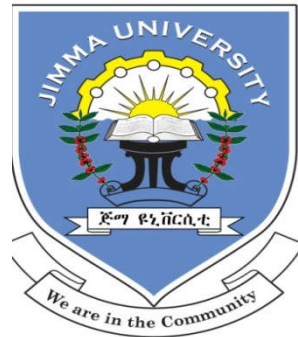


JIMMA UNIVERSITY

INSTITUTE OF HEALTH

FACULTY OF PUBLIC HEALTH

DEPARTMENT OF HEALTH EDUCATION AND PROMOTION



TOBACCO SMOKING BEHAVIOUR AMONG HIGH SCHOOL STUDENTS
IN MISHA DISTRICT, HADIYA ZONE, SNNPR, ETHIOPIA

BY: TILAHUN ERMEKO (BSC)

A RESEACH THESIS SUBMITTED TO JIMMA UNIVERSITY; INSTITUTE
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JIMMA, ETHIOPIA

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Abstract

Background: Smoking is the most important preventable risk factor for diseases, disabilities and death in the world. At a moment the spread of tobacco use is growing at fast in the adolescents, who are the future of the generation of the country. There is limited data on the smoking habits of students in high school levels of Ethiopia.

Objective: To assess the prevalence of cigarette smoking and associated factors among high school students in Misha District, Hadiya zone, SNNPR, Ethiopia, 2017

Subjects and methods: A cross-sectional study was conducted to assess the prevalence of cigarette smoking and associated factors of cigarette use among high school students

Randomly selected 352 students were participated. Data were collected using a pre-tested self-administered questionnaire with closed ended questions. It was entered in to Epi-data version 3.1 and analyzed using SPSS version 21. Summary statistics was calculated and multiple logistic regression analysis was considered to determine of smoking behavior at 95% confidence level adjusting for confounders.

Results: Three hundred fifty two students were participated in the study yielding response rate of 98%. This study revealed that current smoking prevalence was 11.1% (95% CI: (8.0, 14.5). Having smoking mother (AOR=3.6), male gender (AOR=2.5), Khat chewing practice (AOR=3), having friends smoking (AOR = 2.6), having smoking father (AOR = 3.2) and having sisters smoking (AOR = 3.31) were significantly associated with current smoking of students.

Conclusion and recommendation: This study found significant numbers of students were smokers. Overwhelming proportion of non smoking students intended, implying high risk associated with tobacco smoking of future generations. Therefore, actions targeting on predictors are necessary to effectively reduce the smoking of the tobacco.

Key words: Prevalence, Predictors, students, smoking, high schools, Misha District.

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Acronyms and Abbreviations

AOR	Adjusted Odds Ratio
CDC	Communicable diseases control
COPDS	Chronic obstructive pulmonary diseases
COR	Crude odds ratio
CVDS	Cardio vascular diseases
EDHS	Ethiopian demographic health survey
ETB	Ethiopian Birr
FMOH	Federal ministry of health
HHS	Households survey
NCDS	Non communicable diseases
SNNPR	South nation and nationalities people region
SPSS	Software package for social sciences
WHO	World health organization

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Chapter one: Introduction

1.1 Back ground information

Tobacco is the name for any plant of the genus *nicotiana* of the *solanaceae* family and for the product manufactured from the leaf and used in cigars and cigarettes, snuff and pipe and chewing tobacco (1) .

Smoking is the inhalation and exhalation of fumes form a substance (of abuse) used in various forms. Smoking can be defined as a practice of burning a substance and inhaling the smoke. Smoking, which is the major single known cause of non-communicable diseases, is widespread around the world (2). The World Health Organization (WHO) estimates that about 30% of the adult males are global population smokes and about 50% of men and 8% of women in developing countries are smokers (3).

Globally, smoking prevalence is much higher in men as compare to women. According to WHO 2010, there were 40% smoking males as compared to 9% smoking females, and males comprised 80% of all smokers (1). Global age-standardized prevalence of daily tobacco smoking was 31.1% in 2012 for men (4). Tobacco use primarily begins in early adolescence, reportedly before the time of high school graduation (5). Adolescent smoking is a global issue because there is not a single country around the world where the teens are not smoking. Many adult smokers initiate the smoking habit during adolescence or as young adults (4). The use of tobacco products during adolescence increases the risk for adverse health effects and lifelong nicotine addiction. In general, the prevalence of smoking is declining in many developed countries but increasing in developing countries.

Smoking is the single most known preventable cause of death in many countries (4). The World Health Organization (WHO) estimates tobacco attributes 4.9 million deaths a year to tobacco smoking, a figure that is expected to rise to more than 10 million by 2030 if no action is taken. Tobacco is the only consumer product that, when used as recommended by its manufacturers, eventually kills half its regular users (6).

There are 1.3 billion smokers in the world, and approximately 84% of them live in developing countries (5). In 2014, an estimated 4.6 million middle and high school students were current users of any tobacco product, of whom an estimated 2.2 million were current users of two or more types of tobacco products (7). Studies revealed that national smoking prevalence among men in sub-Saharan Africa varies from 20 to 60% and the yearly cigarette consumption rates are on the rise for both men and women (8).

Several studies indicate that tobacco use among Southern Ethiopian adolescents is considerably rising. Nowadays, tobacco use is widely consumed among high school and college students in Ethiopia (9-11). The onset of tobacco use occurs primarily in early adolescence, a developmental stage that is far removed by several decades from the death and disability that are associated with smoking in adulthood. Most of the risk of dying prematurely due to smoking is reversed if people quit smoking before the age of 30. However smoking during childhood and adolescence also causes a range of immediate health problems, as well as laying the foundation for the development of serious disease in adulthood (9, 10). The use of this serious substance is alarmingly increasing on many high school and college level. Therefore this study aimed at identifying age of initiation and factors associated with smoking in Misha District high schools, Hadiya zone, SNNPR, Ethiopia, will furnish important directions for intervention and prevention in this age group.

1.2: Statement of problem

Tobacco smoking among the youth is public health concern because of the immediate and long-term health sequel associated with tobacco use such as asthma, chronic cough, chronic obstructive airways disease, cancers and cardiovascular diseases. Adolescent tobacco use has also been linked to other risky health-related behaviors, mental health problems, suicide, motor vehicle accidents, violent crime and even dental problems. Tobacco in any form of products such as cigarettes, pipes, cigars or hand-rolled tobacco are particularly harmful because the burning process releases a dangerous cocktail of about 7,000 chemicals of which about 70 are known carcinogens (10, 12).

The most harmful natures of tobacco are its presence every corner of globe, habit in short time and risk is not limited to smoker only, but also for nonsmokers who live with smoking environment (13). Nearly 6 million people die from tobacco use or exposure to secondhand smoke, accounting for 6 percent of female and 12 per cent of male deaths worldwide, every year. A total of about 600,000 people are also estimated to die yearly from the effects of second-hand smoke (passive smoking) and many of these are children and women (14, 15).

Worldwide, cigarette smoking kills four million people each year and the figure is increasing. In most countries, the worst is yet to come, for by the time present young smokers reach middle or old age there will be about 10 million deaths from tobacco per year. Approximately 500 million individuals alive today can expect to be killed by tobacco; 250 million of these deaths will occur in the middle age (16, 17). More than one billion (80%) smokers globally live in low- and middle-income countries, where the mortality and morbidity burden due to tobacco is much higher (14). About 20% of teens, aged 13 – 15 years, smoke worldwide (18). Tobacco smoking is a leading modifiable global disease risk factor, with nearly 6 million premature deaths, 6.90% of years of life lost and 5.5% disability-adjusted life-years (4).

Over three million people worldwide die prematurely because of cigarette smoking and tobacco consumption annually, one million of whom are from developing countries. Smoking is the most important preventable risk factor for diseases, disabilities and death in the world (19, 20) .

The vast majority of smokers begin using tobacco products well before the age of 18 years (12). The earlier one starts smoking, quitting it in the future becomes harder and more unlikely (21).

Although the bulk of morbidity and mortality in sub-Saharan Africa arises from communicable diseases, overall the contribution of tobacco use to ill-health in Developing World has been growing (5, 9).

In Ethiopia, tobacco use accounted for 25% of deaths due to lung, trachea and bronchus cancer, and 8% of deaths due to non-malignant respiratory diseases, including 15 % of deaths due to COPD (World Health Organization, 2011) (22). Cigarette smoking and its grave consequences on health such as lung cancer, chronic bronchitis, and carcinoma of the oral cavity (larynx, esophagus, and tongue) and urinary bladder, are all well documented (23).

Study conducted in Ethiopia indicated that the prevalence of cigarette smoking in Ethiopia is increasing among adolescents and that the proportion of female smokers is increasing (9). Early prevention and intervention is extremely important for adolescent from tobacco related vulnerability. Given that tobacco use is preventable, that initiation occurs primarily during adolescence, and that regular users find cessation very difficult (11, 22, 24).

Understanding factors which initiate students toward smoking is critical for countries like Ethiopia, which rely on young generations for sustainable development. This study, therefore, aimed at identifying the prevalence and factors associated for tobacco smoking of students in Misha District, Hadiya zone and will furnish important directions for intervention which will help policy makers and decision makers to critically look at the problem during their planning process.

Chapter two: Literature review

2.1: Initiation age of cigarette smoking

Study conducted at Kenya revealed that Experimentation with smoking started at five years and regular smoking at 10 years. Majority of students (72.2%) started at between age 12 and 16 years (25). A study conducted in Ethiopia showed that most adolescents first initiated smoking at the age interval of 14 – 15 years (10). Averagely 10-19 years initiation of tobacco smoking tendencies were reported from studies conducted at Ethiopia, Nigeria, Bangladesh, Iran, and Sudan (4, 5, 9, 26-29).

