCH services.

In contrast to the above findings, even when geographic accessibility is not a problem the utilization rate of modern health services is sometimes low. This situation has been reported in a study done by Malison, Sekito, and others (2) in a district of Uganda. They conducted interviews in 75 households nearest to each of 36 existing rural health facilities. The survey documented high rates of mortality and low levels of utilization of primary health care services despite easy physical access to health facilities. In Ethiopia, Melake-Berhan Dagnev (10) has also reported a very low level of utilization in spite of the fact that all interviewees lived in a town with a health center and thus had geographic accessibility.

3. Acceptability

As shown above need and geographical accessibility alone are not the only determining factors in utilization of health services. Once the service is accessible, it still needs to be acceptable to the population, otherwise people may not come for it and may even seek alternative care. Acceptability of the services, which could be affected by quality of the service and socio-demographic characteristics of the consumer, have also been shown to be associated with utilization in various studies.

The knowledge people have about the available health services and their perception of the quality of these services as well as their satisfaction, may affect both initial contact with these services and compliance with any prescribed treatment (4,6,9). As noted by King (9), quality of the care available is one of the most important determining factors. The better the medicine the further will people be prepared to go for it. Furthermore, quality of service and perceived efficacy of treatment were often more important considerations in the selection of health services than cost. Thus some traditional healers were sought out even though they charge more than health units for certain diseases (5).

The way in which health services are organized and delivered may also account for differential utilization. The view is that organizational characteristics of a health care system may be as highly related to variation in utilization as personal and other characteristics (5,6). Habib (6) reported that the decline in utilization of health units was sharper with distance for local health units than for all other health services. This may indicate that local health units in Iraq are viewed as offering poorer quality services. In rural Zambia (13) it was found that, because of the frequent lack of drugs or absence of personnel, patients delay going to the nearby government health unit and often bypass the clinic to go to the Mission clinic (approximately 2 days walk) where drugs were consistently available.

Higher education level is often associated with higher use. As level of general education improves, people will become more receptive to the benefits provided by health units. In Jordan the use of antenatal care (ANC) was significantly associated with level of the women's education (42.8 % of the non users and 18.6% of the users were illiterate) (12).

The other important acceptability factor in determining utilization is family income. Some studies have shown that utilization rates increase substantially with increasing income (6). In Ethiopia, Kloos et al (5) reported

that the higher proportion of people who had not obtained any treatment were in the low socio-economic group. Germano (11) has also found that household income influences the decision of the patient to seek treatment.

Many studies have reported that, in addition to the above mentioned factors which are associated with acceptability, the following variables were found to influence utilization of health services: age, sex, ethnicity and religion. In Kloos et al study (5) these characteristics were shown to affect utilization. More females than males used both modern and traditional care and fewer reported non-use. Differences in utilization among the Amhara, Oromo, and Gurage ethnic groups was also shown, which probably reflected urban/rural differences. In the same study more Moslems than Christians used modern care, the explanation of which was that higher rates were found among Moslem Gurage traders.

Furthermore, in Ethiopia a study done by Kloos and others (3) found that among others the reasons given for patients' choice of facilities included:

- Free or low cost treatment
- Absence of long waiting lines, and
- Referral by relatives, friends and neighbors.

On the other hand a study conducted on an Oromo ethnic group in Eastern part of Ethiopia (22) has reported a number of reasons for not going to the nearest health unit such as:

- Negative past experiences of the target population with health institution concerned.
- Lack of ideas as to when , where and in case of what kind of illness action should be taken.
- The population avoiding the health units as a result of religion or culture.
- Fear of medical examination and treatment.
- The frequent absence of medical personnel during the unit's official opening hours, so that the people often come for nothing.
- Unfriendly or impolite attitude of the medical personnel.

Similarly rural patients or their relatives, in Kenya (11) gave a number of reasons for not having sought treatment for an illness:

- Undecided about the provider to visit
- Lack of money for treatment
- Lack of person to leave at home or at the farm
- Gave up seeking treatment.

All these characteristics or variables show that there are multiple factors that can influence utilization of health services. These factors could affect utilization independently or in combination. Hence to solve the problem of underutilization it is worthwhile determining the factors affecting utilization of health services.

MATERIALS AND METHODS

I. THE STUDY AREA

Yererna Kereyu Awraja, in Shewa region , is in the central part of Ethiopia. The awraja, with a surface area of 9620.6 square km., has a total population of about 800,000. (about 45% being below the age of 15 years). It is divided into eleven woredas and the majority of the population are farmers. It should be noted that with the administrative restructuring which took place in 1988/89, Yererna Kereyu Awraja no longer exists. Most of the new region of Eastern Shoa is what was Yererna Kereyu Awraja.

The eastern part of the awraja is inhabited by pastoral nomads which makes health delivery difficult and hence health institutions are few in number in the area. The western half of the Awraja is densely populated and more than three-fourths of the health stations are found in this western part (see figure 1).

In total at the time of study, there were 58 health institutions in Yererna Kereyu Awraja (six hospitals, two health centers, and 50 health stations). About half of the health units are under the Ministry of Health, serving the general population, including two hospitals, two health centers and 23 health stations. The remaining of the health stations are under other ministries, such as State Farms, Industry, Education and/or run by Nongovernmental Organization. Health units other than run by the

Ministry of Health provide health services for limited number of the population, such as a health station or a hospital for factory workers only . As shown in figure 1, seven of the eleven woredas of the awraja have at least two health stations.

II. STUDY DESIGN

A case control study of health station utilization was designed with users being cases and non users being controls in six health stations in Yererna Kereyu awraja. Cases lived within 5 km and came from one of three categories of clinic users: polyclinic attenders, women attending antenatal clinics, and children attending vaccination clinics. Controls were chosen from villages within a 5 km radius of the health station and consisted, for each category of clinic users, of people who were sick in the past four weeks but did not go to the clinic, pregnant women who did not attend antenatal clinic, and children less than three years of age who had never attended vaccination clinics, respectively. See figure 2 for the study design and selection hierarchy.

