



ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCE
SCHOOL OF PUBLIC HEALTH

Assessment of Desire for Marriage and Fertility preferences among Adolescent girls in a Senior Secondary School; Borena, Ethiopia.

By Hirbo Shore

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A thesis to be submitted to the school of graduate studies of Addis Ababa University, College of Health Science, School of Public Health in partial fulfillment of the requirement for the Degree of Masters of Public Health in Epidemiology.

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ADDIS ABABA, ETHIOPIA

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List of Acronyms

EDHS:	Ethiopian Demographic and Health Survey
EGM:	Expert Group Meeting
IRB:	Institutional Review Board
NSFG:	National Survey of Family Growth
RH:	Reproductive Health
UN:	United Nations
UNFPA:	United Nations Population Fund
UNICEF:	United Nations Population Fund
U.S.A:	United States of America
YSSPS:	Yabello Senior Secondary and Preparatory School

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Abstract

Background information: Adolescence is the transitional period from childhood to adulthood characterized by significant physiological, psychological and social changes. It is during this period that the biosocial transition is experienced, including intention and desire for future individual and societal role such as marriage and child bearing. Age at first marriage has a major effect on childbearing since women who marry early have, on average, a longer period of exposure to pregnancy and a greater number of lifetime births. In Ethiopia among women age 25-49, 63 percent married by age 18, and the median age at first marriage among women age 25-49 is 16.5 years. The fertility among adolescents age 15-19 in Ethiopia is 79 births per 1,000 women. The contribution of adolescents' fertility to the overall fertility rate in Ethiopia is significant. This study complements research on adolescents' reproductive and marital behavior by examining their desired age of marriage and family formation.

Objective: The objective of the study was to assess adolescents' desire for marriage and fertility preferences among high school students in a Senior Secondary School, Borena, Ethiopia.

Methods and material: School based cross-sectional study was conducted using both quantitative and qualitative data collection methods among sample of 422 adolescents from senior secondary and preparatory school on their desire for marriage and fertility preferences from January 5-6, 2012. Data was entered by Epidata version 3.1 and analyzed SPSS version 16. Bivariate and multivariate analyses were carried out.

Result: More than four fifth (85.4%) of adolescents desire to marry at age less than twenty four years. The mean desired age of marriage was 21.1 year (20-22.2 years). More than one fourth (29.2%) desired to have child five or more children and the mean desired number of children was 3.85 (1.85-5.85). Multivariate logistic regression showed that religion (being Muslim and Catholic), mother education (being illiterate), having married friend(s), ever had sexual intercourse, and internal locus of control (higher) were independently associated with desired age of marriage. Furthermore, ethnicity (being Amhara and Burji), places of birth (Rural), desired age of marriage, believe of parent determine when and who to marry, intension to have child and internal locus of control (higher) independently associated with desired fertility preferences.

Conclusion: Great majority of adolescents desired to marry before 24 years of age. Significant proportion of adolescents desire to have five or more children. School should offer adolescents' reproductive health education with focus on increasing awareness among young people on the micro and macro advantages of late age of marriage and lower fertility preference.

1. Introduction

1.1 Background information

Adolescence is the transitional period from childhood to adulthood characterized by significant physiological, psychological and social changes. World health organization (WHO) defines the age group 10-19 and 15-24 years of age as adolescents and youth, respectively. Those in the age group 10-24 years are called young people (1). It is during adolescence that the biosocial transition from childhood to adulthood occurs, is experienced, and further influences development. Development proceeds through a complex process that involves the mutual influences of a person's innate characteristics, family experiences, peer interactions, social roles, cultural environment, and the fortuities that impinge upon a life (2).

In low and lower middle income countries in the East Asia and Pacific region a significant proportion of women commence sexual activity during adolescence. The median age of sexual debut for women aged 25-49 ranges from 17.3 to 21.9 years and is similar to age at first marriage. The median age of first birth ranges from 20.2 to 23.4 years. Between 3.4% and 26.3% of women aged 15-19 are pregnant or have at least one previous birth. By 19 years of age between 10.5% and 48.5% of adolescents have commenced childbearing. Adolescent fertility rates are high in aged 15-19 years (3).

Fertility in the least developed countries is not only high; it is also characterized by a very early onset of childbearing. Consequently, the least developed countries display some of the highest adolescent birth rates in the world. Thus, whereas the total fertility of the least developed countries is double that of the developing countries, their adolescent birth rate is more than thrice as high: 117 births per 1000 women aged 15-19 vs. 37 births per 1000. Furthermore, the adolescent birth rate of the least developed countries has remained virtually unchanged since 1995(4). There are over 14 million births to adolescent women aged 15-19 each year, 91 percent of these in low and middle-income countries (5).

In Ethiopia, marriage marks the point in a woman's life when childbearing becomes socially acceptable. Age at first marriage has a major effect on childbearing because women who marry early have, on average, a longer period of exposure to pregnancy and a greater number of lifetime births. Women in Ethiopia marry much younger than men, and men are much less likely to have married by a specific age than women. However, the male-female gap in the proportion ever married becomes narrower with age and is much smaller for the 25-49 age group compared with the 15-24 age groups. Between the 2000 and 2005 surveys, the percentage of young women who were ever married decreased at all ages, except among women age 22. For young men, the percentage ever married decreased slightly for those age 15-18, but increased somewhat for men age 19-24(4).