2.2: Prevalence of cigarette smoking

Study conducted at Zambia found that the prevalence of current cigarettes smoker among in-school adolescents Chongwe district was 27%. This prevalence is lower than the 31% reported by Mpabulungi and Muula for Arua, rural. A study at Kenya on cigarette smoking among students showed the prevalence rate of 20% and an average age of onset was at 14 years. A similar study in Uganda found the rates among a similar age group was 33.4% and 7% for males and females respectively. The prevalence of Smoking among female students in Zimbabwe was 6.0% and 17.3% among rural and urban private school girls respectively (2, 4, 9, 16, 17, 25, 30, 31).

The epidemiology of Ethiopia estimated that about 7.6 % of adult males and 0.9% of adult females smoke in Ethiopia as reported by World health organization 2008. Some survey indicated that, Ethiopia ranked in the bottom five countries with the lowest smoking prevalence, with a smoking prevalence below 10% (22). This study (Southern Ethiopia) also tried to show the prevalence of ever smoker among adolescents was found to be 28.6% (21.2% males and 7.4% females), and current smokers were 17.2% (13.3% males and 3.8% females) (32). A study of young people aged 15 to 24 years in Addis Ababa demonstrated current smoking prevalence of 11.8% in males and 1.1% in females (10). A review of studies on cigarette smoking in different parts of Ethiopia publicized that the prevalence ranges from 7.5 to 19.17% (10).

The prevalence of ever smoking in Malaysia primary school children in Tumpat, Kelantan was 15.6%. Reports showed that the prevalence of cigarette smoking in Africa range from 40% boys and 4-8% of girls were regular smoker of cigarette. The figure of smoking was given that for

females as 0.4%, 0.7%, 0.7%, 6.0% rural, and 17.3% in Tanzania, Swaziland, Zambia, and Zimbabwe respectively (25). Study conducted at Thailand showed that the prevalence of smoking in the South East Asia Region ranges between 25.7% and 59.6% in adult men and 1.7% and 28.7% in adult women (26, 33).

2.3: Factors related with cigarette smoking

Factors that commonly play a role in initiation of smoking among adolescents include socio-cultural factors, smoking among family members, peers, teachers, psychological relaxation and economic factors (25, 34). Studies conducted in Bangladesh indicated that living with family members or friends have been associated with smoking in adolescents and young adults. Smoking mother increases the chances of smoking in students. Surprisingly, having smoker, father are significantly associated with smoking of students (1, 4, 9, 28, 32, 35, 36). The Social Learning Theory states that learning is through observation the models (36).

This is in agreement with the findings Kota, Malaysia, revealed that smoking of father did no influence on adolescent smoking status (28, 37, 38). Differences in community composition, local customs and family bonds may be the explanation, which requires further study.

Students who have smokers' siblings have greater risk of becoming smoker than those students who have non smoker siblings (4, 35, 39-41). A study conducted at India was inconsistent with this finding (42).

Having smoking friends have great risk of smoking than those with has not smoking friends. Many reviewed studies conducted at developed and developing countries have reported similar results (9, 35, 41, 43, 44).

Boys with only father smoking were more likely to smoke than those who had non-smoking fathers. Likewise, girls with only mother smoking were more likely to smoke than those with non-smoking mothers. Study conducted at Melaka Mani pal Medical College of India showed that age, gender, monthly income, history of smoking status, mother's smoking, siblings smoking, best friend's smoking, and knowledge of health hazards of smoking were predictors of tobacco smoking of adolescents (4, 45, 46).

Study conducted in Ethiopia showed lack of appropriate knowledge, exposure to movie and positive attitude were associated with smoking (9, 22).

Study conducted in Butajira, Ethiopia indicated that age, being a Muslim religion follower, Income, educational achievement and employment were significantly predictors of adolescent smoking (9). This study also concluded that gender, the existence of a smoking family member, the educational level of parents, and the level of family income all play a significant role in smoking behavior (28, 33, 44). Study conducted at Turkey showed that income level, sex, marital status, occupation, smoking cohabitants during child hood can predict the smoking of adolescents (47) Study conducted at Malaysia indicated that wrong beliefs, sex, attitude toward smoking, and knowledge predict tobacco smoking at early ages (47).

The more the respondents had close friend smokers, the more chances for the respondents to become cigarette smokers (5, 9, 40, 48). Reviewed literatures indicated that prevalence of smoking among males is more dominant than females (28, 30, 49-52).

Smoking prevalence in Ethiopia is increasing, particularly among the youth (9, 10, 22).

To date, little is known about either the prevalence of smoking or its predictors in high school students of Ethiopia. Many studies have tended to focus on University and larger cities, and the scale of tobacco consumption in high school students, where most of students initiated to smoking, is little studied. Therefore, knowing the prevalence and identifying the associated factors of tobacco smoking can be important for the prevention of tobacco smoking among high school students. So, the aim of this study was to assess the prevalence of tobacco smoking and its associated factors among high Students in Misha District, southern Ethiopia, 2017.

2.4: Conceptual Framework

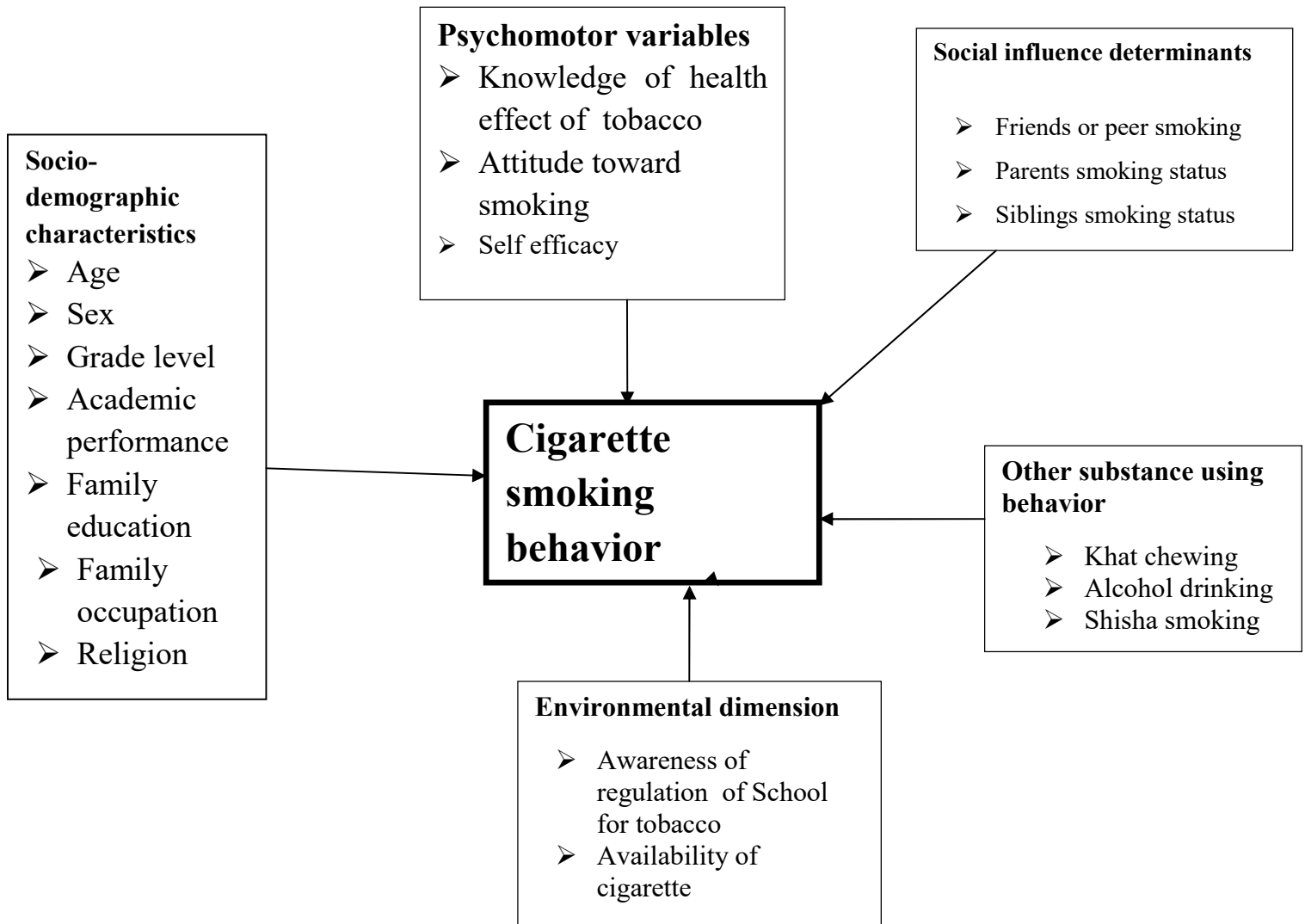


Figure 1: Conceptual frame work showing the proposed relationship between the dependent variable and independent variables

2.5: Significance

This study and many other studies conducted in developing and developed countries indicated that prevalence of smokers among high school students is increasing and also the age initiation has been decreasing. Thus, this study will have the following significance;

- ❖ It helps for educational program, decision, and policy makers managers, and advocates so as to design and focus on prevention of early initiation of tobacco smoking
- ❖ This study provides information on the current situation of tobacco smoking and its associated factors among high school students in Misha District.
- ❖ For researchers this study serves as a base line to conduct further research.

