PATIENT SATISFACTION ON TUBERCULOSIS TREATMENT SERVICE AND ADHERENCE TO TREATMENT IN PUBLIC HEALTH CENTERS AND HOSPITAL OF SIDAMA ZONE, SOUTH ETHIOPIA.

By

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LIST OF ACRONYMS

CI	Confidence interval
CP	Continuation Phase
DOT	Directly Observable Therapy
DOTS	Directly Observed Treatment Short-course
FMOH	Federal Ministry of Health
HC	Health Centre
IOM	Institute of Medicine
IP	Intensive Phase
MAS	Morisky Adherence Scale
MDGs	Millennium Development Goals
NHS	National Health Service
OR	Odds Ratio
PHC	Primary Health Care
PSQ-18	Patient Satisfaction Questionnaire Short- form
TB	Tuberculosis
WHO	World Health Organization

ABSTRACT

Background: Patient compliance is a key factor in treatment success. Satisfied patients are more likely to utilize health services, comply with medical treatment, and continue with the health care providers. However, to investigators knowledge there is no reliable information found on the relationship between patient satisfaction and adherence to treatment in Sidama zone. Thus, assessment of patient satisfaction and adherence to TB treatment a great input to improve the treatment service.

Objective: To assesses patient satisfaction on tuberculosis treatment service and adherence to treatment.

Methods: A facility based cross sectional study was employed using quantitative method of data collection from March 14-April 7/2011. A sample of 531 respondents on anti TB treatment from 11 health centers and 1 hospital were included in the study. The sample size for each facility was allocated by probability proportional to size allocation and individual study population were selected by systematic random sampling. A Pre tested, interviewer administered questionnaire was used to collect data and then the data was edited, coded and entered then double data entry verification was applied using Epi data version 3.1. and exported to SPSS version 16. Confirmatory factor analysis was done to identify factors that explain most of the variance observed in most of manifested variables. Regression analysis (liner and binary logistic) were performed.

Result: Generally, 90% of the respondents were satisfied with TB treatment service. The study shows that 138 (26%) of respondents had poor adherence to their TB treatment. Patient perceived on professional care, time spent with health care provider, accessibility, technical competency, convenience (cleanliness) and consultation and relational empathy were independent predictor of overall patient satisfaction ($P < 0.05$). In addition to this, perceived waiting time was significantly associated with patient satisfaction (Beta = 0.262). In logistic regression analysis model occupational status, area of the residence, perceived time spent with health care provider, perceived accessibility, perceived waiting time, perceived professional care and over all patient satisfaction were significantly associated with adherence to TB treatment ($P < 0.05$). Moreover, patient waiting time at reception room (Adjusted OR= 1.022, 95% CI 1.009, 1.0035) and Patient treatment phase (Adjusted OR=0.295, 95% CI 0.172, 0.507) were independent predictor of adherence to TB treatment.

Conclusion and recommendation: The finding of this study showed that patient perception on health care provider interaction had a significant influence on patient satisfaction and adherence to TB treatment. Moreover, an increased the overall patient satisfaction score had a positive outcome on patient adherence to TB treatment. Therefore, the health care provider should emphasis more on the improvement of patient provider interaction to enhance patient satisfaction and adherence to TB treatment.

Key words: Patient satisfaction, Adherence to TB treatment.

CHAPTER ONE: INTRODUCTION

1.1. Back ground

Prompt, accurate diagnosis and effective treatment for tuberculosis are the key elements in the public health response to tuberculosis and are the cornerstones of tuberculosis control [1]. Effective treatment not only restores the health of the individual with the disease but also, quickly renders the patient noninfectious and no longer a threat to the community [2].

Properly applied TB chemotherapy is effective in curing infectious cases and interrupting the chain of transmission. The best prevention of TB is therefore the cure of infectious TB cases. The World Bank recognizes the DOTS strategy as one of the most cost-effective health interventions, and recommends that effective TB treatment be a part of the essential clinical services package available in primary health care (PHC) [3].

Patient satisfaction is considered as one of the desired outcomes of health care and it is directly related with utilization of health services. Asking patients what they think about the care and treatment they have received is an important step towards improving the quality of care, and to ensuring that local health services are meeting patients' needs [4].

The emerging health care literature suggests that patient satisfaction is a dominant concern that is intertwined with strategic decisions in the health services [5]. When patients are more satisfied, medical management and outcome are enhanced. Patient satisfaction is a measure of the quality of care, and indispensable to assessment of quality as to the design and management of healthcare system. Hence a useful way of doing this is by carrying out surveys of patients who have used the health services [6].

1.2. Statement of the problem

Tuberculosis (TB) is a global health concern; nearly one-third of the global population is infected with Mycobacterium tuberculosis and at risk of developing the disease. More than eight million people develop active tuberculosis (TB) every year, and about two million die [7]. More than 90% of global TB cases and deaths occur in the developing world, where 75% of cases are in the most economically productive age group [8].

In resource-constrained settings where the health care services are not well developed, delayed presentation for treatment and defaulting from treatment are the two major challenges that TB programmes face [9]. Patient compliance is a key factor in treatment success. In many countries, a significant proportion of patients stop treatment before completion, for various reasons. Promoting compliance through a patient-centered approach, this includes facilitating access to treatment, choosing with the patient the most convenient time and place for direct observation of treatment and, when possible, providing other social and medical services, is much more effective than spending resources on defaulter tracing [10].

Reducing the waiting times for appointments can greatly reduce the stress of utilizing healthcare services [11]. Foremost factor in patient dissatisfaction was waiting time. It is easy to see the implication: the more time out of the activities, the more income is lost, and the less likely they will utilize services in the future [12].

Studies have shown that, satisfied patients are more likely to utilize health services [13], comply with medical treatment [14], and continue with the health care providers [15]. Satisfaction is related to more partnership building, more social conversation, courtesy, clear communication and information, respectful treatment, length of consultation, cleanliness of facility and waiting time [16, 17]. Measurement of patient satisfaction involves multi-dimensional aspects of patients' opinion on health care, identifying problems in health care, and evaluation of health care [18, 19, 20, 21].

Ethiopia ranks seventh among the world's 22 high-burden tuberculosis (TB) countries. According to the World Health Organization's (WHO's) Global TB Report 2009, the country had an estimated 314,267 TB cases in 2007, with an estimated incidence and prevalence rate of 378 cases per 100,000 population and 579 cases per 100,000 population respectively [22].

In Ethiopia, health services are limited and of poor quality [23] and the country has extremely poor health status relative to other low-income countries. To solve this problem, the government has focused on improving the organization and quality of health services delivered to the population. This is because of improving the poor quality of care delivered to patients is one of the strategies to reduce the burden of communicable diseases and plays a significant role in attaining the Millennium Development Goals (MDGs) [24-25].

The World Bank joint work with FMOH report indicates that about 52 percent of respondents perceived the quality of care they received as good whereas about 30 percent of households who visited government health facilities consider the quality of care they received to be below average. The main reasons cited for dissatisfaction with the quality of care in public health care facilities included: drugs were not consistently available, lengthy waiting time, lack of courtesy on the part of the staff assigned in the facilities, and inadequate availability of diagnostic services [26].

Study conducted in Tigray region of northern Ethiopia shows that the poor quality of TB service delivery in public health facilities was key determinants of low adherence to treatment. The provision of TB care by poorly trained and inadequately supervised TB focal persons was related to high treatment interruption. [27].

In Ethiopia before the introduction of DOTS, 82% of TB patients were reported to have failed to complete treatment [28]. In the southern region of Ethiopia (Southern Nations Nationalities and Peoples' Regional State), DOTS was introduced in 1996, however study conducted in South Ethiopia shows that one in five patients still continued to default from treatment [29].

In Sidama zone between 1995 and 2004, the smear positive case notification rate increased from 45 to 143 per 100 000 population, the case detection rate from 22% to 45%, and the treatment success rate from 53% to 85%. The default and failure rates decreased from 26% to 6% and from 7% to 1%, respectively [30]. However, to investigators knowledge there is no reliable information found on the relationship between patient satisfaction on TB treatment service and adherence to treatment in Sidama zone. By better understanding of patient satisfaction and adherence to treatment useful for administrators and service providers in determining and improving weaker aspects of their TB treatment service delivery system. Therefore it is important to know the patient satisfaction on TB treatment service and adherence to treatment.

CHAPTER TWO: LITERATURE REVIEW

One of the main goals of quality improvement is to meet the need and expectations of the clients. Therefore, for quality improvement program to succeed it has to carefully identify its clients and learn their needs and expectation, and must find way to meet them. Otherwise, quality improvement will have little or no impact on what matter the most [31].

There is general agreement that client satisfaction is an integral component of service quality [32] and expanded definitions of health service quality typically make explicit mention of patient satisfaction. The argument has been offered that the effectiveness of health care is determined, in some degree, by consumers' satisfaction with the services provided. Support for this view has been found in studies that have reported a satisfied patient is more likely to comply with the medical treatment prescribed, more likely to provide medically relevant information to the provider, and more likely to continue using medical services. The logic has been extended to developing countries; patient satisfaction and Perceived quality will influence utilization of services, as well as compliance with practitioner recommendations [33].

Donabedian describes four specific reasons for investigating patient satisfaction. (1) Satisfaction is an objective of care; (2) satisfaction is also a consequence of that care, and therefore an outcome; (3) satisfaction can contribute to the effects of care, as a satisfied patient is more likely to comply with advice; and (4) satisfaction is also the patient's judgment on the care that has been provided [34].

Treatment adherence means that a patient is following the recommended course of treatment by taking all the prescribed medication for the entire length of time necessary [35]. Accurate assessment of adherence behavior is necessary for effective and efficient treatment planning and for ensuring that change in health outcomes can be attributed to the recommended regimen [36]. Adherence to treatment can be measured by variety of methods. However, these measures of adherence have different strengths and weaknesses in regard to practical application and identifying deficient adherence [37].

The questioning patient about their adherence is the most readily available, valid method of measuring adherence in clinical practice [36]. Several studies showed a strong relationship of patient interview to other concurrent measures [38]. In this study self report (indirect method) was conducted for adherence measure.

Study conducted U.S. primary care physicians showed that longer waiting times were associated with lower patient satisfaction ($p < 0.05$) however; time spent with the physician was the strongest predictor of patient satisfaction. The decrement in satisfaction associated with long waiting times is substantially reduced with increased time spent with the physician (5 minutes or more) [39].

Study done in Kota Bharu, Kelantan, Malaysia showed that there were no significant differences in socio-demographic characteristics between non-compliance and compliance groups. Among treatment related factors, there were significant differences between compliance and non-compliance groups regarding convenience with clinic day schedule (those who were inconvenient with schedule had about 2.5 times higher odds of being noncompliant), problem with distance to health facility (those who had problem with distance had two times higher odds of being noncompliant) and patients who lived more than ten kilometers away from health facility had seven and half times significantly higher odds of being non-compliant. [40].

Other study carried out in India revealed that the distance could still be challenging for the very sick and/or for the very poor, and six of the 40 default patients stated that the DOT centre was difficult to reach. it was found that issues such as poor communication and lack of attention and support, from the provider to the patient sometimes precipitated default, those features or behaviors are at least partly the result of the lack of the very same inputs (communication, attention and support), from the programme to the provider. According to this data, six of the 40 defaulters stated that they had defaulted because of the poor communication skills of the health workers, who were described as being rude or unhelpful [41].

A matched Case control Study carried out in India, defaulted patients as ‘‘cases’’ and equal number of age and sex matched patients completing treatment as ‘‘controls’’, revealed that in the overall univariate analysis, factors significantly associated with default were inadequate patient provider interaction, poor support from health staff and dissatisfaction with services provided.

Though 847 of the 929 (91%) of the patients in the study group expressed Satisfaction with the DOT services, there was significant difference in this regard between the defaulted and completed group (81% v/s 98%, p,0.01) [42].

A cross sectional study done in Tanzania showed that all interviewed patients were satisfied with the services provided to TB patients. Twenty one (50%) of the 42 males mentioned good patient-service provider relationship as an important reason for satisfaction as compared to 59.3% (16/27) female respondents ($\chi 2 = 0.57$, df = 1, $P > 0.005$) who gave the same reason. Most of the respondents (57.8% (37/64)) said they were well attended by service providers [43].

Other case control study done South African district hospital of the 159 patients using prospectively collected data, 105 (66%) was adherent and 54 (34%) non adherent. No significant association was found between school grades and adherence, but Employment status was significantly associated with non-adherence. It was also associated with a good relationship with the nurse. Higher patient satisfaction with the service at the hospital was also significantly associated with higher levels of adherence. [44].

A cross sectional study done in university of Ilorin Teaching Hospital revealed that Majority of the patients (94.6%) adhered with their medications. Partial regression of effects of counseling on patients' drug adherence is presented. The results showed that there is positive effect of counseling on the patients' drug adherence. However, Chi – square analysis revealed that age had no significant relationship with patients' drug adherence, whereas education was significantly associated with patients' drug adherence [45].