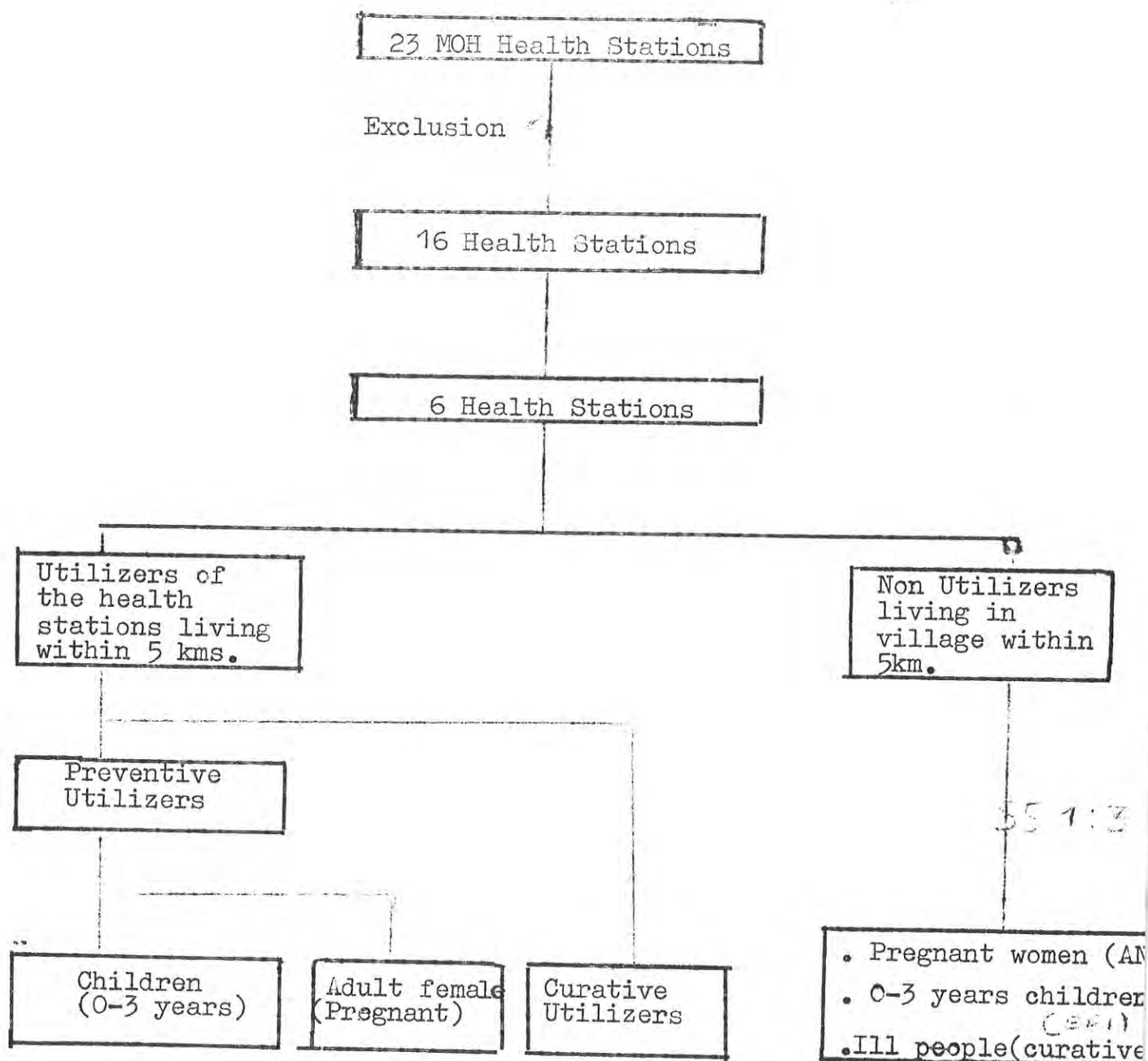


Figure 2. Study design and selection hierarchy.

R- Random sampling

SS= Systematic sampling

In the study, two stages of sampling were used:

1. Random sampling of health stations

From the 23 MOH health stations in the awraja 16 were selected as possible study areas. The rest were excluded due to:

- Problems with transportation - Lack of roads
- Security problems and
- Absence of settled communities (where only nomads are found).

From the 16 selected health stations 6 (26% of the total) were chosen by simple random sampling. These selected health stations were Doni, Wolenchiti, Koka, Ijere, Mojo and Dukem. All people, who fit into one of the three categories, visiting the health stations during the study period were interviewed until a total of 1000 cases were found.

2. Systematic sampling of the households to find the controls:

From the villages within a five km radius of each health station, every third household was visited and asked about the presence of an appropriate control. The starting house was selected randomly. Only one control was interviewed from a household and that house was marked to avoid repetition. When two or more controls were found in a household, the first contacted individual was taken. The

odometer of a vehicle was used to determine the distance from the health stations.

III. STUDY POPULATION

Cases - All patients who came to the six study health units seeking health services (curative, EPI or ANC) during 40 days of data collection (between October 17 & November 26, 1988)

Controls - Someone who lived within 5 km and was sick during the same period as the cases, but did not go to the health stations, a child less than 3 years of age and who has never been vaccinated and a pregnant woman who did not seek any medical help.

Exclusion Criteria (both cases and controls):

- Anyone coming from areas outside the radius of 5 km.
- For curative utilizers or non utilizers, anyone who had been sick for more than four weeks.
- Someone who had not lived in the defined study area for 6 or more months.
- If someone else was interviewed from the same family.

In this study the terms cases and utilizers are used synonymously, as are controls and nonutilizers.

The sample size calculation was done to be able to detect a 10% difference in literacy rate between users and non users (55% and 45% respectively) with a power of 90% and an α of 0.05 using the formula:

$$n = \left[\frac{Z_{1-\alpha/2} \sqrt{2(p_1)(1-p_1)} + Z_{1-\beta} \sqrt{(p_1)(1-p_1) + (p_2)(1-p_2)}}{\Delta} \right]^2$$

$$p_1 = 0.45$$

$$p_2 = 0.55$$

This resulted in a sample size of 1270- 635 cases and 635 controls. However, a total of 1000 each of cases and controls were aimed at in order to provide a safety margin.

IV MEASUREMENT

The interview was conducted using a questionnaire which was prepared in English (see appendix) and translated into Amharic. The questionnaire was in a closed form and it contained the following variables:

- Demographic characteristics
 - age, sex, education, occupation, religion, ethnicity and marital status;
- Economic status
- Sociocultural factors
 - People's perception about the quality of services, health workers attitude toward the people and payment for the services.

- Duration of travel and means of transportation to the health units from home.
- The individual's knowledge about presence and importance of some of the services.

The educational status was determined as follows: Illiterate refers to those who have not been taught to read and write; Literacy campaign refers to those who attended special literacy class to learn to read and write but have no formal schooling, and schooled refers to those who attended formal schools. The economic status was determined by enquiring about the annual family income. When the subject was a farmer his annual production in quintals was estimated in Birr.

V. DATA COLLECTION & ANALYSES

After the preparation of the study protocol and training of the interviewers, a pretest was conducted for one day in a health station which was not included in the study. This pretest was done to determine the knowledge and skills of the interviewers and to find out whether each question of the questionnaire was understood by the respondents. The information obtained was used in designing the contents of the retraining given to the interviewers to ensure standardization of questions and interviews.

Prior to launching the study, the consent of community leaders was obtained as well as a letter of permission from

the awraja administrative office, which helped to have access to houses and hence controls of the study. A meeting was held with the chief health assistants of each health units from whom an agreement was obtained to co-operate with the interviewers in every aspect.

During the 40 days of data collection the interviewers were assigned to one of the six health stations for 20 consecutive days. Cases were found by interviewing all attenders at the polyclinic, antenatal clinic and vaccination clinic, who lived within a 5 km radius of the clinic. Controls were found by visiting every third household of the villages within the 5km radius of the health station and inquiring about the presence of a sick person, a pregnant woman, or a child under 3, who had not attended the clinic. This systematic search was carried out until one control had been found for each case. The same interviewers and time period were used to collect the data both on the cases and controls.

In the analysis the odds ratio and chi-square tests were calculated to examine the effects of each factor. A 95 % confidence interval was determined for all the significant differences. The data was entered and analyzed using an spss-pc+ statistical package. The odds ratio and confidence interval calculations were done with a calculator.

RESULTS

I. DESCRIPTION OF THE TOTAL STUDY POPULATION

From the six randomly selected health station study areas, a total of 1000 users of the health stations (cases) and 1000 non-users (controls) were interviewed. The numbers in each category were as follows:

Polyclinic users and non-users	-	690	each.
ANC users and non-users	-	91	"
EPI users and non-users	-	219	"

The results of the more important socio-demographic characteristics of the study population are presented below.

The study population which consisted of 1000 cases and 1000 controls had a mean age of 20.8 years. The majority of the respondents (72.9%) were below 30 years of age. Twenty five percent were in the age group 0-2 years, but only 24 % were in the age group 35 years and above (see table 1).

The majority of the subjects were women (60.9%) including the antenatal clinic users and non users. Excluding the antenatal subjects still the women predominate (56.9%). Similarly the proportion of female was high in the EPI study groups (60.4%), and the sex distribution of the polyclinic population was found to be 56 percent female.

The distribution of the study population by occupation showed that farmers constituted 53.3%, government employees 14.5%, while 5.8% were without employment.