Chapter: Three Objectives

3.1: General Objective

To assess the prevalence of cigarette smoking and associated factors among high school students in Misha District, Hadiya zone, SNNPR, Ethiopia, 2017

3.2: Specific Objectives

- To determine magnitude of cigarette smoking behavior among high school students
- To identify factors associated with tobacco smoking among high school students

Chapter four: Methods and Participants

4.1: Study settings

Misha District is found in Hadiya administrative zone at the south of the country. Morsito town is administrative town of Misha District which is located at 248 km from Addis Ababa and 192 km from Hawassa which is capital city of SNNPR. The distance from Hosanna to Misha Woreda is 18 Km. It is one of the eleven districts found in the zone. The District has a total population of 171,675. There are seven high schools in the district. Total of 10,000 students are currently present on these high schools. It is bounded by Siltie zone in the north, Gibe and Gomboro woredas in the west, in the east Kembata zone. It has purely Woinedega agro ecological zone

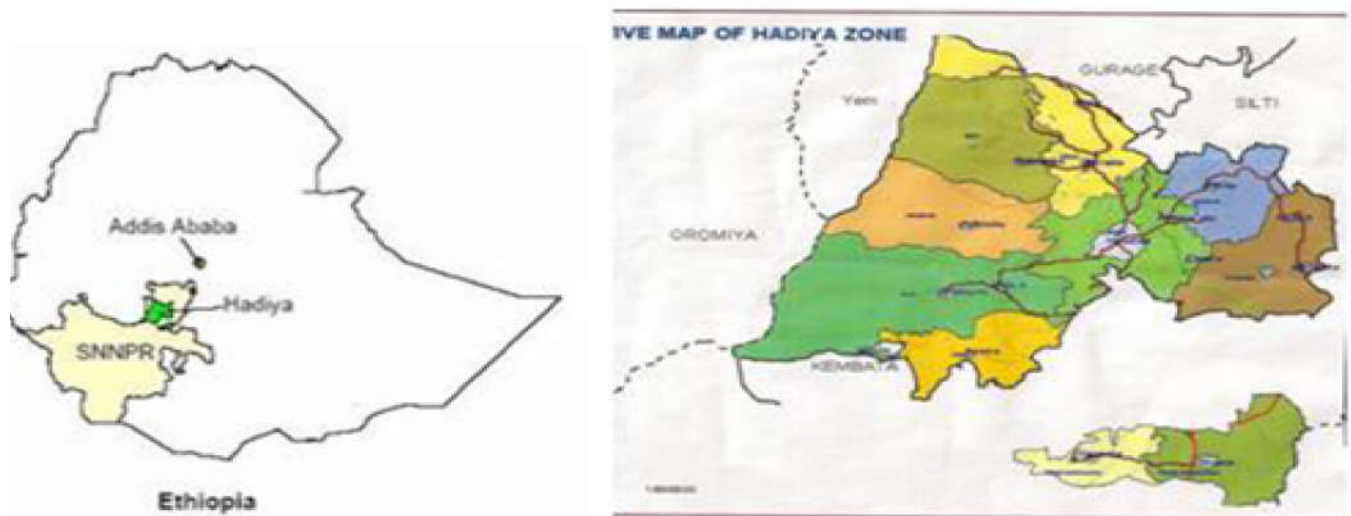


Figure 2: Map of Hadiya Zone

4.2: Study period

Data were collected from March 1st to March 30th, 2017

4.3: Study Design

A cross-sectional study was conducted to assess the prevalence and associated factors of cigarette smoking among high school students

4.4 Population

4.4.1: Source population

- All students at Misha District high schools were source population

4.4.2: Study population

Randomly selected students from sampling frame by using lottery method

4.4.3: Inclusion criteria

- All students who were present at randomly selected high schools during data collection

4.4.4: Exclusion criteria

- Students who were unable to fill questionnaires because of illness were excluded
- Students who did not willing to give informed consent were excluded

4.5 Sample size determination and sampling technique

4.5.1 Sample size determination

The sample was calculated by taking current prevalence of tobacco smoking among high school students of Southern, Ethiopia which was **17.2% (9)**. Single population proportion was used. By using parameters: P of 17.2 %= 0.172 , $q=1-0.172=0.828$, at 95% CI, $z =1.96$ and Marginal error of 5%= 0.05 , since the sampling technique was multi stage, design effect of 1.5 was used, after adding 10% for non response rate final sample size was **360**.

4.5.2 Sampling technique

Out of seven, four (4) high schools were selected by simple random sampling using lottery method. Firstly high schools were stratified by grade level. Then proportionally allocation to size and grade level was applied. Classes were selected by simple random sampling technique. The sampling frames were obtained from home room teacher lists of the classes. To select the participants from each selected classes simple random sampling was applied. Finally the required sample calculated was 360.

4.5.3 Schematic sampling technique diagram

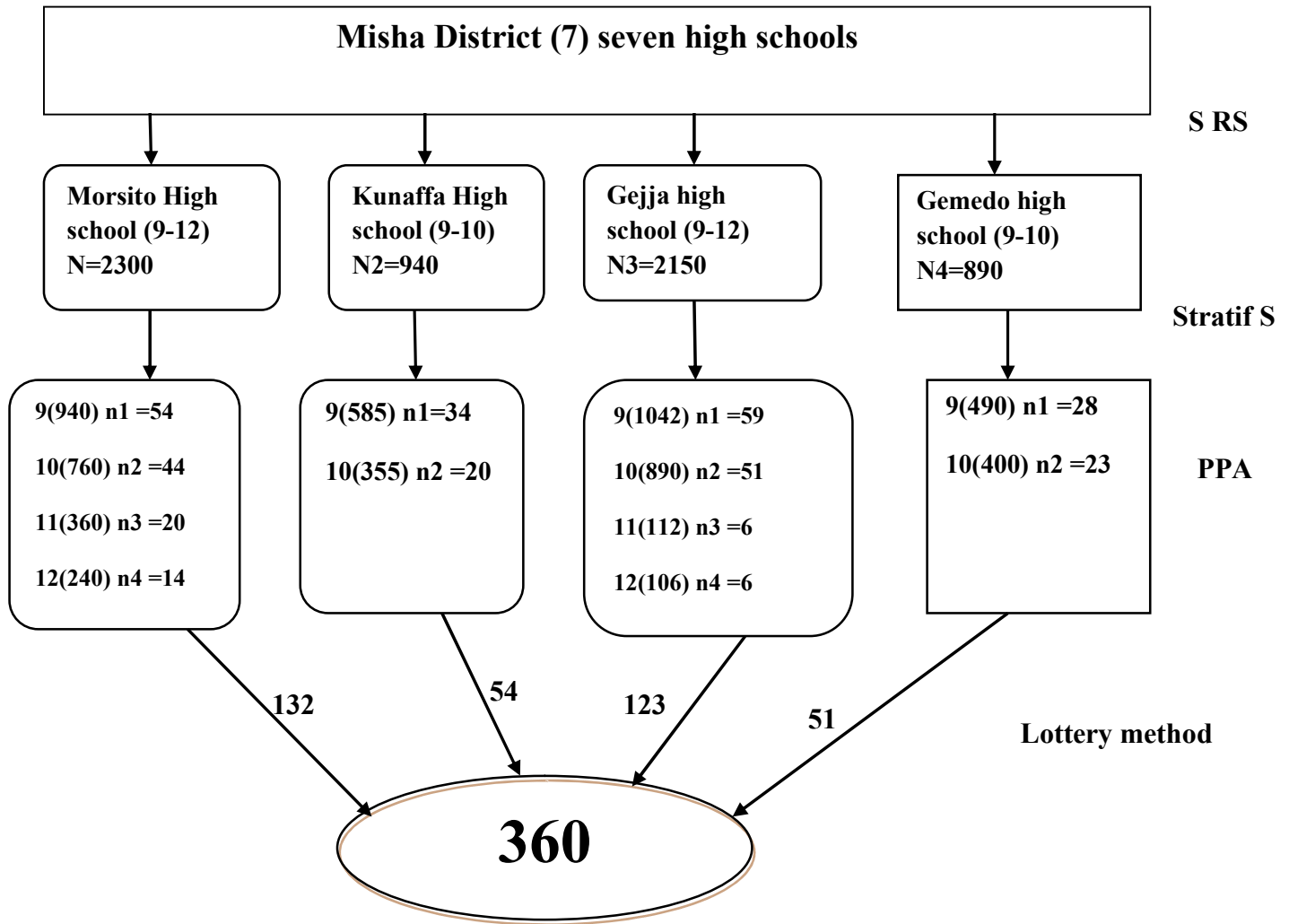


Figure 3: showing Schematic Sampling techniques of students from the sampled high schools, Misha District March 1st to 30th, 2017

Note: PPA: Proportion allocation

Sim RS: Simple random sampling

Stratif S: Stratification sampling

4.7 Variables

4.7.1 Dependent variable

Cigarette smoking behavior

4.7.2 Independent Variables

- ❖ **Socio- demographic variables:** Age, sex, level of grade, level of parents educational level, parents occupation, parents income, pocket money, academic achievement and religion
- ❖ **Psychomotor variables:** Self efficacy, attitude, knowledge of health risk of tobacco
- ❖ **Social influences:** Friends' smoking status, parents smoking status and Siblings smoking status and teachers smoking
- ❖ **Environmental variables:** Availability of cigarette, awareness of school regulation regarding tobacco smoking
- ❖ **Other substances using:** Khat chewing, alcohol drinking and shisha smoking

4.8 Data collection procedure

Pre-tested self- administered questionnaire with structured and semi structured questions the predictors were used for tobacco smoking. The questionnaire was originally developed in English and then translated into local language of participants Hadiyisa then re-translated back to English language by two independent translators to keep consistency of questionnaires. The questionnaires had several sections dealing with tobacco smoking and the predictors of the ecological framework including individual, family, school, environmental variables.