1.2 Statement of problem

The obvious explanation for marriages between men and women lies in the desire to raise own children and the physical and emotional attraction between sexes (6). The age at which women marry has a strong influence on fertility levels in a society because it is a principal determinant of the length of time that women will be exposed to the risk of pregnancy during their reproductive years. Early marriage is directly associated with the early initiation of childbearing and high fertility which may have adverse effects on the health of mothers and newborns. Women in Ethiopia marry at a much younger age than women in most other sub-Saharan African countries which is 16.1 years (7). In Ethiopia among women age 25-49, 63 percent married by age 18, and 77 percent married by age 20. The median age at first marriage among women age 25-49 is 16.5 years (8).

The issue of adolescent fertility is important for health, demographic and social reasons. Adolescent mothers themselves are more likely than older women to suffer from severe complications during pregnancy and delivery because of physiological immaturity (7). Prior researches from developing countries have shown that married adolescents have earlier and higher fertility, poor fertility outcomes, and inadequate number of years between children than have married young adults (9). The fertility among adolescents age 15-19 in Ethiopia is 79 births per 1,000 women. The TFR for Ethiopia for the three-year period preceding the survey is 4.8 children per woman. The crude birth rate in Ethiopia is 34.5 births per 1,000 population (8).

Delaying girls' marriage by at least three years will significantly impact the rate of population growth (10). The impact of an increase in the median age at marriage on fertility will depend in part on the extent to which the increase is accompanied by a corresponding increase in the median age at first birth (11). Despite widespread interest in fertility intentions, the individual-level dynamics of fertility intentions and behavior are not well understood. Given the high level of involvement of adolescents in marriage and childbearing, and that the contribution of their fertility to the overall fertility rate in Ethiopia has higher. Only a few studies have examined the correlation between early expected family sizes and completed family size, and the degree to which fertility desires change over time is unknown. This study complements research on

adolescents' reproductive and marital behavior by examining their desired age of marriage and family formation. Questions addressed included: When adolescents size up their futures, how soon do they expect to marry and become parents? How commonly do they expect or desire to be unwed parents? What factors are associated adolescents' desires for marriage and parenthood? We are also concerned to know what family size adolescents want and why. The answers help us understand how contemporary adolescents view family formation. This helps us to know reproductive behavior and desires of the adolescents in fertility and to give attention. Ignoring adolescents in fertility research undermines efforts both to change their attitudes on population matters and to motivate them toward small family norms.

2. Literature review

2.1 Factors influencing desire of marriage

The family is a source of role modeling, guidance and emotional regulation, and a reproducer of societal values, norms and attitudes across generations (12). The family context perspective maintains that a family's values, cultural background, socioeconomic status, family structure, and other characteristics directly affect adolescents' views about their future life course, including their expectations and desires about family formation (6). Women who had decision-making freedom in their parental home carried this ability with them into marriage in their new home and were better able to negotiate about their fertility. The decisions regarding family planning and pregnancy are controlled by the family, often involving complex negotiations (13).

Race or ethnic groups tend to be socialized differently about the value of marriage, parenting, non-marital childbearing, and traditional family life the family context perspective suggests that race or ethnicity is related to adolescents' expectations and desires about marriage and childbearing or parenthood (6). Three aspects of family context are consistently associated with the expected or desired age of marriage; gender, race and ethnicity, and religious upbringing. Adolescent's age is not related significantly to marriage expectations (14).

Higher maternal education is associated with fewer transitions to cohabitation and marriage in young adulthood (15). Children who experienced parental divorce or lived in a step family are more likely to form marital unions earlier than those intact families to biological parent families (16).

Marriage is viewed as an important part of the future for most high school seniors. They say they most likely will choose getting married in the long run, and this attitude has increased slightly over the years. The great majority of high school seniors also strongly believe in the importance of marriage and family life. Teens seem to have become more pessimistic about the chances in modern society for having a happy marriage. The teen years are a time when thinking about children and parenthood is not a particularly high priority. When asked about the likelihood that

they would want to have children, the percentage of high school seniors stating that it's "very likely" has been relatively stable, 62% in 1995 (17).

The diverse family structures, in which teens are raised, as well as their early experiences with romantic relationships and dating, may have important implications for their attitudes and expectations concerning adult relationships and marriage. Teens who have serious romantic relationships in high school are more likely than other teens to expect to get married. In addition, attitudes toward marriage are a strong predictor of later relationship outcomes in adulthood (18).

Most high-school-aged teens have positive attitudes toward marriage and feel well prepared for it. When asked about their general attitudes toward marriage, most high-school-aged teens express strong support. In the 2006 wave of the MTF study, 98 percent of high school seniors responded that having a good marriage and family life was "somewhat important", "quite important" or "extremely important" to them. Only 2 percent said that a good marriage and family life was "not important". Most high school students also feel well prepared for marriage. In the 2006 MTF study, students were asked the question, percent of high school seniors said they felt "fairly", "well" or "very well" prepared for marriage. Less than 10 percent said they felt "poorly" prepared (18).

Most high-school-aged teens expect to get married, and a growing number want to delay marriage until later in life. In addition to holding positive general views about marriage, most high-school-aged teens say they expect to get married. More than 80 percent of high school seniors said they expect to get married. Another 15 percent said they are unsure which relationship outcome they are most likely to choose, while only 4 percent said they are most likely to stay single. Among the 81 percent of students who said they expect to get married, 90 percent said they expect to stay married to the same person for life. However, teens may overstate their chances of staying married to the same person for life. Addition 64% adolescents prefer marriage to stay single while 36% disagree (18).

Study on marriage and sexual experience of adolescent girls and women in West Gojam Zone showed that never married respondents and those who had been to school had the most progressive views on marriage age with over 75% feeling that a girl's ideal marriage age was at least age 18. Median age at first marriage was 17.3 among those aged 10 to 19 (19).