The result of educational status revealed that 51.7% of the study population were illiterate, 27.9% attended literacy classes and the other 20.5% were schooled. The literacy rate in this study (48.3%) was much lower than the Awraja figure which was 80% (18).

Marital status of the study population showed that 68.7 % of the respondents who were fifteen years or above (if less than fifteen years of age, the head of the household) were found to be currently married. This was followed by 21.5 % single. The remaining 9.9% were divorced, widowed or separated.

As shown in table 1, the main ethnic group was Oromo(59.7%). The second group was Amhara (32.7%), with others being present in fewer numbers. Table 1 depicts that about one third of the families had an annual income between 800-999 Birr (31.5%) and 54.7% of the families earned less than 800 Birr per year.

The majority of the study subjects are Christian in religion, 89.3%, and 2.4 % claimed that they had no religion.

Table 1.

Socio-demographic Characteristics of the Study Population

Selected Variables		Number	Percent
Age	0- 4	584	29.2
	5-14	238	11.9
	15-24	353	17.7
	25-34	351	17.6
	35-44	266	13.3
	45 +	208	10.4
Sex	Male	783	39.1
	Female	1217	60.9
Occupation	Farmer	1065	53.3
	Govt employee	289	14.5
	Trader	192	9.6
	Others	454	22.6
Educational Status	Illiterate	1034	51.7
	Literacy campaign	557	27.9
	Had formal schooling	409	20.4
Marital status	Married	1374	68.7
	Single	430	21.5
	Divorced	113	5.7
	Separated	38	1.9
	Widowed	45	2.3
Ethnicity	Oromo	1193	59.7
	Amhara	653	32.7
	Gurage	75	3.8
	Others	79	3.9
Family income	0-199	249	12.5
	200-399	283	14.2
	400-599	262	13.1
	600-799	298	14.9
	800-999	629	31.5
	1000+	279	14.0
Religion	Christian	1786	89.3
	Muslim	164	8.2
	No religion	47	2.4
	Others	3	0.2

NB. columns do not always add to 100 due to rounding.

II. BIVARIATE ANALYSES (CASES Vs CONTROLS)

Analyses of different factors were done comparing users and non users of the health stations. There were factors with and without significant association with utilization.

1. Factors Significantly Associated with Utilization

The following variables were found to produce significant χ^2 tests: age, sex, occupation, education, ethnicity and other Socio-economic factors to be described below. As presented in table 2, odds ratios were calculated using the most common category for a variable as reference.

As shown in figure 3, excluding cases and controls chosen for the EPI programme, cases (utilizers) were predominantly found between the ages 15 to 34 years. However, utilization of the health stations was lower at the younger and older ends of the age categories.

Regarding the gender of the study population more females utilize the health services as compared to males. Of the total cases 49.3% were males and 50.7% females and of the total controls 29.0% & 71% were males and females respectively ($\chi^2 = 85.64$, $p < 0.0001$).

From different occupational categories, users were more likely to be government and other employees (salaried employees) (37.4% of the cases and 26.5% of the

controls). Non-users were more likely to be farmers as compared to the utilizers (57.8% and 48.7% respectively). There is also a great difference in educational status of the cases and controls: cases were more likely to have received some formal education, and controls more likely to be illiterate ($\chi^2 = 41.77$, $p < 0.0001$).

The proportion of Amharas is higher among cases where as the Oromos are higher among controls ($\chi^2 = 7.92$, $p < 0.05$). Figure 6 depicts the difference in estimated travel time between users & non-users. Of the cases 62.3 % travel to a health station within 2 - 20 minutes while only 41.5 % of the controls can reach the health station within the same period. On the other hand 35.4% of the utilizers and 64.6% of non utilizers need 25-60 minutes to travel to the health unit. However, the majority of both the cases and controls tend to travel on foot.

The respondents were asked whether they can or cannot get a letter from their Kebele for free treatment at the health stations. Accordingly 59.2 % of the cases and only 33.3% of the controls replied that they could. Almost the same proportion of the cases and controls claimed they couldn't get it. 38.2% of the controls did not know anything about the free letter, while only 15.2% of the cases were unaware. A similar finding was obtained for attitude forward the service fee at the health station. Many utilizers claimed that the fee was reasonable (71.8%). Many of the non-utilizers did not have any idea about the fee (44.3%) and 15.7% found it not reasonable.

The attitude of the interviewees toward the services of the health stations was assessed; 94.2 % of the cases and 64.8 % of the controls claimed it was good. An attempt was also made to assess the knowledge of the individuals about the importance of EPI and ANC. More of the utilizers as compared to the non-utilizers seemed to know about the EPI and ANC programs (91.8%) while fewer of the non-utilizers knew about the programmes (66.6%).

The number of health education sessions the individuals had had in the six months prior to the study and the presence of radio at home also showed significant differences between utilizers and non-utilizers. More of the utilizers had one or more health education sessions and a radio at home compared to non-utilizers.

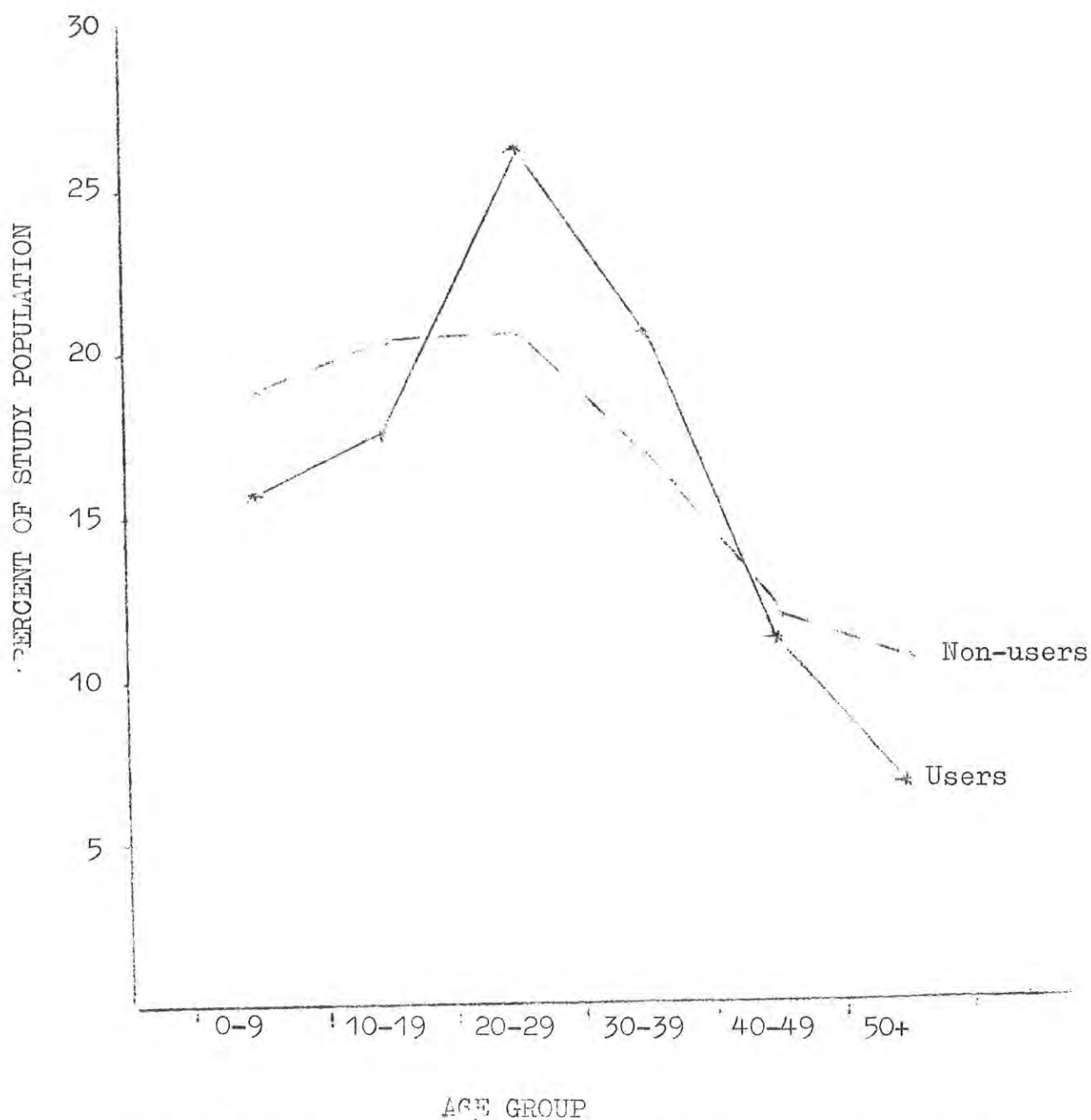


Figure 3 Distribution of users and non-users excluding cases and controls in the EPI services.

