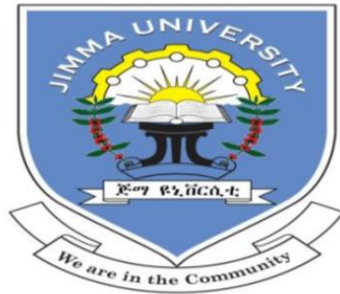


Factors associated with household contacts screening for TB among active TB  
Household contacts in Jimma & Agaro town, South-Western Ethiopia, 2021



By: Admasu Habtu (B.Sc.)

A thesis submitted to Jimma University Institute of Health, Faculty of Public Health, Department of Health, Behavior, and Society, in Partial Fulfillment of the Requirements for the Degree of Master of Public Health (MPH) in Health Promotion and Health Behavior.

DECEMBER, 2021

JIMMA, ETHIOPIA

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## Abstract

**Background:** *Tuberculosis is among the leading causes of mortality and morbidity in Ethiopia. Systematic screening of active tuberculosis household contact attendance is the way for the identification of suspected target individuals using tests. Early detection, initiation of treatments, and safeguarding cure should be the highest priority. It has the potential to minimize avoidable delays in diagnosis and the beginnings of treatment. Low screening of active TB household contact is the major problem contributing to the high burden and transmission of tuberculosis in most developing countries. The same is true in my study area, Jimma and Agaro town, southwest Ethiopia.*

**Objective:** *To assess factors associated with attendance of screening for tuberculosis among active TB household contacts in Jimma and Agaro town 2021.*

**Methods:** *A community-based cross-sectional study was conducted. Data were collected using a pretested structured questionnaire that was undergone from June 1 to September 30, 2021, on 417 TB household contacts who are residents in Jimma and Agaro town. A logistic regressions model was used to identify independent determinants of screening attendance of TB household contacts. A P-value < 0.05 at 95 % CI is considered statistically significant.*

**Result:** *A total of 417 TB household contacts participated in the study, with a response rate of 96.3%. The proportion of screening for TB attendance and none screened were 38.6% and 61.4% respectively. Factors associated with attendance of screening were, family close related [AOR=0.393:95%CI (0.246-0.627)], monthly household income of the respondent above 7071Et. Birr [AOR=2.76:95% CI (1.177-6.48)], perceived susceptibility [AOR= 2.43:95% CI (1.40-4.235)], perceived severity,[AOR=2.80:95% CI (1.58-4.99)],and motivation of the respondent [AOR=2.15:95% CI (1.40-3.30)].*

**Conclusion:** *Predictors such as family support, household monthly income, perceived susceptibility, perceived severity, and motivations were significantly associated with TB household contact screening. Therefore, by increasing the perceptions and income of TB household contact, it is possible to tackle the screening problem.*

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## Acronyms and Abbreviations

ACF	Active Case Finding
DOTS	Directly Observed Treatment Short course
DR-TB	Drug Resistance Tuberculosis
HBC	High-Burden Countries
HCF	Health Care Facilities
HEWs	Health Extension Workers
HHC	Households Contact
LTB	Latent Tuberculosis
LTBI	Latent Tuberculosis infection
MDG	Millennium Development Goals
MDR	Multi-Drug Resistance
MDR-TB	Multi-Drug Resistance tuberculosis
NTLP	National Tuberculosis and Leprosy Control Programme
PCF	Passive Case Finding
PHC	Primary Health Care
PTB	Pulmonary Tuberculosis
TB	Tuberculosis
TPT	Tuberculosis preventive treatment
UHEW	Urban health extension worker
WHO	World Health Organization

## Table of contents

Contents-----	Page
Abstract .....	I
Acknowledgments .....	II
Acronyms and Abbreviations .....	III
Table of contents .....	IV
List of Table .....	VII
List of Figure .....	VIII
1. INTRODUCTION .....	1
1.1 Background .....	1
1.2 Statement of the problem .....	4
2. Literature review .....	7
2.1 Overview of TB contacts .....	7
2.2. Factors affecting Attendants of screening and follow-up .....	8
2.2.1. Socio-demographic .....	8
2.2.2 Cognitive factors .....	10
2.2.3 Socio-cultural factors .....	11
2.3. Significance of the study .....	12
2.4. Conceptual framework .....	13
3. OBJECTIVE .....	14
3.1. General objective .....	14
3.2. Specific objectives .....	14
4. METHODS AND MATERIAL .....	15
4.1, Study area and study period .....	15
4.2. Study design .....	16

4.3. Population.....	16
4.3.1. Source and Study Population .....	16
4.4. Inclusion and exclusion criteria.....	16
4.4.1. Inclusion criteria.....	16
4.4.2. Exclusion criteria.....	16
4.5. Sample size and sampling techniques .....	16
4.6. Data collection instruments.....	16
4.7. Study variables .....	17
4.7.1. Dependent Variables are .....	17
4.7.2. Independent Variables: - .....	17
4.7.3 Data collection and Data collection procedure .....	18
4.8. Operational definition .....	18
4.9. Data quality control.....	19
4.10. Data processing and analysis.....	19
4.11. Ethical consideration .....	20
4.12. Dissemination plan.....	20
5. Results.....	21
5.1. Socio-demographic and social related characteristic of the Participants .....	21
5.2. Household TB Contacts Screening status and relationship with an index case.....	24
5.3. Cognitive factors with household Contact Screening for PTB in Jimma and Agaro town South-western Ethiopia, 2021 .....	25
5.4. Factors associated with Household TB contact screening (Bivariate analysis).....	27
5.5 Factors associated with Household TB contact screening (Multi-variate analysis).....	28
6. Discussion.....	30
7. Conclusion and recommendation.....	32

7.1. Conclusion.....	32
7.2. Recommendation.....	32
Reference .....	34
Annexes.....	40
Annex I Informed consent English version.....	40
Annex II: Assent Form English Version .....	41
Maxxansa I Guca waliigaltee afaan Oromoon Kan qopha’ee.....	52
Maxxansa II waliigaltee afaan Oromoon .....	53
Guca Gaafii afaan Oromoon Kan qopha’ee .....	54
Annex I Amharic version consent form .....	68
Annex II የመስማማቻ ቅጽ .....	69
Declaration .....	79



## List of Table

Table-----	Page
Table 1: Socio-demographics characteristics household contacts of TB patients in Jimma and Agaro town, South-western Ethiopia, 2021 (N=417). .....	21
Table 2: Household Contacts relationship with an index case in Jimma and Agaro town South-western Ethiopia, 2021(N=417). .....	24
Table 3: Cognitive factors with household Contact Screening for PTB in Jimma and Agaro town South-western Ethiopia, 2021(N=417). .....	26
Table 4: Bivariate analysis for Factors associated with household contact screening among active TB cases in Jimma and Agaro Town, Ethiopia. 2021.....	27
Table 5: Predictors with household contact screening among active TB cases in Jimma and Agaro Town Ethiopia, 2021.....	29

## List of Figure

Figure 1: Conceptual framework indicates factors affecting household TB contacts attendance of screening and follow-up in Jimma &Agaro town, south-western Ethiopia 2021.....	13
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# 1. INTRODUCTION

## 1.1 Background

Tuberculosis (TB) is transmittable a chronic, infectious disease caused by mycobacterium tuberculosis. TB can affect almost any part of the body. The mycobacterium that affects the lung is called pulmonary TB(1). TB can spread when a person with active TB disease in the lungs or throat coughs, sneezes, or sings. Discharge from the TB victim that contains the bacteria to spray into the air and infect people who breathe them in(2). A patient with pulmonary tuberculosis (PTB) may have a chronic active or non-productive cough for two weeks or longer(1).

Mostly tuberculosis (TB) case-finding strategies focus on passive case finding at the health facility level. According to World Health Organization (WHO), every year over 30% of the estimated new TB cases are missed(died or under diagnosed) before diagnosed and after being diagnosed and treated, but not reported to national TB programs (NTP)(3). World Health Assembly in 2014, estimated 9 million persons who fall ill with TB each year, about 3 million are not diagnosed and registered for quality-assured TB treatment. Additionally, many individuals are delayed in seeking care for their illness before they are eventually diagnosed and treated, and this can lead to worse health outcomes, higher costs for patients and their families, and more transmission of the disease(4).

In Africa, 40% of TB cases are under-detected or under-reported; there is a critical difference in TB diagnosis with a critical gap in TB detection. Additionally, more than 100,000 children and adolescents with TB are missed each year in West and Central Africa (5,6). Furthermore, the approximate mortality rate in TB/HIV co-infected patients in the west-central Africa(WCA) area is 50% higher than in the rest of Africa, and rifampicine-resistant/multidrug-resistant tuberculosis (RR/MDR-TB) is under diagnosed and under treated-only 20% of DR-TB patients are diagnosed and treated (1).

Due to low contact tracing of the index case, household contacts are highly vulnerable to acquiring TB infection. The high number of TB cases, especially in low and middle-income countries, can facilitate or contribute to TB transmission (7–10). To combat this problem, in middle and high TB-burden settings, household TB contact screening among active TB case is recommended for household and close contacts(11,12).

In Ethiopia 2011 EC, the first population-based national survey shows a prevalence rate of 108/100,000 population smear-positive TB among adults, and 277/100,000 population bacteriologically confirmed TB cases. In the same year, the prevalence of TB for all groups in Ethiopia was 240/100,000 populations. This finding indicates that the actual TB prevalence and incidence rates in the country were lower than the WHO estimates for the same period. Additionally, the survey showed a higher prevalence rate of smear-positive and bacteriologically confirmed TB in pastoralist communities. However, consistent with its methodology, the survey does not allow further disaggregated sub-national estimates(13).

Ethiopia has achieved a 50% reduction of most of the Millennium Development Goals (MDGs) targets related to TB. However, the decline of TB incidence and prevalence rates has been comparatively slow. Community-based study of undiagnosed smear-positive pulmonary tuberculosis (PTB) shows that nearly 30% of incident cases of tuberculosis remained undiagnosed. On the other hand, a very low TB cases detection rate and the presence of infectious TB cases in the community without treatment pose serious problems for the TB control program. (14).

Systematic screening for TB disease should be conducted In settings where the TB prevalence in the general population is 100/100 000 population or higher, people with a risk factor for TB who are either seeking health care or who are already in care, people living with the human immuno virus(PLHIV) should be systematically screened for TB disease at each visit to a health facility, and general population in areas with an estimated, TB prevalence of 0.5% or higher, and also household contacts and other close contacts of individuals with active TB(15).

There is a range of deficiencies in TB prevention and control interventions in target populations, such as the weak organizational capability of laboratory networks, lack of participation by health care providers and the community (1,6,16). Screening and follow-up of active TB household contact is the main strategy to implement a TB control program (17). Patients with bacteriologically confirmed TB at least within one week must be investigated to initiate or elicit the name of household contact (18).

Systematic screening for active TB is an identification of people with suspected active TB, in a predetermined target group, using tests, examinations, or other procedures that can be applied

rapidly(17). Among those screened positive, the diagnosis needs to be established by one or several diagnostic tests and additional clinical assessments, which together have high accuracy. Screening for active TB is a relevant complement to improving early TB detection in specific groups who are close contacts with active TB. For most risky people, systematic screening for TB should involve collaboration with other health and social programs, which may already be engaged in screening the targeted population for other conditions(4).

The households contacts smear-positive tuberculosis patients, young children (aged < 5 years), people of any age who have diseases that can challenge the immune status of an individual are at high risk of getting TB infection (19). The timely diagnosis and proper treatment of active tuberculosis (index case), screening of people in close contact with the index case, regular follow-up for those screened in household contact, and management of latent tuberculosis infection (LTBI) are all major challenges to successful tuberculosis control(20).

This shows that, according to usual care, if one pulmonary positive patient is identified, the patient is requested to tell the name of his family (household contact) or to bring them to the health facility to be screened. But, the patient and some health care providers consider TB is the only concern of the TB victim. On the other hand, after screening has been done for household contact, follow-up is not well-known as per the recommended schedule, the way some contacts those who are taking TB preventive therapy (TPT) are under question.

Based on different literature related to the study phenomena there is a gap in screening on active TB household contact. Identifying index TB household contact, screening gaps, associated factors, and addressing an effective solution have significant importance for individuals as well as for the community as a whole. So, this study was aimed to determine factors associated with attendance of screening for tuberculosis among active TB household contacts.

## 1.2 Statement of the problem

Tuberculosis (TB) is a major global public health problem and represents one of the top 10 causes of death globally. In 2018, an estimated 10 million people developed TB disease, and 1.5 million caused death out of the new case identified only 7 million TB cases were notified by national health authorities and reported to the World Health Organization (WHO), but more than 3 million TB cases were missed (21). WHO's End TB strategy 2020 milestones was a 35 % reduction in deaths and a 20 % reduction in TB incident rates, respectively. However, at the end of 2019, most WHO regions, and several high TB burden countries were not on target to meet the End TB Strategy's 2020 milestones (20%), those from 2015 to 2019, the average decline was 9 % (5,22).

It is estimated that over one year, a single pulmonary TB patient can infect, on average, 10 to 15 people she/he has contact with a patient in a community who are in close contact with it, and 90% of TB transmission in the community is due to sputum smear-positive patients (23). Because of their proximity, household contacts (HHC) are vulnerable to TB infection from index cases (24). All household contacts with bacteriologically confirmed TB, children of age under 5 years and older, immuno-compromised people, prisoners, health care workers, migrants, people of other chronic diseases like Diabetes mellitus, are among highly vulnerable contacts(25).

Ethiopia continues to be among the 30 high burden TB, TB/HIV, and DR-/MDR-TB countries in the world. According to the 2019 WHO Global TB Report, the incidence of TB is estimated to be 151 per 100,000 populations and the mortality is 22 per 100,000 populations (21). These figures remain high despite commendable efforts by the national tuberculosis and leprosy control program (NTLP), which have resulted in a steady decline in incidence over the years. TB treatment coverage, derived from new and relapse notified TB cases divided by estimated incidence, was 69 % in 2018, indicating that 31 % of TB cases were missed. Among the 114,233 notified drug-sensitive (DS) TB cases in 2018, 69 % were pulmonary TB. Of the nationally notified pulmonary TB cases, 62 % were bacteriologically confirmed. (21).