Sexual activity in adolescents increasing the likelihoods of expecting the "cohabitation then marriage" pathway instead of the "direct marriage" pathway (20). Adolescents who are involved in serious relationships are more likely than others to think they will get married at age 25 (21).

Study in Nigeria revealed that more than half of female adolescents reported that their parents were the most influential person in such decisions; this represents a considerable parental influence in whom and when their children and wards marry. Next to parents are the individuals (48% of males and 38% of females), although the individual rarely makes the final decision in this culture (22). Marjorie E. Starrels and colleague showed that a majority of both male and female respondents said they were somewhat or very likely to be married or to have a child by age 24, more female than male respondents were so inclined. Specifically, 86% of female, compared with 78% of male respondents thought they would marry by that age. Similarly, 65% of daughters versus 61% of sons thought that they would have a child by age 24 (23).

In the human capital approach to marriage, employment is a key mediating factor in the relationship between education and the transition into marriage and childbearing. In contrast to the effect of secondary education, urban residence is associated with a lower risk of marriage after first intercourse. Theories of socialization and role modeling suggest that parental education is related to adolescents' expectations of family behavior (6). Women living in towns and cities are between one-half and one-third as likely to marry in a given year after first intercourse as women living in rural areas. Because the effect of secondary education is so strong (OR = 7.7), even after taking into account the delaying effect of living in a town or city, women with a secondary level education are still much more likely to marry in a given year after first intercourse than less educated women regardless of where they live. The predictions of the dislocation hypothesis in terms of a greater likelihood of premarital intercourse and a longer time

to marriage after premarital sex hold true for women with little or no schooling living in urban areas, but not for women with higher education (9).

Constance A. showed if women's economic opportunity are determinant, then the favorable economic opportunities for both women and men may allow women to be less concerned about marriage, more concerned in a man in additions to his economic prospects and therefore, more choosy out their partners. On the other hand, if men's economic opportunities dominate the transaction, then favorable opportunities for both sexes should lead women to forget to their own economic prospects in the favor of sexual involvement and an early marriage (24).

Study in U.S indicated that the indicators of opportunity costs show strong, significant relationships with the outcomes in the predicted directions. Seniors expecting a bachelor degree or higher expect and desire to marry and become parents at a later age than seniors with lower educational ambitions. The age difference is about one year for expectations and between seven and ten months for desires. Grade point average similarly shows a strong positive relationship with all outcomes. A one standard deviation (0.89) increase in this average is associated with an increase in the marriage ages of about six months and in the parenthood ages of almost 12 months (14).

Poor living conditions and potentially dangerous neighborhoods lead parents to strictly control their children, control which they could relax only when the children got married. Marriage was the route to independence and adulthood for children growing up in these circumstances (25). Subtle changes in the family pattern especially with regard to the authority within the family as well as increased focus on individual autonomy, are also likely to influence members expectations of marriage and their choice of marriage partner. Educated middle class families are now more hesitant to make decisions for their off springs with regards to marriage (26). Current marital status, years of schooling, work status and parental marital decision are important predictors of early marriage (27).

2.2 Factors influencing desire and preference of fertility

The National Population Policy seeks the “harmonization of the rate of population growth and the capacity of the country for the development and rational utilization of natural resources to the end that the level of welfare of the population is maximized over time”. Specifically to reduce fertility per woman to 4 (28). At current fertility levels, an Ethiopian woman will have an average of 4.8 children in her lifetime. Ethiopian women want, on average, about four children, while Ethiopian men want about five children. Women living in rural areas desire more children than women living in urban areas (4.5 versus 3.7). Women with more than secondary education desire fewer children than women with no education (8). Fertility has declined from 6.4 births per woman in 1990 to 5.4 births per woman in 2005, a one child drop in the last 15 years. At current age-specific rates of childbearing, an Ethiopian woman will have had more than half of her lifetime births by age 30, and nearly three-fourths by age 35 (29).

Childbearing in Ethiopia starts early (8). The study in Nigeria showed that childbearing reflect various levels of influence, such as parental pressure, and socio-economic status, social norms, as well as individual needs and desires. About 45% of the adolescents desired large family size of six children or more; more female adolescents (43.8%) desired large family size. Adolescents’ gender, residence, ethnic origin, religion, educational level, knowledge and approval of contraceptive methods were significantly associated with family size preferences. The likelihood of large family size preference is significantly higher among adolescents whose parents had no formal education, married as teenagers, had six children or more, and practiced polygamy (22).

Several economists and sociologists have emphasized the role of the demand for children as an important source of change in the reproductive behavior of the individuals. Becker and others, by using the standard micro-economic consumer approach, theorized that children are perceived by parents as goods and that changes income and prices will predictably influence the demand of couples for children. Because childbearing and rearing involves significant amount of time and money, parents who choose to have more children weigh the rewards from having another child against the rewards other goods and services that could have been attained instead, thus making the demand of children change with the income and time costs (30).

Essentially social and economic circumstances of adolescents and their parents are crucial motivations for teenage marriage and childbearing, as well as family size preference (22). The larger the family of origin, the more likely the woman is to have higher than average intentions at a young age and to increase her fertility intentions as she gets older (31).

Study in Ethiopia showed that women living in rural areas were more likely to be fertile than their counterparts in urban areas. Compared to those living in Addis Ababa, adolescents living in rural (AOR=3.6; 95%CI=1.9 to 6.9) and other urban area outside Addis Ababa (AOR= 2.1; 95%CI=1.1 to 3.9) were four and two times more likely to be fertile respectively (32).