The wording and sequence of questions were designed in logical flow of ideas. Respondents were asked to fill self administered questionnaires before class begins. Randomly selected participants who were volunteer to fill self administered questionnaire and all classes at a similar time to avoid information contamination. Two supervisors who have Degree holder in Health and seven facilitators (diploma nurses) were recruited for data collection. Then after taking three days training on the objective, purpose of the study and methodology of the research they have distributed questionnaire to the study participants and have collected self administered questionnaire by checking its completeness. Supervisors had supervised and coordinated the data

collection activity. The principal investigator had close supervision regularly over all process of data collection

4.8.1 Data tools measurement

4.8.2 Measures of outcome variables

Smoking status of respondents was assessed using questions: "Have you ever smoked cigarette? Answering "yes" for this question was categorized as "ever smoker" those answering "no" were categorized as "never smoker" another question was "have you smoked cigarettes within 30 days preceding this data collection?" respondents answering "yes" were classified as "current smokers" (9, 46, 53).

4.8.3 Measures of predictor variables

Knowledge was measured by eight (8) items by using responses ("1" Yes and "0" No). The Codes were, "0" for incorrect answer and "1" for correct answer about tobacco related health risk, students who scored median & above median were considered as "good knowledgeable" and the score below median were classified as "poor knowledgeable"

Experimental attitude was assessed in scales "agree, neutral and disagree" for behavioral believes parts and "likely, neutral and unlikely" for evaluation parts. Six behavioral believes and six evaluations totally "12" items were used to measure evaluation of attitude.

Five items by using five scales (1.Difficult, 2.Very difficult, 3.Neutral, 4.Easy, and 5.Very easy) were used to assess self efficacy of participants regarding tobacco smoking.

Social influences were questioned by asking like (Do/does) parents, siblings, and best friends' smoke/smokes tobacco now? A respondent answering "yes" the questions was classified having smoking influences

4.9 Data quality assurance

Data collection instrument was prepared in English language and it was translated to Hadiyisa language and back to English language by independent translators to keep consistency

Data collectors and supervisors were trained for three days by principal investigator on objectives, data collection tools, and procedure during data collection and on ways how to obtain consent from clients. Frequent supervision by supervisors and principal investigator was

followed during data collection. The filled questionnaires were checked for completeness and clarity.

4.10 Data processing and analysis

Before Data entry:

- Data were cleaned, coded ,explored for outliers and missed values
- Data entry template was prepared on EPI data version 3.1
- Data were entered to the prepared template Epi-data version

Analysis stage

- Firstly descriptive analysis was carried out to examine the distribution of each of study variables
- Bi-variables analysis/cross tabulation was carried out to examine the relationship between dependent and independent variables of the study.
- Multivariable logistic analysis was carried out to see independent effect of the predictor variables on the dependent variable by adjusting the effect of potential confounding variables.
- Adjusted Odds ratio with 95% CI was used to show strength of association between dependent and predictor variables.

4.11 Operational definitions

Current smoker: The current smoking status was measured through asking respondents “have you smoked part or all of a cigarette every day or any day within 30 days preceding the study, those respondents answering ‘Yes’ to the question were classified “as current smoker” and those respondents answering ‘No’ classified as a current non-smoker (9, 46, 53).

Ever smoker: The respondents answering ‘Yes’ to the question ‘Have you ever smoked in your lifetime?’ were categorized as “ever smoker” and those respondents answering ‘No’ classified as a never smoker (12, 46).

Knowledge of health effects of cigarette smoking: The level of knowledge about health effects of smoking was measured using eight core questions. Each of them has two responses (1.Yes, No). Each correct answer for the smoking-related health effects were represented by ‘Yes’ and the other option classified as incorrect answer (No). Responses from respondents after computing and summing “respondents who scored median score& above median were

considered as “good knowledgeable” and those scored below median were considered as “poor knowledgeable”

Attitude: Six believes and six evaluations totally 12 items were used to measure attitude. Three scales (Agree, Neutral/Undecided and Disagree) for believes part and (likely, neutral and unlikely) for evaluation parts were used to evaluate respondents. Overall evaluation of smoking was computed by summing, multiplication of evaluation by believes for (12 items); the score “1” was given for valuable evaluation and “0” for non valuable evaluation, after summing and computing, those scored median and above median values were categorized as “positive attitude” and the scores below median were classified as “negative attitude”

Self efficacy: Five items were used to measure self efficacy toward smoking by using scales: Difficult, very difficult, neutral, easy and very easy.

4.12 Ethical consideration

- The ethical clearance was obtained from ethical committee of Jimma University, Institute of health and Faculty of public health.
- Permission paper was obtained from Misha Districts offices at different levels
- And verbal written consent was obtained from each study participants
- An anonymous questionnaire were used to assure the confidentiality of the information obtained from participants

4.13 Dissemination plan

The findings of this study will be:

- Presented to JU
- Distributed to Hadiya Zonal Health and educational Department
- Shared with Misha District health and educational offices
- Finally effort for publication on Journal of Addiction & Prevention, will be attempted

Chapter five: Result

5.1 Socio-demographic characteristics

Three hundred fifty two participants were included in this study yielding response rate (98%). The majority of the respondents 237(67.3%) were of age group 20-24 years. One hundred eighty nine (53.7%) were males. The average age of respondents was 21.6 years (range 15 to 29 years) (Table 1).

Table 1: Socio-demographic characteristics of the respondents in Misha district high schools, Southern Ethiopia, March 1st to March 30th , 2017 (n=352)

Socio-demographic characteristics respondents	Categories	Frequency	Percentage
Age category of students in years	20-24	237	67.3
	15-19	68	19.3
	25-29	47	13.4
Sex of students	Male	189	53.7
	Female	163	46.3
Grade level of students	10 th grade	109	31
	11 th grade	103	29.3
	12 th grade	83	26.3
	9 th grade	57	16.2
Ethnic group of students	Hadiya	211	60
	Gurage	60	17
	Kembetta	42	12

	Amhara	23	6
	Silte	16	5
Religion of respondents	Protestants	220	62.5
	Orthodox	97	27.6
	Muslim	30	8.5
	Catholics	5	1.4
House hold head	Father	245	69.6
	Mother	107	30.4
Educational level of house hold head	Elementary school	124	35.2
	Able to read and write	74	21.0
	College and above	63	17.9
	High school	49	13.9
	Illiterate	42	11.9
Occupation of house hold head	Farmer	149	42.3
	Merchants	94	26.7
	Government employee	90	25.6
	House wife	19	5.4

5.2. Cigarette smoking behavior.

In this study prevalence of current smoking was 11.1%; (8.8% males versus 2.3% females) and ever smoking prevalence was 22.7%; (16.8% males versus 6.0% females). To fun with friends was main reason for smoking of adolescents. Twenty (51%) of the smokers consumed tobacco on average for 4-6 days per week (Table 2).

Table 2: Showing cigarette smoking behavior of the respondents among high school students in Misha district, Southern Ethiopia, March 1st to March 30th , 2017 (n=352)

Smoking related characteristics of respondents	Categories	Frequency	Percentage
Ever smokers (n=352)	Males	59	16.8
	Females	21	6.0
Current smokers (n=352)	Males	31	8.8
	Females	8	2.3
No of sticks smoked per a smoked day (among current smokers) (n=39)	2-4 cigarettes	22	54.6
	5-6 cigarettes	17	45.4
Frequency of smoking (among current smokers) (n=39)	4-6 Days	20	51
	1-3 Days	19	49.1
Got cigarette most often from (among current smokers) (n=39)	From street	12	30.8
	From nearby shop	17	43.6
	Other	10	25.6
Brand of cigarette smoked (among current smokers) (n=39)	Niyalla	22	56.4
	Roth man	5	12
	Locally prepared tobacco	12	31.6
Reasons given for smoking (among current smokers) (n=39)	To achieve some goals	16	41
	To have fun with friends	19	49
	To reduce boredom feeling	5	13

Other substance using behavior			
Khat chewing(among current smokers) (n=39)	Sometimes	25	64.1
	Always	11	28.2
	Never	3	7.7
Alcohol drinking (among current smokers) (n=39)	Sometimes	18	46.2
	Always	16	41.0
	Never	5	12.8

5.3 Psycho social-dimensions of respondents

About half of respondents have good knowledge regarding health risk related with tobacco smoking. Nearly four folds of respondents disapprove cigarette smoking. 62.8% respondents have strong self efficacy against tobacco smoking (Table 3).

Table 3: Showing psychosocial-dimensions with cigarette smoking among high school students in Misha district, Southern Ethiopia, March 1st to March 30th , 2017 (n=352)

Dimensions	Category	Frequency	Percentage	Mean & S.D
Self efficacy level(n=352)	Strong	221	62.8	0.62, 0.48
	Weak	131	37.2	
Attitude toward smoking (n=352)	Negative	286	81.3	0.18, 0.39
	Favorable	66	18.8	
Knowledge regarding health risk of tobacco smoking (n=352)	Poor	208	59.1	0.41, 0.49
	Good	144	40.9	
Social influence score (n=352)	Low	200	43.2	0.58, 0.49
	High	152	43.2	
Awareness regarding school regulations of tobacco smoking (n=352)	Aware	193	54.8	0.54, 0.49
	Not aware	159	45.2	

5.4 Magnitude of social environmental influencing factors

From pie chart below we can observe that having best friends smoking and father smoking influences the students smoking.