Nearly 70% of cases reported each year are between the ages of 15 and 54, with just around 12% being children under the age of 15. These age groups are highly active and involved in community interaction which may contribute to TB transmission. During the same year, males accounted for 56% of all nationally reported TB cases, while females accounted for 44% (26).

Ethiopia is implementing community-based TB prevention and care as a major component and priority intervention area of a national TB intervention program. Increasing community awareness on TB prevention and treatment, early identification of presumptive TB cases and tracing and referral of active TB contacts are among the objective of the program (26).

The primary goal of screening is ensuring the early detection of people who are with active TB, reducing transmission of TB, and decreasing the risk of poor treatment outcomes; consequentially reducing the future incidence of TB. The main purposes of conducting contact screening and case tracing are to identify contacts of all ages with undiagnosed TB disease among the contacts of an index case, do an investigation to rule out active TB, and to provide preventive therapy for eligible contacts without TB disease that have increased susceptibility to develop Active TB disease following recent infection(4).

The study conducted in Gonder town out of 404 study subjects, overall household contact TB screening adherence was 47.5%; to this prevalence; having a certificate and above educational level, having sufficient knowledge about TB, being satisfied with health care service, health education given by health care workers, having HIV/AIDS co-infection were factors associated with household contact TB screening(27).

Similarly in Haramaya District, Oromia Region, the overall prevalence of pulmonary tuberculosis among adult household contacts was 7.8%, Out of these eating meals less than three times per day, drinking raw milk, having a family history of tuberculosis with more than one index case, living in poorly ventilated houses were from the identified risk factors (28). Tuberculosis case finding status and household contacts screening by health extension staff in the Tigray region was only one-fifth (21.7 %) of index TB cases for screening (29). Which is far below from national tuberculosis screening program implementation in Ethiopia (26).

Another study conducted on screening for tuberculosis in family and household contacts in a rural area, Ethiopia, showed that out of, 122 patients' 105 TB patients were with contacts registered, from these, no family or household contacts went for screening to the TB clinic were 37 (35.2%) cases. Finally out of 68 indexes TB cases 299 household contacts were identified. Of the 299 contacts, 160 (53.5%) were screened. Of the 160 family and household contacts

screened, 34 (21.3%) of them were children  $\leq 5$  years of age. TB was diagnosed after screening in 16 (10.1%) contacts, there is poor screening(30).

Different studies indicated factors that have been associated with low performance of contact screening and follow-up were lack of cooperation or avoidant behavior, low awareness about TB, financial barrier, and habit of smoking and alcohol use were also associated factors. In Another study conducted in north Ethiopia, screening attendance was low among Christians. Being female was supported in other literature. Another study conducted in Malaysia; passively provision of information on the need for TB screening in the workplace or at school and if contact were not relatives of someone with active TB, fear of discrimination, stigma, and financial barrier for contact to attend screening were among the factors. Especially from a health facility; passive TB case finding, non-available health workers and lack of out station visits, weak laboratory specimen referral system and shortage of diagnostic tools including experts, and the costs for laboratory tests were the affecting factors.

Thus, there is easily understood as there is a gap in addressing screening of active TB household contact as well as determinant factors about active TB household contact which differs from community to community and from place to place. Regarding all these factors of TB, there is limited evidence on household contacts TB screening among TB patients in Agaro and Jimma town. Therefore, this community-based study was aimed to determine factors affecting the attendance of screening for tuberculosis among household contacts in Agaro and Jimma town.



## 2. Literature review

### 2.1 Overview of TB contacts

Tuberculosis remains a significant public health problem in both high- and low-prevalence countries, even though effective drug treatment has been started since the 1940s (31). While modern medicine is on implementation, close follow-up, and directly observed, therapy (DOT) is used, people in Africa's high-burden countries believe the tribal (herbal) medication cures tuberculosis(32). Different Guidelines suggest that passive TB case findings must be supported by active TB case finding (17). According to a study conducted in Malaysia due to the passive nature of TB household screening, there was a low screening of contacts because health care givers bring only symptomatic contact for screening (33).

Household active TB contact(HHC) is defined as any person who lives in the same house as the index case for at least 3 months and sleeps in the same house for on average at least 4 nights per week, for at least 3 months leading up to the time of diagnosis of the index case(4). The infectiousness of the index case and the contact's level of exposure and vulnerability are the most important determinants when prioritizing contacts for screening. The exposure risk for individual contacts is determined by the intensity, frequency, and cumulative duration of time they spent with the index case during the infectious period (4). WHO targets which at least 90% of household contacts of index TB cases should be screened for TB(34)

According to the study, done on screened household contact out of 521 with a symptom of TB, there were 18 contacts (3.45 %) with symptoms suggestive of TB. Of these, 6 contacts were diagnosed to have TB; 5 being sputum positive cases and one with X-ray suggestive of TB; giving a prevalence of 1.15 %. The study achieved a yield of 4.51% secondary case (20). A study done among household contacts of newly diagnosed TB patient 55sputum smear-positive index case and 356 household contacts, showed that a large number of symptom-positive household contacts (83.8%) were screened for tuberculosis, with 18.9% of them testing positive for tuberculosis (35).

Another study conducted on household contact investigation for TB in South Africa shows that from a total 259 screened for symptoms of TB, 47.1% went TB clinic investigation, from these 17 (6.6%) new TB cases were diagnosed which represents a prevalence rate of 6564 per 100,000

population (36). While a study in India on household screening and yield of TB cases was 29 (5.3%) out of 544 contacts. Among those identified total of 29 TB patients, 23 (79%) were sputum smear-positive (23).

The ultimate reduction of the risk of TB transmission will minimize health sequel and the adverse social and economic consequences of TB (17). Guidelines suggest that for all under 5 year Index TB case contact INH is prescribed for TB prevention therapy (TPT) (26). Of 174 household contacts, 115 were  $\geq 15$  years and 59 were  $< 15$  years. The %age of TB cases detected among the household contacts was 13.8%. There were 14 (12.2%) positive TB cases among the 115 contacts aged  $\geq 15$  years while 10 (16.9%) of those aged  $< 15$  years had clinical signs and symptoms of TB with an abnormal CXR. A study conducted on screening TB house hold in the rural area of Ethiopia shows that from 160 screened household contacts 34(31.3%) were under the age of 5 years and INH preventive prophylaxis was prescribed for only 64 % of children under 5 years (30).

## 2.2. Factors affecting Attendants of screening and follow-up

### 2.2.1. Socio-demographic

The study conducted in Malaysia on contact follow-up shows that passively provision of information on the need for TB screening in the workplace or at school and if contact were not relatives of someone with active TB, fear of discrimination, stigma, and financial barrier for contact to attend screening were among the factors affecting continued participation on TB contact investigation(37). According to a study done in Kampala Uganda, the challenges to completing clinic evaluation, including contacts was lack of money, time for travel, and fear of stigma among contacts(9).

A study done in South Africa showed that reasons for non-attendance of primary health care(PHC) facilities for clinical evaluation, The most cited reason for non-attendance of PHC facilities for clinical evaluation was difficult to get time off other duties such as work and school (44.4%)(36). The other study done in South Africa shows a lot of reasons for household contacts that hinder them to visit health care facilities for screening was lack of transportation to and from PHC facilities (11.1%) is the major one (32).

A study conducted in north Ethiopia shows that an individual social and cultural acceptability, family income of the patient, family support, are factors that facilitate screening adherence (38). According to a study conducted in the Hadiya zone, Anlemo districts south west Ethiopia the costs for laboratory tests during screening for tuberculosis is raised as one of the reasons for not attending health institutions for TB screening, the same study also revealed that awareness of the need of screening of household contacts of TB patients is low (8,).

An institution-based cross-sectional analysis conducted in Gonder town, TB contact screening adherence was 47.5 %. For this, the factors associated with screening were Education status significantly associated with household screening(27). Another study conducted in north Ethiopia shows that individual, social, cultural, and religion affects TB screening of household contacts. The overall adherence to household contact screening in the Amhara region was 33.7%. Adherence was higher among Muslims than Christians. Adherence was 2.17 times higher if the patient had sufficient knowledge of tuberculosis during the interview (38).

According to a study done, on knowledge among the rural community in south-western Ethiopia, there was little knowledge about tuberculosis. Out of 476 pulmonary TB suspects, (50.4%) were the commonly mentioned cause of TB. Individuals who could read and write were more likely to be aware that TB is caused by a microorganism than non-educated individuals. Males were more likely to know the cause of TB than females (39,40). A study conducted in the Hadiya zone in Anlemo district shows that contacts of active TB thought treating the index case, opening the window and door, separating utensils from index patients was sufficient to prevent transmission of TB (8).

Delayed tuberculosis (TB) therapy raises the risk of mortality and the prevalence of infection in the population. Owing to an unexplained or well-specified source, women encountered more obstacles and faced longer delays than men (41). Household contacts also perceive it is enough if only index case is treated so that they are not urged to be screened for TB (8). A financial barrier for contact to attend screening was among the factors affecting continued participation in TB contact investigation. Contrarily the experience of having a close household member with active TB, availability of a health inspector to conduct household visits appears motivating factor for participation in contact screening (37). The other study done in South Africa shows a lot of reasons for household contacts that hinder them to visit health care facilities for screening and

follow up of which lack of transportation to and from PHC facilities (11.1%) is the major one and among the motivating factors for visiting health care facility for screening and follow up shorter waiting times at PHC facilities (25 %) was the most cited factor (32).

### 2.2.2 Cognitive factors

According to a study done by Velayutham B, on TB screening in household contacts was being uncooperativeness by PTB patients for household TB contact screening for 12 months is very difficult because the index case on the treatment itself may not cooperate for screening and follow-up, non-availability or non-cooperation HCW, inconvenient time feeling healthy, fear of stigma and out station visit were the main reason for contacts not undergoing screening (42)

According to Southeast Asian journal household contact screening adherence was associated with a good knowledge of TB (OR=4.94, 95%CI=3.08-7.91), a high perceived susceptibility (OR=11.93, 95%CI=7.05-20.19), a high perceived severity (OR=10.06, 95%CI=6.02- 16.82), a high perceived benefit (OR=6.69, 95%CI=4.08-10.97), and a low perceived barrier (OR=19.01, 95%CI=10.84-33.36). But the overall participants who had a high perceived susceptibility were three times more likely to bring their household contacts to the TB clinic than those who had a low perceived susceptibility (Adjusted OR=2.90, 95%CI=1.18- 7.16). Index cases with low perceived barriers were more likely to bring their household contacts to the TB clinic (Adjusted OR=4.60, 95%CI=1.99-10.60 (43). Perceiving tuberculosis as a severe disease (OR 0.29, 95%CI 0.09–0.91) and consulting for an immigration examination (OR 0.42, 95%CI 0.18– 0.98) was associated with refusal of TB skin test (TST) in Canada (44).

According to a study done in South Africa the most cited reason for not attending health care facility for screening among household contacts of TB are difficult to give time off other duties such as other work and school (44.4 %s), travel commitments (11.1 %s) and individual perception of unhelpful staff at health facilities (8.9 %). And also sensitization about TB screening and follow-up (25 %), On the other hand being encouraged by someone else, shorter waiting times at PHC facilities (25 %) was among the motivating factors for visiting health care facility for screening (32).

A study done in Nigeria showed that a higher number of males (64.2%) than females (57.8%) had a higher level of TB knowledge, while, on the other hand, more females (42.2%) than males (35.8%) had low knowledge of TB (45).

A study conducted in South West Ethiopia shows that stigma toward TB among the rural community out of 476 TB suspect was 199 (51.2%) (29). More than one-third of Ethiopians have high scores for TB-related stigma, which was associated with educational status, poverty, and lack of awareness about TB (27). Deferent literature reveals that TB contacts are highly vulnerable to TB, besides low contact tracing and fear of stigma and discrimination TB transmission among contacts is very high(8). Fear of stigma among index case, avoidant behavior among the contacts, fear related to TB, and HIV stigma is also among the barriers of contact tracing(9).

According to a study done in Gonder town having a certificate and above educational level (AOR = 2.83, 95% CI: 1.40, 5.67), having sufficient knowledge about TB (AOR = 8.26, 95% CI: 4.34, 15.71), were factors associated with household contact TB screening(37). The same study was done in northern Ethiopia Amhara region household contact screening adherence was 2.17 times higher if the patient had sufficient knowledge on tuberculosis [AOR: 2.17, 95% CI: 1.29 to 3.67] (46).

### 2.2.3 Socio-cultural factors

A study conducted on knowledge towards tuberculosis among the rural community in southwestern Ethiopia shows that there was little knowledge about TB. Out of 476 pulmonary TB suspects, 395 (83%) had ever heard of TB's “evil eye” and 51.3% of TB suspects perceived that other people would consider them inferior if they had TB. 220 (46.2%) did not seek help for their illness. Individuals who had previous anti-TB treatment were more likely to have appropriate health-seeking behavior than those who had not (39,40). A study conducted in north Ethiopia shows that an individual social and cultural acceptability, family income of the patient, family support, are factors that facilitate screening adherence (38).

According to a study conducted in the Hadiya zone, Anlemo districts south west Ethiopia the costs for laboratory tests during screening for tuberculosis is raised as one of the reasons for not attending health institutions for TB screening, the same study also revealed that awareness of the

need of screening of household contacts of TB patients is low TB (8). The language barrier, inconvenient or unfriendly is among the barriers (9). Another study conducted in northern Ethiopia shows that household contact screening is lower among Christian due to the belief in the use of holy water 16% and herbal medication 1.5% for the treatment of tuberculosis(46).