The close correlation between education and adolescent motherhood has raised expectations that the predicted expansion in access to secondary and university education accompanied by a sustained decline in adolescent fertility. Simply because of a statistical composition effect, more schooling does in fact tend to reduce aggregated levels of teenage fertility and motherhood. In addition, school, to which there is now mass access, has become the main place for socialization during adolescence (rather than simply a place to receive education). Teenagers meet their peers at school and are influenced by them. They learn how to relate to the opposite sex. In this context, they make their first romantic and sexual forays. However, neither society nor the school itself has adapted to this new reality (23).

The family plays a role for adolescents' future orientation by communicating expectations and deadlines, influencing ways in which goal realization can be dealt with, and contributing to evaluation of goal pursuits by providing support and feedback, and has been investigated in some studies. First, future planning was defined as an interpersonal action, subject to availability of co-planners: family members, peers, teachers or guidance counselors. When adolescents were asked with whom they had planned their future, they ranked family members as the most frequent source of information, followed by peers, the mass media and school (12).

There is a moderate-to-strong association between mothers' and children's family plans. The mothers' expectations of earlier marriage increase the odds of a higher score from their daughters by a factor of 1.97 and from their sons by a factor of 1.43. For the timing of parenthood measure, a higher score by mothers increases the odds of a higher score from daughters by a factor of 1.35 and from sons by a factor of 1.32. Sons were more likely to think that they would marry and become a father by age 24 if they had many friends. For both sons and daughters, plans for early parenthood are associated with father's involvement in decision making regarding children. Perhaps when their fathers are highly involved in day-to-day child rearing, daughters and sons have a more positive view of the parenting process and thus are more eager to become parents themselves (33).

An increase age at marriage and at first birth was an important component of fertility reduction and late age at marriage was a factor in the relatively low pretransition fertility of population. The impact of an increase in the median age at marriage on fertility will depend in part on the extent to which the increase is accompanied by a corresponding increase in the median age at first birth (34).

Expected and desired age of parenthood is significantly associated with three aspects of family context; gender, race, ethnicity and religious upbringing. The two indicators of sense of confidence and control show little relationship to the outcomes. The one significant coefficient of the eight suggests that locus of control has a positive relationship with expected age of parenthood (14).

The correspondence between intentions and behaviors varies depending on the components of intentions being measured; for example, women are more accurate at predicting their fertility behavior over a short period (two to three years) than over longer time spans, and intentions to have children or not match behavior better than intentions for specific numbers of children. Women who report that their fertility expectations are more certain are more likely to carry out those expectations (16). The stronger the intention to have or not have children, the greater the likelihood of realizing this intention. In most cases fertility intentions turn out to be poor predictors of future behaviors (35). Age and family formation status also affect the

correspondence between fertility intentions and behavior. Married women are more likely to meet fertility intentions than unmarried women; among unmarried women, the correspondence between intentions and behavior is strongly related to subsequent marriage (16). The actual fertility depends on the socio-demographic situations. Fertility tends to decrease with the level of educations. Fertility decreases among the lowest income persons and, curiously among those with highest income (35).

Laurent T and colleague showed that fertility intentions do not have the same predictive value for all social groups. For example, all other things being equal, it's the most highly educated who often realized the intentions whatever these may have been. The relationship between fertility intentions and actual fertility behaviors is therefore quite loose, because it depends on many other factors (35).

According to Catherine Stevens-Simon et al, childbearing expectations reflect distinct concepts and account for a significant portion of the variance in the desire to remain non-pregnant during adolescence. Future plans, self-esteem, and boyfriend relations, are statistically significant, independent predictors of the strength of the desire to remain non-pregnant during adolescence ($p < 0.0001$) (36).

Study by Freedman R showed that reproduction and the level of fertility tended to be crucial matters for family and society where they belonged. Therefore, they are determined by the cultural norms related to family size and other related concerns such as marriage, timing of intercourse. The decision on the number of children that the couples should have tended to be determined by community's family size norms. These family size norms tend to be corresponded with the numbers of that maximizes the net utility to be derived from having children in a society. Thus changes in fertility are likely without prior or at least simultaneous changes in institutions (37).

Studies in U.S. showed that births to unmarried women increased steadily during the post-war decades, accelerating in the 1980s. This trend also contributed to an increase in single parenthood. Over the last 40 years, an historic shift occurred in the percentage of children living with a parent who has never married. In the early 1960s, less than 1 percent of children lived with a parent who had never married. By 2000, nearly one in ten children lived with a never-married parent. In addition, today nearly one-third of all births occur to unmarried women (including never married, divorced, and widowed women), accounting for more than a million births annually (38).

Adolescents from non-intact families are more likely to develop non-normative attitudes. Hence, they may be more likely to have non-normative expectations about family life, including stronger expectations for early and non-marital childbearing (22).

Attitudes toward having children outside of marriage, respondents with traditional orientations to familial values have shown more negative attitudes to childbearing outside marriage. Attitude toward having children outside of marriage more common among those who disagree with the traditional gender division of labor. More positive attitudes toward having children outside of marriage for persons who are less religious, persons who hold positive attitudes to cohabitation, and those for whom the ideal family size was under three children (39).

3. Objectives

3.1 General objective

To assess desire for marriage and fertility preferences among adolescent girls in Yaballo Senior Secondary and Preparatory school, Borena, 2012.

3.2 Specific objectives

1. To assess desired age of marriage among adolescent girls.
2. To assess fertility desires and preferences among adolescent girls.
3. To explore factors influencing desires for marriage.
4. To explore factors influencing fertility preferences among adolescent girls.