Study conducted in West Shoa, Central Ethiopia showed that 73% of the respondents Perceived that provider's empathy were good and 35% complained that providers were not technically competent enough. On the other hand, the study documented that the mean duration of consultation was 6.26 ± 2.55 minutes (range = 2-20 minutes). Generally speaking, 62.6% of the patients reported that they have been satisfied with their visit. Perceived empathy, Perceived technical competency, type and frequency of visit and educational status were main independent predictors of patient satisfaction [46].

Other study done in eastern Ethiopia showed that the satisfactions level related to consultation time is relatively higher. Statistical analysis has shown that the level of satisfaction decreased with an increase in Perceived length of waiting time $p< 0.01$ [47].

Study conducted in Arsi Zone in Ethiopia showed that the overall rate of defaulting from DOTS was calculated to be 11.3%. Defaulting was highest (81%) during the continuation phase of treatment. Medication side effects were significantly associated with defaulting [48].other study conducted in Jimma Zone showed that overall rate of defaulting was 6.7%. Socio-economic factors including distance of patients' residence from the health institution were the major reasons contributing to poor compliance and defaulting [49].

Study done in Tigray region of northern Ethiopia revealed that From TB register data, of 246 eligible patients, 237 (98%) completed the intensive phase of treatment. Only 37 (16%) of 237 did not miss any of their monthly appointments while the remaining missed at least one appointment during the continuation phase. Twenty-two per cent missed five or more monthly follow-up visits. The overall treatment completion rate was 74%, while default and death rates were 22% and 3.8%, respectively. Age, sex, marital status and residence were not associated with defaulting, treatment interruption or non-adherence to self-administered treatment [27].

A cohort study conducted on smear-positive tuberculosis patients diagnosed and registered in Hossana revealed that 72% of the patients in study reach a health facility in a two-hour walk. A total of 81 patients (20%) defaulted from treatment while 310 (77%) successfully completed treatment. In this study, more than 90% of the defaulters discontinued treatment during the continuation phase of treatment, particularly during the first two months following the two month intensive phase of treatment. In univariate analysis, factors significantly associated with treatment non-completion included participant over the age of 25 year, rural residence, educational level, occupation, distance from residence to the nearest treatment centre, and the patient’s condition on treatment initiation. The major reasons given by 45% of the patients for interrupting treatment were those related to physical access (TB clinic too far from home, could not afford transportation cost, and too tired to walk to the treatment centre) [50].

CONCEPTUAL FRAMEWORK

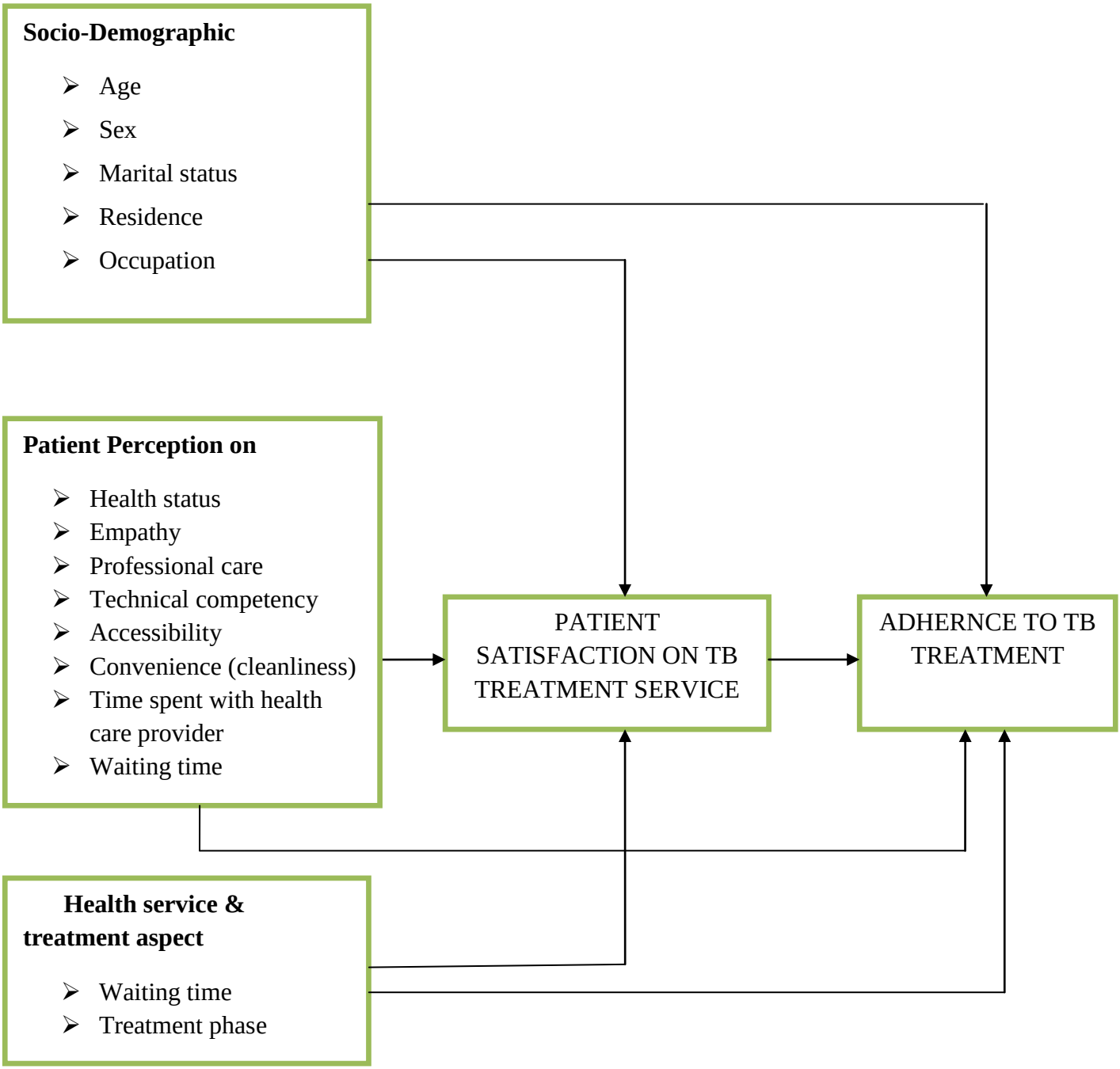

Figure 1: The Conceptual framework on patient satisfaction and adherence to TB treatment 2011.

CHAPTER THREE: SIGNIFICANCE OF THE STUDY

Patient satisfaction is the essential indicator that indicates the service quality at any level of health care services. Patient satisfaction is therefore of high value and it is useful to understand the need of patient. By understanding the importance of satisfaction and determining its existing level, health care service can be made relevant to the requirements of patients [51].

Satisfied patients are the assets of health institution, which will induce a sense of belonging and could improve autonomous participation on health facility development. In order to improve the quality of service as part of total quality management, the measurement of patient satisfaction in autonomous health facility should carried out regularly as basic indicator to define the strength and weaknesses of the provided services. Data of patient satisfaction could alert health care providers to patients concerns, needs and perception of treatment.

Thus by understanding patient satisfaction and adherence to TB treatment, administrators and service providers help to promote patient compliance to treatment by addressing the major predictors of patient satisfaction and adherence to treatment. In addition to that, the data may also prove useful for program planner, evaluator and policy maker. Thus, this study aimed to measure patient satisfaction on tuberculosis treatment service and adherence to treatment.

CHAPTER FOUR: OBJECTIVE

4.1. GENERAL OBJECTIVE

- ✓ To assesses patient satisfaction on tuberculosis treatment service and adherence to treatment in public health centers and hospital of Sidama Zone, South Ethiopia.

4.2. SPECIFIC OBJECTIVE

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1. To assess patient satisfaction on TB treatment service in public health centers & hospital.
2. To measure the level of patient adherence to TB treatment in those facilities.
3. To identify the predictors of patient satisfaction.
4. To identify the predictors of treatment adherence.

CAHPTER FIVE: METHODS AND MATERIALS

5.1. STUDY AREA AND PERIOD

The study was conducted from March 14 to April 7/2011 in Sidama zone of South nations, nationalities and peoples region. The Southern Nations, Nationalities and Peoples' Region has an area of 118,000 sq km. and 15.7 million people, constituting 20% of the nation's total. It has 13 zones, eight special woredas, 133 woredas, 22 town administrations and 3,851 rural kebeles. Nearly to 93% of the population live in rural areas [52].

Sidama zone is one of 13 zones in the SNNP regional state. The administrative center for Sidama is Hawasa which found 275 kilometers south to Addis Ababa. Based on data from the CSA, in 2007 the zone has an estimated total population of 2,954,136, of whom 1,491,248 are men and 1,462,888 are women; 162, 632 or 5.5% of its population are urban dwellers. The zone has 2 hospitals, 46 health centers and 422 health posts with 85% of potential health service coverage [52].

The TB control programme operates as an integral part of the public health system, with management structures at regional and district levels. The district health office is responsible for the management of TB services in its catchment health facilities [53]. In Sidama zone currently the TB treatment service is provided by 46 health centers and 2 hospitals.\

Figure 2: Map of Sidama zone in the southern Ethiopia.

5.2. STUDY DESIGN

A facility based cross sectional study was employed using quantitative method of data collection.

5.3. POPULATION

5.3.1. TARGET POPULATION

All TB patients who were on anti TB treatment in public health centers and hospitals of Sidama zone.

5.3.2. SOURCE POPULATION

All TB patients who were on anti TB treatment in the selected public health centers and hospital of Sidama zone.

5.3.4. STUDY POPULATION

TB patients who were selected by systematic random sampling in the selected public health centers and hospital and who can meet the inclusion criteria.

5.3.5. INCLUSION CRITERIA

- TB patients who were following their anti TB treatment for two or more weeks.
- TB Patients whose age 15 and above.

5.3.6. EXCLUSION CRITERIA

- TB Patients who were severely ill.

5.4 SAMPLE SIZE AND SAMPLING TECHNIQUE

5.4.1. SAMPLE SIZE

The sample size was calculated using a single proportion formula by assuming p (0.77), proportion of patient adherence to TB treatment study done in Hossana, which gave the maximum sample size [50]. Other assumptions made during the sample size calculation were 5% marginal error (d) and confidence level of 95% ($z\,{}^{\alpha}/_{2}$= 1.96). Based on these assumptions, the sample size was calculated as follows:

$$n = \frac{z^2\,{}^{\alpha}/_{2}\,p(1-p)}{d^2}$$

This yields a sample size of 272. However, since the target population <10, 000 sample size correction formula was used to determine the final sample size

$$nf = \frac{n}{1+(n/N)}$$

nf = desired sample size (with population <10,000)

n=calculated sample size (when population>10,000)

N= the estimate of the population size (3581)

The calculated correction sample size was 253. This was multiplied by a factor of 2 to correct the design effect of sampling which gives 506. Then considering 10% non response rate, the final sample size was 556.

5.4.2. SAMPLING TECHNIQUE

A multi stage stratified sampling technique was used with the strata of health facility exist in urban and rural. The health facility was selected at first stage by simple random sampling then the Respondents were selected at the second stage by systematic random sampling.

A total of 46 health centre and 2 hospitals were providing TB treatment service in the Zone, of which 27 health centers exist in rural district and the remaining 19 belongs in urban district. However, the two hospitals exist in urban at Yergalem town and Bona district town. For this particular study due to resource constraint 25% (12) of public health facilities, 7 health centers from rural and 4 health centers and 1 hospital from urban were selected randomly. The number of health centers and hospital were determined by the probability proportional to size of health facility exists in rural and urban. Number of respondents from each health centre and hospital were based on the probability proportional to size of patients' who use TB treatment service during one week prior to the start of the study. Then respondents of the study from source populations (1001 patients) were selected by systematic random sampling every 2 (1001/556) TB patients. The first patient was the 2nd visitor of TB patient which was selected by lottery method.