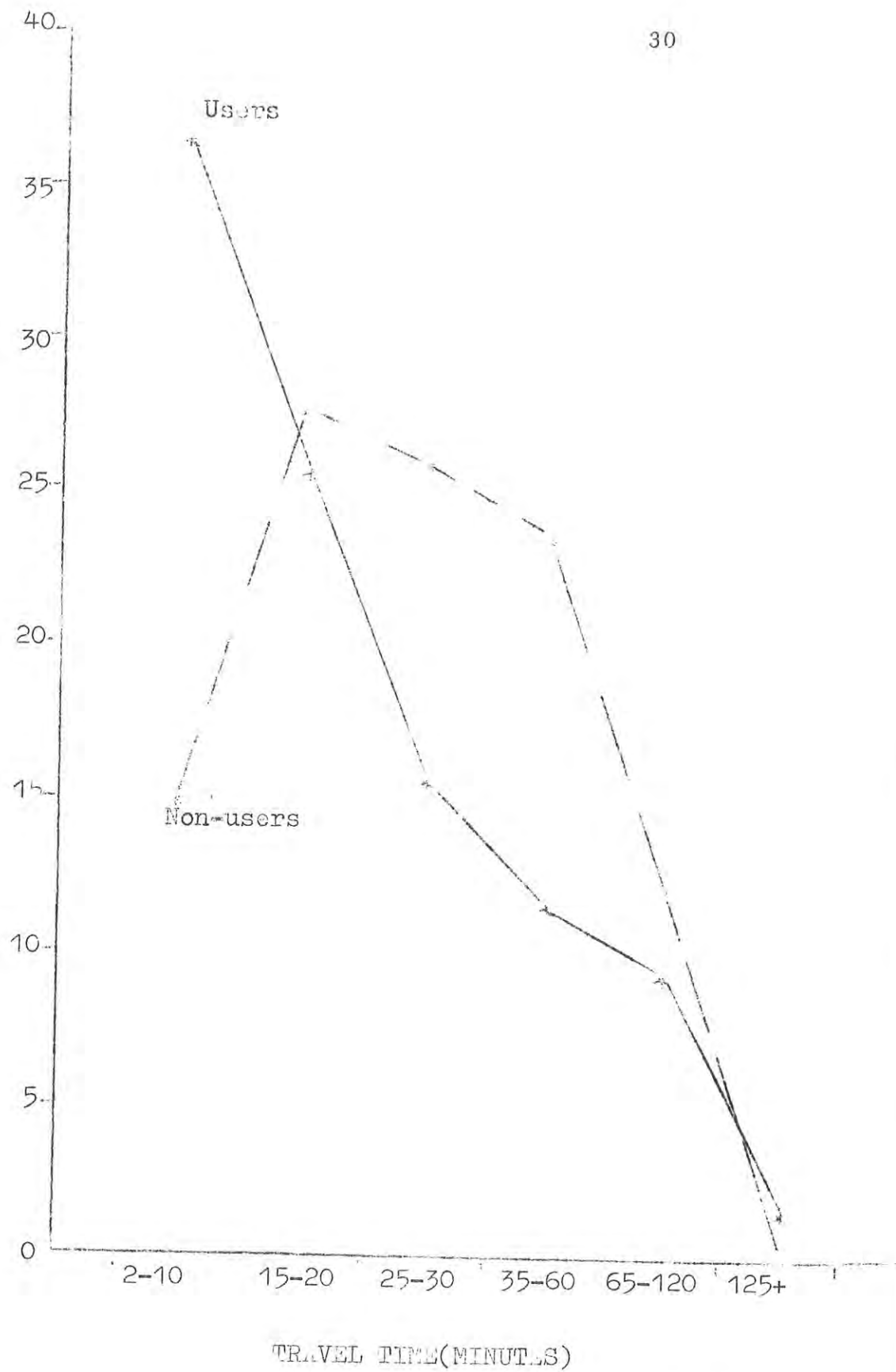


Figure 4 Distribution of utilizers & non-utilizers according to perceived travel time from home to health unit.

Table 2.

Comparison of Users and Non-users by Selected Variables

Selected variables	Users		Non-users		Odds Ratio (95% CI)
	No	%	No	%	
Sex - Female	507	50.7	710	71.0	2.3(1.91,2.77)
- Male	493	49.3	290	29.0	
Occupation					
-Farmer	487	48.7	578	57.8	
-Salaried workers	374	37.4	265	26.5	1.7(1.39,2.07)
-Others	139	13.9	157	15.7	1.1(0.96,1.25)
Education					
- Illiterate	449	44.9	585	58.5	
- Literacy Campaign	301	30.1	256	25.6	1.5(1.22,1.85)
- Schooled	250	25.0	159	15.9	2.0(1.78,2.25)
Ethnic group					
-Oromo	570	57.0	623	62.3	
-Amhara	356	35.6	297	29.7	1.3(1.07,1.57)
-Others	74	7.4	80	8.0	1.0(0.84,1.19)
Duration of transportation to health station					
- 2-20 minutes	623	62.3	415	41.5	
-25-60 minutes	270	27.0	492	49.2	0.4(0.33,0.49)
-65 + "	107	10.7	93	9.3	0.8(0.59,1.08)
Free letter					
- Can get	592	59.2	333	33.3	
- Can't get	256	25.6	285	28.5	0.5(0.42,0.67)
- Don't know	152	15.2	382	38.2	0.2(0.16,0.25)
Service fee at h.sta.					
- Reasonable	718	71.8	370	37.0	
- Not reasonable	60	6.0	157	15.7	0.2(0.14,0.28)
- Do not know	222	22.2	473	27.3	0.2(0.16,0.24)

Table 2 cont'd

	Cases		Controls		Odds Ratio
	No.	%	No.	%	(95% C.I)
Attitude of the individuals toward service					
- Good	942	94.2	648	70.8	
- Fair	52	5.2	262	28.6	0.1(0.07,0.14)
- Bad	6	0.6	5	0.5	0.8(0.24,2.63)
Knowledge of the people about importance of EPI					
- Yes	918	91.8	666	66.6	
- No	82	8.2	334	33.4	0.2(0.15,0.26)
No. health edu. session(s) the individual had					
- 0	484	48.4	733	73.3	
- 1	286	28.6	161	16.1	2.7(2.16,3.38)
- ≥2	230	23.6	106	10.6	3.3(2.55,4.27)
Availability of radio at home					
- Not available	621	62.1	762	76.2	
- Available	379	37.9	238	23.8	2.0(1.65,2.43)
Annual family income					
- > 600 Birr	641	64.1	565	56.5	
- < 600 Birr	359	35.9	435	43.5	0.7(0.58,0.84)

The economic status of the comparison group is different from the utilizers particularly in the two extreme groups (see figure 5). Categorizing the individuals into those who can afford the service fee or not according to the governments policy (greater than 600 and less than 600 Birr per year respectively) has shown that 64.1% of the cases and 56.5% of the controls were in the "can afford" group.