4. Material and Methods

4.1 Study area and period

This study was conducted in YaballoTown of Borena Zone which is 573Km South of Addis Ababa, capital of Ethiopia. Yaballo has one public high school and preparatory school which was the oldest and historic school in Zone. It was established in 1972 E.C. There were 2689 students in the academic year 2011/12, of which 39.05% (1050) were female and 1027(97.8%) of them are in age group 15 to 19 years old. Yaballo senior secondary and preparatory school is purposely selected for this study because it has larger number of students coming from different places with different background. Data was collected in January, 2012.

4.2. Study Design

School based cross-sectional design was used and quantitative and qualitative were collected from senior secondary and preparatory school adolescents on their marriage and fertility desire as well as preferences.

4.3 Source population

All adolescent girl students attending high schools in Yaballo Senior Secondary and Preparatory School in the year 2012.

4.4 Study population

High school girl students in Yaballo between the ages of 15 and 19 years attending grade 9-12 for the academic year 2011/2012 selected from the source population.

4.5 Sample size

4.5.1 Quantitative component

The sample size was determined assuming that 50% of adolescent expect marriage at the age 24 years because there is no research done in the area or probably in the country, with 5% marginal error and 95%CI($\alpha = 0.05$) and a none response rate of 10%. Based on this assumption, the actual sample size for the study was determined using the formula for single population proportion.

$$n = \frac{(Z_{\alpha/2})^2 p(1-p)}{d^2}, \quad n = \frac{(1.96)^2 \times 0.50(1-0.50)}{(0.05)^2} = 384$$

Where: n=the required sample size

z= standard score corresponding to 95% CI

p= Assumed proportion of desired age marriage at less than 24 years.

d= the margin of error 5%

None response rate = 10%

n= 384 + 10%

None respondent rate 10%= 38

Required sample size 384= 422

4.5.2 Qualitative component

Focus Group discussion (FGD) was conducted in order to generate information to supplement the quantitative data. Four groups of 8 female students were selected purposely for FGD from each grade (9-12) level. Information were collected from those students not participated in the quantitative study to minimize information dissemination during the study period.

4.6 Sampling procedure

For quantitative component systematic random sampling method was used after sample size is proportionally allocated to each grade level from grade 9-12 to the number of eligible girl students in each grade. Continuous assessment sheet along with attendance sheet was used as a sampling frame and study subjects were systematically selected from the frame.

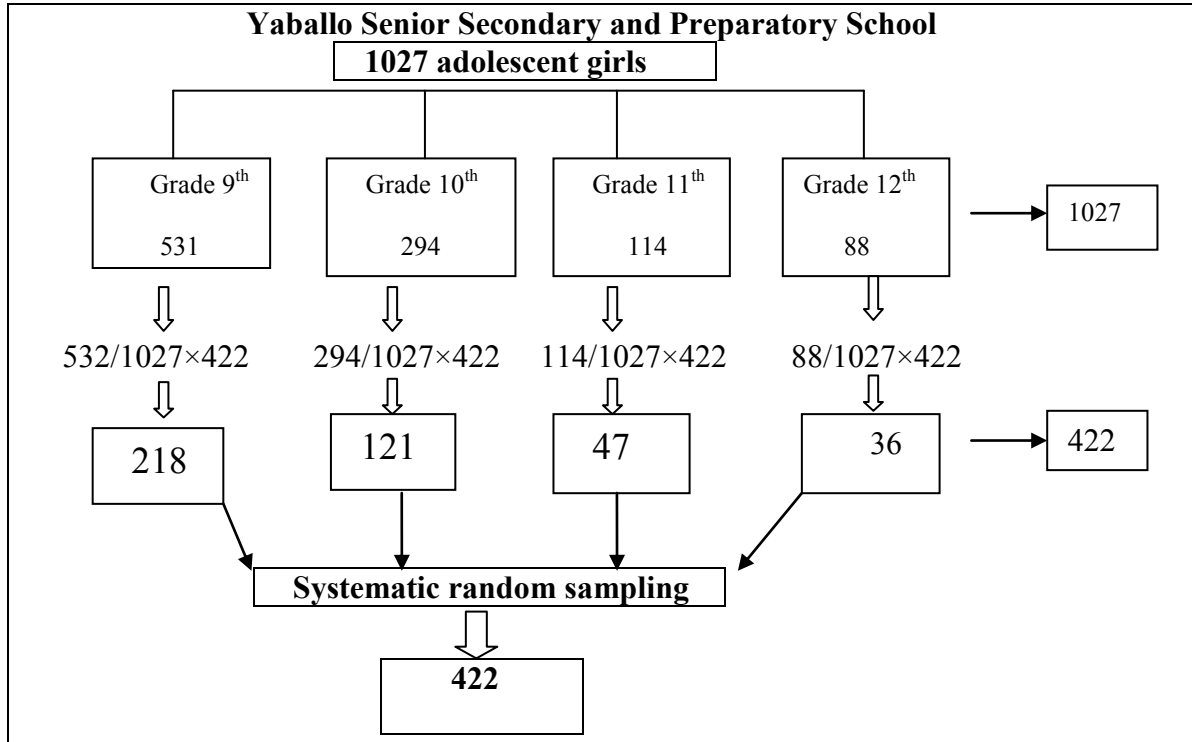


Figure 1. Schematic presentation of sampling procedure

4.7 Study Variables and measurement

4.7.1 Dependent variables

Desired age of marriage and fertility preferences. The desired age of marriage was measured by asking student to select age group in which they desire to marry. Similarly desired age at first birth was measured by providing option which contain age group less than 18, 18-19, 20-21, ..., 30+ and the mean and median of desired age of marriage was calculated by taking the middle value of the group. To see factors associated with desired age of marriage we dichotomized into 1= age less than 24 year and 0 \geq 24 years. Fertility preferences or desired number of children was

measured by providing options for respondents 1, 2, 3, 4, 5, 6, 6+ and dichotomized into $0 \leq 4$ or average and $1 > 4$ to see factors associated with future fertility preferences.