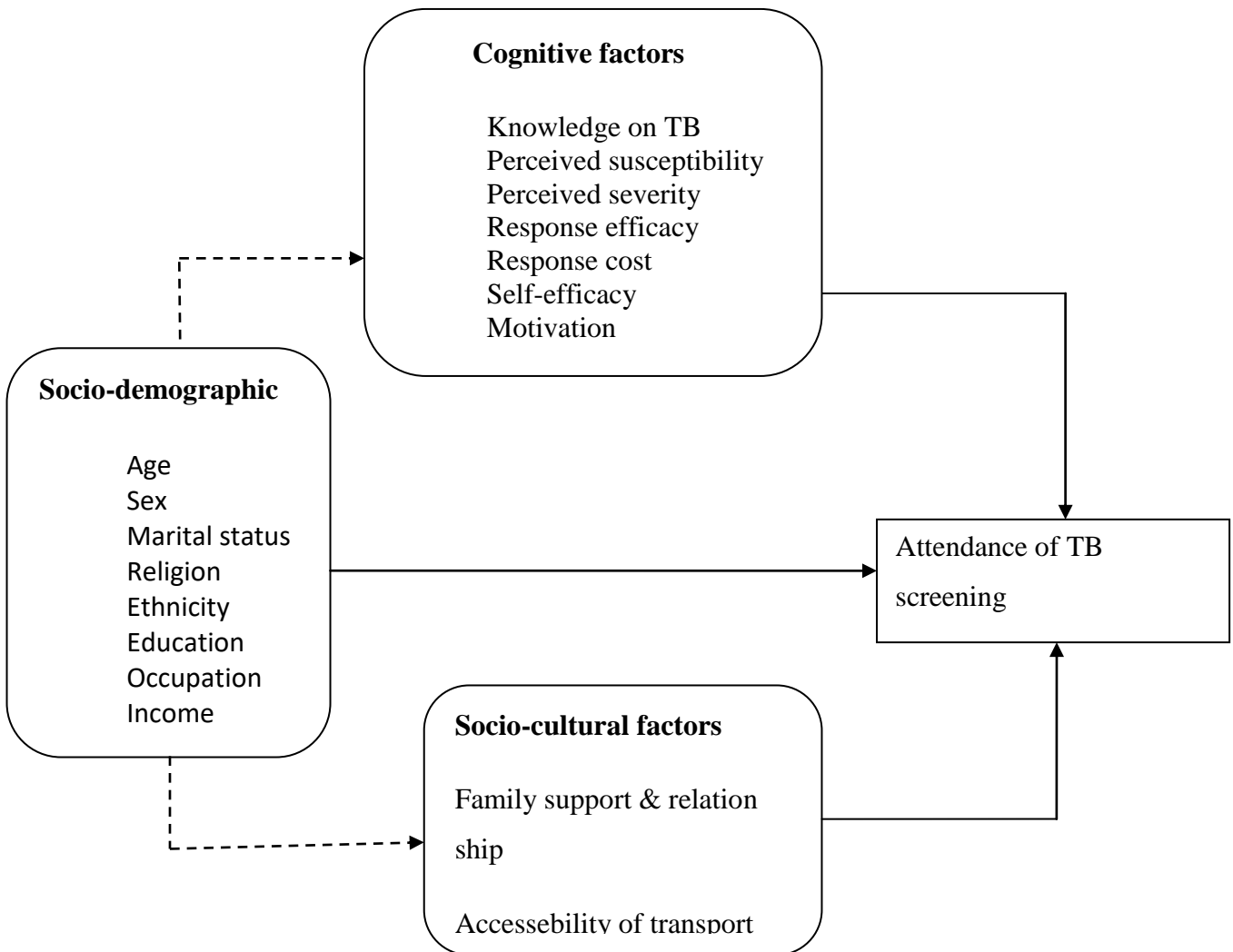
### 2.3. Significance of the study

This study assessed factors that affect the attendance of screening of active TB household contacts that are in Jimma & Agaro town. So, determination of these factors informs intervention aims to promote attendance of screening and follow up among contacts and hence prevent and control TB infection.

The finding of this study will serve as baseline data for further studies in a similar area. Since the study attempts to reveal the major factors, it will help governmental and non-governmental organizations to develop programs and set an appropriate plan to tackle the existing health conditions. This is scientifically significant in raising community awareness about the importance of household contact TB screening and standard of care for the research community to contribute to the formation of healthy communities.

## 2.4. Conceptual framework

The conceptual framework was developed by reviewing the literature. It shows the individual level (socio-demographic and cognitive and psychological factors that can affect the outcome variable. Active TB household contacts may participate or not participate in screening due to individual or social factors.



**Figure 1:** Conceptual framework indicates factors affecting household TB contacts attendance of screening and follow-up in Jimma & Agaro town, south-western Ethiopia 2021.

### 3. OBJECTIVE

#### 3.1. General objective

To assess factors associated with household contacts TB screening among active TB in Jimma &Agaro town, South-Western Ethiopia, 2021.

#### 3.2. Specific objectives

1. To assess the household contacts screening for TB among active TB households in Jimma &Agaro town, South-Western Ethiopia, 2021.
2. To assess factors associated with household contacts screening for active TB household contacts in Jimma &Agaro town, South-Western Ethiopia, 2021.



## 4. METHODS AND MATERIAL

### 4.1, Study area and study period

The study was conducted in the Jimma zone; Jimma & Agaro town, Jimma town is Located southwest of Ethiopia & the Western Oromia region, 352 km from Addis Ababa (AA). Jimma town is the administrative center of Jimma Zone, and it is one of the commercial centers of south western Ethiopia. It has an area of 4,623 hectares. Administratively, Jimma town is divided into 4 sub- towns and 17 Kebeles. Its absolute location is 7 6785'N Latitude and 36 83'84E Longitude. It is bounded from the East by "Kersa" Woreda, from the West by Seka Woreda, from the North by Mana Woreda, and from the South by Dedo Woreda. According to the Jimma Town Health office, the estimated population of Jimma town for 2013 E.C is 220,609 of which 110,922 are males and 109,687 are females. As for the health facilities in the Jimma town administration, there are 5 hospitals, 4 health centers, 26 Medium clinics private, 6 Dental clinics, 7 Primary clinics, 20 Pharmacy, 33 drug stores, 7 Medium clinics for nonprofit, 2 Higher diagnostic lab and 2 Medium diagnostic labs. TB "diagnosis and treatment" is given in four government health centers and two governmental hospitals, three private hospitals, six private clinics, and one NGO health facility.

Agaro town is Located in South west Ethiopia Oromia region Jimma Zone. It is 397 km away from Addis Ababa (AA) and 45 km away from Jimma town. Agaro town is the only administrative town in Jimma Zone and bounded by Gomma Woreda in all its directions. There are 6 Kebele and the total population is 41961 of which 21232 are male and 20729 are female. There is one hospital and two health centers serving the community in Agaro town administration. The study was conducted from July 1-September 30/2021 in Agaro and Jimma town residents. TB "diagnosis and treatment" is given in two government health centers and one hospital.

## 4.2. Study design

A community-based cross-sectional study was conducted among household contacts of active TB cases.

## 4.3. Population

### 4.3.1. Source and Study Population

All household contacts of microbiologically confirmed pulmonary positive TB cases (PTB+ patients), who were under TB treatment between January to September 2021 in governmental and non-governmental health institutions in Jimma and Agaro town

## 4.4. Inclusion and exclusion criteria

### 4.4.1. Inclusion criteria

All household contacts of pulmonary TB case who were under TB treatment between January to September 2021 in governmental and non-governmental health institution.

### 4.4.2. Exclusion criteria

Age below twelve years of age and those who are transferred out of study area are not included in the participation.

## 4.5. Sample size and sampling techniques

Before data collection, the number and address of pulmonary TB patients with their household contacts were obtained from health facilities providing directly observed therapy (DOT) services in Jimma & Agaro town. All eligible household contacts were included in the study.

## 4.6. Data collection instruments

Data was collected using a structured and pre-tested questionnaire. The questionnaires contain questions that assess socio-demographic factors (Age, Sex, and Marital status, Religion, Education, Occupation, and Income), Cognitive factors of household contacts of active TB patients (Knowledge on TB, Response efficacy, Risk perception, Response cost, Self-efficacy, and Motivation) and Socio-cultural variable (Traditional healers, Self-medication and Family support). The questioner was adapted and developed from different previous studies (47) and other literature. Questionnaires were first developed in English and translated into Afan Oromo

and Amharic (local languages) and then translated back to English by people who are proficient in both languages to maintain the consistency of the questionnaires. Finally, the outcome variable was assessed by having two alternative responses (being screened or not i.e., 1=Yes, I have done the screening for TB and 0= No, I haven't done the screening for TB).

#### 4.7. Study variables

##### 4.7.1. Dependent Variables are

Attendance of screening for TB

##### 4.7.2. Independent Variables: -

Socio-demographic variable

- Age
- Sex
- Marital status
- Religion
- Education
- Occupation
- Income

Cognitive factors

- Knowledge on TB
- Risk perception of TB
- Response efficacy of screening
- Response cost of attending a screening
- Self-efficacy to attend a screening
- Motivation to attend a screening

Socio-cultural variable

- Family support & relationship
- Access of transportation

#### 4.7.3 Data collection and Data collection procedure

Data was collected by 8 BSc/PH nurses from an individual TB household contact using of written questioner house to a hose and 2 BSC Nurse/PH those with a minimum of two-year work experience were assigned to supervise and one data clerk was assigned to inter-data, after data collection.

#### 4.8. Operational definition

Household contact: A person who shared the same enclosed living space for one or more nights or frequent or extended periods during the day with the index case (18).

Knowledge on TB: When the household contact knows the cause and the way of its transmission and knows the major sign and symptoms of TB.

Knowledgeable for TB case -Those scoring above mean and mean are considered as high knowledge and those scoring below the mean are considered as low knowledge.

Perceived Susceptibility: Belief about getting a disease or condition that Measured by three items rated on five points from 1 (*strongly disagree*) to 5 (*strongly agree*).

Perceived Severity: Refers to the negative consequences an individual associates with an event or outcome that is measured by five items rated on five points from 1 (*strongly disagree*) to 5 (*strongly agree*).

Family support- the relationship between index case and family and if their relation tied with blood and marriage it considered as close family support and if it was out of that it considered as no close family support.

Response efficacy- Respondents' belief about efficacy or effectiveness of screening in reducing the risk of TB, Response efficacy was measured by five items rated on five points from 1 (*strongly disagree*) to 5 (*strongly agree*). A mean sum score was calculated and a higher score indicated more response efficacy.

Response cost- Contacts belief about the cost of attending a screening for TB. Response cost was measured by five items rated on five points from 1 (*strongly disagree*) to 5 (*strongly agree*). A mean sum score was calculated and a higher score indicated more response cost.

Self-efficacy- Respondent's confidence in their ability to attend a screening for TB, Five items rated on a five-point Likert scale were used to assess self-efficacy. A mean sum score was calculated and a higher score indicated more self-efficacy.

Motivation- Respondent's intention to attend the screening to prevent TB transmission from index case to them, Motivation was measured by three items rated on a five-step response scale.

Attendance of TB screening- Contacts of active TB cases in the household that are going to be assessed about TB status.

Attendance of TB screening done -If the contacts of active TB made urgent as soon as possible (generally within one week) screening for their TB status after the index case is identified(18,48).

TB index case - The initially identified case of new or recurrent TB in a person of any age in a specific household or another comparable setting in which others may have been exposed(18).

#### 4.9. Data quality control

Data were collected using properly designed questionnaires. The one-day training was given for data collectors and supervisors on data collection tools and procedures, how to conduct an interview, maintain confidentiality and privacy. A pretest was done on 5% of the sample population with similar socio-demographic characteristics which are not the actual data collection area, at Dedo Woreda Sheki town. Based on the pretest, some adjustment to the questionnaires was done like removing some vague words using index TB unique number than index case house number.

#### 4.10. Data processing and analysis

The data were entered, Epi Data version 3.1 to clean and check data completeness and missing values. Data were coded, and then it is exported to SPSS version 23 for analysis. Logistic regression analysis was conducted to identify factors associated with household contact attendants of screening and follow-up. A variable with P-value < 0.25 was a candidate for multivariable logistic regression. In multivariable logistic regression, variables with p-value < 0.05 are factors for attendants of screening. The degree of association between independent and

dependent variables was assessed using an Odds ratio with a 95% confidence interval. The results are explained by descriptive statistics such as tables with narrations.

#### 4.11. Ethical consideration

Ethical clearance was obtained from the JU institute of health research committee Ref. No JHRPGn/360 date 23/07/2021. And also Permission letter was obtained from the Jimma zone and town health office. Participants who were between 12-18 ages in years had consent forms from parents(49). Finally, care was taken from disclosing patients' records. Since the study was done through reviewing of medical records, the individual patients were not subjected to harm as much as the confidentiality is kept. To keep confidentiality, all collected data were coded and locked in a separate room before being entered; the computer and names were not be included in the data collection format. After entering the computer, the data is kept in a locked password, and the data was not disclosed to any person other than the principal investigator. During data collection, covid-19 prevention and control protocols were maintained by all members of data collectors.

#### 4.12. Dissemination plan

The result of the study will be submitted and presented to Jimma University institute of health, faculty of public health, Department of Health, behavior, and society. The study result will also be submitted to the Zonal & town health office, and the finding will also be presented in locally or internationally held seminars, workshops, conferences, and meetings, and it will be published in one of internationally or nationally recognized journals.

## 5. Results

### 5.1. Socio-demographic and social related characteristic of the Participants

A total of 417 household contacts of TB index cases have participated in this study with a response rate of 96.3%. The majority of the study participants 220 (52.76%) were male whereas 197(47.24%) were females. The respondents' ages ranged from 12 to 75 with the mean and standard deviation of respondents being 29.01 and 12.78 years, where the majority of them, 209 (50.1%) were at the age of 15-29. Regarding the religious status, the majority of the participants, 247 (59.23%) was Muslim. Concerning Ethnicity, the majority of them were Oromo 291 (69.78%) followed by Amhara 59 (14.15%) (Table1).

Table 1: Socio-demographics characteristics household contacts of TB patients in Jimma and Agaro town, South-western Ethiopia, 2021 (N=417).