2. Factors not Significantly Associated with Utilization

With chi square tests there was no significant difference in religion and marital status of the utilizers and non-utilizers of the health services ($p > .05$). The utilizers were 88.9% christian and the non-utilizers were 89.7% christian ($P > 0.05$).

In the study an attempt was also made to assess who advised the person to go or not to go to the health stations; 82.8% decided to go themselves and this was same for cases & controls.

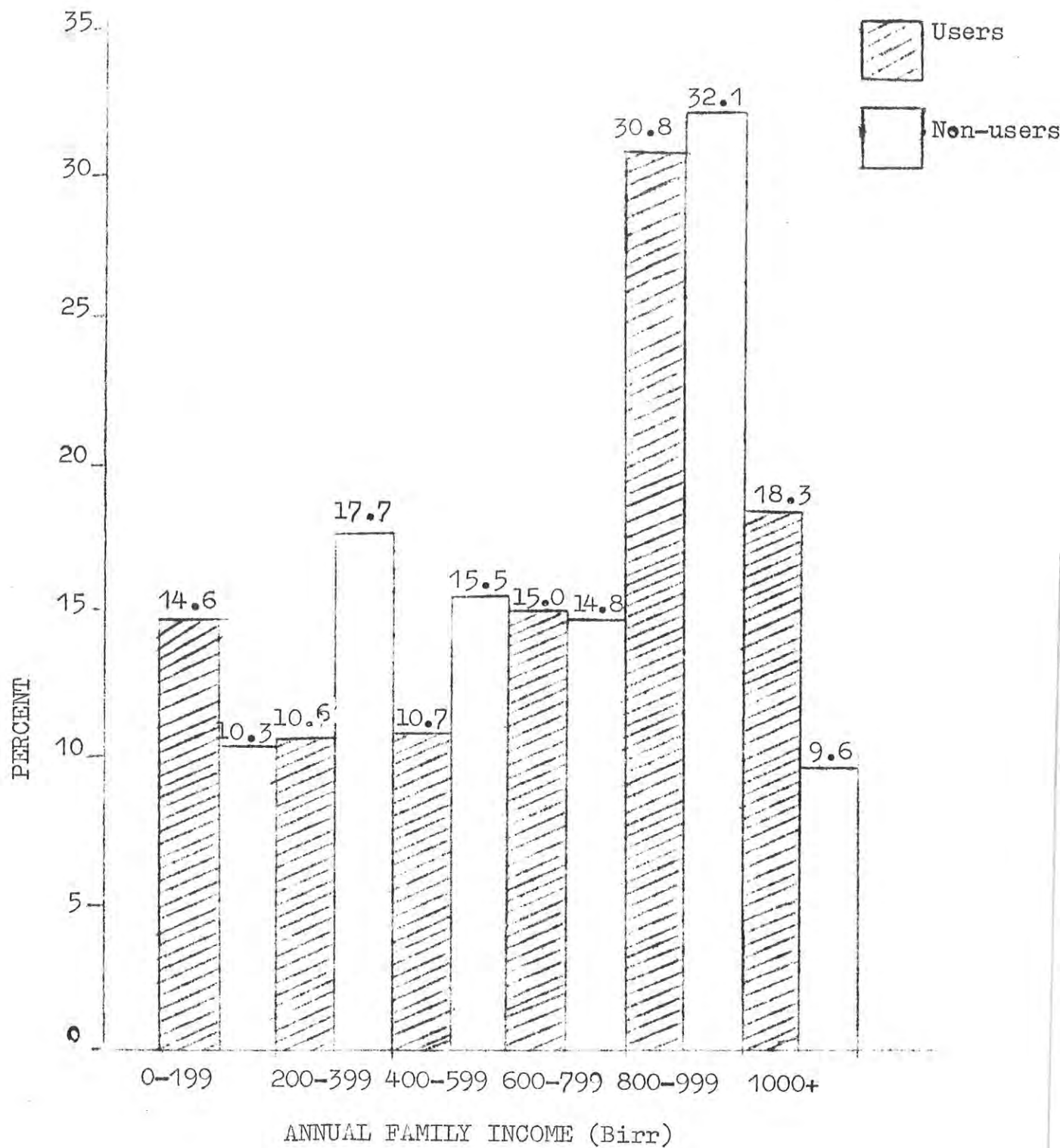


Figure 5. Distribution of users and non-users based on annual family income.

DISCUSSION

The health station service is usually the first entry to the governmental health service system in the country (primary level of health care). Its pattern of utilization is likely to show the characteristic of medical service consumption in general. This study showed high levels of association between certain individual and health service variables and utilization of health station services. It is of course possible that other variables not considered are also important in determining whether people use these health services. In this study the health service consumption was highest for age groups between 15-40 years and it was low in both extreme age groups. A study by Kloos et al in Addis Ababa and rural central Ethiopia (5) showed a similar age difference. Utilization of modern care was lower in the older age group, with correspondingly higher use of traditional medicine. This may be explained in terms of a combination of cultural lag and lower mobility of older people. However there was an equal child to adult distribution of recorded illnesses in a health service utilization study done in rural Zambia (13).

About half of the health station utilizers were females, but a large proportion of the non-utilizers were also females. The high proportion of female non-utilizers could be attributed to the limited mobility of women because of cultural restrictions placed on women's travel

(5). Also it is difficult for them to leave home unless they have someone to care for children and do works (11). It might also be that women have higher morbidity than men.

Although more farmers use the services of health stations, as shown in Table 2 the odds ratio of being users for other occupational categories is greater than 1. This can be explained by the large proportion of farmers living around the health stations. The majority of the farmers in the study areas were from the Oromo ethnic group, as a result of which more Oromos were found to be utilizers of the health services. However, the odds ratio of being Oromo for cases is less than 1 (0.8). The differences in utilization between Amharas and Oromos and between government employees Vs farmers may also reflect urban/rural differences (4). The majority of Oromo farmers were living in the rural parts of the study area.

The educational status of utilizers was higher than non-utilizers. This is comparable to the result of a study done in Jordan (12) where the use of antenatal service was significantly associated with the level of the women's education. 42.8% and 18.6% of the non-users and users, respectively, were illiterate or had no formal education.

The geographical proximity of health units to people's home is one of the most important factors that affects the utilization of health services, particularly in rural areas in developing countries (3,4,6). Distance of people's home

from the health stations could be indirectly determined by the time duration required to go to the health stations, if the means of transportation is the same. In this study more of the cases than controls needed less than 20 minutes to travel to the health stations. This shows that even within the 5 km radius, distance determined by travel time plays a great role in affecting utilization of health services. Both cases and controls use walking as the major means of transportation. However, it must be remembered that few subjects had watches and they estimated the time it took them to get to the health station. Thus although there is a perceived difference in time, the actual time to get there was not measured.

In the health stations, every utilizer except for EPI and ANC services is requested to pay for the services, unless he/she has a letter of exemption from his Kebele for free treatment. The letter is given to those families whose monthly income is less than 50 Birr or a farmer who has less than two oxen. From the income pattern of the study population, it does not seem that there would be much difference between the cases and controls in getting the letter. However, more cases than controls knew that they could get the letter. This indicates that there exists a lack of information or lack of awareness of the population which contributes to the non-use of health stations. Another possible explanation is lack of interest in the services offered by health units and hence little

attempt to acquire knowledge about them, because of alternative health resources such as traditional healers. The perception of service fee at the health stations also showed that there was a significant difference between utilizers and non-utilizers.