4.7.2 Independent variables

Age, sex, residence, religion, ethnicity, school grade level, school grade average point, number of sibling, parents' marital status, mother education level, father educational level, parents occupation, parents marital status, parents types of union and whether they are living together, respondent's social relationships such as having married friends, married sister and brother, history of sexual intercourse, having sexual partner, attitudes towards marriage, intention for marriage, expectation of staying married to same person, cohabitation traditionalism, expected educational attainment, self-esteem, locus of control and expects nonmarital birth.

4.8 Inclusion and exclusion criteria

4.8.1 Inclusion criteria

All students between the age 15 and 19 years attending school in the Yabello senior secondary and preparatory school during study period, who are willing to participate in the study by completing the self administered questionnaire and focus group discussion.

4.8.2 Exclusion criteria

All girl students below the age of 15 and above 19 years were excluded from the study. Furthermore, those currently married or parents or pregnant adolescent girls were also excluded assuming that they are under the influence of their partner or parent.

4.9 Data collection process

4.9.1 Quantitative data collection process

Structured and semi-structured, pretested and self-administered questionnaires were used for data collection. Eight teachers who had BSc were used as supervisors during data collection. Adequate training was given to data supervisors about the purpose of the study, on the contents of the questionnaire, issues related to the confidentiality of the responses and the rights of

respondents. Self-administered questionnaires were distributed by the data supervisors to the students to answer each question in hall. The principal investigator supervised the whole process.

4.9.2 Qualitative data

Four focus group discussions were carried out using discussion guide containing semi-structured questions. Thirty two purposely selected female adolescent of age 15-19 years were involved in four sessions each session containing eight female students. Those adolescents who didn't participate in the quantitative component and who were volunteers were purposely selected for FGDs. Two trained research assistants tape recorded and took note of all discussions. The principal investigator moderated all focus group discussions. The focus group discussions were focused on exploring factors that affect age of marriage and fertility preferences.

4.10 Data quality control

The questionnaire was prepared originally in English and translated to Afan Oromo and then translated back to English. Pretest of the questionnaire for clarity and consistency of the questions were done two days prior to actual data collection. Eight supervisors served as a research assistant and performed the routine supervision of the detailed data collection procedure. They have checked each and every completed form and special attention to the completeness of each question in the questionnaire. Additionally principal investigator provides technical assistant and guidance throughout data process. Furthermore, double data entries were done for 10% of the data to check for consistency. Eleven questionnaires were discarded because of incompleteness and inconsistencies. Questionnaires were excluded from entry if students failed to answer questions about desired age marriage, fertility preference, self-esteem and self-control or if they gave inconsistent or invalid answer to all questions

4.11 Data processing and analysis

Data analysis for quantitative

Quantitative data was coded and entered into Epi Data version 3.1 and exported for analysis to SPSS Version 16 computer. For errors related to consistency, 10% of data were entered and cross checked as part of data cleaning process. The descriptive analysis such as proportions, frequency distribution and measures of central tendency were computed. Association was computed using odds ratio with 95% confidence interval. Univariate and multivariate analyses were performed to examine relationship between outcome variables and selected determinant factors. P-value less than 5% considered significant.

Data analysis for qualitative

Focus group discussion findings both written on a notebook and transcribed tape -recorded notes were compiled together, and later translated and open coded with open code version 3.6. The categories developed from code and data analyzed using theme. Important findings were discussed and presented in quotations.

4.12 Ethical consideration

Ethical clearance was obtained from the SPH and Institution and REC for the study. A formal letter was written from School of Public Health, Addis Ababa University to Borena Zone educational bureau and Yaballo Senior Secondary and preparatory School. Permission obtained from YSSPS after explaining the issue of minor groups. Furthermore written consents were obtained from the study subjects after explaining the study objectives and procedures and their right to refuse to participate in the study any time they want to. For this very purpose, a one-page consent letter was attached to the cover-page of each questionnaire stating about the general purpose of the study and issues of confidentiality which were discussed by data collectors before proceeding with the interview.

4.13 Operational Definitions

Adolescence: Period of development corresponds to the period between the ages of 10 and 19 years (WHO).

Adolescent: 10-19 years age group (WHO)

Young adolescent: 15-17 years of age group (WHO)

Old adolescent: 18-19 years of age group (WHO).

Desired age of marriage: Age at which one want to marry or get married.

Desire for parenthood: motivation to have child (aspiration).

Fertility preference: desired number of children or family size in the future.

High school: grade level from 9-12.

Locus of control; refers to the perceived location of reinforcement sources for a person—that is, who or what is responsible to the things that happen to a person(Rotter,1966).

Marriage: A living arrangement legally contracted by or for two people of the opposite sex. The legality of the arrangement or union may be established by civil, religious or other means as recognized by the laws of each country.

Nonmarital: Outside marriage

Opportunity cost: The cost of an alternative that must be forgone in order to pursue a certain action, or the benefits one could have received by taking an alternative action.

Parenthood: Childbearing

Self-esteem: the extent to which one perceives oneself as relatively close to being the person one wants to be and/or as relatively distant from being the kind of person one does not want to be, with respect to person-qualities one positively and negatively values.