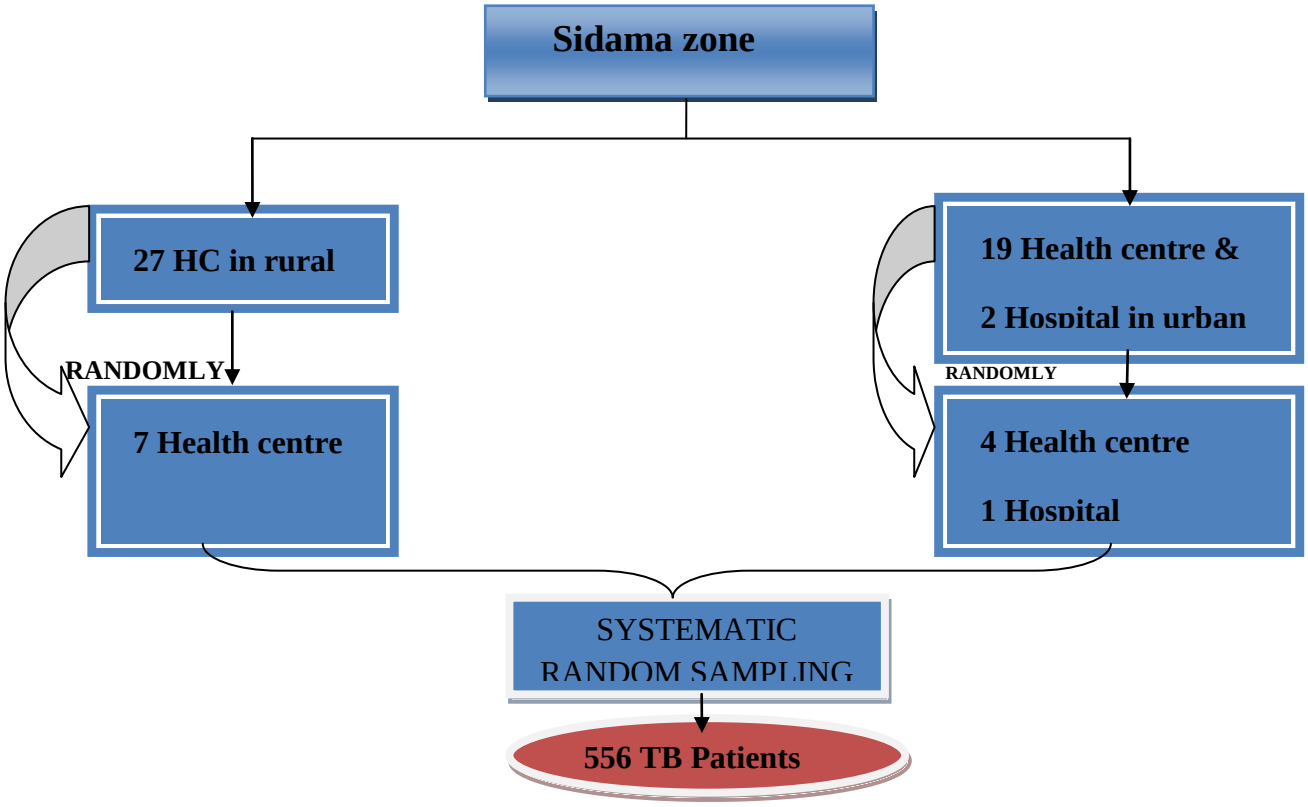

Figure 3: Schematic presentation of sampling procedure in Sidama Zone 2011.

5.5. DATA COLLECTION AND MEASUREMENT

5.5.1. VARIABLES

Dependent variables

- Adherence to TB treatment
- Patient satisfaction (an intermediate outcome)

Independent variables

- Age
- Sex
- Religion
- Marital status
- Ethnicity
- Educational level
- Occupation
- Monthly family income
- Duration of treatment
- Distance from health facility
- Time to reach the health facility
- Health status

- Waiting time
- Consultation duration
- Perceived accessibility
- Perceived convenience (cleanliness)
- Perceived waiting time
- Perceived empathy
- Perceived technical competency
- Perceived professional care
- Perceived time spent with health care provide.

5.5.2. DATA COLLECTION INSTRUMENT & MEASUREMENT

The study was conducted using a structured questionnaire. The study instrument is formed from validated questionnaires adapted to local context for the study purposes.

For assessing patient satisfaction a validated patient satisfaction questionnaire were adapted from Birhanu et al 2010 and Grant N. Marshall & Ron D. Hays 1994 [46, 54]. The measurement has 5 sub-scales: Consultation and Relational Empathy (10 items), Perceived technical competency and/ or professional care (11 items), Perceived Accessibility and convenience (9 items), Time spent with health care provider (2 items) and patient general satisfaction (5 items). Each item is measured by a five-point Likert scale. After data collection confirmatory factor analysis was employed.

Questions regarding adherence were taken from the Morisky Adherence Scale (MAS) to assess adherence to medications. MAS is a 4-item self report scale with original binary response option (yes [1] and no [0]) and one open ended question was used for clarification of reason. The classification of the patients as Poor adherence or Good adherence depended on the proportion of binary answers [55].

Then the questionnaire was translated into Amharic & Sidamagna and was retranslated into English to ensure its consistency.

5.5.3. PRE-TEST

The instrument was pre-tested using 5% (28 TB patients) of the sample size of the study in public health centre of Dila town.

5.5.4. DATA COLLECTORS' SELECTION AND TRAINING

The data collectors were 12 non health professionals grade 10 completed to reduce interviewer and social desirability bias. The Supervisors were 3 B.Sc health professionals. The Supervisors and data collectors were trained for one day on relevant data collection principles and procedures before their participation.

5.5.5. DATA COLLECTION METHOD

The questionnaires were administered by trained interviewer. The participants were interviewed in the public health centers and hospital after completing the service. The selected patients who were refuse participation or unable to answer the questions, the next eligible respondent was interviewed.

5.6. DATA ANALYSIS

The data was edited, coded, and entered then double data entry verification was applied using Epi data version 3.1 and exported to SPSS version 16. Using SPSS version 16, descriptive analysis (Mean ± SD, median and percentile for continuous variables and frequencies for categorical variables) was conducted. Confirmatory factor analysis was done to identify factors that explain most of the variance observed in a much of manifested variables. Negatively worded questions were reverse scored (so that 1 = 5, 2=4, etc). Thus high score always shows higher satisfaction.

Analysis of regression (linear and binary logistic) was done to determine the predictors of patient satisfaction and Treatment adherence. P value less than 0.5 was used as cut off point.

5.7. DATA QUALITY CONTROL MEASURES

Quality of data was assured through: -

Data collection tools were adapted to local context of the study area then translated to Amharic and Sidamagna then back translated to English. The tools were pre-tested using 5% of the sample size. Before the data collection, training was given to data collectors and supervisors and then frequent supervision by supervisors and principal investigators was done for consistency and completeness of data. After data collection, the data was edited, coded and entered then double data entry verification was applied. After factor analysis employed the reliability of the instrument was checked.

5.8. OPERATIONAL DEFINITIONS OF TERMS AND CONCEPTS

Satisfaction- Patients' opinion of overall satisfaction level with TB treatment services they received determined by percentile values of satisfaction assessment questions.

Perceived empathy- Patients' opinion of their health care provider ability to identify with and understand somebody else's feelings or difficulties, determined by percentile values of Empathy assessment questions.

Perceived professional care- Patients' opinion of the received professional care from the health care provider determined by percentile values of professional care assessment questions.

Perceived Technical competency- Patients opinion of technical competency of their health care provider in treating them determined by percentile values of technical competency measurement questions.

Perceived accessibility - Patients opinion of access to health care provider, TB treatment service, determined by percentile values of accessibility measuring questions.

Perceived convenience (cleanliness) - Patient opinion of cleanliness' and comfort of the health facility determined by percentile values of Convenience measuring questions.

Perceived waiting time- Patient opinion of waiting time at health facility reception room determined by percentile values of waiting time measuring questions.

Perceived time spent – Patient opinion of time spent with health care provider, determined by percentile values of time spent to health care provider measuring questions.

Waiting time- Duration by which patients stay in reception room to see his/her health care provider.

Consultation duration- Duration recorded by the interviewers by which the patients' stays in the health care provider office, from entrance to health care provider office up to exit.

Good Adherence - Patients compliant with the four MAS item (MAS score 0).

Poor adherence – Patients compliant with fewer than four of the four items (MAS score 1-4).

5.9 . ETHICAL CONSIDERATION

Before the start of the data collection process ethical clearance was secured from Jimma university public health and medical science ethical review board. Permission was sought from SNNPR health Bureau, Sidama zone Health department and respective public health centers and hospital. Participation in the study was voluntary and based on each patient's ability to give verbal informed consent. Participants were guaranteed on confidentiality of the information by not mentioning their name or any identification of patient, kept information, and interview was done only in the presence of data collector and patient.

5.10. DATA PRESENTATION AND DISSEMINATION PLAN

The study finding will be presented to Jimma University. Then it will be communicated to concerned bodies including public health facilities, South region health Bureau and Sidama health department. Finally effort will be done to publish for dissemination worldwide.

CHAPTER SIX: RESULT

Socio-demographic characteristics of the respondents

A total of 12 health facilities (11 health centers and 1 hospital) were included in this study. Five hundred thirty one TB patients aged 15 years and older were interviewed yielding a response rate of 95.5%. Two hundred ninety one (54.8%) of the respondents were male. The median age of the respondents was 28 years. Two hundred seventy two (51.2%) of the respondents were married, while 206 (38.8%) were single. The majority of the respondents 363(68.4%) were Sidama. Three hundred sixty six (68.9%) of the respondents reside in rural area. Concerning educational status, 153(28.8%) of the respondents have attended up to second cycle education (grade 5-8); while 124 (23.1%) of them were illiterate. Occupationally, 135 (25.4%) of the respondents were farmers and 127(23.9%) and 121(22.8%) of them were house wife and students respectively. The median family income of the respondents was 452.50 Birr. Almost 347(65.3%) of the respondent were protestant religion followers (Table 1).

Table 1: Socio demographic characteristics of the respondent at public health centers and hospital of Sidama zone, March-April 2011. (N=531)

Background characteristics	Health Facilities		Total number (%)
	Rural N (%)	Urban N (%)	
Sex			
Male	116(39.9)	175(60.1)	291 (54.8)
Female	108(45.0)	132(55.0)	240 (45.2)
Age			
15-19	49(46.2)	57(53.8)	106(20)
20-24	33(37.1)	56(62.9)	89(16.8)
25-34	70(44.3)	88(55.7)	158(29.8)
35-49	49(38.3)	79(61.7)	128(24.1)
50+	23(46.0)	27(54.0)	50(9.4)
Marital status			
Single	84(40.8)	122(59.2)	206(38.8)
Married	138(50.7)	134(49.3)	272(51.2)
Divorced	0	23(100)	23(4.3)
Widowed	2(6.7)	28(93.3)	30(5.6)
Educational level			
Illiterate	80 (64.5)	44(35.5)	124(23.4)
Read and write	13 (31.7)	28(68.3)	41(7.7)
Grade 1-4	52 (44.1)	66 (55.9)	118(22.2)
Grade 5-8	57 (37.3)	96 (62.7)	153(28.8)
Grade 9-10	17(22.1)	60 (77.9)	77(14.5)
Grade 10+	5(27.8)	13 (72.2)	18(3.4)
Religion			
Orthodox	23(21.3)	85(78.7)	108(20.3)
Muslim	18(40.0)	27(60.0)	45(8.5)
Protestant	173(49.9)	174(50.1)	347(65.3)
Catholic	10(32.3)	21(67.7)	31(5.8)
Occupation			
Farmer	75 (55.6)	60(44.4)	135(25.4)
Government employee	6(23.1)	20(76.9)	26(4.9)
Daily labour	7(10.9)	57(89.1)	64(12.1)
Merchant	12(20.7)	46(79.3)	58(10.9)
House wife	63(49.6)	64(50.4)	127(23.9)
Student	61(50.4)	60(49.6)	121(22.8)
Ethnicity			
Sidama	172(47.4)	191(52.6)	363(68.4)
Oromo	26(60.5)	17(39.5)	43(8.1)
Amhara	9(13.4)	58(86.6)	67(12.6)
Gurage	12(35.3)	22(64.7)	34(6.4)
Tigre	2(50.0)	2(50.0)	4(0.8)
Wollayetaa	3(15.0)	17(85.0)	20(3.8)

Measurements of the satisfaction subscales

1. Consultation and Relational Empathy

A principle components analysis with varimax rotation was conducted to obtain the dimensions of Perceived consultation and relational empathy. The Kaiser test for eigenvalues greater than one suggests one-factor solution which explains 65.39% of the variance. A factor loading of 0.4 was used as a cutoff point to eliminate variables with low correlation from each factor and a reliability test was applied to examine the internal consistency of each factor separately. Since all items in factor loading were greater than 0.4 no item was discarded from this sub-scale. The result show that the value of reliability coefficient (Cronbach's alpha) of the Perceived consultation and relational empathy scale was 0.940, which indicate the scale was good with internally consistency among items. These 10 items were based on the following questions: Thinking about your TB Treatment service, how was your provider at making you feel at ease, letting you tell your story, really listening, being interested in you as a whole person, fully understanding your concerns, being caring and compassionate, being positive, explaining things clearly, helping you to take control, and involving you in decision about treatment plan.