Characteristics		Frequency	Percent
Age	<= 14	37	8.9
	15 – 29	209	50.1
	30 – 44	112	26.9
	45 – 59	44	10.6
	60+	15	3.6
Sex	Male	220	52.8
	Female	197	47.2
Marital	Single	201	48.2
	Married	195	46.8
	Divorced	8	1.9
	Widowed	13	3.1

Ethnicity	Oromo	291	69.8
	Amhara	59	14.1
	Dawro	42	10.1
	Other <sup>1*</sup>	25	6.0
Religion	Muslim	247	59.2
	Orthodox	130	31.2
	Protestant	40	9.6
Education	Can't Read and Write	42	10.1
	Read and Write	64	15.3
	Grade1-8	152	36.5
	Secondary School	104	24.9
	College and above	55	13.2
Occupation	Merchant	90	21.6
	Home Wife	69	16.5
	Student	130	31.2
	Private Org Employee	47	11.3
	Other <sup>2*</sup>	81	19.4
Household Income	<1500	49	11.8
	1500-4605	265	63.5
	4606-7071	51	12.2



	>7071	52	12.5
Relationship	Husband	76	18.2
	Wife	80	19.2
	Siblings	146	35.0
	Other <sup>3*</sup>	115	27.6
Primary health care unit(PUCU)	Agaro health center	56	13.4
	Agaro Hospital	57	13.7
	Becho bore health center	24	5.8
	Firomsis Hospital	6	1.4
	Higher two health center	19	4.6
	Jimma health center	42	10.1
	Jimma university medical center	114	27.3
	Mendera Kochi health center	40	9.6
	Mission of charity	2	.5
	Shenen gibe hospital	53	12.7
	Universal medium clinic	4	1.0

1\* =Gurage, Yem, kefa, Tigre

2\* =Governmental employee, daily laborer

3\*= Servant, Guard, other students

## 5.2. Household TB Contacts Screening status and relationship with an index case

From 417 household contacts, only one hundred sixty-one (38.6%) household contacts were screened for TB after index cases were identified. Of these screened contacts, 35 (21.7%) have screening follow-ups more than one time. Concerning the reason for not screening, the majority of the respondents, 139 (54.3%) were reported that they were not aware of the presence of screening followed by feeling healthy 64 (25%).

Regarding relationship with index case husband accounted for 76 (18.2%), wife 80 (19.2%), sibling 146 (35%) and others (servants, other students, guards) 115 (27.6%). Of all respondents, 333 (79.9%) sleep in the same room with the index case, whereas, 84 (20.1%) reported sleeping on the same bed with the index case. Concerning time of screening after index case is identified 71 (44.1%) screened within one week, 71 (44.1%) screened within two weeks and 19 (11.8%) were screened above two weeks. Regarding the accessibility of transportation, out of 161 household TB contacts, 81 (50.3%) move to their health facility on foot and the rest 80 (49.7%) use public transport. The time taken to reach the health facility to get to service among screened household contact below 30 minutes was 120 (74.5%) while above 30 minutes were 41 (25.5%)(Table 2).

Table 2: Household Contacts relationship with an index case in Jimma and Agaro town South-western Ethiopia, 2021(N=417).

Characteristics	Category	From the total(417)		Among screened(161)	
		Frequency	Percent (%)	Frequency	Percent (%)
Relationship b/n index case and family	Husband	76	18	28	17.4
	Wife	80	19.2	30	18.6
	Siblings	146	35	64	39.7
	Others *	115	27.6	39	34.2
Sharing materials	Sleep in the	333	79.9	123	76.4

in common	same room				
	Sleep on the same bed	84	20.1	38	23.6
Household contact spend in one day with the index case	All-time day and night	243	58.3	94	53.4
	Night time only	123	29.5	45	27.9
	Day time only	51	12.2	22	13.6

1\*= Servant, Guard, other students

### 5.3. Cognitive factors with household Contact Screening for PTB in Jimma and Agaro town South-western Ethiopia, 2021

Regarding the knowledge of the participants on TB, those who are knowledgeable are 222 (53.2%), and they score above the average mean value (0.5947). Participant risk perception perceived susceptibility for TB and understanding on TB household contact screening were 234 (56.1%) and they scored above the average mean value and the rest 183 (43.9%) were scored less than the average mean value (<3.07). On the other hand, among all the participants' perceptions of the severity of TB are 278 (66.7%) which scored above the average mean value, and the other 139 (33.3%) study participants' score less than the average mean value (3.79). Response-efficacy and response-cost of the respondents were 44.8% and 42.9% scored less than the average mean respectively. Regarding motivation for screening among TB index case household contact respondents, 218 (52.3%) were scored above the average mean value and 199 (47.7%) scored less than the average mean value of (3.35).

If mean value  $\geq 0.5947$  knowledgeable & mean  $< 0.5947$  not knowledgeable, mean value  $\geq 3.07$  high perceived susceptibility & if mean value  $< 3.07$  low perceived susceptibility, mean value  $\geq 3.79$  high perceived severity & mean value  $< 3.79$  low perceived severity & mean value  $\geq 3.35$  high motivation & mean value  $< 3.35$  low motivation for TB screening.

Table 3: Cognitive factors with household Contact Screening for PTB in Jimma and Agaro town South-western Ethiopia, 2021(N=417).

Characteristics		Screening for TB		Total
		No(percent)	Yes(percent)	
Knowledge status of the respondents	Not knowledgeable	120(61.5)	75(38.5)	195
	Knowledgeable	136(61.3)	86(38.7)	222
Relationship	Husband	48(63.2)	28(36.8)	76
	Wife	50(62.5)	30(37.5)	80
	Siblings	107(73.3)	39(26.7)	146
	Other*	51(44.3)	64(55.7)	115
Perceived Susceptibility	High	146(62.4)	88(37.6)	234
	Low	110(61.1)	73(39.9)	183
Perceived Severity	High	198(71.2)	80(28.8)	278
	Low	58(41.7)	81(58.3)	139
Response Efficacy	Low	105(56.1)	82(43.9)	187
	High	151(65.7)	79(34.3)	230
R. Cost	Low	111(62.0)	68(38.0)	179
	High	145(60.9)	93(39.1)	238
Motivation	High	114(52.3)	104(47.7)	218
	Low	142(71.4)	57(28.6)	199

1\*= Servant, Guard, other students

#### 5.4. Factors associated with Household TB contact screening (Bivariate analysis).

From the candidate, variables entered to Binary logistic regression, age, religion, monthly income, occupation, perceived susceptibility, perceived severity, response efficacy, self-efficacy, relationship, and motivation were candidate variables for multivariate logistic regression by criteria of  $p < 0.25$  (Table 4).

**Table 4:** Bivariate analysis for Factors associated with household contact screening among active TB cases in Jimma and Agaro Town, Ethiopia. 2021.

Characteristics		Screening for TB		COR(95%CI)	P-Value
		No	Yes		
<b>Sex</b>	Male	126 (57.3%)	94 (42.7%)	1.448(0.972-2.155)	<b>0.068</b>
	Female	130 (66.0%)	67 (34.0%)	1	
<b>Ethnicity</b>	Oromo	175 60.1%	116 39.9%	1.704(0.69-4.21)	<b>0.248</b>
	Amara	40 67.8%	19 32.2%	1.22(0.36-3.42)	0.703
	Dawro	23 54.8%	19 45.2%	2.124(0.733-6.154)	<b>0.165</b>
	Other	18 72.0%	7 28%	1	0.00
<b>Religion</b>	Muslim	144 58.3%	103 41.7%	2.46(1.25-5.39)	<b>0.24</b>
	Orthodox	81 62.3%	49 37.7%	2.084(0.195-4.743)	<b>0.08</b>
	Protestant	31 77.5%	9 22.5%	1	
<b>Income</b>	<1500	33 67.3%	16 32.7%	1	0.00
	1500-4605	161 60.8%	104 39.2%	1.09(0.47-2.52)	0.839
	4606-7071	26 51%	25 49%	1.453(0.768-2.75)	<b>0.251</b>
	>7071	36 69.2%	16 30.8%	2.163(0.967-4.84)	<b>0.060</b>
<b>Occupation</b>	Merchant	54 60%	36 40%	0.718(0.39-1.32)	<b>0.284</b>

	Home Wife	46 66.7%	23 33.3%	0.538(0.277-1.046)	<b>0.068</b>
	Student	86 66.2%	44 33.8%	0.551(0.312-0.972)	<b>0.039</b>
	Employee	28 59.6%	19 40.4%	0.731(0.353-1.513)	0.398
	Other	42 51.9%	39 48.1%	1	0.00
<b>Relationship</b>	Non blood family	51 44.3%	64 55.7%	1	0.00
	Family blood	205 67.9%	97 32.1%	2.65(1.708-4.118)	<b>0.000</b>
<b>Perceived Susceptibility</b>	Low	161 58.8%	113 41.2%	1	0.00
	High	95 66.4%	48 33.6%	0.72(0.472-1.098)	<b>0.12</b>
<b>Perceived Severity</b>	Low	198 65.3%	105 34.7%	1	0.00
	High	58 50.9%	56 49.1%	1.821(1.76-2.818)	<b>0.007</b>
<b>Response Efficacy</b>	Low	105 56.1%	82 43.9%	1	0.00
	High	151 65.7%	79 34.3%	0.67(0.45-0.996)	<b>0.048</b>
<b>Motivation</b>	Low	142 71.4%	57 28.6%	1	0.00
	High	114 52.3%	104 47.7%	2.273(1.514-3.141)	<b>0.000</b>

### 5.5 Factors associated with Household TB contact screening (Multi-variate analysis).

All predictors of attendance of screening for TB among active TB Household contacts with p-value < 0.25 were entered into a multiple logistic regression analysis and the final predictors of the attendance of screening for TB among active TB Household contacts score were identified.

Being in the income category of more than 7,071 Birr were nearly three times more likely to be screened than those who had income less than 1,500ETB (AOR= 2.76, 95%CI (1.177- 6.48) p<0.05); being in a non-close family had 60.7% more likely to screen than close family(closed relative)(AOR= 0.393, 95% CI (0.246-0.6273) p<0.01). The odd of high perceived susceptibility for TB were two times more likely screened compared to those with low perceived susceptibility (AOR= 2.431, 95%CI (1.40-4-235) p<0.05), those who had high perceived severity were nearly

three times more likely to be screened than those low perceived severity (AOR= 2.82, 95%CI (1.58-4.99)  $p<0.01$ ) and finally the odds of being screened for those who had high motivation was two times more likely screened than that of with low motivation (AOR= 2.15), 95%CI (1.40-3.303  $p<0.01$ ) (Table 5).

**Table 5:** Predictors with household contact screening among active TB cases in Jimma and Agaro Town Ethiopia, 2021

Characteristics	Screening for TB		COR(95%CI)	AOR(95%CI)	P-Value
	No(percent)	Yes(percent)			
Income<1500	33(67.3%)	16(32.7%)	1	1	
1500-4605	161(60.8%)	104(39.2%)	1.09(0.47-2.52)	1.49(0.61-3.65)	0.383
4606-7071	26(51%)	25(49%)	1.453(0.768-2.75)	1.94(.98-3.82)	0.056
>7071	36(69.2%)	16(30.8%)	2.163(0.967-4.84)	2.76(1.18-6.48)	0.020
Family support Non-clise		51 44.3%	64 55.7%	1	1
	Close family support	205 67.9%	97 32.1%	2.65(1.708-4.118)	0.393(0.246-0.627)
Perceived Susceptible					
Low	161(58.8%)	113(41.2%)	1	1	
High	95(66.4%)	48(33.6%)	0.72(0.472-1.098)	2.43(1.40-4.235)	0.002
Perceived Severity					
Low	198(65.3%)	105(34.7%)	1	1	
High	58(50.9%)	56(49.1%)	1.821(1.76-2.818)	2.82(1.58-4.99)	<.001
Motivation					
low	142(71.4%)	57(28.6%)	1	1	
High	114(52.3%)	104(47.7%)	2.273(1.514-3.141)	2.15(1.4-3.303)	<.001

## 6. Discussion

Most research has focused on active case finding and treatment of TB disease while there are few studies examining factors associated with TB testing and evaluation among TB contacts. This study addresses this gap by considering the demographic factors among household contacts of active TB cases associated with TB screening(50).

The overall TB household contact screening in this study is 38.6%. This result is low compared to the national TB screening program implementation. WHO targets which at least 90% of household contacts of index Tb cases should be screened for TB where in rural and urban health extension workers have been given the responsibility to screen all household contacts during their home visit in Ethiopia (26,51). The current finding is slightly higher than the study done in northern Ethiopia 33.7% (46), and the Tigray region 21.7% (29). However, it is also lower than the study done in Bangkok Thailand 52% and Gonder town 45.7% (37,52). The possible explanations for the discrepancy could be differences in the socio-cultural status of the study participants and health policy and health care system in the countries as well in study settings. On the other hand, people may lack awareness of the advantage of early TB screening practice unless they get appropriate health information from the health care providers. In this study, the main reasons that the majority of TB household contacts do not participate in TB screening 54.3% were not aware that the presence of screening and 25% of them were feeling healthy. This idea is also supported by the study done in India (42).

The other reason for low contact screening might be urban health extension(UHEW) workers may not have a regular home visit and lacks TB patient referral linkage between the health facility and health posts, this idea was also supported by a study done in the Tigray region(29). Screening of household members can be affected by individual, social-cultural, accessibility, and health system factors.

The low TB screening practice of household contacts could be due to low family income. In this study, the finding revealed that those families with a monthly income of 7071Et. Birr and above were three times more likely to be screened for TB than those households with less than 1500 monthly income (AOR= 2.76, 95%CI (1.177- 6.48)  $p<0.05$ ). As the monthly household income



of the family increase, TB household contact screening status also increases. This finding is supported by different studies which recommended income generating for better TB contact screening. A study done in Northern Ethiopia showed that having a good family income was among the factors that facilitate TB screening. The same study was done in Kampala Uganda also revealed that challenges to completing clinic evaluation, for TB household contacts were lack of money(9,38).