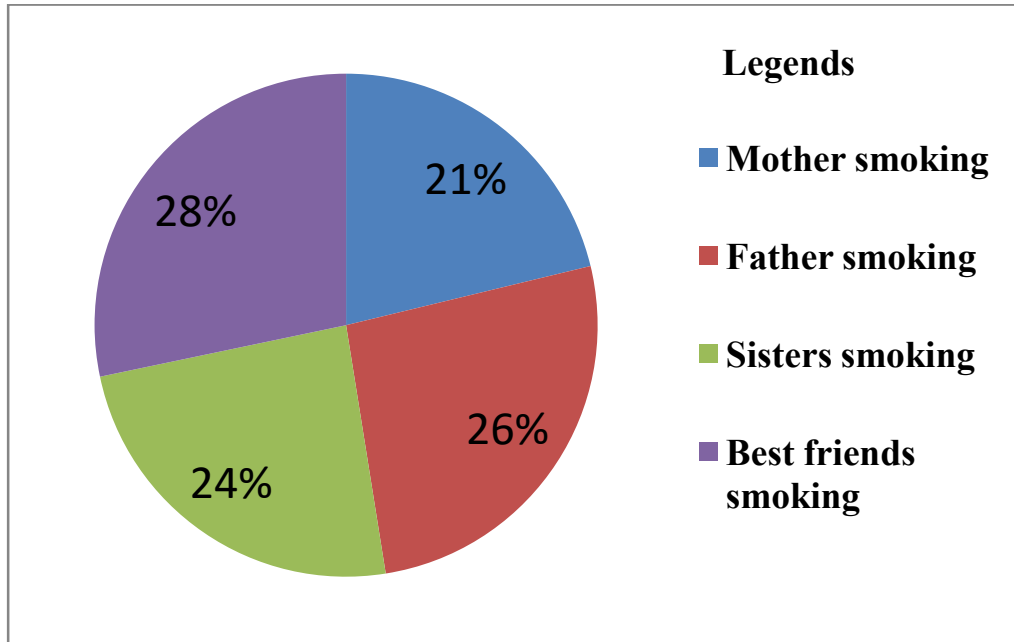


Figure 4: Magnitude of sources of exposure to cigarette smoking of adolescents among high school students in Misha district, Southern Ethiopia, March 1st to March 30th, 2017

5.5: Factors Associated with Tobacco Use

Binary Logistic regression analysis was used to identify factors associated with current smoking. All variables associated with current cigarette smoking in the Binary logistic regression with a p-value ≤ 0.25 were entered together into a multivariable logistic regression by using the backward method. Accordingly male gender, parent smoking, peer smoking, sisters smoking and Khat chewing were seen significantly associated with current tobacco smoking. Three hundred fifty two students participated in the study yielding response rate of 98%. This study revealed that current smoking prevalence was 11.1% (95% CI: (8.0, 14.5). Having smoking mother (AOR=3.6), male sex (AOR=2.5), Khat chewing practice (AOR=3), having friends smoking (AOR = 2.6), having smoking father (AOR = 3.2) and having sisters smoking (AOR = 3.31) were significantly and positively associated with current smoking of students (Table 4).

Table 4: Multivariable logistic regression analysis showing factors associated with cigarette smoking among high school students in Misha district, Southern Ethiopia, March 1st to March 30th, 2017

Variables	Categories	Current use of tobacco (N, %)		COR (95%CI)	AOR(95% CI)
		Yes	No		
Sex	Male	31(16.4)	158(83.6)	4.58(2.3-9.2)	2.5 (1-6.2)*
	Female	8(4.9)	155(95.1)	1	1
Mothers smoking	Yes	21(53.8)	18(46.2)	5.2(2.8-9.3)	3.6(1.6-8)*
	No	57(18.2)	256(81.8)	1	1
Fathers smoking	Yes	26(66.7)	13(33.3)	4.4(1.6-5)	3.23(1.4-7.3)*
	No	97(31.0)	216(69.0)	1	1
Khat chewing	Yes	22(56.4)	17(43.6)	5.2(2.8-9.4)	3(1.4-7)*
	No	62(19.8)	251(80.2)	1	1
Sisters smoking	Yes	26(66.7)	13(33.3)	4.48(1.6-5)	3.31(1.45-7.47)*
	No	78(24.9)	235(75.1)	1	1

Best friends smoking	Yes	27(69.2)	12(30.8)	5.6(3.6-12.8)	2.6(1.16-6)*
	No	95(30.4)	218(69.6)	1	1

Note: Statistically significant at $p < 0.05$ after being adjusted for other variables, **1** = reference. The Hosmer -Lemeshow goodness-of-fit statistic was used and the model had a p-value > 0.05 ($p = 0.644$) which proved the model was good.

Chapter six: Discussion

The main objective of this study was to determine the prevalence of cigarette smoking and associated factors among high school students. Accordingly, this study revealed that the prevalence of current smoking was 11.1% (95% CI: 8 – 14.5). Inline finding was reported from study conducted at Cameroon among high school students (11.2%) (37).

Almost similar findings were found from studies conducted in Southern Ethiopia (17.2%), Sudan (13.6%) and South-west Bangladesh (15.7%) (4, 9, 32). This study has higher prevalence than the study conducted at Nigeria (7.5%), Malaysia (6.8%) (25, 30) . This study has lower prevalence than the study conducted at Misirak Badewecho District Ethiopia (23.6%), Nigeria (40%), Uganda (33.4 %), Rural Zambia (27%), Malaysia (29.7% and 28.8%) and Pakistan (23%) (2, 9, 30, 44). This discrepancy could be due to difference in study setting, socio cultural differences, level of study, and time gap of the study and accessibility of cigarettes.

The finding of this study revealed that the lifetime (ever smoking) prevalence rates of cigarette smoking among high school students was 22.7% (95% CI 18.8– 27.3). This finding was consistent with the study conducted in Bale Zone Ginnirr high school, Southern Ethopia (21.3 % (18.2% males versus 3.1% females), Pakistan (23%) and Nigeria (24.8%) (8, 9, 11, 25, 29, 42, 44). This study has lower life prevalence than the study conducted in Southern Ethiopia (28.6%) and Nigeria (64.6%) and Nairobi Kenya (38.7%) (9, 25, 29). These discrepancies might be from the study settings, the study time, socio-demographic and socio- economic back grounds.

The main predictors of cigarette smoking in this study were having friends who smoke, male sex, having smoking sisters, parental smoking and khat chewing practice.

This study was tried to assess the reasons for smoking of students. Thirty nine students who had smoked at least once indicated the following reasons for this experience. Twenty (34 %) were smoke to achieve some goals, nineteen (33 %) smoked to have fun with friends, sixteen (28 %) were smoke to reduce boredom feelings. This finding was supported by studies in Bale Zone Ginnirr high school Students, Kenya, Nigeria and Bangladesh (4, 11, 25, 29)

This study also found that the khat chewing practice was 2.7 folds increase the odds of smoking among current smokers (AOR=2.7, 95%CI: 1.3-5.8). Similar results were reported from studies

conducted at Misirak Badewecho District, Southern Ethiopia and Jimma (2, 8, 9). This relation between smoking and chewing khat might be due to the need to increase satisfaction from multiple substance use, increase excitement and to relieve from stress (2, 8, 9).

In this study the result indicated that males had higher odds to use tobacco as compared to females (AOR = 2.5; 95% CI 1, 6.2). Consistent results were reported from studies in Ethiopia and other African countries have shown that cigarette smoking is associated with male gender (9, 10, 21, 25, 37, 41, 50). This discrepancy among male and female sex might be explained by the socio-cultural or religious background of the countries. Furthermore, familial relationships, including care and family related activities may protect females from involving in tobacco use.

A number of studies showed that parental smoking is significantly associated with adolescents smoking status. Parents' smoking contributes to the onset of daily smoking in their teenagers even if parents practice good family management, hold norms against teen tobacco use, and do not involve their children in their own tobacco use (9, 13, 21, 36, 49) The family who smokes will be less likely control smoking and availability of cigarettes increases when family smokes tobacco. Also parents who smoke may not be committed to discourage adolescent smoking (33, 40, 54, 55). According to Bandura's social cognitive learning theory, adolescents get their beliefs in smoking from role patterns, especially friends' and parents' smokers (36). From this point of view, it is supposed that having contact with friends and parents who smoke, makes special beliefs in the person and that belief directs him to misuse of tobacco products (36).

This study discovered that the odds for a respondents smoking cigarettes if the father also was smoked was 3.2. (AOR = 3.2; 95% CI 1.4-7.3). Consistent findings were reported from other studies conducted in Nigeria and Bangladesh (4, 35). This finding was inconsistent with the findings in Malaysia, Doula Cameroon and Malay as they revealed that smoking of father did no influence on adolescent smoking status (16, 28, 37, 38). Differences in community composition, local customs and family bonds may be the explanation.

When parents or older siblings smoke, cigarette stubs are readily available for early experimentation (35). The association of respondents' cigarette smoking with that of parents and siblings obtained in this study was consistent with Bandura's social learning theory (SCT) (35,

36). Having closest friends smoking was correlated with age at smoking initiation. Those who started smoking earlier tend to be triggered by a friend smoking (13, 37, 49).

The odds of respondents smoking cigarettes if the friend smoked was (AOR = 2.6; 95% CI 1.16-6). Studies conducted on many parts of world were consistent with this finding (4, 9, 35, 43, 49). Having a friend who smokes not only influences the onset of smoking but also is a strong predictor of continuing the habit in adulthood. This result is consistent with similar studies conducted in India, Pakistan, Kenya and Iran showed similar significance (21, 25, 41, 44).