2. Perceived technical competency and/or professional care

The items of the scale were subjected to factor analysis by principle component analysis with varimax rotation to look into the underlying components of the Perceived technical competency and professional care scale. The Kaiser test for eigenvalues greater than one suggests two-factor solution which explains 65.59% of the total variance. Thus the items classified in to two factors: Perceived professional care and Perceived technical competency. A factor loading of 0.4 was used as a cutoff point to eliminate variables with low correlation from each factor and a reliability test was applied to examine the internal consistency of each factor separately.

2.1.Perceived professional care

Perceived professional care has a total of eight items with factor loading of 0.4 a cutoff point. The scale has high internal consistency among item (Cronbach's alpha = 0.898). These 8 items were based on the following questions: The health care provider carefully check everything when examine me, the health care provider does everything needed to arrive to find what is wrong with me, the health care provider give me counseling service on TB treatment, the health

care provider clearly explained me about the importance of taking regular medicine, the health care provider understand how I am ill, the health care provider explains well what is wrong with me, the health care provider have good communication with patient, the health care provider explain me about treatment plan or schedule.

2.2.Perceived technical competency

Perceived technical competency has two items with factor loading of 0.4 a cutoff point. The scale has high internal consistency among item (Cronbach's alpha = 0.892). These 2 items were based on the following questions: The health care provider you have seen lacks experience with my medical problem and I have some doubts about the ability of health care provider who treat me.

3. Perceived Accessibility and convenience

To examine the underlying factors (components) of the Perceived accessibility and convenience a principle components analysis with varimax rotation was conducted to obtain the dimensions. The Kaiser test for eigenvalues greater than one suggests three-factor solution which explains 72.52% of the total variance. A factor loading of 0.4 was used as a cutoff point to eliminate variables with low correlation from each factor and a reliability test was applied to examine the internal consistency of each factor separately. The factors (components) classified as Perceived accessibility, Perceived waiting time and Perceived convenience (cleanliness).

3.1.Perceived **accessibility**

Perceived accessibility scale has two items. The scale has reliability coefficient with (cronbah's alpha =0.690). These 2 items were based on the following questions: I am able to get medical care whenever I need it and the required medical staff was available during working hours.

3.2. Perceived waiting time

Perceived waiting time scale has two items. The scale has high internal consistency among item (cronbah's alpha =0.738). These 2 items were based on the following questions: where I get medical care, people have to wait too long for TB treatment service and I am usually kept waiting for long time when I am at reception and/or exam room.

3.3. Perceived convenience (cleanliness)

Perceived convenience (cleanliness) scale has two items. The scale has reliability coefficient with (cronbah's alpha =0.686). These two items were based on the following questions: Waiting rooms are clean and the office of the health care provider is clean & comfortable.

4. Perceived time spent with health care provider

The items of the scale were subjected to factor analysis by principle component analysis method to look into the underlying components of the Perceived time spent with health care provider scale; accordingly one meaningful factor (component) with the Kaiser test for eigenvalues greater than one. The factor accounted for 59.63% of the total variance. The scale has reliability coefficient with (cronbah's alpha =0.319). Since the cronbach's alpha very less, based on the content of the scale one item (the health care provider usually spend plenty of time with me) used for further analysis.

5. Overall patient satisfaction with TB treatment service

To examine the underlying factors (components) of the overall patient satisfaction about the service factor analysis was conducted. Five items was loaded and one meaningful factor (component) with Kaiser test for eigenvalue greater than one was produced. The factor explains 70.82% of the total variance. A factor loading of 0.4 was used as a cutoff point to eliminate variables with low correlation from each factor and a reliability test was applied to examine the internal consistency of each factor separately. Based on this three items were loaded on factor matrix then the remaining two items were discarded. These 3 items were based on the following questions: I am totally satisfied with TB treatment service, something about my consultation is better and I will advise my friend or relatives to see this provider. The scale has high internal consistency among item (cronbah's alpha =0.792).

General health service aspect and treatment phase

In this study the mean distance of the health facilities from the respondent's home was 2.67 kilometers with SD ±1.63 and the median travel time to reach health facility by walking was 45 minute. The majority 424(79.8%) of the respondents were walk on foot to reach health facility. Of the respondents 93.4% reached to the health facility within 2 hour walk. The median waiting time of the respondents in reception room was 12 minute. The mean time spent for consultation with the health care provider was 7.12 minute with SD ±4.45. Of the respondents 376(70.8%) were in continuation phase; whereas the remaining in intensive phase. Among the total respondents 288(54.2%) rate their current health status very well, 234(44.1%) good and 9(1.7%) not good.

Patient perception on the health care provider interaction.

Patient perception on consultation relational empathy was rated using five point likert scale from poor to excellent. The result shows that the mean score of perceived consultation and relational empathy was 35.88 with SD ±8.52. As shown in Table 2, 25% of the respondents perceived consultation and relational empathy scored less than or equal to 29. On other way 75% of the respondent's perceived consultation and relational empathy scored greater than 29 for the 10 items. Thus, 75% of the respondents rated the perceived consultation and relational empathy from Good to Excellent.

Patient perceived on professional care, technical competency, accessibility, waiting time, convenience and time spent with health care provider were rated using five point likert scale from strongly disagree to strongly agree. The mean score for perceived professional care was 32.82 with SD ±5.20. Based on the percentile values 75% of the respondents rated the perceived professional care from agree to strongly agree. Similarly the mean score for perceived technical competency was 7.66 with SD ±2.43 and for perceived waiting time were 7.16 with SD ±2.37. The percentile values shows that 25% of the respondents rated the perceived technical competency and waiting time from disagree to strongly disagree. The mean score for perceived accessibility was 7.68 with SD ±1.86 and 75% of the respondents rated above uncertain (neither agree nor disagree). The mean score for perceived convenience (cleanliness) and time spent

with health care provider were 8.46 with SD ±1.39 and 3.88 with SD ±1.02 respectively and 75% of the respondents rated from agree to strongly agree for both components (Table 2).

Table 2: Patients perception on the health care provider interaction at public health centers and hospital of Sidama zone, South Ethiopia, March-April 2011. (N=531)

Subscale	No. items	25th percentile	50th percentile	75th percentile	Mean	SD
perceived consultation and relational empathy	10	29	35	43	35.88	8.52
perceived professional care	8	32	33	36	32.82	5.20
perceived technical competency	2	6	8	10	7.66	2.44
perceived accessibility	2	7	8	9	7.68	1.86
perceived waiting time	2	6	8	9	7.16	2.37
Perceived convenience	2	8	8	10	8.46	1.39
Perceived time spent with heath care provider	1	4	4	5	3.88	1.02

The overall Patient satisfaction

The overall patient satisfaction on TB treatment service was rated by five point likert scale from strongly disagree to strongly agree as shown in Table 3. The study shows that the mean score of overall patient satisfaction on TB treatment service were 12.79 with SD ±2.30. The percentile values shows that 10 % of the respondent's satisfaction scored less than or equal to 10. On other way 90 % of the respondents rated overall satisfaction scored above uncertain (neither agree nor disagree). Thus, 90% of the respondents satisfied with TB treatment service.

Table 3: Overall patient Satisfaction on TB treatment service at public health centers and hospital of Sidama zone, South Ethiopia, March –April 2011.

Items	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
I am totally satisfied with TB treatment service (N=530)	14(2.6%)	36(6.8%)	7(1.3%)	235(44.3%)	238(44.9%)	Mean 4.22 SD 0.962
Something about my consultation is better (N=530)	10(1.9%)	32(6.0%)	15(2.8%)	306(57.7%)	167(31.5%)	Mean 4.11 SD 0.863
I will advise my friends or relatives to see this provider. (N=527)	7(1.3%)	15(2.8%)	3(0.6%)	178(33.8%)	324(61.5%)	Mean 4.51 SD 0.770
The 10th percentile =10. **The 50th percentile =13**	Mean 12.79. SD ±2.30.					

Adherence to medication

Scores for the Morisky Adherence Scale range from 0 to 4. As described above, respondents were categorized as Good adherence or poor adherence. The proportion of good adherence patients was 393(74%) and the proportion of poor adherence patients 138(26%) (Figure 4). The results of responses to individual MAS items are presented in Table 4. Of the 138 poor adherence 117 (84.78%) cited one or more reason. The most commonly cited reasons for poor adherence were 69 (58.97%) absence of drug, 10 (8.5%) the health facility is far away from home, 8(6.8%) too hard to take so many pills, 6(5.1%) fear of interaction with other medication 6(5.1%) had other appointment and 24(20.5%) others which cover felt depression, wanted to avoid side effect, busy with work, etc.

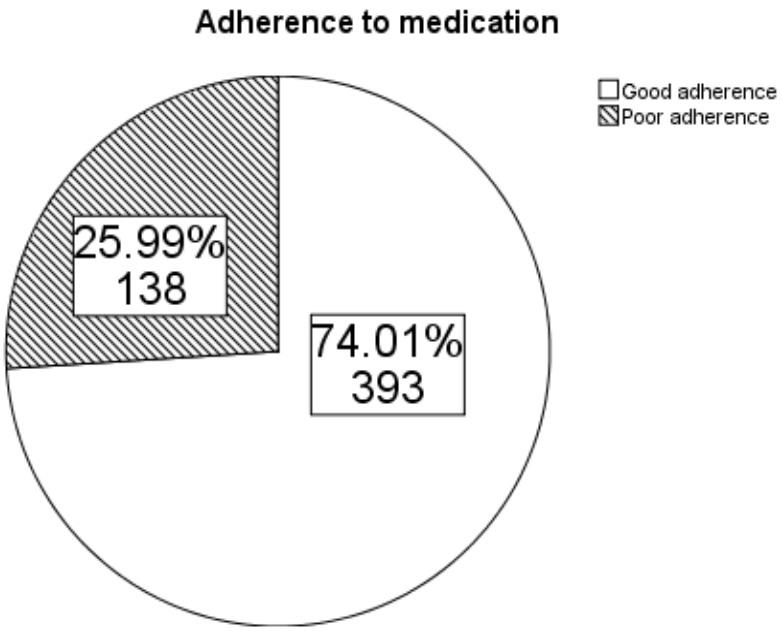

Figure 4: Patient adherence to TB treatment at public health centers and hospital of Sidama zone, South Ethiopia, March-April 2011.

Table 4: Participants' Medication Adherence Scale (MAS) item at public health centers and hospital of Sidama zone, South Ethiopia, March-April 2011. (N=531)

Medication Adherence Scale (MAS) score*	Yes (1)	No(0)
Forgot to take medication	97(18.3%)	434(81.7%)
Careless about taking medication	24(4.5%)	507(95.5%)
When feeling better, stopped taking medicine	23(4.3%)	508(95.7%)
When feeling worse, stopped taking medicine	40(7.5%)	491(92.5%)

Socio-demographic variables as predictors of patient satisfaction

The relationship between socio demographic and patient satisfaction was analyzed using multiple linear regression analysis through stepwise method to build the model. In the model marital status and age of the respondents were explained by 41% variation in patient satisfaction. Marital status and age group of the respondents were predictors of patient satisfaction score. Being single and widowed in marital status, the respondents had an average increase of 0.673 (B 95% CI 0.176, 1.169) and 1.14 (B 95%CI 0.273, 2.007) on patient satisfaction score respectively as compared to married. The patient satisfaction score of the respondents age group between15-19 dropped by average of 0.739 (B 95% CI-1.318, -0.160) as compared to age group 25-34. However, when the respondents age above 50 years the patient satisfaction score increased by average of 0.735 (B 95% CI 0.31, 1.44) as compared to those in age group 25-34 (Table 5).

Table 5: Socio-demographic variables as predictors of patient satisfaction at public health centers and hospital of Sidama zone, South Ethiopia, March-April 2011.

Explanatory variable	No (%)	P-value	Un standardized B coefficient	Standardized B coefficient	95% CI for B
Marital status					
Single	206(38.8)	0.008	0.673	0.142	0.176, 1.169
Married*	272(51.2)				
Widowed	30(5.6)	0.010	1.14	0.114	0.273, 2.007
Age group					
15-19	106(20)	0.012	-0.739	-0.128	-1.318, -0.160
25-34*	158(29.8)				
50+	50(9.4)	0.041	0.735	0.093	0.31, 1.440

***Reference category (highest frequency taken as reference category)**

General health status of the respondents and treatment phase as predictor of patient satisfaction.

Linear regression analysis was used to see the relationship between general health status of respondents and treatment phase with patient satisfaction score. Accordingly, the health status of the respondents and their treatment phase were significantly associated with patient satisfaction score. The patient satisfaction score for good health status decreased by average of 0.653 (B 95% CI -1.044, -0.263) as compared to those who were in a very well health status. Similarly, being the health status of the respondents not good, the respondents had an average decrease of 3.021 (B 95% CI -4.522, -1.519) on patient satisfaction score as compared to very well health status. Moreover, being patients in intensive phase the satisfaction score increased by average of 0.537 (B 95% CI 0.107, 0.9670) as compared to those who were in continuation phase (Table 6).