The other factors affecting TB household contact screening in Jimma and Agaro town, TB household contacts who live with non-family blood (non-closed relatives) are higher screened compared to TB household contacts who live with blood family (closed relatives) AOR=0.393 at 95% CI (0.246-0.627). This might be the index case family who lives with a non-closed family had a high monthly income and afford any expense that might be needed for screening. The finding of this research is similar to research done in north Ethiopia and Malaysia[AOR: 0.4, 95% CI: 0.2 to 0.9] (37,38).

The participants perceive that TB is a severe disease and they are susceptible if they live close to someone with TB, and unless strict prevention measures are taken not to be infected by TB, they know that the chance of getting TB is high. The finding in this study revealed that among the cognitive factors of individual household contact of high perceived susceptibility for TB were two times more likely screened than those with low perceived susceptibility[AOR= 2.431, 95% CI (1.40-4.235)  $p<0.05$ ]. And household contact that had high perceived severity on TB had three times more likely screened than those with low perceived severity[ AOR=2.818 at 95% CI (1.589-4.999)]. The adjusted odds ratio of this study is lower than the study done in Southeast Asian journal results, which revealed that the household contact screening adherence of tuberculosis patients was significantly associated with a higher perceived susceptibility (Adjusted OR=4.60,95% CI=1.99-10.60) and high perceived severity (Adjusted OR=10.06, 95%CI=6.02- 16.82) (43).

Regarding motivation, about 218(52.28%) of the respondents were highly motivated to participate in the health program, and that the odds of being screened for those who had high motivation was two times more likely screened than that of with low motivation (AOR= 2.15), 95%CI (1.40-3.303  $p<0.01$ ). This result is supported by a study done at Hadiya zone Anlemo district and a study done in South Africa (32,53).

## 7. Conclusion and recommendation

### 7.1. Conclusion

The overall TB household contact screening in this study is low(38.6%) compared to the national guidelines and WHO targets which at least 90% of household contacts of index TB cases should be screened for TB(26). Predictors such as family support, household monthly income, perceived susceptibility, perceived severity, and motivations were significantly associated with TB household contact screening. Even though TB household contact screening responsibility was primarily given to health extension workers, there was not much more effort seen to screening during their household visit.

### 7.2. Recommendation

#### Administrative Level

- ✓ Increasing the perceptions and household income by creating job opportunities, through continuous health education and health promotion for household contacts, the household TB screening problem might be solved.
- ✓ Strengthening health workers (HW) and urban health extension workers (UHEW) on the awareness of TB household contacts screening benefits for the community.
- ✓ Promote income generating non-governmental organizations (NGO) for those poor households.
- ✓ Ensure that TB household contact screening is a routine activity in all health facilities that are providing TB treatment.

#### Health workers level

- ✓ Counsel the index case regularly about household contact screening benefits.
- ✓ Give attention to the screening and follow-up whenever TB case is identified among their family.
- ✓ Strengthening the referral linkage (Communication) between health facility and UHEW.
- ✓ Give attention to increasing the perception of TB household contact screening as a major tool for TB prevention by providing regular health education and health promotion.

- ✓ Promote /motivate the advantages of TB household contact screening in TB control and prevention programs by counseling/giving health information for the index case to bring about behavioral change.

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## Annexes

Jimma University

Institute of Health, Faculty of Public Health

Department of Health, Behavior and Society

### Annex I Informed consent English version

Instructions; - Informed consent

My name is \_\_\_\_\_ and I am a data collector of research. From Jimma University department of health behavior and society on Factors associated with attendance of screening for TB among active TB House hold contacts in Jimma & Agaro town. The owner of the research is Mr. Admasu Habtu. He is a postgraduate student on health promotion and health behavior. He has an official letter from Jimma University Institute of health science to the Jimma town health office.

You will not directly benefit from participating in this research. The overall goal of this research is to provide better understanding of factors affecting active TB house hold contact screening. You will be asked to participate in an interview by the questioner that is estimated to take half an hour. The location of the interview will be determined according to your preference. And you will be asked some questions regarding your overall experience with TB, and screening and follow-up. It is possible that your participation in this study may elicit distress related to the disclosure of information of a personal and potentially difficult nature. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. The information collected about you will be coded using a fake name or initial and numbers. Your consent will be asked, you can choose whether to be a part of the study or not. If you are volunteer to be part of the study, you can withdraw at any time without consequence of any kind. Your participation is very important for the success of this study. If you have any questions regarding your right as a study participant, you can contact the researcher using the number 0911813697. Finally, if you have read the following and agreed, please add your name and signature at the end of the paper.

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Annex II: Assent Form English Version

I Mr. /Mrs. \_\_\_\_\_ age \_\_\_\_\_ sex \_\_\_\_\_

Here by giving my consent for my child to participate in the mentioned study. I understand that this study will be used to assess factors associated with attendance of screening for TB among active TB House hold contacts; by Mr.Admasu Habtu; who is post graduate student of Jimma University. I also trust that at the end of this study, the results will be shared and with the concerned body, to Jimma and Agaro town health facilities and health offices, finally to Jimma Zonal Health Department.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Thank you for your participation!

Questionnaire on Factors associated with attendance of screening for TB among active TB House hold contacts in Jimma & Agaro town Oromia regional state Western Ethiopia, from February to July 2021

Part 1: Identification Information

No	Question	Response	Insert Code	Skip
001	Interview date			
002	unique TB number of the patient			
003	Kebele			
004	Name of PHCU use for service	_____		
005	Name of Health post /use for service	_____		
006	Name of village (garee)			

Part 2: Socio demographic characteristics

NO	Question	Answer code	Insert code	Remark
101	Age(in years)	_____		
102	Sex of respondent	1.male 2.female		
103	Ethnic group	1.Oromo 2.Amhara 3.Dawro 4.Other, specify		
104	What is your religion	1. Muslim 2. Orthodox 3. Protestant 4.Others		

105	Marital status	1. Single 2.Maried 3.Divorsed 4.Widowed		
106	What is your the education level ?	1. Cannot read and write 2. Read and write only 3.Grade 1-8 4.Grade 9-10 5.Collage and above		
107	Monthly household income(in Birr)	_____		
108	What is your occupation (what do you do for living)	1.Merchant 2. House wife 3.Student 4.Private organization employer 5.Other specify		

Part 3: Respondents knowledge on TB

No	Question	Response code	Insert Code	Skip
201	Have you ever heard about TB?	1.Yes 2.No		
202	From where you heard about TB? (Please choose more than one if had from any one		1.yes	2.no
		1. Health professionals' [health extension workers, nurse, doctors,		

		midwife]		
		2. Neighbors/relatives/ Friends		
		3.Index TB patient		
		4. Radio/TV		
		5. others specify		
203	TB is caused by infectious TB germs.	1.yes 2.no 3.don't know		
204	TB is curable	1.yes 2.no 3.don't know		
205	What are the symptoms of TB?  Multiple answer possible		1.yes	2.no
		1. Cough for 2 weeks or more		
		2. Night sweating for 3 or more weeks in the last 4 weeks		
		3. Noticeable weight loss? ( $\geq 3$ kg loss in a month)		
		4. Fever		
	5. I do not know			
206	How one can get TB? Multiple answer is possible		1.yes	2.no
		1.Exposure to TB Patient's		

		coughing/sneezing/		
		2.Living in the same room with TB patients /overcrowding/		
		3.Sharing eating utensils with TB patients		
		4.Sharing of food/drinking/		
		5.I don't know		
		6.Other specify_____		
207	How one can prevent transmission of TB from a patient to his/her family members?  Multiple answer possible		1.yes	2.no
		1.Cover your mouth and nose when you cough or sneeze		
		2. Spend only a short time in rooms that other people.		
		3.Taking prescribed medicine		
		4.Open the windows in your home, in the bus while travel		
		5.Proper disposal of sputum		
		6.I don't know		
		7.Others specify_____		
208	Screening for TB among household contacts of active TB cases is necessary?	1.yes 2.no		

209	What do you think the benefit of contacts screening?	Justify _____		
210	Can you tell me where household contacts of active TB can go to be screened for TB? <i>Do NOT prompt. Select all mentioned.</i>		1.yes	2.no
		1. Hospital		
		2. Health center		
		3. Private health facility		
		4. at home by health extension workers		
5.Other specify				

Part 4: Perception about TB and Screening

	Perceived susceptibility	strongly disagree	Disagree	unsure	agree	strongly agree
301	I am very likely to be infected with TB due to contact with TB patient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
302	Due to contact with TB patient, my chances of getting TB in the next few years are great.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
303	Compared to others people of my age who do have contact with TB patient, I am more likely to get TB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Perceived severity					
304	If I were to develop TB, I would suffer a lot of pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
305	The thought of developing TB makes me feel very frightened	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



306	If I develop TB, it will hurt my family's life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
307	My social relationships will suffer if I develop TB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
308	If I do not attend screening for TB early, I will get severely ill in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Response efficacy						
309	Attending screening and follow-up for TB will help me to find TB early	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
310	Having screening and follow-up for TB does not help me to get reassurance that I DO NOT has TB.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
311	Having a screening and follow-up for TB will decrease my chances of dying from TB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
312	If I find a TB through a screening my treatment for TB may not be as bad [reduce complication due to the disease]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
313	If I find a TB through a screening and start treatment early, I will reduce chance of transmitting the disease to my close contacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Response cost						
314	Attending the screening for TB, exposes me to unnecessary expenses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
315	Waiting for TB screening services at health facility takes too much time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

316	Health professionals doing screening for TB are not welcoming.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
317	I cannot get time off other duties to attend screening for TB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
318	It would be too hard for me to travel to have screening for TB due to lack of transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Self- efficiency</b>						
319	I feel confident in my ability to attend screening for TB even if I am busy with other works/activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
320	I can attend screening for TB even if traveling to have the screening exposes me to expenses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
321	I can attend screening for TB regardless of its cost [expense incurred]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
322	I can attend screening for TB despite the absence of transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
323	I can attend screening for TB even if waiting for screening service at health facilities take me too much time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Motivation</b>						
324	I intend to attend screening for TB at health facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
325	I intend to attend screening for TB at health facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

326	I want to attend screening for TB at health facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Part 5: Socio-cultural related questioner

NO	Question	Answer code	Insert code	Remark
401	Relationship with the index case	1.Husband 2.wife 3.sibling 4..other		
402	Family size in number	_____		
403	How many of your family members are screened for TB	_____		
404	Do you use /share this commonly with index case		1. Yes	2. No
		1. Sleep in the same room with the index TB case		
		2. Sleep on the same bed with the index TB case		
405	How much time in one day do you spend in the same room as the index case?	1.All the time/day and night/ 2. Only at night 3. Only during the day		
406	Have you screened for TB by health professional after index case developed TB? [to know whether you developed TB or not] IF the answer is <u>NO</u> move to Question 410	1. Yes 2. No		
407	If yes, for question 406 how many	_____		

	times you screened?			
408	If only one times, during your last visit have the health professionals told you to come back for follow up/ second screening?	1. Yes 2. No		
409	Where have you screened?	1.Health center 2.Hospital 3.Private clinic/hospital 4.At home by health extension worker		
410	How would you usually get there?	1. On foot 2. By Taxi 3. By Bajaj 4. By Ambulance 5. Local stretcher		
411	What was the time of your screening after index TB case is diagnosed in day, week or month, IF you are not screened move to question number413	1.within a week 2. within Two weeks 3. Two month and above		
412	Who initiated you to be screened?	1. self-initiated 2. Index case 3. Family/friends/neighbor 4.Health professionals [health extension workers and others] 5. Message on media		

413	What is Your means of transportation to TB clinic?	1 on foot 2 public transport		
414	Time taken to get TB clinic	1.<30 minute 2.≥30 minute		
415	Result of the screening IF you are not screened move to question number 416	1.positive for sign of TB 2.Negative for sign of TB		
416	If not screed, what was the reason?	_____		
417	This question is Only for those who were not screened,  Do you have the following symptoms?		1.Yes	2.No
		1.Cough for 2 week or more	1	2
		2. Noticeable weight loss? (≥ 3 kg loss in a month)	1	2
		3.Night sweating for 3 or more weeks in the last 4 weeks	1	2
		4.Fever ,chest pain	1	2
418	Where do you go for the first time when you feel sign of TB		1.Yes	2.No
		1.H/Facility		
		2.Buy some medications		
		3. Use herbal medicine		
		4. Nothing to do		

Name \_\_\_\_\_ of \_\_\_\_\_ data  
 collector \_\_\_\_\_ signature \_\_\_\_\_ Date \_\_\_\_\_

Maxxansa I Guca waliigaltee afaan Oromoon Kan qopha'e

Yuunivarsiitii Jimmaatti

Inistiutyii Fayyaa Faakaaliti Saayinsii Fayyaa Hawaasaa

Qajeelfama Waliigalaa:- Maqaan koo \_\_\_\_\_ Ani ragaa sasabduu Univeersitii Jimmaattii Muummee Baruumsa dagaagina amalaafi Fayyaa hawasaa (Health, Behavior and Society)tti Qo'rannoo Digrii Lamataaf (Mastersiif) Mata duree Maatii nama dhibee sombaatiin qabame adda bahaniif, sakatta'insa maatii dhibee sombaafii dhimmoota harkisoo ta'an walqabate irratti dha. Qorannoon kun magaala Jimmafii Agaroo kessatti kan ademsifamu ta'a. Qorannoo kana abbumman Kan hogganu Obbo Admaasuu Habtuu jedhamu. Isaanis University Jimmatti Barataa digrii lammaffaa, dagaagina fayyaafii amalaa fayyaatiinii dha. Qorannoo kana akka gegessanuuf jecha heyyamnii Universitii Jimma Instiuty Fayyaa irraa Waajjira Eggumsa Fayyaa Magaala Jimmaa fii magaalaa Agarootti akka gegessan knnameefii jira

Isin qorannoo kana keessatti hirmaachuu kessaniin kallattin Kan argattaan homaa hinjiru. Haata'utii kaayoon qorannoo kanaa dhimmoota rakkoolee maatii nama dhibee sombaatiin qabame waliin jirataniif adda bahaniif hordoffin isaanii dhibee sombaa ittisuuf yaaluu kessatti kan jiran addabaasuudha. Bargaafileen dhimma kanaaf qopha'an irratti hundooftanii nideebistuu. Gaffolii kana xumuuruuf walumaagalatti sa'atii tokko ni fudhata jennee yadna. Bakki taa'umsii keenya baka isin feetanitti ni ta'a. Gafooliin kunneen waanuma isiin dhibee sombaa irratti hubannoo qabdanidha. Gaafiif deebiin kenya hiciitiin isaa kan eeggame dha. Kun jechuun fedhii kessaniin ala qaama biiraatti dabarfamee hin laatamu. Deebiin isin laattan hundumtuu maqaa addaatiin nikaawamaa kodiinis ni kennamaafii, tajaajila inni barbdameef qofa ola. Qorannoo kana bakkan gahuu kessatti hirmaachuuf attomni keessan murteessaadha. Haa ta'utii hirmaachuu yoo hinbarbadne, yeroo kamiyyuu hirmaannaa kessan addaan kutuu nidandeesuu. Gaafii kamiinu yoo qabaattan abba qoraannichaan lakkofsa bilbila 0911813697 irratti bilbiluudhaan odeeffannoo irra argachuu nidandeesu. Egaa kanaa olitti kan ibsamee hunda dubbistaaniin booda waliigaluu keenyaaf maqaa kessanitti ansitanii nimalateesitu.