Those respondents who have smoking sisters have greater risks of becoming smoker than those who have non smoker sisters. Similarly the respondents were more likely to be cigarette smokers if they have sisters who smoked. (AOR = 3.31; 95% CI 1.45-7.47). Studies conducted in India and Nigeria were inconsistent with this finding (41, 42). Socio-cultural and family bond might be common reasons for this discrepancy. The possible reason for this discrepancy might be socio-cultural, socio-economic and the strength level of family bonds.

The majority of respondents (both smokers and non-smokers) had a good knowledge of the health hazards of smoking. According to the finding of this study the level of knowledge regarding tobacco was not associated with an individual initiation of smoking. This was consistent with the study done Karachi, Pakistan (55)

Maternal smoking status was significantly associated with current smoking of respondents. In this study students who having smoking mother was more risk of initiated smoking than those who have no smoking mother (AOR = 3.6; 95% CI 1.6-8). Inconsistent finding was reported from study conducted in Ethiopia and Bangladesh (4, 9). The possible reasons for this discrepancy could be from the strength level of family bonds, socio-cultural and socio-economic difference among the study participants.

People usually adjust their act of habit (behavior) on ways like their models did through vicarious reinforcements. This was elaborated by “social cognitive theory (observational learning) (36).

In this study considering educational back ground of family, the educational status of parents’ was not associated with adolescents’ tobacco smoking. Different reviewed studies from Dhaka

Bangladesh, Iran and India were consistent with this finding too (13, 26, 56). Contrasting finding was reported from study conducted in Malaysia (57). The smoking behavior of students did not rely on educational status of parents, but it depends on how the families habit (behave). Similarly the occupation and type of occupation in this study was no find significant association with current smoking of students (adolescents). Consistent finding was found from study conducted in Bangladesh (13).

“This could suggested by Bandura’s, most of human behaviors are beings learned through vicarious reinforcement through observing their models (36).

This study revealed that the occupation of family also was not associated with adolescents smoking. Consistent finding was reported from the study conducted at Bangladesh (13). Since smoking is a complex behavior the adolescents smoking did not rely on what occupation did family belongs to, but on their smoking status.

Limitation of this study:

- There may also be recall biases as students may not recall whether or not they smoked within the past 30 days prior to the day of the data collection
- The prevalence of smoking may have been underestimated by negative responses from students who smoke secretly due to social desirability bias
- Due to cross sectional nature of the study, temporality of the outcome variable and the predictor variables cannot be inferred

Chapter seven: Conclusion and recommendation

7.1 Conclusion

- This study found significant numbers of students were smokers.
- Overwhelming proportion of non smoking students intended, implying high risk associated with tobacco smoking of future generations.
- Furthermore, this study revealed that student current cigarette smoking is strongly associated with having smoking parents, having smoking sisters, khat chewing practice, having smoking peers and male sex.

Based on the findings of this study the following recommendations are forwarded:-

7.2 Recommendations

7.2.1 For Misha District educational office

- Public health programs which address family smoking should be established
- Should give high attention to tobacco smoking of students at school campus and the near school
- Youth population and especially male students should be continuously targeted by preventive measures and sensitization campaigns against tobacco use.

7.2.3 for schools

- Should establish community conversations with families, students and teachers on burdens related with tobacco smoking.
- Should design a program addressing control of khat availability near school
- Teachers should take greater interest in cigarette smoking control in school

7.2.4 for parents

- Should be aware on the influence of their smoking behavior on initiation and continuation of smoking their children and should be encouraged to quit smoking

7.2.5 for Researchers:

A prospective longitudinal study will be required to overcome these limitations in future

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ANNEX 1- ENGLISH VERSION QUESTIONNAIRE

JIMMA UNIVERSITY

INSTITUTE OF HEALTH

FACULTY OF PUBLIC HEALTH

DEPARTMENT OF HEALTH EDUCATION AND HEALTH PROMOTION

These are questionnaires to assess tobacco smoking behavior among your high school students at Misha District, Hadiya Zone, SNNPR, and Ethiopia 2017

Hello. How are you? My name is ----- . I am here to collect tobacco information and tobacco smoking behavior and related data from you. The objective this study is to assess prevalence and associated factors of tobacco smoking behavior among high school students in Misha District, Hadiya Zone, and SNNPR. And you are one of the students who are selected to participate in this study just by chance.

Consent Form

Your truth and full answers for all of our questions about **Tobacco smoking behavior** will be very important. Your answers will be very confidential and secret. No one will identify this document. If you agree to be you can take the questionnaire and fill all questions by yourself.

The data collectors were explained the aim of the study and participation is voluntarily. You can stop participation at any time if you do not want to Participate. So I assure my interest to participate in this study by my signature.

Participant's Signature _____ Date _____

Data collector, s signature _____ Date _____

Identification code: _____

Date of data collection: Day _____ Month _____ Year _____

Thank you

Section one: Socio-demographic backgrounds charestistics

Instruction 1: Please circle (○) or write in text your appropriate answers as necessary

Table 5: Questionnaires with English language version

Serial no	Statements	Response	Remark
101	How old are you?	I amyears old	
102	What is your sex?	1. Male 2. Female	
103	What is your grade level?	1. 9 th 2. 10 th 3. 11 th 4. 12 th	
104	What was your past year's average grade point? PLEASE WRITE IN NUMBER	It was.....	
105	What is your ethnic background?	1. Hadiya 2. Gurage 3. Kembeta 4. Silte 5. Amhara	
106	What is your religion?	1. Protestant 2. Orthodox 3. Muslim 4. Catholic	
107	Who is house hold head of your family?	1. Mother 2. Father	
108	What is highest grade level completed by your family's house hold head?	1. Illiterates 2. Able to read & write 3. Elementary school 4. High school 5. College & above	
109	What is occupation of head of house hold in your family?	1. Government employee 2. Merchant 3. Farmer 4. House wife	
110	What is your parents' monthly income?	Please write in Birr (ETB).....	
111	How much do you get per month?	It is.....	
112	Who gives that money?		

Section two: Assessing Knowledge of health effects of cigarette smoking

Instruction 2: Please circle (○) or write in text your appropriate answers as necessary

Code	If someone smoke tobacco, which of the following will occur as consequences?	Response categories		
201	The lung of smoker might be damaged and finally it can be changed to lung cancer	1. Yes	2.No	3. I do not know
202	Can damage circulatory system and latter it will be consequences of blood cancer	1. Yes	2.No	3. I do not know
203	Can destruct epidermis and dermis and on latter can cause irreversibly over all skin problem	1. Yes	2.No	3. I do not know
204	On long run tobacco dependence and psychotic health problems happened with its continuity	1. Yes	2.No	3. I do not know
205	Can be associated with tuberculosis, asthma and other respiratory diseases	1. Yes	2.No	3. I do not know
206	Smoking tobacco can be reason for digestive diseases like peptic ulcer and duodenal ulcer	1. Yes	2.No	3. I do not know
207	Can aggravate and elevates blood glucose level which may result on Diabetes Mellitus(DM)	1. Yes	2.No	3. I do not know
208	Associated with decreasing of brain chemicals, finally can be reason for mental unbalance	1. Yes	2.No	3. I do not know

Section three: Scaling experimental attitude toward tobacco smoking

Instruction A: Please circle (○) which is appropriate for you

Code	Statements	Behavioral believes		
301	Tobacco smoking is the good way of relaxing from distressing stimuli	1. Agree	2. Undecided	3. Disagree
302	Tobacco smoking is truly a sign of modernity	1. Agree	2. Undecided	3. Disagree
303	Tobacco smoking causes in reduction of weight	1. Agree	2. Undecided	3. Disagree
304	Smoking is one way of getting respect from friends	1. Agree	2. Undecided	3. Disagree
305	Tobacco causes great irreversible damages to almost every system of our body on the long run	1. Agree	2. Undecided	3. Disagree
306	Tobacco smoking can be regarded as bad habit particularly in your age groups	1. Agree	2. Undecided	3. Disagree
EVALUATION FOR BELIEVES				
Code	Statements	Categories of evaluation		
307	Most people like to relax when they are in distressing situations	1. Valuable	2. Neutral	3. Invaluable
308	Being regarded as a modern young is worthwhile for me by smoking	1. Likely	2. Neutral	3. Unlikely
309	Currently reduction of weight is a valuable things for my health	1. Valuable	2. Neutral	3. Invaluable
310	Getting friends and respect from is one of the things youngsters like me would like to smoke	1. Likely	2. Neutral	3. Unlikely
311	Keeping the health of body systems starting from young age is most valuable to good living in later ages of adulthood	1. Valuable	2. Neutral	3. Invaluable
312	Healthy and well future life is one of the dreams any youngster like me feels to have	1. Likely	2. Neutral	3. Unlikely

Section four: Leveling of self efficacy

Please place an “x” in the box that most closely represents your opinion (CHOOSE ONLY ONE OPTION)

Code	Statements	Very easy	Easy	Undecided	Difficult	Very difficult
401	I am confident that I should not smoke tobacco					
402	For me to it is easy against smoking when someone gives me					
403	I stand not to smoke and fight for what I want.					
404	I resist the impulse to smoke when I am under pressure.					
405	I feel confident I would be able to choose when and where to engage relaxation					

Self evaluation Measurement Please tick the one which is appropriate for you

Code	Statements	Responses		
406	Do you think smoking should not be part of your life?	Yes	No	Un decided
407	Do you believe that your abstaining from tobacco smoking is your good quality?	Yes	No	Un decided