4.14 Dissemination of finding

The finding of the study after being defended at Addis Ababa University will be submitted to the School of Public Health, Borena Zone Education Bureau, Yaballo Senior Secondary and Preparatory School, Yaballo Town Education Bureau and UNFPA, the funding agent. As deemed necessary, it will also be communicated in scientific conferences and will be Published and disseminated through different journals and scientific publications.

5. Results

5.1 Socio-demographic characteristics

A total of 422 study subjects participated in the study and 411 of them completed the questionnaires which makes the respondent rate 97.4%. The mean age of the participant was 16.78 (SD= 1.2) years.

Nearly half 211(50.3) of were grade 9th students. More than two third (69.6%) were young adolescents between age of 15-17 years. Oromo is the major ethnicity group (80%). More than one third 141(34.3%) of student follow orthodox Christianity.

With respect to birth places majority of respondents; that is more than half (55.5%) students born in urban. Two hundred thirty three (56.7%) were living with both biological parents. Parents are the sources of income for 79.3% (326). (*Table 1*)

Table 1. Socio-demographic characteristics of adolescent girls in YSSPS, Yaballo, 2012.

Characteristics	Frequency (n)	Percentage (%)
Grade		
9	211	50.3
10	120	29.2
11	46	11.2
12	34	8.3
Age (n=411)		
15-17	286	69.6
18-19	125	30.4
Ethnicity (n=411)		
Oromo	329	80.0
Amhara	37	9.0
Burji	24	5.8
Konso	6	1.5
Others	5	3.6
Religion (n=411)		
Orthodox	140	34.1
Protestant	128	31.1
Muslim	84	20.4
Catholic	43	10.5
Other	16	3.9
Birth place (n=411)		
Urban	228	55.5
Rural	183	44.5
Person live with (n=411)		
Both parents	233	56.7
Single & grandparents	37	9.0
Brother/sister	65	15.8
Friend	46	11.2
Alone	16	3.9
Other	14	3.4
Sources of income (n=411)		
Family	325	79.1
Working	36	8.8
Scholarship	33	8.0
Other	17	4.1

5.2 Socio-demographic characteristics of family of adolescents

Greater majority (98.3%) of respondent' s biological parents were married. Of these married biological parents 86.9% (351) were in monogamous union and 93.1% (376) are currently living together. Two hundred forty nine (60.6%) of parents of respondents are currently living in urban areas. Two hundred sixty six (64.7%) of respondents have six or more siblings.

Regarding respondent' s maternal educational status 56.9% (234) illiterate while 9.5% (39) reached to tertiary level education. For one hundred eighty two (44.3%) of respondent' s father illiterate and less than one fifth (18.5%) reached tertiary education.

Concerning occupational statuses of parents, 37.6% (154) of mothers were housewife and 26.3% (108) were farmers. Two hundred twelve (52.2%) of fathers were farmer and 25.8% (106) were employed in public institutions and Non-governmental institutions. (Table 2)

Table 2. Socio-demographic characteristic of family of Adolescent girls in YSSPS, Yaballo, 2012.

Characteristics	Frequencies (n)	Percentage (%)
Parents married (n=411)		
Yes	404	98.3
No	7	1.7
Parental Union Types (n=404)		
Monogamy	351	86.9
Polygamy	53	13.1
Parent Current living together (n=404)		
Yes	376	93.1
No	28	6.9
Place of residence (n=411)		
Urban	249	60.6
Rural	162	39.4
Number of sibling (n=411)		
1-2	25	6.1
3-4	63	15.3
5-6	135	32.8
7-8	119	29.0
9-10	46	11.2
>10	23	5.6
Mother Education (n=411)		
Illiterate	234	56.9
1-4	34	8.3
5-8	64	15.6
9-12	40	9.7
12+	39	9.5
Father Education (n=411)		
Illiterate	182	44.3
1-4	38	9.2
5-8	64	15.6
9-12	51	12.4
12+	76	18.5
Mother Occupation (n=411)		
Housewife	154	37.6
Farmer	108	26.3
Merchant	95	23.2
Employed	48	11.7
Other	6	1.2
Father Occupation (n=411)		
Farmer	212	52.2
Merchant	63	15.2
Employed	106	26.2
Other	25	6.2

5.3 Sibling, friends' and sexual characteristics of adolescent

Regarding sibling, friends and sexual characteristics of students; two hundred fifty six (62.3%) of them have married sister(s) and 209(50.9%) of them have married brothers. One hundred eighty five (45%) of them have both married sister(s) and brother(s). Two hundred twenty four (54.5%), one hundred forty four (35%) and two hundred seventy five (66.9) of them have married friend(s), ever made boy friend and ever have sexual intercourse respectively.

Table 3. Sibling and friends' marital status and sexual experiences of adolescent girls in YSSPS, Yaballo, 2012.

Characteristics	frequencies (n)	Percentage (%)
Have married Sister (n=411)		
Yes	256	62.3
No	155	37.7
Have married Brother (n=411)		
Yes	209	50.9
No	202	49.1
Have married friend (n=411)		
Yes	224	54.5
No	187	45.5
Ever made boy friend (n=411)		
Yes	144	35.0
No	267	65.0
Ever sexual intercourse (n=411)		
Yes	275	66.9
No	136	33.1

5.4 Attitude towards marriage of Adolescent girls

Great majority of participants (91.5%) believes that marriage important, quite important or extremely important. The result from Focus group discussion supports this; Most of the discussants considered marriage as important event in life. For example one the 19, protestant, came from rural and 12 grade student said;

Three hundred thirty seven (82%) prefer marriage to staying single. Majority of adolescents (59.9%) reported that they were fairly, prepared, well prepared or very well prepared. One hundred sixty five (40.1%) were answered that they were poorly prepared for marriage. (Table 4)

Table 4. Attitude towards marriage of adolescent girls in YSSPS, Yaballo, 2012.