Table 6: General health status of the respondent and treatment phase as predictor of patient satisfaction at public health centers and hospital of Sidama zone, South Ethiopia, March-April 2011.

Explanatory variable	No (%)	P-value	Un standardized B coefficient	Standardized B coefficient	95% CI for B
Health status					
Very well *	288(54.2)				
Good	234(44.1)	0.001	-0.653	-0.141	-1.044, -0.263
Not good	9(1.7)	0.000	-3.021	-0.169	-4.522, -1.519
Treatment phase					
Intensive phase	155(29.2)	0.015	0.537	0.106	0.107, 0.967
Continuation phase*	376(70.8)				

***Reference category (highest frequency taken as reference category)**

Predictors of patient satisfaction with Patient perception on health care provider interaction and TB treatment service.

Through stepwise method, multiple linear regression analysis was used to quantify the relationship between patients perception on health care provider interaction with patient satisfaction. The variables were explained by 51.3% variation in patient satisfaction. In the model perceived professional care, perceived time spent with health care provider, perceived accessibility, perceived technical competency, perceived convenience and perceived consultation and relational empathy were identified as independent predictor of patient satisfaction on TB treatment service.

The respondents perceived professional care become increased by one unit, an average increase of 0.138 (B 95% CI 0.099, 0.178) on patient satisfaction Score. Again when the respondents perceived time spent with health care provider become increased by one unit, an average increase of 0.354 (B 95% CI0.170, 0.538) on patient satisfaction score. In the same way, for one unit increase of Perceived accessibility, the respondents had an average increase of 0.230 (B 95% CI 0.132, 0.328) on patient satisfaction score. The Perceived technical competency become increased by one unit, the respondents had an average increase of 0.100 (B 95% CI 0.040, 0.160) on patient satisfaction score. Perceived convenience (cleanliness) had similar effect on the above explanatory variable. The patient satisfaction score increased by average of 0.162 (B 95% CI 0.52, 0.272), for one unit increase of Perceived convenience (cleanliness). The respondents had an average increase of 0.029 (B 95% CI 0.008, 0 .050) in their satisfaction score, by one unit increase of Perceived consultation and relational empathy. In addition to this Perceived waiting time was significantly associated with patient satisfaction (Table 7).

Table 7: Patient perception on health care provider interaction as predictor of patient satisfaction at public health centers and hospital of Sidama zone, South Ethiopia, March-April 2011.

Explanatory variable	P-value	Un standardized B coefficient	Standardized B coefficient	95% CI for B
Constant		1.919		0.856, 2.98
Perceived professional care	0.00	0.138	0.315	0.099, 0.178
Perceived time spent with health care provider	0.00	0.354	0.156	0.170, 0.538
Perceived accessibility	0.000	0.230	0.185	0.132, 0.328
Perceived technical competency	0.001	0.100	0.106	0.040, 0.160
Perceived convenience (cleanliness)	0.004	0.162	0.099	0.52, 0.272
Perceived consultation and relational empathy	0.007	0.029	0.109	0.008, 0.050
Constant		10.914		
Perceived waiting time	0.00	0.262	0.271	0.183, 0.342

Socio-demographic variables as predictors of adherence to TB treatment

As indicated Table 8 binary logistic regression analysis was computed to see the relationship between socio demographic variables and patient adherence to TB treatment. Based on the result of the analysis, occupational status and area of residence of the respondents were significantly associated with patient adherence to TB treatment. Occupationally, being a student 1.57 (unadjusted OR 95% CI 1.011, 2.445) times more likely to be poor adhere than farmer. Likewise, urban residents were 0.639 (unadjusted OR 95%CI 0.426, 0.960) times more likely to be good adhere than the rural residents (Table 8).

Table 8: Socio demographic variables as predictors of adherence to TB treatment at public health centers and hospital of Sidama zone, South Ethiopia, March-April 2011.

Explanatory variable	No (%)	P-value	B coefficient	OR	95.0% C.I. for OR
Occupational status					
Farmer *	135(25.4)				
Student	121(22.8)	0.045	0.452	1.572	1.011, 2.445
Resident					
Urban	165(31.1)	0.031	-0.447	0.639	0.426, 0.960
Rural *	366(68.9)				

***Reference category (highest frequency taken as reference category)**

Health service waiting time and treatment phase as predictor of adherence to TB treatment

Multiple logistic regression analysis was used to build the model. In the model patients treatment phase and waiting time of patient in reception room was independent predictor of Patient adherence to TB treatment. The odds of poor adherence of the respondent was 0.295 (Adjusted OR 95%CI 0.172, 0.507) times higher in intensive phase as compared to continuation phase independent of waiting time. In other way when patients were in intensive phase, the respondents had good adhere to their TB treatment. However, at one minute increase of patients waiting time at reception room, 2.2% times more likely to be poor adhere to TB treatment (Adjusted OR 1.022 95% CI 1.009, 1.0035) independent of patients treatment phase (Table 9).

Table 9: Health service waiting time and treatment phase as predictor of adherence to TB treatment, at public health centers and hospital of Sidama zone, South Ethiopia, March-April 2011.

Explanatory variable	P-value	B coefficient	OR	95.0% C.I. for OR
Waiting time	.001	.022	1.022	1.009, 1.0035
Treatment phase	.000	-1.222	.295	0.172, 0.507
Constant	.000	-1.163	.313	

Predictors of adherence to TB treatment with Patient perception on health care provider interaction.

In binary logistic regression analysis model perceived time spent with health care provider, perceived accessibility, perceived waiting time and perceived professional care were identified as significantly associated with patient adherence to TB treatment. The odds of poor adherence of the respondent for one unit increase of patient Perceived time spent with health care provider was 0.702 (unadjusted OR 95% CI 0.583, 0.845) times higher. By one unit increase of patient Perceived accessibility, the odds of poor adherence of the respondent was 0.798 (unadjusted OR 95% CI0.721, 0.884) times higher. Similarly by one unit increased on Perceived waiting time, the odds of poor adherence of the respondents was 0.902 (unadjusted OR 95% CI 0.832, 0.977) times higher. Additionally, when the Perceived professional care increased by one unit, the odds of poor adherence of the respondents 0.952 (unadjusted OR 95% CI 0.919, 0.986) times higher (Table 10).

Table 10: Patient perception on health care provider interaction as predictor of adherence to TB treatment at public health centers and hospital of Sidama zone, South Ethiopia, March-April 2011.

Explanatory variable	P-value	B coefficient	OR	95.0% C.I. for OR
Perceived time spent with health care provider	0.00	-0.354	0.702	0.583, 0.845
Perceived accessibility	0.00	-0.225	0.798	0.721, 0.884
Perceived waiting time	0.011	-0.103	0.902	0.832, 0.977
Perceived professional care	0.006	-0.049	0.952	0.919, 0.986

Patient satisfaction as a predictor of adherence to TB treatment

In logistic regression model the overall Patient satisfaction had a significant association with adherence to TB treatment. This indicated that for one unit increase in the patient satisfaction score, the odds of poor adherence of the respondent was 0.90 (Unadjusted OR 95% CI 0.840, 0.984) times higher (Table 11).

Table 11: Patient satisfaction as a predictors of adherence to TB treatment at public health centers and hospital of Sidama zone, South Ethiopia, March-April 2011.

Explanatory variable	P-value	B coefficient	OR	95.0% C.I. for OR
Patient satisfaction	0.019	-0.095	0.90	0.840, 0.984
Constant	0.761	0.157	1.17	

CHAPTER SEVEN: DISCUSSION

The study tries to assess the patient satisfaction on TB treatment service and adherence to treatment. In the study, the median time taken by the respondents to reach health facilities by walking was 45 minute and 93.4% of the respondents reach the health facility within 2 hour walk. When compared to the study done in Hossana, 72% of the respondents reach health facility within two hour walk, it was higher [50]. The median waiting time of the respondents in reception room was 12 minute. The mean time spent for consultation with the health care provider was 7.12 with SD ±4.45. This is comparable with the study done in west shoa zone on outpatient satisfaction; the mean consultation duration was 6.26 with SD± 2.55 minutes [46].

The mean score of patient satisfaction on Tuberculosis treatment service for three items was 12.79 with SD ±2.30. The items covers I am totally satisfied with TB treatment service, something about my consultation is better and I will advise my friends or relatives to see this provider. Generally, 90% of patients were satisfied with TB Treatment service. This is consistent with the study done India, where 91% of the patients in the study group expressed Satisfaction with the DOT services [42].

Based on the multiple linear regression analysis result, marital status and age group of the respondents were predictors of patient satisfaction. Being single and widowed in marital status the patient satisfaction score increased by average of 0.673 (B 95% CI 0.176, 1.169) and 0.10 (B 95% CI 0.273, 2.007) respectively as compared to those who were married. This is in contrast with the study done in west shoa zone [46]. The satisfaction score for age group of the respondents between15-19 years was dropped by average of 0.739 (B 95% CI-1.318, -0.160) as compared to age group 25-34 years. However, the satisfaction score for age of the respondents above 50 years was increased by average of 0.735 (B 95% CI 0.31, 1.44). Thus the higher the age of the respondents, the patient satisfaction on TB treatment service become increased. The one possible reason for this might be as age increase the patients might have be more frequency of visit to the health facilities which might be increase their satisfaction score. This is supported by earlier Studies found; age to be significant predictor of satisfaction [56].

In this study the health status of the respondents and their treatment phase were significantly associated with patient satisfaction score. This indicates that being the health status of the respondents not good, the patient satisfaction score decreased by average of 3.021 (B 95% CI-4.522, -1.519) as compared to those with very well health status. Thus, better health status had a positive effect on patient satisfaction score. This finding is comparable with the study done in South Africa on black diabetic patients, where patient in poor general health were significantly less satisfied with the organizational quality of care than patients in good health status [57]. Concerning patient treatment phase, being patients in intensive phase, the patient satisfaction score for respondents had an average increase of 0.537 (B 95% CI 0.107, 0.967) as compared to those who were in continuation phase. The one possible reason for this might be patient in intensive phase has frequent and ongoing interaction with health care provider than patients in continuation phase. This is also supported by study done in out patient satisfaction, frequency of visit to health facility significantly associated with patient satisfaction [46].

In multiple linear regression analysis model, perceived professional care, perceived time spent with health care provider, perceived accessibility, perceived technical competency, perceived convenience (cleanliness) and perceived consultation and relational empathy were independent predictors of patient satisfaction ($P<0.05$). This indicating that an increased patient perception on health care provider interaction has a positive outcome on patient satisfaction. This finding is supported by the Study done in Tanzania, where good patient-service provider relationship as an important reason for satisfaction on TB treatment service [43] and previous finding on out patient satisfaction in west Shoa zone [46]. In addition to this perceived waiting time was significantly associated with patient satisfaction. This is consistent with study done eastern Ethiopia, where the level of satisfaction decreased with an increase in perceived length of waiting time [47].

The study shows that 138 (26.0%) TB patients had poor adherence to their TB treatment. When compared to the study done South Africa, where 34% non adherent, it is less [44] but when compare to the study done in Nigeria, where 5.4% non adherence, it is higher [45]. The most commonly cited reasons for poor adherence were absence of drug, the health facility far away from home, too hard to take so many pills, fear of interaction with other medication, felt depression etc. Study conducted in Tanzania revealed that 80% of patients viewed medication

taken at home or at a closer health facility as an improvement in TB-services [58]. In order to reach WHO targets of 85% treatment success [22] consideration should be given to adherence to TB treatment and the major reason cited for poor adherence.

In binary logistic regression analysis of result, occupational status and resident of the respondents were significantly associated with patient adherence to TB treatment. Occupationally, being a student the odds of poor adherence of the respondents 1.57 (OR 95% CI 1.011, 2.445) times higher than farmer. This might be students has busy with school home work, they might have exam or they might at morning shift thus they might probably miss their medication. Likewise, the odds of poor adherence of the respondents were 0.639 (OR 95% CI 0.426, 0.960) times higher in urban residents as compared to the rural residents. The possible reasons for this might be respondents in urban residents might have higher awareness than the rural residents or it might be related to access to the DOTS centers. This is consistent with the study done Hossana [50].

In multiple logistic regression model patients' treatment phase and waiting time in reception room were independent predictors of patient adherence to TB treatment. The odds of poor adherence of the respondents was 0.295 (Adjusted OR 95% CI 0.172, 0.507) times higher in intensive phase as compared to continuation phase independent of waiting time. In other way when patients in intensive phase, the respondents had good adhere to their TB treatment. This might be in intensive phase patients take their medication daily in the health institution. This is comparable with the study done Hossana and Arsi Zone, where defaulting was highest during the continuation phase of treatment even if default not equal to poor adherence [49, 50]. However, at one minute increase of patients waiting time at reception room, 2.2% times more likely to be poor adhere to TB treatment independent of patients treatment phase. Thus, an increased the patient waiting time at reception room had negative effect on adherence to TB treatment.