Mallto \_\_\_\_\_ Guyyaa \_\_\_\_\_

Hirmaachuu kessaniif hedduu galatoomaa

Maxxansa II waliigaltee afaan Oromoon

AniObbo/Adde/Guddisaa/Guddistuu,\_\_\_\_\_ummurii\_\_\_\_\_salaa,

\_\_\_\_\_Mucaan koo qo'annoo mata duree dhimmoota calaalli dhibee daranyoo sombaa fii sakatta'insa isaa irratti barataa degree lamaffaa university Jimma Obbo Admasu Habtu gegessan irratti akka hirmaatu yemmuun mallatteesu feedhiif Bu'aan qoannoo kanas qaama dhimmi ilaallatuufis akka laatamu waajjiraalee eggumsa fayyaa magaalaa Jimmaafii magaalaa Aggaroo, Dhumarratti waajjira eeggumsa fayyaa godina JimmaatifAkkaa ta'nanamana.

Mallto\_\_\_\_\_ Guyyaa\_\_\_\_\_

Hirmaachuu kessaniif hedduu galatoomaa

Guca Gaafii afaan Oromoon Kan qopha'e

Kutaa 1ffaa: Odeeffannoo adda baafachuuf Kan qopha'e

Lakk		Deebii	Koodii	Yaada
001	Guyyaa Af-gaaffii			
002	Lakkoofsa addaa kandhukkubsatichaa/unique TB No of the index case/.	_____		
003	Ganda	_____		
004	Maqaa dhaabata fayaa			
005	Maqaa keellaa fayyaa	_____		
006	Maqaa garee	_____		

Kutaa2 ffaa: Haala waliigalaa Jireenya Hawaasummaa gafachuuf kan qophaa'e

Lakk	Gaafii	Deebii koodii	koodii	Yaada
101	Umurii(Waggadhaan)	_____		
102	Saala	1.Dhiira 2. Dhalaa		
103	Saba	1.Oromoo 2.Amharaa 3.Dawuroo 4.Kan biro		
104	Amantaan kee maliidhaa?	1. Musiliima 2. Ortodosii 3. Protestaantii 4.kanbiroo		
105	Haala gaa'ila	1. kan hin heerumne /hin fuune 2.kan fudhe /Heruumte		



		3.kan walhiikan 4.kan jalaa boqate/du'e		
106	Sadarkaa baruumsaa	1.Dubisuuf barreesuu kan hin dandeenye 2.Dubbiisuuf barreesuu kan danda'u 3. kutaa 1-8 4. kutaa 9-10 5.kolleejiif isaa ol		
107	Galiin maatii ji'aan	_____		
108	Gahee Hojii	1.Daldaalaa 2.Hadha manaa 3.Barataa 4.Hojjataa dhaabbata mana dhunfaa 5.kan biroo ibsi_____		

Kutaa 3ffaa: Beekmsa hirmaatan dhukkuba daranyoo sobaa irratti qabu ilaalchisee

Lakk	Gaffii	Deebii	Koodii galchi	Gara aanutti ce'i
201	Waa'ee dhukkuba daranyoo sombaa dhageessanii	1.Eeyyee 2.Lakki		

	bektuu?			
202	Waa'ee dhukkuba daranyoo sombaa essaa dhagessuu? Filannoo armaan gadii kessa tokko ol filachuun ni danda'ama.		1.Eeyyee	2.Lakki
		1.Ogeessa fayyaa(Hojattuu ekisteensinii fayyaa, narsii, Doktora, narsii dessistuu irra).		
		2.Maatii/fira dhihio, Ollaa,Hiriyaa		
		3>Nama mana kessa dursa dhukkubsate irra		
		4.Raadiyoonii /televizhinaa		
		5.kanbiroo yoo jiraatee haa ibsamu_____		
203	Sababiin dhukkuba daranyoo sombaa kandhufu Jarmii hibe TB tiin.	1.Eeyyee 2.Lakki 3.hin beeku		
204	Dhukkubni daranyoo sombaa fayyuu kan danda'uudha.	1.Eeyyee 2.lakki 3.Hin beeku		
205	Mallattooleen dhukkubni daranyoo sombaa maal fa'aa? Debi tokko caalaa debisuu dandeesu		1.Eeyyee	2.Lakki
		1.Qufaa torbee lamaafii isaa ol		
		2.Dhukkubii qomaa		
		3.Ulfaatiinaa qaamaa hirri'isuu		
		4.Hoiinssa qaamaa		
		5.Ani hinbeeku		

206	Namnii tokko dhukkuba daranyoo sombaatiif akkamitti saaxilamuu danda'a?		1.Eeyyee	2.Lakki
		1. walitti dhufeenya nama dhibee daranyoo sombaa qabu wajjin yeroo dhukkubasatichi qofa'uu fi haaxiifatu		
		2. Mana tokko kessatti nama dhibee daranyoo sombaatiin qabame wajjin yoo waliin jiraataniidha.		
		3. Meeshaalee nyaataa		
		Yoo dhukkubsataa sombaa waliin fayyadaman.		
		4. Meshalee nyaataaf dhugaatii dhukkubsataa daranyoo sombaatiin waliin yoo fayyadaman.		
		5. Ani hin beeku.		
	6.kan biroo yoo jiraate ibsi_____			
207	Namnii tokko dhibeen daranyoo sombaa dhukkubsataa irra gara isattii fi gara maatii isaatiittii akka hindabarre mal gochuu qaba? Deebii tokko caalaa debisuu dandeesu.		1.Eeyyee	2.Lakki
		1. Yeroo qufa'anii fi haaxiifatan afaanii fi funyaan haguugachuu.		
		2. Kutaa tokko kessatti yeroo gabaabaatiif turuu.		
		3. Qoricha ajajame fudhachuu.		
		4.Foddaalee mana kessa jiran banuun		

		5.Qodaa hakkeen ittiin kuusaanii maksan qophessuun		
		6. Ani hinbeku.		
		7. kanbiroo yoo jiraate ibsi____		
208	Waa'ee fayidaa calallii namoota dhibee daranyoo sombaa nama qabame waliin jiraataniif taasifamuu dhageessee bektaa?	1.Eeyyee 2.lakki		
209	Calalliin dhukkuba daranyoo sombaa, namoota dhukkubsataa dhibee daranyoo sombaatiin waliin jiraataniif taasifamu irratti yaada akkamii qabdaa?	Haa	ibsamu	
210	Namoonii walitti dhufeenyaa dhibee sombaatiin qabame waliin jiraatan sakata'amuuf eessa akka isaan deeman natti himtaa? Waan beektan qofa deebisaa.		1.Eeyyee	2.Lakki
		1.Hospitaala		
		2.Buufata fayyaa		
		3. Dabbataa fayyaa dhuunfatti		
		4. Manatti hojattootta ekisteensinii fayyaatiin.		
		5.kan biraa yoo jiraate ibsi_____		

Kutaa 4ffaa: Gaafiilee Hubanno sakatta'insa namoota tutuqaa qabaniif qopha'e

	Hubannoo saxilamummaa	Jabeessee irratti walii hin galu	Irratti walii hin galu	Hin beeku	Irratti Walii gala	Jabeessen irratti walii gala
N 301	Nama dhukkuba daranyoo sombaan qabame wajjiin jiraachuu koo irraa kan ka'een carraan dhukkuba kanaan qabamuu koo bal'aadha.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
302	Sababa nama dhukkuba daranyoo sobaan qabame wajjiin jiraadhuuf carraan waggaa muraasa keessatti dhukkuba daranyoo sombaan qabamuun koo bal'aa dha.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
303	Ani namoota gara biroo kan umriidhan nagitan fi nama dhukkuba daranyoo sombaan qabame wajjiin jiraatan irra caalaa dhukkuba daranyoo sombaatiin qabamuu ni danda'a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Hubannoo hameenya dhukkuba daranyoo sombaa					
304	Yoo dhukkuba kanaan kan qaabamuu ta'e dhukkubbiin isaatiin baayyeen gidiirfama.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

305	Waa'ee dhukkuba daranyoo sobaatiin qabamuu yaaduniyyuu na sodaachisa.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
306	Yoo ani dhukkuba daranyoo sombaatiin qabame, jireenyaa maatii kootii ni miidhama.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
307	Yoo ani dhukkuba daranyoo sobaatiin qabame, walitti dhuufeenya hawaasummaa koo ni miidhama.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
308	Yeroodhaan/ dafee/ dhukkuba daranyoo sombaatiin qabamuu fi dhiisuu baruu mana yaalaatti yoon laallamuu[sakattamuun] baadhee, booda dhukkubichi natti cimee naa miidhuu ni danda'a.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deebii oftti amanamummaa						
309	Yeroodhaan dhukkuba daranyoo sombaatiin qabamuu fi dhiisuu koo mana yaalaatti laallamuun fi hordoffii gochuun dhukkubicha  Battalatti adda baafachuuf nagargaara.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
310	Dhukkuba daranyoo sombaatiin qabamuu fi dhiisuu koo mana yaalaatti laallamuun akkasumas hordoffii gochuun yaadoo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	dhukkubichaan qabameera mo hin qabamne jedhu irraa bilisa  Nahintaasisu					
311	Dhukkuba daranyoo sombaatiin qabamuu fi dhiisuu koo mana yaalaatti laallamuun akkasumas hordoffii gochuun carraa daranyoo sombaatiin du'uu ni hirdhisa.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
312	Yerodhaan laallamee yoon dhukkubni daranyoo sombaa ana keessatti argame akkasumas,yeroon yaala yoon jalqabe, rakkoo walxaxaa dhukkuba sanaan dhuufan ofirraa hirdhisuun ni danda'a.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
313	Dhukkuba daranyoo sombaatiin qabamuu fi dhiisuu koo yerodhaan laallamuun akkasumas yoon dhukkubich qabaadhee yaala yeroodhaan jalaqabudhaan carraa dhukkubicha namoota nawaliin jiraatanitti dabarsuu na hidhisa.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Gatii deebii</b>					
314	Dhukkuba daranyoo sombaa qabaachuu fi dhiisuu laallamuun akkasumas hordoffii gochuun deemun baasii hin barbaachifneef	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	na saaxila					
315	Dhaabbata fayyatti tajaajila sakattaa dhukkuba daranyoo sombaa qabaachuu fi dhiisuu baruuf godhamu argachuuf yeroo dheeraa eeguu gaafata.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
316	Ogeeyyiin fayyaa tajaajila sakattaa dhukkuba daranyoo sombaa qabaachuu fi dhiisuu akkasumas hordofii godhamu kennan sirnaan/haalan nama hin keessumeessan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
317	Hojii irraan kan ka'een yeroo itti deemee dhukkuba daranyoo sombaa qabaachuu fi dhiisuu itti ilaallamu hin qabu	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
318	Geejibn dhabamuu irraan kan ka'een deemee dhukkuba daranyoo sombaa qabaachuu fi dhiisuu ilaallamuus ta'e hordofii isaa gochuuf natti ni uulfaata.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Self-efficiency					
319	Yooma hojii hojjadhu irra kan ka'een yeroo kan hinqabne ta'ee illee, dhukkuba daranyoo sombaa qabaachuu fi dhiisuu baruuf akka laallamuuf hordofiisa gochuu akka	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



	danda'u uffitti ni amana					
320	Dhukkuba daranyoo sombaa qabaachuu fi dhiisuu baruuf hordofiisa gochuuf deemuun baasiidhaaf kan na saaxilu ta'uu deeme nan laallama	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
321	Gatii muliilee yoo baasuu ta'ae sakatta'insaa dhibee daranyoo sombaa nan taasiisaa.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
322	Yoo hangam geejjibni dhiibe illee sakatta'insaa fi hordoffii dhukkuba daranyoo sombaa naan taasiisa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
323	Yooma dhaabbata fayyatti tajaajila daranyoo sombaa qabaachuu fi dhiisuu baruuf lallamuun akkasumas hordofii argachuufi yeroo dheeraa kan na eegsisu ta'uyyu sakattaa dhukkubichaa fi hordofii naan taasiisa.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Kaka'umsa					
324	Gara dhabbata fayyaa deemee dhukkuba daranyoo sombaa qabaachuu fi dhiisuu baruuf lallamuuf karoora qaba.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
325	Gara dhabbata fayyaa deemee hordofii dhukkuba daranyoo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	sombaaf qabaachuu fi dhiisuu baruuf godhamu/irra deebi'e laallamuuf karoora qaba.					
326	Gara dhabbata fayyaa deemee dhukkuba daranyoo sombaaf qabaachuu fi dhiisuu baruuf lallamuu fedhii qabda?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Kutaa 5ffaa: Gaafii Hawaasummaa fi aadaa ilaalchisee