Section Five: Assessing awareness of policies and regulation of school towards tobacco smoking

Instruction Five: (CHOOSE ONLY ONE OPTION WHICH IS APPROPRIETE IN YOUR OPININION)

Codes	Items	Response categories
501	Does your school have a policy or rule specifically prohibiting tobacco use among students inside school buildings?	1. Yes 2. No 3. I don't know
502	How well does your school enforce any of its policy or rule on tobacco use among students or any personnel?	1.Consistently 2.Some times 3. Rarely 4.Never
503	Does Ethiopia have policies that prohibit smoking in public places?	1.Yes 2. No 3. I don't know
504	Do you believe that smoking should be forbidden on your age at adolescent time?	1.Yes 2. No 3. I don't know

Section 5.1 Assessing social influence dimensions regarding smoking

Codes	Questions	Responses categories	
505	Does your mother smoke tobacco now?	1. Yes	2 .No
506	Does your father smoke tobacco now?	1 .Yes	2. No
507	Do your sisters smoke tobacco now?	1 .Yes	2 .No
508	Do your brothers smoke tobacco now?	1 .Yes	2. No
509	Do your best friends smoke tobacco now?	1 .Yes	2. No
510	Do teachers smoke tobacco?	1 .Yes	2. No

Section six: Leveling magnitude of significance others on students smoking

Instruction six: Please circle (○) your appropriate answers as necessary

Codes	Normative belief	Response category		
601	My father think that I should smoke tobacco	1. Agree	2.Undecided	3. Disagree
602	My mother think that I should not smoke tobacco	1. Agree	2.Undecided	3. Disagree
603	My teacher's not acceptance of my smoking is important to me not to smoke	1. Agree	2.Neutral	3. Disagree
604	Smoking of my sister or brother enhances me toward my smoking	1. Agree	2.Undecided	3. Disagree
605	Smoking of my classmates engage me toward tobacco smoking of me	1. Agree	2.Undecided	3. Disagree
Magnitude of motivation to comply significance others				
Codes	Statements	Measuring level of influence		
606	My father's approval of my smoking is important to me to smoke	1. Strong	2.Medium	3.Not all
607	My mother's approval of my smoking is important to me to smoke	1. Strong	2.Medium	3.Not all
608	My teacher's disapproval prevents me from smoking tobacco	1. Strong	2.Medium	3.Not all
609	My siblings approval of my smoking is important to my smoking	1. Strong	2.Medium	3.Not all
610	Approval of my classmates add value to me forward smoking of tobacco	1. Strong	2.Medium	3.Not all

Section seven: Assessing practice of tobacco smoking

Please encircle which is appropriate to you

Code	Items	Response	Skip rule
701	Have you ever smoked tobacco in your life time?	1. Yes 2. No	
702	Have you smoked tobacco within 30 days preceding this study?	1. Yes 2. No	
704	How many days on average do you smoke per a week?	It is.....days	
705	How old were you when you first started smoking?	Please write in years.....	
706	How many sticks of cigarette do you consume per a smoked days?	Please write in number.....	
707	Which brand of cigarette do you smoke?	1. Niyalla 2. Rothman 3. Locally prepared	
708	If you are currently smoke, why are doing so? Because..... [MULTIPLE OPTION IS POSSIBLE]	1. when I like to relax from stress 2. I am once addicted 3. I had once tried to quit and failed 4. whenever I see my friends who smoke 5. I am trying to quit but can't do it once at all 6. To achieve some other goals like weight reduction and to get friends 7. In order to catch up with modern way of acting 8. It doesn't have any tangible hazard as compared to the benefits it gives me 9. Other specify_____	

709	Have you ever drink alcohol now?	1. Some times 2. Always 3. Never	
710	Have you ever chew khat now?	1. Some times 2. Always 3. Never	
711	Do you smoke shisha now?	1. Some times 2. Always 3. Never	
712	Do you think you will smoke cigarettes in the next year?	1. Definitely yes 2. Probable yes 3. Probable not 4. Definitely not	
713	What could be your engagement to smoking?	1. Peer pressure 2. Siblings smoking 3. Parents smoking 4. Teachers smoking 5. Some people who smoke at school 6. Other	
714	If one of your best friends were offer to you a cigarette, would you smoke it?	1. Definitely yes 2. Probable yes 3. Probable not 4. Definitely not	

Section eight: Assessing environmental availability of tobacco

Please encircle (○) which is appropriate in the area you live

Code	Items	Response	Skip rule
801	Have you get cigarette easily?	1. Yes 2. No	
802	From where do you get cigarettes?	1. From nearby shop 2. From street 3. Other Specify.....	
803	Have you ever asked your age while you buying cigarettes?	1. Yes 2. No	
804	Is the place of putting cigarettes visible in shops from where you buy?	1. Yes 2. No	
805	Does the places from where you buy cigarette	1. Yes	

	visible for ever one?	2. No	
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THANK YOU FOR COPERATION TO MY QUESTIONARIES

ANNEX 2. HADIYISA VERSION QUESTIONNAIRES:

Jimmi Yuniverisitee: Fayya,ommi egellimi losa'nni mineenne la'mmi digiire'e maassi kitaaba gudiissimmina wixa'aakami naqaasha wixxaachina eeyyii'xi sagara uwwoo Losaano siidimina gudaakkoo gudishsha

Lophphitaattoo Losaanchcho:

Summi iikki_____yamaamookko.Ku xa'mmichchi qoodamaakoo kosho,o wirisimmi halat losa,ni minenne losa,ni gaballanne yookkoko keenatina guddakohanne..Eebikina ka horoori woshshanegudikki xa'mmichcha dabarimmine naqaasha uwwiito'sina ati do'llaantaatto.

Ka xaa'mmichchuwika hundami ihukko kolli dabacha dabarimii, urimi xaansiisoothane ihukarem ati ka xa'mmichina uwwiitoo naqaashi danaami misha eebimina araqqa awwadohanne ihookkoki.

Xa'mmichcha dabarimina iitaantoo?

1. Eeyya 2. Asheere 3. aa'ee

Galaxxoommo!

Naqaasha wixaa'anchi summa_____furmma'a_____ayyaamo_____

Xa,mmichchi bikko'o (coodda)_____ Losa,n mi'ni bikko,i xiggo(coodda)_____

Losaanchi summa.....Furma,a.....ayyaamo.....

BAXXANCHCHI MATO: MINAADAPHI HEECHCHI OGORAA GATTI QANQUUWAA
BIKKINA XA'IMMAKKAMI XA'IMMICHCHA

Table 6: Hadiyisa language version Questionnaires

Xigo	Xa,mmicha	Dabachcha	Bikko,o
101	Ki umuri mee'oo?	_____Hiinchcho	
102	Albach maha?	1. Gooncho 2. Landichcho	
103	Losa,n gaballi mee,o?	1. 9 nso 2. 10 mmo 3. 11 mato 4. 12mmo	
104	Higuu hiinchchi mishi mee,omisha kitaabe	
105	Ki shuumo,i maha?	1.Hadiiyya 2.Kambaataa 3.Sillixe,e 4.Guurage,e	
106	Ki ammanatti maha?	1.Ammananchcho 2.Ortoodoxxa 3.Musilima 4. Katoolikka	
107	Ki,ni mi,ni awoonsaanchi ayyette?	1. Abba,a 2. Ayya,a	
108	Issoomi mee,i baxxanchcha losakka,atte?	1. Horeem losa,akkoyyo 2. Qananacha kitaabima xanakkamo 3. Lu'xxi gabala 4. La'mmi gabala 5. Diplomaa hannaanette	
109	Iseemiki baxxi marichcho?	1.Addil baxxaanchcho 2. Daddaraanchcho 3. Abullanchcho 4. Mi.ni baxxaanchcha 5. Mullikeeno	
110	Ki,ni mini	Kittaabe mee,o....	

	awoosaanchchikimat aggani miqqo,I mee,o?		
111	Atoomi mee,i birra siiddotto?	Kittaabe mee,o....	
112	Ayyeete kiina uwwokkoki?	1. Iyyuumma 2. Iyyani 3.Iyyabbayyuwii iyyayuwwi 4. Qari manna 5. Mullikeenuwwa	

BAXXANCHI LAMMO: KOSHO, O WISIMMI EEBBO HAWWUWWI LACHI GABALLI KEENNO, O.