In logistic regression analysis model perceived time spent with health care provider, perceived accessibility, perceived waiting time and perceived professional care were positive association with patient adherence to TB treatment ($P<0.05$). This is consistent with the study done in South Africa, where adherence was significantly associated with a good relationship with the nurse (44) and study done in India, inadequate patient provider interaction, poor support from health staff

were predictors of default [42]. The key challenge of direct observation of treatment is to implement it well, maximizing convenience of and respectful interaction with patients [59]. Therefore an improving the treatment service process and close relationship between providers and patients has a positive outcome on reducing poor adherence to TB treatment.

In logistic regression model patient satisfaction was a significant association with adherence to TB treatment. On other way, by one unit increasing the patient satisfaction score the odds of poor adherence of the respondents was 0.90 (OR 95% CI 0.840, 0.984) times higher. Thus an increased the overall patient satisfaction on TB treatment service has a positive effect on patient adherence to TB treatment. This is comparable with the study done in South Africa, higher patient satisfaction with the service at the hospital was significantly associated with higher levels of adherence [44] and study done in India stated dissatisfaction with services provided was the predictors of default even if default is not equal to poor adherence [42].

Strength of the study

- Stratified sampling procedure was used.
- Factor analysis was performed.
- Reliability of the instrument was checked.

Limitation of the study

- Social desirability bias by the respondents as they are interviewed in the health facilities.
- Patient might have recall bias on adherence measurement.
- The design does not permit for distinction between cause and effect relationships in the associations.

CHAPTER EIGHT: CONCLUSION AND RECOMMENDATION

8.1. CONCLUSION

The result of this study tries to generate information on patient satisfaction on TB treatment service and adherence to treatment. Based on the result of the survey majority of the respondents were satisfied with TB treatment service. Marital status and age group were independent predictors of patient satisfaction score.

Perceived professional care, time spent with health care provider, perceived accessibility, perceived technical competency, perceived convenience (cleanliness) and perceived consultation and relational empathy were identified as independent predictor of patient satisfaction. This means that an increased the patient perceptions on health provider interaction and treatment service has a positive effect on patient satisfaction. Additionally, the health status of the respondents and patient treatment phase were significantly associated with patient satisfaction.

More than one in fourth patients was poor adhering to TB treatment. Absence of drug, the health facility far away from home, too hard to take so many pills, the most commonly reasoned for poor adherence. Occupational status, resident of the respondents, Treatment phase and waiting time of patients in reception room were significantly associated with patient adherence to TB treatment.

In the same way perceived time spent with health care provider, perceived accessibility, perceived waiting time and perceived professional care were a significant association with patient adherence to TB treatment. Therefore, build up patient perceived health care provider interaction has a positive outcome on reducing poor adherence to TB treatment. Additionally, Patient satisfaction was a significant association with adherence to TB treatment. Thus, an increased overall patient satisfaction on TB treatment service has also a positive outcome on patient adherence to TB treatment.

8.2. RECOMMENDATION

In order to help Public Health facilities, effectively and efficiently address the issue of patient satisfaction on TB treatment service and adherence to TB treatment. The following recommendations are forwarded to health care provider, program planner, evaluator and policy maker.

For health care provider

- Improving close relationships between providers and patients through frequent and ongoing interaction should be considered as a means to enhancing patient satisfaction and adherence to treatment.
- The health care provider should strength the counseling service especially for continuation phase patients since Poor adherence was higher in continuation phase.
- The heath care provider should shorten the waiting time of the patient at reception room as much as possible in order to improve the patient adherence.

For MOH, SNNPRHB and SZHD

- Strengthening the community health agent at Keble level to support patients at continuation phase by home to home visit should be considered.
- The MOH and SNNPR health Bureau should routinely check the availability and timely distribution of anti-TB drug to each health facility.
- The SNNPR health Bureau and Sidama zone health Department should give continues training for health care provider on Patient-centered care to enhance.
- Consideration should also be given to more community-based services in the surrounding areas.

For Woreda health office

- Support of health care providers by district TB programmes supervisors to improve patient centered care also important.

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ANNEX

QUESTIONNAIRES

JIMMA UNIVERSITY COLLEGE OF PUBLIC HEALTH AND MEDICAL SCIENCES DEPARTMENT OF HEALTH SERVICE MANAGEMENT

Questionnaire for data collection on patient satisfaction on TB treatment service and adherence to TB treatment at public health centers and hospital of Sidama zone, South Ethiopia 2011

IDENTIFICATION

Type of institution ---------- Name of the institution----------
Address of the institution---------- Institution code No ----------

Verbal Consent Form before Conducting the Interview

Greetings:

Hello, how are you?

My name is _____. I am working in the research team of post graduate thesis of Jimma University. I would like to interview you a few questions about your experience and opinion of tuberculosis treatment service while you are use in this public health facility. The objective of this study is to assess patient satisfaction on TB treatment service and adherence to TB treatment, which is important to improve tuberculosis Services so as to facilitate the healing process of the patients. Your cooperation and willingness for the interview is helpful in identifying problems related to the service. Your name will not be written in this form. All information that you give will be kept strictly confidential. Your participation is voluntary and you are not obliged to answer any question you do not wish to answer. If you are not still discomfort with the interview please feel free to drop it any time you want. Do I have your permission to continue?

1 – If yes, continue

2 – In no, skip to the other participant

Thank you

Respondent ID_____

Date of interview _____ Time started_____ Time finished_____

Supervisors name _____signature _____

General health service

S.No	Question	Response	Remark
101	How far your home from this health facility?		
102	How much Time will it take to reach health facility (in walking)		
103	Which type of transportation used to reach health facility?		
104	If you pay for Transportation, how much birr did you pay?		
105	For how long did you take your medicine since you start		day
106	Once you arrive for a scheduled appointment with your health care provider, how long do you usually have to wait (including the reception room and the exam room) to see her or him?		
107	Consultation duration	entry time _____ exit time_____	
108	How would you judge your current health status?	a) Very well b) Good c) Not good	

Consultation and Relational Empathy (CARE)

S.No	**During consultation How was the health care provider at**	poor	Fair	Good	Very good	Excellent	No response
201	***Making you feel at ease?*** (Being friendly and warm towards you, treating you with respect)	1	2	3	4	5	99
202	***Letting you tell your "story"?*** (Giving you time to fully describe your illness in your own words; not interrupting or diverting you)	1	2	3	4	5	99
203	***Really listening? (***Paying close attention to what you were saying; not looking at the notes or other place as you were talking)	1	2	3	4	5	99
204	***Being interested in you as a whole person not on your illness*****?** (Asking/knowing relevant details about your life, your situation)	1	2	3	4	5	99
205	***Fully understanding your concerns***? (Communicating that he/she had accurately understood your concerns and illness; not overlooking or undermining your concerns)	1	2	3	4	5	99
206	***Showing care and compassion****?* (Seeming genuinely concerned, connecting with you on a human level; not being indifferent or "detached")	1	2	3	4	5	99
207	***Being Positive?*** (Having a positive approach and a positive attitude; being honest but not negative about your problems)	1	2	3	4	5	99
208	**Explaining things clearly?** (Fully answering your questions, explaining clearly, giving you adequate and clear information)	1	2	3	4	5	99
209	***Helping*** **you to take control?** (Exploring with you what you can do to improve your health yourself; encouraging rather than "instructing " you)	1	2	3	4	5	99
210	***Involving you in decisions*****?** (Discussing what he/she going to do, involving you in decisions; not ignoring your views)	1	2	3	4	5	99

Perceived Technical Competencies/professional care							
S.No	**Items**	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree	No response
301	The health care provider carefully check everything when examining me	1	2	3	4	5	99
302	The health care provider does everything needed to arrive to find what is wrong with me	1	2	3	4	5	99
303	The health care provider give me counseling service on TB treatment	1	2	3	4	5	99
304	The health care provider clearly explained me about the importance of taking regular medicine	1	2	3	4	5	99
305	The health care provider is competent and well trained	1	2	3	4	5	99
306	The health care provider understands how I am ill	1	2	3	4	5	99
307	The health care provider explains well what is wrong with me	1	2	3	4	5	99
308	The health care provider you have seen lacks experience with my medical problem	1	2	3	4	5	99
309	I have some doubts about the ability of health care provider who treat me.	1	2	3	4	5	99
310	The health care provider have good communication with patient	1	2	3	4	5	99
311	The health care provider explain me about treatment plan or schedule	1	2	3	4	5	99
Perceived Accessibility and convenience							
401	I have easy access to the health provider I need	1	2	3	4	5	99
402	Where I get medical care, people have to wait too long for TB treatment service	1	2	3	4	5	99
403	I find it hard to get an appointment for medical care right way	1	2	3	4	5	99
404	I am able to get medical care whenever I need it	1	2	3	4	5	99
405	I am usually kept waiting for long time when I am at reception and/or exam room	1	2	3	4	5	99
406	Waiting rooms are clean	1	2	3	4	5	99
407	The office of the health care provider is clean & comfortable.	1	2	3	4	5	99
408	The required medical staff were available during working hour	1	2	3	4	5	99
Time spent to health care provider							
501	Those who provide my medical care sometimes hurry too much when they treat me	1	2	3	4	5	99
502	Health care provider usually spend plenty of time with me	1	2	3	4	5	99

Patients' general satisfaction by services

S.no	**Items**	Strongly disagree	disagree	Neither	agree	Strongly	No response
601	I am totally satisfied with TB treatment service	1	2	3	4	5	99
602	Something about my consultation is better	1	2	3	4	5	99
603	I am not completely satisfied with TB treatment service	1	2	3	4	5	99
604	I am happy to come again to this health facility	1	2	3	4	5	99
605	I will advise my friends or relatives to see this provider	1	2	3	4	5	99

Medication compliance

Thinking about the medications prescribed to you by your health care provider (s), please answer the following questions:

	In the past two weeks	**Yes (1)**	**No (0)**
701	Do you ever forget to take your medications?		
702	Are you careless at times about taking your medications?		
703	When you feel better, do you sometimes stop taking your medications?		
704	Sometimes if you feel worse when you take your medications, do you stop taking them?		
705	What was the reason for not following the medication?	(mark X all that apply)	

DO NOT READ THIS LIST, JUST USE IT TO CODE ANSWERS TO QUESTIONS 705.

	p		**p**
Didn't fit in your daily routine		Busy with school work	
Were working		were away from home	
Felt depressed or overwhelmed		Fell asleep/slept through dose time	
Too hard to take so many pills		Didn't understand regimen	
Wanted to avoid side effects		Didn't think the medicine was helping	
Had other appointments		Felt like the drug was toxic/harmful	
Were drunk or high		Fear of interactions with other meds	
Other specify			

Socio-demographic variable

S.No.	QEUSTION	Response	Remark
801	sex	1, male 2, female	
802	age		
803	Marital status	1- Single 2- Married 3- Divorced 4- Widowed	
804	Educational status	1- Illiterate 2- Able to read and write 3- Grade 1 – 4 4- Grade 5 – 8 5- Grade 9–10 6- 10+	
805	Occupation	1- Farmer 2- Governmental employee 3- Daily laborer 4- Merchant 5- house wife 6- student 7- Other(specify---------)	
806	Religion	1. orthodox 2. Muslim 3. protestant 4. catholic 5. other(specify_____)	
807	Residence	1.urban 2. rural	
808	Ethnicity	1-Sidama 2- Oromo 3- Amhara 4- Gurage 5- Tigre 6- Wollayetta 7- Others(specify_____)	
809	Monthly family income		

የመጠየቅያ ፎርም

ጅማ ዩኒቨርሲቲ የህብረተሰብ እና የህክምና ሳይንስ ትምህርት ኮሌጅ፤ የጤና አገልግሎት አመራር ትምህርት ክፍል

በደቡብ ክልል፤ በሲዳማ ዞን ጤና ጣቢያ እና ሆስፒታል ውስጥ ያሉ የቲቢ ህመምተኞች በቲቢ ህክምና አገልግሎት ያላቸው እርካታ እንዲሁም ስለመዳኒት አወሳሰድ ሁኔታ ለማወቅ የተዘጋጀ የመጠየቅያ ፎርም ነው፡፡