Lakk	Gaaffii	Koodii Deebii	koodii galchi	Gara anutti ce'i
401	Walitti dhuufeenyi dhukkubsataa wallin qabdan maali	1.Abbaa manaa 2.Haadha manaa 3.Fira dhiigaa/ilmoo 4..Kan biro ibsi		
402	Baa'inni maatii keessanii meeqa?	_____		
403	Maatii kana keessa nama meqaaf sakatta'iinsa/hordoffin dhibee sombaa taasiifamaafii jira?			
404	Waantoota armaan gadiitti ibsamaan dhukkubsataa waliin fayyadamtu?		Eeyyee	lakki
		1. Kutaa tokko keessa ciisuu	1	2
		2. Siree tokko irra waliin buluu	1	2
405	Guyyaa tokkotti si'a meeqa dhukkubsataa TB (mention name	1.Yeroo hundaa(guyyaa fi galgalas)		

	of index) waliin dabarsiitu?	2. Galgaala qofaa 3. Guyyaa qofaa		
406	Erga dhukkubsataa (mention name of index case) dhukkuba daranyoo sombaa qabaachuu baramée as ati dhukkuba daranyoo sombaa qabaachuu fi dhiisuu baruuf ogeessa fayyaa bira deemtee laallamtee ni beekta?Deebiin Miti yoo ta'e gara gaafii 410tti ce'ii	1. Eeyyee 2. Lakki		
407	Eeyyee yoo ta'e si'a meeqa sakatta'amte?	Si'a _____		
408	Yoo tokko qofaaf laallamte ta'ee akka hordoffiidhaaf irra dedebitee ilaalamtu ogessonni sitti hin himnee?	1. Eeyyee 2. Lakki		
409	Isa jalqabaa eessatti kan laallamte?	1. Buufata fayyaa 2.Hospitaala 3.Dabbata fayyaa dhuunfaa 4.Manatti hojjettota ekisteeshinii fayyaattin		
410	Yeroo tajaajila sana fudhachuuf gara dhabbata fayyaa deemtu maaliin deemta?	1. miilaan 2.Taaskiin 3. Bajaajitiin		

		4.Ambulansiitiin 5.Ambulaansii aadaatiin		
411	Erga (name of index case) ykn namnii maatii keessa dhukkuba daranyoon qabamuu isaa baramee booda hangam turteet at ikan ilaallamte? Sakatta'insii siif hintasiifamnee yoo ta'e gara gaafii 413tti ce'ii	1.Torbee tokko kessa 2 Torbee lamaatti 3.Ji'aa lamaaf sana oli		
412	Dukkubicha qabaachuuf dhiisuu kee akka deemtee ilaallamtuuf kan sii kakaase eenyudha?	1. Ofii kee 2. Dhukkubsataa mana keessa jiru 3. Maatii 4.ogeessa fayyaa 5. Ergaa midiyaa irraa darbuun 6. Kanbiraa ibsii		
413	Maddi geejjibaa maali?		Eeyyee	lakki
		1.Miillaan	1	2
		2. Gejjiba uummataa	1	2
414	Kilinikaa dhukkuba daranyoo sobaa biraa deemuuf yeroo hangamii sittii fudhaata? Sakatta'insii siif hintasiifamnee yoo ta'e gara gaafii 416tti ce'ii	1.<30 daqiiqaa 2.≥30 daqiiqaa		
415	Buaan sakatta'insa kee maali ture?	1.Mallattoo dhukkuba daranyoo		

		sombaaf positivii  2. Mallattoo dhukkuba daranyoo sombaaf Negativii/hinqbdu.		
416	Dukkubicha qabaachuuf dhiisuu baruuf yoo hin laallamne ta'e sababbiin isaa maali?	Haaibsamu_____		
417	Gaaffiin kun namoota hin sakata'amne qofaafii dha.  Waantoota mallattoo armaan gadii qabdaa?		1.Eeyye	2.lakki
		1.Qufaa torbee lamaa fi isaa oli	1	2
		2. Hir'iina ulfatinaa? ( $\geq 3$ kg ji'atti)	1	2
		3. Halkaan dafqisiisuu torbee 3 fi isaa ol	1	2
		4.Gubaa qaamaafii dhukkubbii laphee	1	2
418	Yeroo mallattoon dhukkuba daranyoo sombaa sitti dhagahamuu jalqabu yeroo jalqabaaf eessa kan deemu		1.Eeyye	2.lakki
		1.Dhabbata fayyaa		
		2.Qoricha muraasa bitachuun liqiimsa		
		3. Qoricha aadaatti fayyadama		
		4. Homaallee hin goodhu		

Maqaa nama daataa kana funaanee\_\_\_\_\_

Mallatto\_\_\_\_\_ Guyyaa\_\_\_\_\_

Annex I Amharic version consent form

ጅማ ዩኒቨርሲቲ የሕብረተሰብ ጤና ፋካሊቲ

የጤና ባህሪ እና ማህበረሰብ ት/ክፍል

መመሪያ-መረጃ ለመሰብሰብ የሚደረገው ስምምነት

እንደምን አደሩ/ዋሉ? እኔ \_\_\_\_\_ እባላለሁ፤

ከጅማ ዩኒቨርሲቲ የጤና ባህሪ እና ማህበረሰብ ት/ክፍል የሰንባ ታማሚ ቤተሰቦችን ለይቶ ማወጣት እና ተዛማጅ ችግሮቻቸውን መፍቻ መንገዶች ላይ ለሚደረግ ጥናት መረጃ ሰብሳቢ ነኝ። ይህ ጥናት የሚካሄደው በጅማ ከተማ ሲሆን የጥናቱ ባለቤት አቶ አድማሱ ሀበቱ ናቸው። በጅማ ዩኒቨርሲቲ የጤና ባህሪ እና ማህበረሰብ ት/ክፍል የድህረ ምረቃ ተማሪ ናቸው። ከጅማ ዩኒቨርሲቲ የጤና ሳይንስ ኢንስቲትዩት ለጅማ ከተማ ጤና ጥበቃ ጽ/ቤት የድጋፍ ደብዳቤ ተጽፎላቸዋል።

በዚህ ጥናት ውስጥ በመሳተፍ በቀጥታ ተጠቃሚ ባይሆኑም የዚህ ምርመራ የጥናት ውጤት ለእረሶ እና ለቤተሰብ ብሎም ለህብረተሰቡ የሰንባ በሽታ ለመከላከል ገልህ አስተዋጽኦ አለው ተብሎ ይታመናል። አጠቃላይ የጥናቱ ግብ የሰንባ በሽታ ተጠቂ ቤተሰብን ልዩታ ላይ ተጽዕኖ ስለሚያሳድሩ ምክንያቶች ለይቶ መውጣትና የተሻለ ግንዛቤ መስጠት ነው። ይህ ቃለ መጠይቅ ግማሽ ሰዓት ያህል ይወስዳል ተብሎ ይገመታል። እረሶ በመረጡት እና በሚመችዎ ቦታ የሚከናወን ሲሆን ጥያቄዎቹ ቀላል እና እና ግልፅ ናቸው። የእረሶ ተሳትፎ ለጥናቱ መሳካት ትልቅ አስተዋጽኦ አለው። የጥናቱ ተሳታፊ ለመሆን • ካልፈቀዱ በፈለጉት ሰዓት ፈቃድዎን ያለምንም ችግር ማንሳት ይችላሉ።

በመጨረሻ ለረጋግጥልዎ የምፈልገው በዚህ ጥናት ስምዎ ወይም አድራሻዎ አይጠቀስም ነገር ግን የጥናቱ ውጤት ተደራጅቶና ተመዘግቦ ወደሚመለከታቸው የጤና ተቋማት እና ባለድርሻ አካላት ሊገባ ይችላል።ለበለጠ መረጃ ስልክ ቁጥር 09 11 81 36 97 ደውለው መጠየቅ ይችላሉ።

ከላይ ያለውን አንብበው ከተስማሙ ከወረቀቱ መጨረሻ ላይ በፊርማዎ ያረጋግጡ።

1. በጥናቱ ለመሳተፍ ፍቃደኛ ነኝ

ስም \_\_\_\_\_ ፊርማ \_\_\_\_\_ ቀን \_\_\_\_\_

Annex II የመስማሚያ ቅጽ

እኔ አቶ/ ወ/ሮ/ ወ/ት \_\_\_\_\_ ልጄ በጥናቱ ለመሳተፍ ፈቃደኛ መሆኔን በፈረማዬ አረጋግጣለሁ። የሳንባ ታማሚ ቤተሰቦች የሚደረግ ልዩታ እና ክትትል ላይ ለሚያደረገው ጥናት እንደሚጠቅም ተረድቻለሁ ። የዚህ ጥናት ውጤት በጥናቱ መጨረሻ ለሚመለከታቸው አካላት ማለትም ለጅም ከተማ ጤና ጥበቃ ጽ/ቤት፣ለአጋሮ ከተማጤና ጥበቃ ጽ/ቤትአንዲሁም ለጅም ዞን ጤና ቢሮ እንደሚሰራጩ እምነት አለኝ።

የተሳታፊ ስም \_\_\_\_\_

ፈረማ \_\_\_\_\_ ቀን \_\_\_\_\_

መረጃውን የወሰደው(የሰበሰበው) ባለሙያ

ስም \_\_\_\_\_ ፈረማ \_\_\_\_\_

በጥናቱ በመሳተፍ እናመሰግናለን !!!

በኦሮሚያ ክልላዊ መንግስት ምእራብ ኢትዮጵያ በጅም እና አጋሮ ከተማ የሳንባ ታማሚ ቤተሰቦችን ለይቶ ማወጣት እና ክትትል ላይ ያላቸውን የእውቀት ግንዛቤ እና ተዛማች ችግሮቻቸውን መፍቻ መንገዶች ላይ ለሚደረግ ጥናት መረጃ መሰብሰቢያ።

ክፍል 1: ማህበራዊ-ስነ-ህዝብ ባህሪዎች ጥያቄ

001. የመጠይቁ ቀን \_\_\_\_\_

002. የታማሚው ቲቢ መለያ ቁጥር \_\_\_\_\_

003. ቀበሌ \_\_\_\_\_

004. አገልግሎት የሚሰጠው የጤና ተቋም ስም \_\_\_\_\_

005. አገልግሎት የሚሰጠው የጤና ኬላ ስም \_\_\_\_\_

006. የገሬው ስም \_\_\_\_\_

ክፍል 2: ማህበራዊ-ስነ-ህዝብ ባህሪዎች ጥያቄ

101. እድሜ \_\_\_\_\_

102. ፆታ 1.ወንድ 2. ሴት

103. ብሔር 1. ኦሮሞ 2. አማራ 3. ዳውሮ 4. ሌላ ካለ ይግለጹ \_\_\_\_\_

104. ሃይማኖትዎ ምንድን ነው

- 1.ሙስሊም    2.ኦርቶዶክስ    3.ፕሮቴስታንት    4.ሌሎች

105. የጋብቻ ሁኔታ

- 1.ያላገባ/ች    2.ያገባ/ች    3.የተፋቱ    4.ባል/ሚስት የሞተበት/ባት

106. የትምህርት ደረጃ?

- 1.ማንበብና መጻፍ አልችልም                      2. ማንበብና መጻፍ እችላለሁ  
 3.የመጀመሪያ ደረጃ ትምህርት (1-8)              4.ሁለተኛ ደረጃ ትምህርት(9-10)  
 5.ኮሌጅ እና ከዛን በላይ

107. ወርሃዊ የቤት ውስጥ ገቢ (በብር) \_\_\_\_\_

108. ሥራዎ ምንድን ነው? (ለመኖር ምን ያደርጋሉ)?

- 1.ነጋዴ    2.የቤት እመቤት    3.ተማሪ    4.የግል ድርጅት ሰራተኛ  
 5.ሌላ ይግለጹ \_\_\_\_\_

ክፍል 3: አጠቃላይ ስለ ሳንባ በሽታ ጠቅላላ እውቀትና ግንዛቤ መጠይቅ

ተ.ቁ	ጥያቄ	መልስ	ኮዱን አስገባ/ቢ	ምርመራ
201	ስለ ሳንባ በሽታ ሰምተው ያውቃሉ?		1. አዎ	2. አይደለም
202	ስለ ሳንባ በሽታ ሰምተው ከሆን ከየት ነበር የሰሙት?		1. አዎ	2. አይደለም
		1.ከጤና ባለሙያ/ከጤና ኤክስቴንሽን ባለሙያ፣ ነርስ፣ ዶክተር፣ ከአዋላጅ ነርስ		
		2. ከጎረቤት /ከዘመድ/ከጎደኛ		
		3. የሳንባ በሽታ በመጀመሪያ ከተገኘበት የቤተሰብ አባል		



		4.ከሬድዮ/ኮቴሌቭዥን		
		5.ሌላ ካለ ይጠቀስ		
203	የሳንባ በሽታ በሳንባ በሽታ አምጪ ተህዋስ የሚመጣ በሽታነው ?	1.አዎ 2. አይደለም 3. አላውቅም		
204	የሳንባ በሽታ ሊድን የሚችል በሽታ ነው?	1.አዎ 2. አይደለም 3. አላውቅም		
205	የሳንባ በሽታ ምልክቶች ከሚከተሉት የትኞቹ ናቸው		1. አዎ	2.አይደም
		1.ሰል ለሁለት ሳምንት እና ከዛንም በላይ		
		2.ለሊት ለሊት ማላብ		
		3.አሉታዊ የሰውነት ክብደት(≥3ኪሎ.ግራም) በአንድ ወር ጊዜ ውስጥ መቀነስ		
		4.ትኩሳት ለሁለት ሳምንትእና ከዛን በላይ		
		5.እኔ አላውቅም		
206	አንድን ሰው የሳንባ በሽታ እንዴት ሊዘው ይችላል		1. አዎ	2.አይደም
		1.የሳንባ በሽታ ታማሚው ሰው በሚያስልበት እና በሚያስነጥስበት ጊዜ ለጤነኛው ሰው ከልተጠነቀቀ		
		2.በአንድ ክፍል ውስጥ ከሳንባ ታማሚጋርአብሮ በመኖር/overcrowding/		
		3.የመመገቢያ እቃዎችን በጋራ በመጠቀም.		