Xigo	Xa,mmicha	Dabachcha	Bikko,o
Mati manchi kosho,o wirisulas hinki fayya,ooppi hawwo siidokko?			
201	Kuxxichi orochi (Samba,i) jabbuwwa eebookko	1.Eeyya 2. Aa,e	
202	Xi,qqi daballanchci orachuwwane hawwo affisookko	1.Eeyya 2. Aa,e	
203	Bi,lli kollinne yoo omacho bii,ssokkomme hawwojja affisokkomme	1.Eeyya 2. Aa,e	
204	Koshso,o bee,e hee,immi xansiissoyyo yaa amanno,isa issookko	1.Eeyya 2. Aa,e	
205	Sambba,i neqqarssa ebookko	1.Eeyya 2. Aa,e	
206	Hurbaxxi daballanchchi qamafeettanne hawwo affisookko	1.Eeyya 2. Aa,e	
207	Sukka,lli jabbina higissaa uwwookko	1.Eeyya 2. Aa,e	
208	Hooro,lli woronne yoo keemikkalluwwa hajjissa jabbina higissa uwwookko	1.Eeyya 2. Aa,e	

BAXXANCHI SASO: KOSHO, INA YOO WORO, LLI SHEENE, E KEENNO XAMMICHCHA

Xigo	Kosho,o woro,lli keenato	Dabachcha		
301	Kosho,I kichechinse gatisookko	1.Iittammo	2. Murumoyyo	3. Iittoomoyyo
302	Kosho,i wirisimmi dollabiminna haramokko	1.Iittammo	2. Murumoyyo	3. Iittoomoyyo
303	Kosho,o wirisimmi keemato	1.Iittammo	2. Murumoyyo	3. Iittoomoyyo

	xa, isimina haramato issokko			
304	Kosho,o wirisimi beshuwa siidimina haramokko	1.Iittammo	2. Murumoyyo	3. Iittoomoyyo
305	Kosho,o wirisimi orachi qamafeetuwa hawadooyyo	1.Iittammo	2. Murumoyyo	3. Iittoomoyyo
306	Kosho,o wirisimi jor halatonne beyyamokko	1.Iittammo	2. Murumoyyo	3. Iittoomoyyo
Kosho,ina yoo amanato keenimmi gaballa				
307	Bashil mani wirisokoki liraancha siiddiminatte	1.Iittamm o	2. Lambee,anco	3. Iittoomoyyo
308	Dollabimina wirisimmi hasisookko	1.Iittamm o	2. Lambee,anco	3. Iittoomoyyo
309	Kemaato xa,ishina wirisimmi awadookko	1.Iittamm o	2. Lambee,anco	3. Iittoomoyyo
310	Araqqi beshuwa siidimina wirisimmi awadookko	1.Iittamm o	2. Lambee,anco	3. Iittoomoyyo
311	Bashil manni kichecha ho,llokoki kosho,innette?	1.Iittamm o	2. Lambee,anco	3. Iittoomoyyo
312	Doilli woradduwina kosho,o wirisimmi mare,e	1.Iittamm o	2. Lambee,anco	3. Iittoomoyyo

BAXXANCHI SOORO: GAGANNE AMANIMMI GABALLA KEENIMMA

Xigo	Xa,mmicha	Horeem sholle,alla	Sholle,alla	Murumoyyo	Ke,mmalla	Horeem ke,malla
401	Anni iiganne ama,nnoomo wirisomobee,isa kosho,o					
402	Mati mati manni kosho,o uwuta,nimi ani horem kosho,o wirisoomoyyo					
403	Kosho,o wirisoomibee,isa yakkomo					

404	Worinse waroo sheene,uwa macheesomoyo kosho,i bikkina				
405	Ii gagina eer luwwa kuromo				

Gaganne amannimma duha,a keenimma

Code	Statement	Responses		
406	Wirisimma urimmi danaami ihukkisa ammanitohonihe?	1. Eeyya	2. Aa,ee	Murummoyyo
407	Wirisito,ni hee,immi kiina danaami beyyo uwwuso,isa laqqohonihe?	1. Eeyya	2. Aa,ee	Murummoyyo

BAXXANCHI ONTO KOSHO,I WIRISIMMA HORO POLISSE,E BIKKENE GUDDU
XAMICHCUWA

Xiggo	Xa,mmicha	Dabachchi gaballa	
501	Ki,ni losa,n minenne kosho,o wirisimma hooor polise,i yoohonihe?	1. Eeyya	2. Aa,e
502	Tophphe,i polise,i kosho,o wirisimma minaadabi wixu beeyyonne horo,isa laqqohonihe?	1. Eeyya	2. Aa,e
503	Hoffi umuranne kosho,o wirisimi hasisoobee,isa amanitohonihe?	1. Eeyya	2. Aa,e
504	Ki,ni losa,n mini hinka,ni gaballane kosho,o wirisimma egeesisso?	1. Eeyya	2. Aa,e
Abarosikii muli hinc manikka wirisimmi qaxooma keenimma			
505	Kiyyuumma kosho,o wirisaakkamonihe?	1. Eeyya	2. Aa,e
506	Kiyyaani kosho,o wirisaakkamonihe?	1. Eeyya	2. Aa,e
507	Kiyyaayya kosho,o wirisamonihe?	1. Eeyya	2. Aa,e
508	Kiyyaabayyi kosho,o wirisohonihe?	1. Eeyya	2. Aa,e

509	Ki beshuwwi kosho,o wirisamohonihe?	1. Eeyya	2. Aa,e
510	Ki,ni losa,n mininne losisaani kosho,o wirisamohonihe?	1. Eeyya	2. Aa,e

BAXXANCHI LOHO: KOSHO, O WIRISMI QUXXONNE BIKKUWA AMADU MANIKKA QAXXOOOMA KEENIMMA

Xiggo	Gaqqi gaballa keenimma	Gaba,lli keenato
601	Kabba kosho,o wirisitollanihe?	1. Eeyya 2. Aa,e
602	Kabba kiki kosho,o wirisimina yoo heelati maha labookko?	1. Hello,ommoyyo 2. Hoffi qaxxami hello,ommo 3. Horeemi helle,ommo
603	Waroo hiinchco wirisitena sawwiti yoothonihe?	1. Hanqoomanem eeyya 2. Iheena xanokko 3. Iheena xanoyyo 4. Hanqoomannemi ihoyyo
604	Kosho,o wirisito,isina isukkuyyi yokkoki aayette	1. Iyyaani 2. Iyyuumma 3. Iyyaabayyi 4. Iyyaayya 5. Losisaani 6. Qarimanni 7. Mullikeeni.....
605	Horeem ittitoo beshuwwi kosho,o uwamuta,ni wirisitothonihe?	1. Hanqoomanem eeyya 2. Iheena xanokko 3. Iheena xanoyyo 4. Hanqoomannemi ihoyyo
Koshsho,o wirisimina mash ka,I ihoo bikkuwina uwaamo beyyo		
606	Iyyanikki kosho,o wirisimmi aaa,imi wirisomosanne	1. Qoxxalla 2. Lambe,anchcho

		3. Erqaxxame
607	Iyyumakki kosho,o iitimi ii wirisimina mashka,I iheena xanookko	1. Qoxxalla 2. Lambe,anchcho 3. Erqaxxame
608	Losisaan wirisimina uwwamo beeyyi wirisomisina issena xanookko	1. Qoxxalla 2. Lambe,anchcho 3. Erqaxxame
609	Abbayuwikkii aayyuwi kosho,o wirisimma aa, immii urimmi wirisomisina mashka,I iheena xanookko	1. Qoxxalla 2. Lambe,anchcho 3. Erqaxxame
610	Mat baxxanchchanne losimanne yoo beshshuwwi koshsho,o wirisimmi gaballina mashka,I ihamenna xanamokko	1. Qoxxalla 2. Lambe,anchcho 3. Erqaxxame

BAXXANCHCHI LAMARA: KOSHSO, O WIRISIMMI DUHA,A HANANNE YOO AMANANNE YOO HEELATO

Xiggo	Xa,mmichcha	Dabacha
701	Ki heechi doollene kosho,o wirisita laqqohonihe?	1. Eeyya 2. Aa,e
702	Ka higgsu sadi balli woronne kosho,o wirisita laqqohonihe?	1. Eeyya 2. Aa,e
704	Mati santanne mee,i balla kosho,o wirisitotto?balla kitaabe
705	Luxxeekka wirisimma asheeti umur mee,i hee,ikko?	Kittabbe umuromma.....
706	Mee,i kosho,i wixxuwa mat ballanne wirisotto?Haquwwa
707	Lobakat amanne hinkki kosho,i hoffe,e awaxitokoki?	1. Niyyaalla 2. Roozzimana 3. Yoomakko,Ihegeegiinse siidamokkenuwwa 4. Mullikeeno.....kitaabe

708	Mahinatte kosho, o wirisitokoki?Kitaabe
709	Dimbisso agguuwwa agohonihe?	1. Eeyya 2. Aa,e
710	Caatta mixxeshonihe?	1. Eeyya 2. Aa,e
711	Shisha,a wirisitta laqqohonihe?	1. Eeyya 2. Aa,e
712	Waroo hiinchchonne kosho,o wirisito labbohonihe?	1. Hanqomonemmi iheena xanokko 2. Iheena xanokko 3. Ihimma hogena xanokko 4. Hanqomonemmi iheena xanooyyo
713	Mahinatte wirisimma asheetittokki?	1. Beshsuwwi ibbiso bikkina 2. Abbayyuwwii ayyuwwii wirisamu bikkina 3. Mini anno,ikki amo,ikki wirisimmi 4. Losisaa,ni wirisimmi 5. Mati mati mani losa,ni mininne wirismi ki,ubikkina 6. Mullikeeno
714	Mati ittitto beshsichchi koshsho,o uwwuta,ni wirisohonihe?	1. Hanqomonemmi iheena xanokko 2. Iheena xanokko 3. Ihimma hogena xanokko 4. Hanqomonemmi iheena xanooyyo

BAXXANCHCHI SADENTO: KOSHO, I SIIDAANCCHCI HALATO KEENIMMI XAMMICHCHA

Xiggo	Xa,mmichcha	Dabachcha
801	Kosho,o sholle,alisane siidohonihe?	1.Eeyya 2. Aa,e
802	Kosho,o haniinse siidootto?	1. Suqqiinse 2. Googiinse 3. Mulli beyyiinse
803	Kosho,o bita,llituuyya umura xamanta laqqohonihe?	1.Eeyya 2. Aa,e
804	Kosho,o bitaallo minenne kosho,o siidamo beyyone dissakamonihe?	1.Eeyya 2. Aa,e
805	Kosho,o bita,llo mininne kosho,omi siidaamo beyyonne dissakkamonihe?	1.Eeyya 2. Aa,e

UWITAKO, I DABACHCHINA HOREM GALAXXAMMO