Considering the attitude of the individuals toward the services of the health stations and knowledge of the people about the importance of EPI and ANC services, the results showed significant differences between the cases and controls ($P < 0.0001$). This could be attributed to the educational status of the utilizers and the number of health education sessions they had had which was quite different from the controls. The calculation of the association of knowledge and attitude to education has shown significant difference between educated and uneducated subjects. In addition, a higher number of the cases had a radio at home than the controls. The economic status of the study population showed a significant difference between the cases and controls ($P < 0.001$). In many countries various studies have shown that, income highly influences utilization of modern health services. In a study done in southern Iraq (6), income was significantly associated with utilization. It is due not only to the affordability of the service fee, but to associated factors like transport, which are expensive and which the poor cannot overcome.

In contrast to the above findings, marital status and religion of the respondent did not show a difference between the utilizers and non-utilizers. Similarly there was no significant difference between the cases and controls as to who advised the person where to go for health services. In both the utilizers and non-utilizers the majority of the individuals decided by themselves. This is in contrast to Kloos' study (13) which showed that referral by relatives and friends was among the major reasons for patients choice of facilities.

It is possible that factors influencing utilization are different for each of the three groups (EPI, ANC, & curative) studied here. Analysis of the three groups separately in this study would, however, have reduced the power of the study. Future studies in this area may wish to look at each group separately.

This study was not without limitations:

- Exclusion of the Kereyu and Afar pastoral nomads who are inhabiting the eastern half of the Awraja, does not permit us to generalize the results to the whole Awraja.
- The associations shown in this study were determined during a six week period only. It would be preferable to have looked at a whole year, as it is possible that there may be seasonal variation in some of the associations.

less likely to use the services.

- Some variables such as type of disease and precise distance, were not assessed due to lack of facilities and skilled manpower. In particular, use of an odometer of a car to estimate walking distance which is not necessarily along the road, **may be** inaccurate.
- Some variables could not be assessed as to which is cause and which is effect. For example since health education sessions are given to all health unit attenders, it may be that health station attendance causes the number of health education session to be high. On the other hand it may be those who have received more health education sessions became health station attenders.

CONCLUSION AND RECOMMENDATIONS

Despite the great efforts made by the Ethiopian government to provide health services to cover the population, there are still some problems related to the utilization of out patient care. Factors such as education, income, and life style can contribute more to individuals modern health service utilization than does our health care system (15). Although the health service system was not assessed directly by the investigator as a possible factor affecting the utilization, the present study has identified some important socio-economic variables influencing the utilization of services of health stations.

The results presented in this paper are specific to the population of Yererna Kereyu Awraja, in the central part of Ethiopia. However, given the similarities of health stations and the general population of the Awraja to many other parts of Ethiopia many points may be relevant to health services in the country as a whole.

This study showed that use of health stations was significantly associated with:-

- Sex, age, Ethnicity, occupation & educational status
- Duration of travel time required to get to the health station

- Perceived quality of the services, service charge and free treatment
- Knowledge about the importance and availability of some of the services and
- Family income.

It was not associated with:-

- Religion
- Marital status and
- Who advised the individual to use or not to use the services.

The age groups 0-4 use less service than other age groups up to 40 years although morbidity and mortality reports are high in this age group (17). This calls for special attention to increase utilization of the services for the under five children. People did not use the free services, apparently because many people did not know it was available, which is a problem of awareness or because of the bureaucracy involved. There was also limited knowledge of the individuals about the presence of EPI and ANC services and their importance. All these show that there is a lot of activity needed from health workers in collaboration with other sectors to increase the awareness of the community. A greater utilization rate can be expected as the consumer is further educated about health, the health care system, and the quality of medical care programmes.

In general, in addition to geographic, socio-economic and cultural barriers between patients and health services, unequal allocation and quality of services and an inefficient referral system continue to affect the utilization of health services. Self care with modern and traditional medicine and use of indigenous healers must be expected to persist as alternative treatment options due to their cultural compatibility and lack of access of much of the population to modern services. These things need further consideration as to how best to use them for the health of the people.

On the basis of these observations, to alleviate the prevailing problem of not only accessibility but utilization of the services of the limited health units in the Awraja, the recommendations are:-

1. Expand health services to where the masses live and even for those who have access as defined as living within 10 km of health unit. In this respect other than establishing new health units, outreach programmes could help more people particularly those people who can not go to the health units for certain reasons. Experience in the Awraja has shown that a larger proportion of children are vaccinated at outreach sites than in the health units even when the children live within 5 km of a health unit.

2. Arrange (if possible) adequate facilities, health personnel and drugs, as these factors affect the perceived quality of the health units.
3. Increase awareness of the population about health in general and health services in particular.
 - Arrange health education sessions in every possible areas such as health units, schools and Kebele and other meeting areas.
 - Analyses of harmful health behavior with health committees and associations and formulation of appropriate health education messages.
 - Optimum utilization should be made of mass organizations in agitation and motivation of the public to utilize the health services particularly EPI and MCH services.
 - Literacy campaign should be supported to propagate a PHC message by use of posters or pamphlets, which should be made available in the local languages.
4. Integrate health services particularly the services for the mothers and children. Mothers should not come for family planning pills and vaccination of their children at different times. Every opportunity should be utilized to immunize eligible children as well as pregnant women, or they should be treated for minor problems when coming for vaccination.

5. Inform the kebeles and the public about the possibility of " free treatment letters" from each kebele for free treatment for those who can fulfill the criteria.
6. Proper, regular and frequent supervision of the health stations by the Awraja health team to improve and maintain the quality of the services.
7. Last but not least, a more extensive study on the utilization of the health institutions at all levels is necessary to determine the utilization status of all the health institutions in the Awraja. Due consideration of variables such as type and duration of illness, distance and quality of health services which are not included in this study is also necessary.

QUESTIONNAIRE

.To be filled by interviewers

.To be responded by case or control unless < 15 years of age
- which should be completed by adult responsible).

- Date _____

- Case No. _____

Control No. _____

- Service requested

Eligible for

1. Curative _____

4. Curative _____

2. MCH (ANC) _____

5. Pregnant _____

3. EPI (< 3 years) _____

6. EPI (< 3 years) _____

-Name of the health station (attended/nearest) _____

-Name of the village/peasant association _____

1. Age of the case/control _____

2. Sex " " " " _____

Questions 3-7, if 15 years get informations about head of the household.

3. Occupation _____ 1. Farmer

2. Government employee

- manual

- non manual

3. Merchant

4. Non govt. organization employee

5. Mass organization employee

6. Daily labourer

7. Unemployed

8. Other, specify

4. Education _____ 1. Illiterate
 2. Literacy Campaign
 3. Schooled, last grade completed
5. Religion _____ 1. No religion
 2. Christian (Orthodox, Catholic, Protestant etc)
 3. Muslim
 4. Other, specify _____
6. Ethnic group _____ 1. Oromo _____
 2. Amhara _____
 3. Afar _____
 5. Tigre _____
 6. Gurage _____
 7. Other, specify _____
7. Marital Status 1. Single _____
 2. Married _____
 3. Divorced _____
 4. Separated (> one month). _____
 5. Widowed _____
8. Do you know where is the nearest:
- | | | |
|-----------------------------|-----------|----------|
| 1. Traditional healer | Yes _____ | No _____ |
| 2. Health station | Yes _____ | No _____ |
| 3. Pharmacy | Yes _____ | No _____ |
| 4. Community health service | Yes _____ | No _____ |
9. What have you usually done when you or member of your family got sick in the last one year.
- 1. Do nothing
2. Self care