		4.ምግብም ሆነ መጠጦችን በጋራ በመጠቀም		
		5.እኔ አላውቅም		
		6.ሌላ ካለ ይጠቀስ		
207	አንድ ሰው የሰንባ በሽታ ከታማሚው ወደ ጤነኛው/ቤተሰቡ እንዳይተላለፍ ለመከላከል ምን ማድረግ ይጠበቅበታል		1. አዎ	2. አይደለም
		1. በሚያስተባባሩና በሚያስነጥሱበት ጊዜ አፍንጃና አፍንጫን መሸፈን		
		2. ለአጭር ሰዓት በክፍል ውስጥ ከሰንባ በሽታ ታማሚ ጋር በመቆየት		
		3. የታዘዙ መድሀኒቶችን በአግባቡ መውሰድ		
		4. በቤት ውስጥ ያሉ መስኮቶችን እንዲሁም በጉዞ ወቅት የአውቶቢስ መስኮቶችን በመክፈት		
		5. አክታን በአግባቡ ማስወገድ		
		6. እኔ አላውቅም		
		7. ሌላ ካለ ይጠቀስ		
208	ለሰንባ በሽታ ታማሚ ጋር አብረው ለሚኖሩ ቤተሰቦች የሰንባ በሽታ ልዩታ አስፈላጊ ነው።	1. አዎ 2. አይደለም		
209	ስለ ሰንባ በሽታ የቤተሰብ ልዩታ ጥቅም ምን ይላሉ ምን ሀሳብ አለዎት	ይግለጹ-----		
210	ከሰንባ በሽታ ጋር ግንኙነት ያላቸው የቤተሰብ አባላት ለሰንባ በሽታ ልዩታ		1. አዎ	2. አይደለም
		1. ጤና ጣቢያ		

በቅድሚያ የት ይሄዳሉ	2. ሆስፒታል		
	3. በግል የጤና ተቋም		
	4. ቤት በጤና ኤክስቴንሽን ባለሙያ		
	5. ሌላ ካለ ይግለጹ-----		

ክፍል 4 : ስለ ሳንባ በሽታ ልዩታ የመረዳት ሁኔታዎች መጠይቅ

ተ.ቁ	ተጋላጭነትን ስለማወቅ	በአጅጉ አልስማማም	አልስማማም	እርግጠኛ አይደለሁም	እስማማለሁ	በአጅጉ እስማማለሁ
301	ከሳንባ በሽታ ታማሚ ጋር በመኖሪ በሳንባ በሽታ ልዩዝ እንደምችል (የሳንባ በሽታ እንደሚተላለፍበኝ) አውቃለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
302	ከሳንባ በሽተኛ ሰው ጋር በመኖሪ በቀጣይ ጥቂት አመታት ውስጥ በሳንባ በሽታ የመያዝ እድሌ ከፍተኛ ነው።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
303	ከሌሎች የሳንባ በሽታ ጋር ቀረቤታ ያላቸው ሰዎች እድሜ ጋር ሲነፃፀር የኔ እድሜ ለሳንባ በሽታ ተጋላጭ ነው።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
የሳንባ በሽታ የከፋ ስለመሆኑ የማወቅ ሁኔታ						
304	የሳንባ በሽታ የሚይዘኝ ከሆነ ህመሙ እንደሚያሳቃየኝ እረዳለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
305	በሳንባ በሽታ መያዝን ሳስበው በጣም እፈራለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
306	በሳንባ በሽታ ብያዝ የቤተሰቤን ህይወት እጎዳለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
307	የሳንባ በሽታ ቢይዘኝ ከአከባቢ ማህበረሰብ ጋር ያለኝ ማህበራዊ መስተጋብር ይበላሻል።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

308	የሳንባ በሽታ ልዩታ በጊዜ ካላደረጉ ወደፊት ፅኑ የሳንባ በሽታ ሊያጋጥሙኝ ይችላል።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
የሳንባ በሽታን የመከላከል ብቃት						
309	የሳንባ በሽታ ልዩታ በማድረግ የሳንባ በሽታ እንደያዘኝ እና እንዳልያዘኝ ቀድሜ ላውቅ እችላለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
310	የሳንባ በሽታ ልዩታ ማድረግ ምንም አይጠቅመኝም ፤ ለአዕምሮዬም ሰላም አይሰጠኝም ፤ የሳንባ በሽታ የለብህም /ሽም ለመባል ሊያረጋግጥልኝ አይችልም።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
311	የሳንባ በሽታ ልዩታ በማድረግ በሳንባ በሽታ የመሞት እድልን ይቀንስልኛል።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
312	በሳንባ በሽታ ልዩታ እና ክትትል የሳንባ በሽታ ቢገኝብኝ እና ህክምና በማድረግ በበሽታው ምክንያት ለከፋ ችግር እንዳልጋለጥ ያግዘኛል።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
313	የሳንባ በሽታ ልዩታ እና ክትትል የሳንባ በሽታ ተገኝቶብኝ ህክምና ብጅምር አብረውኝ ለሚኖሩ ሰዎች በሽታውን እንዳይተላለፍ ያስችላል።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ግብረ መልስ						
314	የሳንባ በሽታ ልዩታ እና ክትትል ማድረግ ላልተፈለገ ወጪ ይዳርገኛል።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
315	የሳንባ በሽታ ልዩታ እና ክትትል በጤና ተቆም ማድረግ ረጅም ሰዓት ይወስዳል።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
316	የጤና ባለሙያዎች ሳንባ በሽታ ልዩታ እና ክትትል አቀባበላቸው ጥሩ አይደለም።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
317	በስራ መደራረብ ምክንያት የሳንባ በሽታ ልዩታ ማድረግ አልችልም።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

318	ትራንስፖርት መጓጓዣ ሰሌዳ የሰጠ በሽታ ልዩታም ሆነ ክትትል ማድረግ ያስቸግረዋል።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
በራስ መተማመን						
319	ምንም እንኳን ስራ ቢበዛብኝ በእርግጠኝነት የሰጠ በሽታ ልዩታ እና ክትትል አደርጋለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
320	ምንም እንኳን ረዥም መንገድ እና ወጪ የሚያስወጣኝ ቢሆንም የሰጠ በሽታ ልዩታ እና ክትትል አደርጋለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
321	ወጪ እንኳን ማውጣት ካስፈለገ ወጪ አውጥቼ የሰጠ በሽታ ልዩታ እና ክትትል አደርጋለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
322	ትራንስፖርት ባላገኝም የሰጠ በሽታ ልዩታ እና ክትትል አደርጋለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
323	በጤና ተቆም ውስጥ የሰጠ በሽታ ልዩታ እና ክትትል ምንም ያህል ጊዜ ቢወስድም ክትትሉን አደርጋለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ተነሳሽነት						
324	በጤና ተቆም ሄጄ የሰጠ በሽታ ልዩታ አደርጋለሁ ብዬ ወስኛለሁ።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
325	የሰጠ በሽታ ክትትል በጤና ተቆም አደርጋለሁ ብዬ ወስኛለሁ።።።	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
326	በጤና ተቆም ሄጄ የሰጠ በሽታ ልዩታ ለማድረግ እፈልጋለሁ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ክፍል 5፤ ሰነ ማህበራዊ እና ባህላዊ ችግሮች መጠይቅ

401. ከታማሚው ጋር ያላችሁ ዝምድና

1. ባለቤት/አባት    2. ሚስት/እናት    3. ልጅ    4. ሌላ ዘመድ

402. የቤተሰቡ ብዛት \_\_\_\_\_

403. ከዚህ ቤተሰብ ውስጥ ለሰነዎቹ የሰንባ በሽታ ልዩታ ተደርጎላቸዋል-----

404.	ከዚህ ቀጥሎ የተዘረዘሩትን ከሰንባ ታማሚው ጋር በጋራ ትጠቀማላችሁ		1 አዎ	2 አይደለም
		1. በአንድ ክፍል ውስጥ አብሮ መተኛት		
		2. በአንድ አልጋ አብሮ መተኛት		
		3. በአንድ እቃ ውሃ አብሮ መጠጣት		
		4. በአንድ ስኒ ቡና/ሻይ አብሮ መጠጣት		
		5. ፎጣ በጋራ መገልገል		

405. ከሰንባ በሽታ ታማሚ ጋር በቀን ምን ያህል ሰአት ያሳልፋሉ?

1. ሁሉንም ጊዜ/ቀንና ለሌሊት/    2. ማታ ብቻ    3. ቀን ብቻ

406. በቤት ውስጥ ያሉ የሰንባ በሽታ ታማሚ ህመማቸው እንደታወቀ በጤና ባለሙያዎች የሰንባ በሽታ ልዩታ ተደርጎልዎታል? የሰንባ በሽታ ልዩታ አልተደረገልዎት ከሆነ ወደ ጥያቄ 410 ሂድ

1. አዎ ተደርጎልኛል  
2. አይ አልተደረገልኝም

407. ለጥያቄ 406 አዎ ከሆነ መልሱ ምን ያህል ጊዜ ልዩታ ተደርጎልዎታል? \_\_\_\_\_

408. አንዴ ብቻ ልዩታ አድርገው ከሆነ የጤና ባለሙያዎ ተመልሰው ለሁለተኛ ጊዜ ክትትል እንዲያደርጉ አልተነገረዎትም?

1. ተነግሮኛል    2. አልተነገረኝም

409. ለመጀመሪያ ጊዜ የሳንባ በሽታ ልዩታ የተደረገለረዎት የት ነበር?

- 1. በጤና ጣብያ      2. በሆስፒታል
- 3. የግል ክሊኒክ/ሆስፒታል   4. ቤት ውስጥ በጤና ኤክስቴንሽን ባለሙያ

410. ወደ ጤና ተቆምሎ በምን ይሄዳሉ?

- 1. በእግሬ    2. በታክሲ    3. በባጃጅ    4. በአምቡላንስ    5. በወሳንሳ/ባህላዊ ስትሬቸር/ቃሬዛ.

411. ዋነኛው ታማሚ ህመማቸው ከታወቀ በኻለ ከምን ያክል ጊዜ በኻለ የሳንባ በሽታ ልዩታ ተደረገልዎት? የሳንባ በሽታ ልዩታ አልተደረገልዎት ከሆነ ወደ ጥያቄ 413 ሂድ

- 1. በአንድ ሳምንት ጊዜ ውስጥ
- 2. በሁለት ሳምንት ግዜ ውስጥ.
- 3. በሁለት ወራት ጊዜና ከዛን በላይ

412. ለሳንባ በሽታ ልዩታ ማን አነሳሳዎት?

- 1. በራሴ ተነሳሽነት
- 2. መጀመሪያ ከታመመው የቤተሰባችን አባል
- 3. ከቤተሰብ /ከጓደኛ/ጎረቤት
- 4. ከጤና ባለሙያ/ከጤና ኤክስቴንሽን ባለሙያ
- 5. ከሚድያ/ራዲዮ/ቲቪ መልእክት
- 6. ሌላ ካለ ይግለጹ

413. ሁል ጊዜ ወደ ጤና ተቆም የሚሄዱት በምንድን ነው

- 1. በእግሬ    2. በህዝብ ትራንስፖርት

414. ወደ ቲቢ ክሊኒኩ ለመድረስ የሚፈጅቦት ጊዜ

- 1. ከ30 ደቂቃ በትች    2. ከ30 ደቂቃ በላይ

415. የሳንባ በሽታ ልዩታዎ ውጤት ምንድን ነው? የሳንባ በሽታ ልዩታ አልተደረገልዎት ከሆነ ወደ ጥያቄ 416 ሂድ

- 1. የሳንባ በሽታ ምልክት አለ    2. የሳንባ በሽታ ምልክት የለም

416. የሳንባ በሽታ ልዩታ አድርገው ካልሆነ ምክንያቱ ምንድን ነው? ይጠቀስ \_\_\_\_\_

417.

ይህ ጥያቄ የሰንበ በሽታ ልዩታ ላለደረግ ነው።  ከዚህ በታች ያሉት ምልክቶች አሉብዎት?		1.አዎ	2.አይደለም
	1.ከሁለት ሳምንት በላይ የሆነ ሳል		
	2.የሚታወቅ የክብደት  (በወር ውስጥ ከ3 ኪሎግራም ና ከዛንም በላይ)መቀነስ		
	3. ላለፉት ሰባት ሳምንታት እና ከዛም በላይ ለሊት የማላብ		
	4.ትኩሳት እና የደረት ህመም		

418. የሰንበ በሽታ ምልክት ለመጀመሪያ ጊዜ ቢታይብዎት የት ይሄዳሉ?

- 1.ወደ ጤና ተቻም                      1. አዎ 2.አይደለም
- 2.መድሃኒት ገዝቼ መጠቀም        1. አዎ 2.አይደለም
- 3.የባህል መድሃኒት መጠቀም        1. አዎ 2.አይደለም
- 4.ምንም አላደርግም                    1. አዎ 2.አይደለም

መጠይቁን የሞላው ባለሙያ ስም-----

ፊርማ----- ቀን-----



## Declaration

I declare that this research thesis entitled “Assessment of Active TB House Hold Contact Screening for TB in Jimma & Agaro Town South West Ethiopia” is my own work that it hasn’t been addressed in study area as far as my knowledge touched and all resources I used has been indicated and acknowledged as complete reference. I understand that non-adherence to the principles of academic honesty and integrity, misconceptions/fabrications of any idea/data/source will constitute sufficient ground for disciplinary action by the University and also evoke penal action from the sources which have not been properly cited or acknowledged.

Name of student Admasu Habtu Signature \_\_\_\_\_ Date \_\_\_\_\_

## APPROVAL SHEET

As thesis research advisor, I hereby certify that I have read and evaluated this Research thesis prepared under my guidance by Admasu Habtu entitled “Assessment of Active TB House Hold Contact Attendance of Screening for TB in Jimma & Agaro Town South West Ethiopia”. I recommended that the research be submitted for implementation and further action as fulfilling the thesis requirement.

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