የመጠየቅያ መለያ ቁጥር _____

የጤና ድርጅቱ አይነት _____ **የጤና ድርጅቱ ስም** _____

የጤና ድርጅቱ ያለበት ቦታ _____ **የጤና ድርጅቱ ኮድ** _____

ከመጠይቅ በፊት የተዘጋጀ የፍቃድ ጥያቄ ፎርም

ሰላምታ

መግቢያ

ስሜ _____ **ይባላል፡፡ እኔ የምሰራው በጅማ ዩኒቨርሲቲ የድህረ ምረቃ የጥናት ዑሁፍ አባል ውስጥ ነው፡፡ በዚህ የጤና ድርጅት ውስጥ በሚሰጠው የቲቢ ህክምና አገልግሎት እና በእርሶ መዳኒት አወሳሰድ ዙሪያ ያሎትን አስተያየት እና ልምድ ለማወቅ የተወሰነ ጥያቄዎችን መጠየቅ ፈልጌ ነበር፡፡ የዚህ ጥናት ዓላማ የቲቢ ህመምተኞች በቲቢ ህክምና አገልግሎት ያላቸው እርካታ እና በሀኪም የታዘዘውን መዳኒት አወሳሰድ ጥናት ለማድለግ ነው፡፡ይህ ጥናት የቲቢ ህክምናን የታማሚዎችን ፍላጎት መሰረት ያደረገ አገልግሎት እዲሆን የሚሰጠው መረጃ ከፍተኛ ነው ፡፡ ስለዚህ በቲቢ ህክምና አገልግሎት እና በእርሶ መዳኒት አወሳሰድ ዙሪያ ያሉትን ሁኔታዎች ለማወቅ የእርሶ ትብብር አስታጸው ከፍተኛ ነው፡፡ በመጠይቁ ላይ የእርሶ ስም ወይም ማንነቶን የሚገልፅ ማንኛውም ነገር አይጠቀስም እንዲሁም እርሶ የሚሰጡኝን መረጃዎች ሚስጥራዊነት ለመጠበቅ ያመች ዘንድ መጠይቁ እኔ እና እርሶ ባለንበት ቦታ ብቻ ይከናወናል፡፡ መጠይቁ የሚከናወነው በእርሶ ፍቃደኝነት ብቻ የሚሆን ሲሆን በመጠይቁ ወቅት መመለስ የማይፈልጉትን ማንኛውም አይነት ጥያቄ ይለፈኝ ማለት ይችላሉ ፡፡ በተጫማሪም በማንኛውም ሰአት ማቋረጥ ይችላሉ፡፡ ሆኖም እርሶ የሚሰጡት ትክክለኛ መረጃዎች ለቲቢ ህክምና አገልግሎት መስተካከል እና መሻሻል ስላለባቸው ነገሮች ለማወቅ ስለሚረዳን ከፍተኛ ጥቅም አለው፡፡**

በመጥይቁ ላይ ለመሳተፍ ፍቃደኛ ነዎትን?

መልሱ አዎ ከሆነ አመስግነህ/ሽ ወደሚቀጥለው ገፅ እለፍ/ፊ

አልፈልግም ከሆነ አመስግነህ/ሽ የሚቀጥለውን ተጠያቂ መጠበቅ

የተጠያቂው መለያ ቁጥር _____ **መጠይቁ የተደረገበት ቀን** _____

መጠይቁ የተጀመረበት ሰዓት _____ **መጠይቁ የተጠናቀቀበት ሰዓት** _____

የሱፐርቫይዘር ስም _____ **ፊርማ** _____

አጠቃላይ የጤና አገልግሎት

ተ.ቁ	ጥያቄ	መልስ	አስተያየት
101	የእረሶ ቤት ከጤና ድርጅቱ ምን ያህል ርቀት ላይ ይገኛል		
102	በአግሮ እዚህ ጤና ድርጅት ለመድረስ ምን ያህል ሰአት ይፈጀቦታል		
103	ወደዚህ ጤና ድርጅት ለመምጣት ምን አይነት ትራንስፖርት ይጠቀማሉ		
104	ለትራንስፖርት ከከፈሉ ምንያህል ገንዘብ ከፈሉ		
105	ለምን ያህል ጊዜ የቲቢ ህክምናን ተከታትሎዋል		
106	በጤና ባለሞያ ቀጠሮ መሰረት አንድ ጊዜ ጤና ድርጅ ከደረሱ በዋላ በጤና ባለሞያ ለመታየት ምንያህል ሰአት ይቆያሉ		
107	ከጤና ባለሞያ ጋር ያሳለፉት ጊዜ	መግቢያ…….. መውጫ……	በጠያቂው የሚሞላ
108	የእርሶ የጤና ሁኔታ አሁን እንዴት ነው	ሀ. በጣም ጥሩ ነው ለ. ጥሩ ነው ሐ. ጥሩ አይደለም	

በምክክር እና በግንኙነት ወቅት ችግርን እንደራስ ማየት

ተ.ቁ	የጤና ባለሞያው በምክክር ወቅት ከዚህ በታች በተዘረዘሩት ጉዳዮች ላይ ለእረሶ ምን ይመስላል	ደካማ	ደህና	ጥሩ	በጣም ጥሩ	እጅግ በጣም ጥሩ	ያልተመለሰ
201	***ቀለል ብሎ እንዲሰማዎት ያደርጋግ ?*** (በጥሩ አቀራረብ እና እርሶ በሚፈልጉት መልኩ ህክምናን ማግኘት)	1	2	3	4	5	99
202	***የእርሶን ጉዳይ ለመሰማት ግዜ ይሰጦታል ?*** (ያለምንም ጣልቃ ገብነት የእርሶን ህመም ለመግለፅ በቂ ግዜ ይሰጦታል)	1	2	3	4	5	99
203	***በጥሞና ያዳምጦታል?*** *(ለሚናገሩት ነገር ትኩረት በመስጠት በጥሞና ማለትም እርሶ በሚናገሩበት ግዜ ወደሌላ ቦታ ወይም ወደ ማስታወሻ ደብተሩ ሳይመለከት ያዳምጦታል)*	1	2	3	4	5	99
204	***የእርሶን የበሽታ ሁኔታ ሳይመለከት እንደማንኛውም ሰው ትኩረት ይሰጦታል*** ? (ስለእርሶ ህይወት፤ አኗኗር ሁኔታ ይጠይቃል/ያውቃል)	1	2	3	4	5	99
205	***የእርሶን ጉዳይ በሙሉ ተረድቶዋል***? (በንግግራቹህ ወቅት የእርሶን ጉዳይ ወይም ህመም ሳያቃልል እና ሳያካብድ በትክክል ተረድቶዋል)	1	2	3	4	5	99
206	***ለእርሶ ትኩረት እና ድጋፍ ሰጥቶወል***? (ለእርሶ ከልብ ይጨነቃል፤ የመለየት ውይም መድሎ ሳይታይበት ሰው በመሆኖ ክብር ይሰጣል)	1	2	3	4	5	99
207	***ለእርሶ መልካም ሰው ነው***? (መልካም አቀራረብ እና መልካም አመለካከት አለው፤ ታማኝ እና ለእርሶ ችግር መጥፎ አመለካከት የሌለው)	1	2	3	4	5	99
208	**ነገሮችን ግልፅ በሆነመልኩ ያብራራል**? (እርሶ ለሚጠይቁት ጥያቄ በሙሉ ይመልሳል፤በግልፅ ያብራራል፤ በቂ መረጃ ይሰጣል)	1	2	3	4	5	99
209	***ህመሞን ለመቆታጠር እረዳታ አግኝቶዋል***? (የእርሶን ጤና በእራሶ እንዴት መሻሻል እንዳለቦት ማብራሪያ አግኝቶዋል ፤ትእዛዝ ከመስጠት ይልቅ አበረታቶቹህል)	1	2	3	4	5	99
210	***በውሳኔዎች ላይ እንዲሳተፉ አድርገዋል***? (እርሶ ምን ምን ነገሮችን ማድረግ ባለቦት ጉዳዩች ላይ ተሳትፎዋል፤የእርሶን ሀሳብ ያለመናቅ አይቶዋቸዋል)	1	2	3	4	5	99

የቴክኒካል ብቃት እሳቤ /የባለሞያ እንክብካቤ							
ተ.ቁ	ዝርዝር	በጣም አልስማማም	አልስማማ	አስተያየት የለኝም	እስማማለሁ	በጣም እስማማለሁ	ያልተመለሰ
301	የጤና ባለሞያው ሁሉንም ምርመራዬን በጥንቃቄ አካሂዶልኛል	1	2	3	4	5	99
302	የጤና ባለሞያው የኔን የጤና ችግር ለማወቅ ማድረግ ያለበትን ነገር ሁሉ አድርጎዋል	1	2	3	4	5	99
303	የጤና ባለሞያው በቲቢ ህክምና አገልግሎት ዙሪያ የምክር አገልግሎት ሰጥቶኛል	1	2	3	4	5	99
304	የጤና ባለሞያው መዳኒት በአግባቡ የመውሰድ ጠቀሜታን በግልፅ አስረድቶኛል	1	2	3	4	5	99
305	የጤና ባለሞያው የሰለጠነ እና ብቁ ነው	1	2	3	4	5	99
306	የጤና ባለሞው የኔን ህመም በትክክል ተረድቶኛል	1	2	3	4	5	99
307	የጤና ባለሞያው ስላለብኝ የጤና ችግር በግለፅ አስለረድቶኛል	1	2	3	4	5	99
308	የጤና ባለሞያ ስለእኔ የጤና ችግር ልምድ ያንሰዋል	1	2	3	4	5	99
309	ህክምናውን በሚሰጠኝ የጤና ባለሞ ብቃት እጠራጠራለሁ	1	2	3	4	5	99
310	የጤና ባለሞያው ከህመምተኛ ጋር ጥሩ መግባባት ክሎት አለው	1	2	3	4	5	99
311	የጤና ባለሞው ስለ ህክምናዩ ቀጠሮ በግልጽ አስረድቶኛል	1	2	3	4	5	99
ምቹ እና አገልግሎቱን በቅርበት የማግኘት እሳቤ							
401	የምፈልገውን ጤና ባለሞያ በቅርበት ማግኘት እችላለሁ	1	2	3	4	5	99
402	በዚህ ጤና ድርጅት ሕክምናዩን በምከታተልበት ወቅት፤ ሰዎች ለቲቢ ህክምና አገልግሎት መጥተው ለረጂም ሰአት ይጉላላሉ	1	2	3	4	5	99
403	ትክክለኛ የህክምና ቀጠሮ ለማግኘት አስቸጋሪ ሁኖ አግንቼዋለሁ	1	2	3	4	5	99
404	የጤና ሕክምና ማግኘት በመፈልገበት ወቅት ሁሉ ማግኘት እችላለሁ	1	2	3	4	5	99
405	ሁልጊዜ ሕመምተኛ ማቆያ ቦታ ላይ ለረጂም ሰአት እቆያለሁ	1	2	3	4	5	99
406	ሕምተኛ ማቆያ ቦታ ንፁህ ነው	1	2	3	4	5	99
407	የጤና ባለሞያው ቢሮ የፀዳና ምቹ ነው	1	2	3	4	5	99
408	በሥራ ሰአት የጤና ባለሞያዎች በስራቸው ይገኛሉ	1	2	3	4	5	99
ከጤና ባለሞያ ጋር የሚቆዩበት ግዜ							
501	የጤና ባለሞያው አንድ አንድ ግዜ በሚያሕክምኝ ሰአት በጣም ይቸኩላል	1	2	3	4	5	99
502	የጤና ባለሞያው ከኔ ጋር በቂ ሰአት ይወያያል	1	2	3	4	5	99

ህመምተኖች በአገልግሎቱ ዙሪያ ያለቸው አጠቃላይ እርካታ

ተ.ቁ	ዝርዝር	በጣም አልስማማሁም	አልስማማሁም	አስተያየት የለኝም	እስማማለሁ	በጣም እስማማለሁ	ያልተመለሰ
601	በቲቢ ህክምና በሚሰጠው አገልግሎቶች ሁሉ እረክቻለሁ	1	2	3	4	5	99
602	የነበረኝ የውይይት ግዜ ጥሩ የሚባል ነው	1	2	3	4	5	99
603	በቲቢ ህክምና በሚሰጠው አገልግሎቶች ሁሉ እርካታ አላገኝሁም	1	2	3	4	5	99
604	ወደዚህ ጤና ድርጅት በድጋሚ ለመመለስ ደስተኛ ነኝ	1	2	3	4	5	99
605	ጓደኛዩን፤ዘመድ ወይም ቤተሰብ የቲቢ ህክምና የሚያስፈልገቸውን ወደዚህ ጤና ባለሞያ እንዲመጡ እልክላቸዋል	1	2	3	4	5	99

የመዳኒት ክትትል

ከጤና ባለሞያ የታዘዘሎትን መዳኒት በማሰብ ከዚህ በታች ለተዘረዘሩት ጥያቄዎች ይመልሱ

	ባለፉት ሁለት ሳምንታት ውስጥ	**አዎን (1)**	**አይደለም (0)**
701	መዳኒቶን መውሰድ እረስተው ያውቃሉ ?		
702	መዳኒቶን በሚወስዱበት ወቅት ቸልተኛ ኖት?		
703	ጥሩ ጤንነት ሲሰማዎት መዳኒቶን አንድ አንድ ጊዜ መውሰድ አቁሞ ያውቃሉ?		
704	አንድ አንድ ጊዜ መዳኒቶን በሚወስዱበት ሰአት ህመም ሲሰማዎት መዳኒቶን መውሰድ አቁሞው ያውቃሉ?		
705	መዳኒቶን ያቆሙበት ምክንያት ምንድ ነው?	(ከዚህ በታች ከተዘረዘሩት ውስጥ “X” ምልክት ያድረጉ)	