3. Go to traditional healer
4. Go to pharmacy
5. Go to health station in your area
6. " " " " elsewhere
7. " " " center or hospital
8. " " " community health service
9. Who advised you to use the medical help you have chosen.
 1. I decided myself _____
 2. Father/mother _____
 3. Brother/sister _____
 4. Other relatives _____
 5. Friend/neighbour _____
10. Have you ever used the services of:

1. Traditional healer	Yes___ No ___
2. Health station	Yes___ No ___
3. Pharmacy	Yes___ No ___
4. Community health service	Yes___ No ___
11. If the answer to que. 10 No. 1 is yes, how many times did you go there in the last 6 months _____
12. If the answer to que. 10 No.2 is yes, how many times have you been there in the last 6 months _____
13. If the answer to que.10 No.2 is No, what could you use to go there _____
 1. On foot
 2. Horse/mule/camel
 3. Carts
 4. Motor vehicle - car/train
 5. Other, specify _____

14. If the answer to que. 10 No. 2 is yes, what did you use to go to the health station _____
- _____ 1. On foot
 - _____ 2. Hourse/mule/camel
 - _____ 3. Carts
 - _____ 4. Motor vehicle - car/train
 - _____ 5. Other, specify _____
15. Average time required to go to the health station from your home by usual means of transportation _____ minutes
16. How many times have you been sick in the last 6 months _____
17. If you are not using health station in your area what do you think the most important reason is:
- _____ 1. It is not helpful
 - _____ 2. It is far from your home
 - _____ 3. Because you cannot afford the payment
 - _____ 4. you do not know the service exists
 - _____ 5. Other, specify _____
18. If you are not using health station who advised you not to go there _____
- _____ 1. I decided myself
 - _____ 2. Father/mother
 - _____ 3. Brother/sister
 - _____ 4. Other relatives
 - _____ 5. Friend/neighbour
19. Do you think you can get a letter from your Kebele for free treatment 1. Yes _____ 2. No. _____ 3. Do not know _____
20. If the answer to que. 19 is No 2 what do you think the reason is:

1. It is not given for every body
2. Because you can pay
3. Due to lack of cooperation from the Kebele
4. Other, specify _____

21. Do you think that the payment at the health station in your area is reasonable

1. No _____

2. Yes _____

3. No idea _____

22. How do you feel about the services rendered at:

1. Traditional healer good _____ fair _____ poor _____

2. Health station good _____ fair _____ poor _____

3. Pharmacy good _____ fair _____ Poor _____

4. community health service good _____ fair _____ poor _____

23. What is your feeling about the competence of workers of:

1. Traditional healer good _____ fair _____ poor _____

2. Health station good _____ " poor _____

3. Pharmacy good _____ " poor _____

4. Community health service good _____ " poor _____

24. How do you feel about the attitude of the workers

towards people like you

1. Traditional healer good _____ fair _____ pour _____

2. Health station good _____ fair _____ pour _____

3. Pharmacy good _____ fair _____ poor _____

4. Community health service good _____ fair _____ poor _____

25. Is vaccination good for your child 1, Yes _____

3. Don't know _____

2. No _____

If Yes or No why _____

26. Is vaccination given at the health station in your area
1. Yes ____ 2. No ____ 3. Don't know ____
27. Is checkup of pregnant ladies necessary
1. Yes ____ 2. No ____ 3. Don't know ____
If yes or No why _____
28. Number of health education sessions you attended in the
last 6 months _____
29. If the answer to question 28 is 1 or more, where did you have
it : 1. health institution
2. school
3. kebele/meeting
4. other, specify _____
30. Do you have radio at your home 1. Yes ____
2. No ____
31. What is your family annual income
- | | |
|---------------|-------|
| 1. 0-199 Birr | _____ |
| 2. 200-399 " | _____ |
| 3. 400-599 " | _____ |
| 4. 600-799 " | _____ |
| 5. 800-999 " | _____ |
| 6. > 1000 " | _____ |

AMHARIC VERSION OF QUESTIONNAIRE

ተራ ቀንር _____

ቀን _____

ጤና ድርጅት የመጡበት ምክንያት _____

ተራ ቀንር _____

ለጥያቄ የተመረጠበት ምክንያት _____

ባለፈው አንድ ወር ስለታመ _____

የሚሰጥህ ሕመም _____

አርገዝ ስለሆነኛ _____

- ለሀክምና _____

የሚሰጥህ ህመም _____

- በአርገዝና ምርመራ _____

በክትባት ዕድሜ ክልል ስለሆነ /3/ _____

የክሊኒኩ ስም የመጡበት ወይም ባቀራቢያ ያለ _____

የመጡበት መንገድ/ከተማ ስም / _____

1/ ዕድሜ _____ የቤተሰብ ብዛት _____

2/ ፀታ _____

ከ3-7 ተራ ቀንር ያሉትን ጥያቄዎች ተጠያቂው ከ19ወት በታች ከሆነ
ስለቤተሰቡ ኃላፊ ይሞላ

3/ ሥራ _____ 1. ገበሬ _____

2. የመንግሥት ሠራተኛ _____

የጉልበት ሥራ _____

የአእምሮ/የባሮ/ሥራ _____

3. ነጋዴ _____

4. የግል ድርጅት ሠራተኛ _____

5. የሕዝባዊያን ድርጅቶች ሠራተኛ _____

6. የጥን ሠራተኛ _____

7. ሥራ ፈት _____

8. ሌላ ይጠቀስ _____

4/ የትምህርት ሁኔታ _____

1. መጻፍና ማንበብ የማይችል _____

2. መሠረተ ትምህርት _____

3. የተማረ _____

4. የትምህርት ደረጃ _____

5/ ጠይሞች _____

1. ጠይሞች የሌለው _____

2. ክርስቲያን _____

3. እስላም _____

4. ሌላ ይገለጻል _____

6/ ብሔረሰብ _____

1. ሶርያ _____

2. አማራ _____

3. አፋር _____

4. አርገዛ _____

5. ተገራ _____

6. ጉራ _____

7. ሌላ ይገለጻል _____

7/ የጋብቻ ሁኔታ

1. ያሳገባ _____ 4. የተለያዩ ከ100 በላይ _____
 2. ያገባ _____ 5. ሚስት/ባል የዋተበት _____
 3. የፈታ _____

8/ ከሚከተሉት ውስጥ የትኛቹ በአካባቢው መኖራቸውን ታውቃለህ ?

- | | | |
|-------------------|-------------|-------------|
| 1. የባሕል መድኃኒት አዋቂ | አውቃለሁ _____ | አሳውቅም _____ |
| 2. የመንግሥት ክሊኒክ | •• _____ | •• _____ |
| 3. ፋርማሲ | •• _____ | •• _____ |
| 4. የቀበሌ ጤና አገልግሎት | •• _____ | •• _____ |

9/ ባለፈው አንድ ዓመት ውስጥ አንተ ወይም ቤተሰብህ ሲታመም ብዙውን ጊዜ ምን ታደርግ ነበር ?

1. ምንም አሳደርገኝም _____
2. ራሴን በራሴ ወይም ቤት ውስጥ አረዳለሁ _____
3. የባሕል መድኃኒት አዋቂን አሄዳለሁ _____
4. ፋርማሲ አሄዳለሁ _____
5. ባኪባቢ ያለው የመንግሥት ክሊኒክ አሄዳለሁ _____
6. ሌላ ብቻ ያለ የመንግሥት ክሊኒክ አሄዳለሁ _____
7. ጤና ጣቢያ ወይም ሆስፒታል አሄዳለሁ _____
8. የቀበሌ ጤና አገልግሎት አሄዳለሁ _____

10/ በተራ ቁጥር 9 የመረጥኩትን አንድተኛዎ/አንድታደርግ/ ማነው የመከረህ _____

1. እኔ እራሴ/ማንም አልመከረኝም _____
2. አባት/እናት _____
3. አህት/ወንድም _____
4. ሌላ ዘመድ _____
5. ገደኛ/ገረቤት _____

11/ ከሚከተሉት ውስጥ በየትኛቹ ቦታዎቹ የጤና አገልግሎት አግኝተህ ታውቃለህ ?

- | | | |
|-------------------|----------|-------------|
| 1. የባሕል መድኃኒት አዋቂ | አዎ _____ | አይደለም _____ |
| 2. የመንግሥት ክሊኒክ | አዎ _____ | አይደለም _____ |
| 3. ፋርማሲ | አዎ _____ | አይደለም _____ |
| 4. የቀበሌ ጤና አገልግሎት | አዎ _____ | አይደለም _____ |

12/ ለ11ኛው ጥያቄ ተራ ቁጥር 1 መልስህ አዎ ከሆነ ባለፈው ስድስት ወራት ስንት ጊዜ ሄደሃል _____ ጊዜ

13/ ለ11ኛው ጥያቄ ተራ ቁጥር 2 መልስህ አዎ ከሆነ ባለፈው 6 ወር ስንት ጊዜ ሄደሃል? _____ ጊዜ

14/ ለ11ኛ ጥያቄ ተራ ቁጥር 2 መልሱን አይደለም ከሆነ ክሊኒኩ መሄድ ብተፈልግ በምን መሄድ ትችላለህ ?

1. በእግር _____
2. ፈረስ/በቅሎ/ግመል _____
3. ጋሪ _____
4. መከፍ/ባቦር _____
5. ሌላ ይገለጽ _____

15/ ለ11ኛው ጥያቄ ተራ ቁጥር 2 መልሱን አያ ከሆነ ክሊኒኩ ለመሄድ ምን ነበር ስትጠቀም የነበረው ?

1. በእግር _____
2. በቅሎ /ፈረስ/ግመል _____
3. ጋሪ _____
4. መከፍ/ባቦር _____
5. ሌላ ይገለጽ _____

16/ አዘውትረህ በምትሄድበት መንገድ ባቅራቢያህ ያለው የመንግሥት ክሊኒክ ጋ ለመድረስ ምን ያህል ጊዜ ይፈጅብሃል? _____

17/ ባለፈው 6 ወር ጊዜ ውስጥ ስንት ጊዜ ታመሃል _____ ጊዜ

18/ በካባቢህ ያለውን የመንግሥት ክሊኒክ የማትጠቀም ከሆነ ከሚከተሉት ምክንያቶች የትን ሊሆን ይችላል፡፡

1. ክሊኒኩ በደንብ ዕርዳታ የሚያደርግልህ አይመስልህም _____
2. ፊደሉ አጭር ስለሆነ ነው ? _____
3. ከፍተኛ ስለማትችል ነው ? _____
4. የሕክምና አገልግሎት መፍረግ ስለማታውቅ ነው ? _____
5. ሌላ ምክንያት ይገለጽ _____

19/ የመንግሥት ክሊኒክ ማትጠቀም ከሆነ እንዳትጠቀም ማነው የመከረህ?

1. ማንም አልጠቀም _____
2. እናት/አባት _____
3. ወንድም/እህት _____
4. ሌላ ዘመድ _____
5. ጋራ/ገረብ _____

20/ ለነፃ ሕክምና ከቀበሌ ደብዳቤ የምትገኝ የመስልህል ?

1. አያ _____
2. አሳገኝም _____
3. አሳጠቅም _____

21/ ለ20ኛ ጥያቄ መልሱን አሳግኝሎ ከሆነ ምክንያቱ ምን ይመስልሃል?

1. ቀበሌ ለማንም የነጻ ደብዳቤ አይጽፍም _____
2. መክፈል ስለሚችል ነው _____
3. ቀበሌው ስለማይተባበር ነው _____
4. ሌላ ይገለጻል _____

22/ ባካባቢያ ላለው የመንግሥት ክሊኒክ ለጠቅሚያ የሚያስከፍለው ክስገልገሎት ጋር፡

1. ተመሳሳይ ነው _____
2. ተመሳሳይ አይደለም _____
3. አሳውቅም _____

23. የሚከተሉት የጤና አገልግሎታቸው ምን ይመስልሃል ?

1. የባህል መድኃኒት አዋቂ ጥረት ነው _____ መከላከል _____ መጥፋት _____
2. የመንግሥት ክሊኒክ ጥረት ነው _____ መሀከለኛ _____ መጥፋት _____
3. ፋርማሲ ጥረት ነው _____ መሀከለኛ _____ መጥፋት _____
4. የቀበሌ ጤና አገልግሎት ጥረት ነው _____ መጥፋት _____ መጥፋት _____

24/ የሚከተሉት የጤና አገልግሎት ቦታዎች የሠራተኞቻቸው የሥራ ጥራት ምን ይመስልሃል?

1. የባህል መድኃኒት አዋቂ ጥረት _____ መሀከለኛ _____ መጥፋት _____
2. የመንግሥት ክሊኒክ መጥፋት _____ መጥፋት _____ መጥፋት _____
3. ፋርማሲ መጥፋት _____ መጥፋት _____ መጥፋት _____
4. የቀበሌ ጤና አገልግሎት መጥፋት _____ መጥፋት _____ መጥፋት _____

25/ የሚከተሉት የጤና አገልግሎት ቦታዎች የሠራተኞች ሰው አቀባበል ሁኔታ እንዴት ነው?

1. የባህል መድኃኒት አዋቂ ጥረት _____ መሀከለኛ _____ መጥፋት _____
2. የመንግሥት ክሊኒክ መጥፋት _____ መጥፋት _____ መጥፋት _____
3. ፋርማሲ መጥፋት _____ መጥፋት _____ መጥፋት _____
4. የቀበሌ ጤና አገልግሎት መጥፋት _____ መጥፋት _____ መጥፋት _____

26/ ክትባት ለልጅህ የሚጠቅም ይመስልሃል? 1. አዎ _____ 2. አይጠቅምም _____ 3. አሳውቅም _____

27/ ባካባቢያ ላለው የመንግሥት ክሊኒክ ክትባት ለልጆች ይሰጣል ወይ ?

1. አዎ _____ 2. አይሰጥም _____ 3. አሳውቅም _____

28/ እርዝዞች የጤና ምርመራ ያስፈልጋቸዋል ወይ ? 1. አዎ _____ 2. አያስፈልገውም _____ 3. አሳውቅም _____

29/ ባካባቢያ ላለው የመንግሥት ክሊኒክ ለእርዝዞች የጤና ምርመራ ይደረግላቸዋል ወይ ?

1. አዎ _____ 2. አይደረግም _____ 3. አሳውቅም _____

30/ ባለፈው 6 ወር ውስጥ ስንት ጊዜ የጤና ትምህርት አግኝተሃል? _____ ጊዜ

31/ ለ30ኛው ጥያቄ መልሱን 1 ወይም ከ1 በላይ ከሆነ የት ነው የጤና ትምህርትን ያገኘህ?

1. ጤና ደርጅት _____
2. ትምህርት ቤት _____
3. ቀበሌ/ሰብሰባ ቦታ _____
4. ሌላ/ይገለጻል _____

32/ በቤትህ ራዲዮ አለ ወይ ? 1. አዎ _____ 2. የለም _____

33/ የቤተሰብህ የዓመት ገቢ ምን ያህል ነው? 1. 0-199 ብር _____
 2. 200-399 ብር _____
 3. 400-599 ብር _____
 4. 600-799 ብር _____
 5. 800-999 ብር _____
 6. ከ1000 ብር በላይ _____

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DECLARATION

I, the undersigned, declare that this thesis is my work and that all sources of material used for this thesis have been duly acknowledged.

Name Assefa Amenu, M.D

Signature 

Place Addis Ababa

Date of Submission: April 17, 1989