ከዚህ በታች የዘረዘሩትን ጉዳዩችን ሳያነቡላቸው ህምተኛው ለ705 ጥያቄ መልስ ሲመልሱ “X” ምልክት ያድርጉ

	ሕ		**ሕ**
ከቀን ስራዩ ጋ አብሮ አይሄድም		በትምህርት ጥናት መብዛት	
በሥራ		የጤና ድርጅቱ ከመኖሪያ ቤት እሩቅ ስለሆነ	
የድብርት ወይም ጪንቀት ህመም		እንቅልፍ ስለሚያሲዘኝ	
ብዙ መዳኒቶችን ለረጅም ግዜ ለመውሰድ ከባድ መሆኑ		መዳኒቱ ለምን ያህል ግዜ እንደሚወስድ ስለማላውቅ	
ጎኒዩሽ ጉዳትን ለማስወገድ		መዳኒቱ ይረዳኛል ብዩ ስለማላስብ	
. ሌላ ቀጠሮ ስለነበረኝ		መዳኒቱ አደገኛ መስሎ ስለተሰማኝ	
በመጠጥ ምክንያት		ከሌላ መዳኒት ጋር እንዳይጋጪ በመፍራት	
መልሳቸው ከላይ ከተዘረዘሩት ውስጥ ከሌለ ይጥቀሱ			

አጠቃላይ መረጃ

ተ.ቁ	ጥያቄ	መልስ	አስተያየት
801	ፆታ	1.ወንድ 2. ሴት	
802	እድሜ		
803	የጋብቻ ሁኔታ	1- ያላገባ 2- ያገባ 3- የተለያየ 4- የሞተበት	
804	የትምህርት ሁኔታ	1- ያልተማረ 2- ማንበብ እና መፃፍ የሚችል 3- ከ1-4 ክፍል 4- ከ 5 – 8 ክፍል 5- ከ 9–10 ክፍል 6- ከ10 በላይ	
805	ሥራ	1- ገበሬ 2- የመንግስት ሰራተኛ 3- የቀን ሰራተኛ 4- ነጋዴ 5- የቤት እመቤት 6- ተማሪ 7- ሌላ ከሆን ይጥቀሱ..	
806	ሀይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ ከሆነ ይጥቀሱ	
807	የእርሶ መኖሪያ አካባቢ	1.ከተማ 2. ገጠር	
808	ብሔረሰብ	1-ሲዳማ 2- ኦሮሞ 3- አማራ 4- ጉራጌ 5- ትግሬ 6- ወላይታ 7-ሌላ ከሆነ ይጥቀሱ__	
809	የቤተሰቦ የወር ገቢዎ ምን ያህል ነው?		

Xam’ote forme

Jimma universiteligilo dagoomu nna hikiminu sayiinse roosu college: faayyimate ageligilote massagote rosu kifile

Wodiidi dagana dagomu mangiste qoqowo,Sidamu Zone fayyimate agaroshi xabiyana hospitalete gido hedhano nakarisu xiwamano, korichu uyiinanni gara la’’enohun noonsa hagidhamana koleno koricho adhate gara la’ehuni afate qixaabino forme.

Xam’ote badoshu kiro _____

Fayyimate dirijjite badoshe _____ Fayimmate dirijjitete su’ma _____

Fayimmate dirijjite lelitano darga _____ Fayyimate dirijjite kode _____

Xam’mote alibaani qixxabbino fajjote forme

Keere

E’’o

Su’miya _____ yinaye’’e:moh: Ani loseemohu jimmu universiterte layiiniki digre masama xinxalote abaleti. Konni fayyimate dirijjite giddo uyiinanniha nakarisu xibe hikimina nna uyinaanin;e xagichcho adha la’enohun babatino la’’ona nna mashalake afirate xa’mo xa’ma hasireti.Tenne xinxalo gumi xisamano sanbu nakarisi hikiminu ayiito gara la’’enohun noonsa hagirena korichuchu adhate gara la’’enohun tintalo assateti.Tini xintxnbealo sanbu nakarisi hikimni la’’enohu lowo darga amadano. Xaa’mote woraqatira ate su’ma woyi manimaki lelishano choyii diboressinanni. Kolene atohtiti mashalake fulitanoki gede atina xamaanchu challu nowa xamamato. Xa’mo xa’mamatohu ate fajjonni ikkino dafira , dawara hasiratokki xa’mo sa’’oona yaa danidatto. Koleno ayii yannani xa’mama . agurte fula danidato. Ikkolana kaayiini ati ato dawaro sanbu nakarsi hikimini woyanbera lwo kalo assanno.

Ta’mo beqa baxato?

Olo ee’’e ikkituro galatemohe woro no qola sai

Dihasiremo ikkiro wole xamamancho xammi

Xam’amanchu badoshu kiro _____ Barra _____

Xa;mo hanafi sa’’ate _____ xa’mo gumuli sa’’ate _____

Supervizerte s’ma _____ Malate _____

Taphomu fayimmate ageligilote

T.Q.	Ta'mo	Dawaro	Laa''o
101	Ate mini fayimate agaroshin magesha fafano?		
102	Faymate dirigite lekaten han'ro magesha fafano?		
103	Koni fayimate agaroshi dirijite date mayi gari tranporte horonisidhini		
104	Kamelao magesha battini		
105	Mageshshi yanna sanbu nakera tagicho harunistinooni		
106	Mageshshi yana adho'ne fayimmate ogeyenni xiba'ne la'mat(me'' ee saa'te)		
107	Fayimate ogeye ledo me''ee saete sayisini	Ee''o …….. fulo……	xamanchu wonshnahoo
108	Fayimaki xa ma labano?	a. Lowo gesha danchaho b. danchaho c. Di danchaho	

Malamateni nna xadoshu yann ogeyeete ledo kara umisi gede ase la''a

T.q	Fayimate ogessi amaalate yanna hikiminu mine konni worooni xawwisoni hajo atera maa lawanohe	**didanchaho**	**danchaho**	**garaho**	**Lowo gesha dancho**	**Lowo lowo gesha danchaho dan**	**Dawro dino**
201	*Dancha machisham machishantahe gede assano*	1	2	3	4	5	99
202	*Ate karra machishate yanna aano*	1	2	3	4	5	99
203	*Macha ee''e machishanohe*	1	2	3	4	5	99
204	*Ate hishote gara dhibiki gobaani xam'anohe*	1	2	3	4	5	99
205	*Ate hajo bala hegersano*)	1	2	3	4	5	99
206	*Atera kalone hegerisho uyinohe?*	1	2	3	4	5	99
207	*Atera danchaho?*	1	2	3	4	5	99
208	Xawisha anohehe xamokira	1	2	3	4	5	99
209	*Dhisoki hurate kal'o afiroto?*	1	2	3	4	5	99
210	*Ate bekancho assanohe murote?*	1	2	3	4	5	99

Ogeyeete kaal"o							
T.k	**Tawishsha**	**Horontani disumamemo**	**disumamem**	**Hedo dinoehe**	**sumawemmo**	**Lowo geeshsha sumaweemmo**	**Qolo unoonikiha**
301	Fayimate oogesi garunni fayimate mirimara laiin'oo	1	2	3	4	5	99
302	Fayyimate oogesi karaya afate hasisire bala assino	1	2	3	4	5	99
303	Nakarisu bashite(sanbu nakarisa) hikimina laehuni amale uyinoee	1	2	3	4	5	99
304	Koricho adhinani gara , garuni kulino'e	1	2	3	4	5	99
305	Fayimmate ogeesi xinxawinohona umosi dandinoho	1	2	3	4	5	99
306	Tibaya garunii machishinoe	1	2	3	4	5	99
307	No'e dhibaya garun kullo'e	1	2	3	4	5	99
308	Ane xibira Oogimma aganosi	1	2	3	4	5	99
309	Koricha uyinoe oogessa xintalosi diamanemo	1	2	3	4	5	99
310	Xiwamu ledo danchu tadooshi noosi	1	2	3	4	5	99
311	Kaxaroy'a barra garuni kulino'e	1	2	3	4	5	99
Woyawinohana mule afirate hedo fayima agaroshe							
401	Hassine'moha fayyimata oogeea mule affine;mo	1	2	3	4	5	99
402	Kone hikimnu darga naxarisu hikiminira dano manni xaransa yannani ditiranni(keshitano)	1	2	3	4	5	99
403	Kataro aa''te danchu huneti dino	1	2	3	4	5	99
404	Fayimate koricho adhate hassirumoro balankani afirdhemo	1	2	3	4	5	99
405	Hikiminaho dayumo kiro xisamano keshitano darga hasiromore afirumokin low yana kesheemmo	1	2	3	4	5	99
406	Xisamano keshshitanno dargi cho;amoho	1	2	3	4	5	99
407	Ogeyyete biro cho'emate nna danchaho	1	2	3	4	5	99
408	Losano losu yana agarte yannateni leelitano	1	2	3	4	5	99
Fayimmate oogesi ledo keshemmo yanna							
501	Fayyimate ogeesi sae sae xibaya hakamano woyite mudamano	1	2	3	4	5	99
502	Fayimmate oogessi ane ledo yanna ee;;e hassawano	1	2	3	4	5	99

Fayyimate dirijite dag ano xisaasino hikimina laenohuni noonsa hagire

T.k	**Tawishsha**	**Horontani disumamemo**	**disumamem**	**Hedo dinoehe**	**sumawemmo**	**Lowo geeshsha sumaweemmo**	**Qolo unoonikiha**
601	Sanbu naqaarisi hikimina uuyinahun hagidhomo	1	2	3	4	5	99
602	Hasawate yana oogesu ledo danchate	1	2	3	4	5	99
603	Sanbu naqarisi uyyinnani hikimini hagirisisaho	1	2	3	4	5	99
604	Koni teni derjite wiro higate hagidhamoho	1	2	3	4	5	99
605	Fitaya, mini mana , gudegnaya akarisu hikimini hasiisasare kawira soyeemo	1	2	3	4	5	99

Koricha dhate nna hikimina harunisate gara

Fayyimate oogeyeenni hajaanjoniha korich'ne la'enani konni worooni nooha xawishsha xa'mo dawri

		Ee''e (1)	Dee'ni (0)
701	Xagichcho adha habe egenooto ?		
702	Koricha adhato woyite wodannini heditokinniti adhatohu?		
703	Woyawee''e yite hedato yannara koricha adha urrisse egn''oto?		
704	Sae sae koricha adhato woyite xiso machishanituhero adha agurtte egee''noto?		
705	Koricho agurotu korikati mayaati?	(konni worooni no xawishshi gido "X" e malte wori)	

Konni woroonni no xawishshi gidonni nabanabani''ne woyite xamamanichu xa'mo 705 dawaro kolo "X" malete wori

	X		X
Barri losi ledo diharano		Rosu xintalo batigninni	
Hawe		Fayyimate diriijite miniyanni fafanohura	
Tissoteni		Loosu korikaatin	
Chachawe		Gotichu adhaehura	
Lowo xagicho seeda yannara adha chachesitano		Tagichcho mage yannara adhinaro afa hogayanni	
korichu abano qararinni fayyo ikkate		korichchu kalla''e ye hedemokki dafira	
Wole qataro noo''ehura.		korichu bushe lawee''ehura	
Dinbisano ago age		Wole korichchi ledo xado ye wajjomohura	
Wole daworo nohero kuli			

Xaphomu mashalaqe

T.K	Xa'mo	Dawaro	Laa''o
801	Badoshe	1.labaho 2. mayeete	
802	Diro		
803	Galitete gara	1- adhekiha 2- galite noho 3- baxinoha 4- galte retinoha	
804	Rosu gara	1-Rosinokiha 2-Boresanna nabawa dandanoha 3- 1-4 kifile 4- 5 – 8 kifile 5- 9–10 kifile 6- 10+	
805	Looso	1- Batto loosire galinoha 2- Manigistete losaancho 3- Baru loosancho 4- Dadalanchcho 5- Mini galite 6- Rosaanchcho 7-Wole dawaro hedhuhero kuli..	
806	Hayimaanote	1. Orthodoxise 2. Musulime 3. pentte 4. Katoolike 5. wole qolo hedhuro kuli	
807	Tesso	1.Katama 2. Gatare	
808	Sircho	1-Sidaama 2- oromo 3- Amahra 4- Guraage 5- Tigire 6Wolayiita 7-Wolle tumo hedhuhero kuli__	
809	Aganu ee''o?		