Characteristics	frequency	percentage
Importance of marriage(n=411)		
Extremely important		
191	46.5	
Quite important	110	26.8
Important	75	18.2
Not important	35	8.5
Better to marry (n=411)		
Strongly agree	211	51.3
Agree	126	30.7
Disagree	43	10.5
Strongly disagree	31	7.5
How well prepared for marriage (n=411)		
Very well prepared	57	13.9
Well prepared	61	14.8
Fairly prepared	128	31.1
Poorly prepared	165	40.1

5.5 Desired age of marriage and Ideal time to marriage of adolescents

Two hundred forty eight (60.3%) of the students had thought of marriage. More than half (59.9) of adolescents expect to marry while 39.7% (163) were not certain about marriage.

The mean of ideal age of marriage was 19.5 (SD= 2.0). The ideal age of marriage was less than twenty for nearly two third (267) of adolescents. For majority of students 47.9%(197) the ideal age of marriage was 18-19 and age 24-25 accounts only 6.1% (25) of ideal age of marriage.

The ideal time to marriage is 2-3 year of 33.6% (138), followed by 31.6% (130) and 29.0% (119) for greater than or equal to six and four to five respectively.

The mean of desired age of marriage of the study subjects was 21.103 (SD=1.10). One hundred nineteen (29.0%) adolescents desire to marry at age 22-23year and only 4.1% (17) them desire to marry at age less than 18 (see table 5). The qualitative result show similar result that most of participants discussed that their desired age of marriage is 18 or more than that. For example one the participant 19, grade 12 said;

Concerning persons who influence marriage; two third 66.7% (274) believe that they themselves determine who and when to marry.

Two hundred fifty two (61.3%) study subjects expect to marry to the same person in their life time (see table 5). The qualitative support this result that most of the participant discussed monogamy marital union is preferable. For example of participant 19, grade 12 said;

Regarding study subjects' expectations of cohabitation, more than half (54.0%) of them do not expect cohabitation at all. Fifty two (12.7%) of them indicated that they certainly they expect cohabitation.

Concerning the expectation of non-marital child birth, 91.0% (374) of them do not expect non-marital child birth at all.

Table 5. Intension of marriage, ideal and desired age at marriage and expectation of cohabitation of adolescent girls in YSSPS, Yaballo, 2012.

Characteristics	Frequencies (n)	Percent (%)
Thought Marriage (n=411)		
Yes	248	60.3
No	163	39.7
Expect Marriage (n=411)		
Yes	246	59.9
No	2	0.5
Uncertain	163	39.7
Ideal Age of Marriage (n=411)		
<18	70	17.0
18-19	197	47.9
20-21	69	16.8
22-23	50	12.2
24-25	25	6.1
Desired age at marriage (n=411)		
Less than 18	17	4.1
18-19	99	24.1
20-21	11	28.0
22-23	119	29.0
24-25	61	14.8
Desired age of marriage		
< 24	350	85.2
≥24	61	14.8
Expect cohabitation (n=411)		
Not at all	222	54.0
A little	26	6.3
Somewhat	39	9.5
Probably	72	17.5
Definitely	52	12.7

5.6. Desired Fertility Preferences of adolescent

With respect to desired fertility preferences of study subject, more than half (53.3) students reported that have ever thought about having child. The mean ideal age to have first child of the study subjects 22.2 (20.2-24.2) years. Three fourth (75.4%) of study subjects believe the ideal age to have first child is less than 24 years of age. Among these, for 54.7% (169) the ideal age to have the first child is 22-23 year. For nearly quarter adolescent (24.3%) ideal age of first child is 20-21 years.

The mean of desired age to have first child was 22.7 (20.7-24.7) years. More than two third of adolescents (68.9%) desire to have first child at age less than 24 years. Nearly two third (65.3%) of these desire to have their first child at age 22-23 years (Table 6).

Overall the mean of desired number of children 3.85(SD=2.0). Majority (70.6%) of study subjects desire to have four or less children.

Adolescents were asked their idea of what number of children constitutes “large” or “small” family size was sought. Majority adolescents (80.3%) have opinion that a family size of six children or more is large.

On the preference of small or large family; 359 (87.3%) of adolescents said they prefer to have a small family size in their life time, while 12.7% of them prefer large family size (see table 6). But what constitutes small and large family is very different among adolescent. There were adolescents that said family of seven is small and the other say a family more than three is large.

Table 6. Intention to have child, ideal and desired age of first child birth, and Desired Fertility Preferences of adolescent girls in YSSPS, Yaballo, 2012.

Characteristics	Frequencies (n)	Percent (%)
Thought of having child (n=411)		
Yes	219	53.3
No	192	46.7
Ideal age at first child (n=411)		
<18	5	1.2
18-19	35	8.5
20-21	100	24.3
22-23	169	41.1
24-25	95	23.1
26-27	7	1.7
Ideal of having child (n=411)		
Less than 24	309	75.2
≥24	102	24.8
Desired age of having first child (n=411)		
18-19	18	4.4
20-21	81	19.3
22-23	186	45.3
24-25	97	28.6
26-27	29	7.1
Desired age having first child (n=411)		
Less than 24	283	68.9
≥24	128	31.1
Desired Number of children (n=411)		
1-2	93	22.6
3-4	198	48.2
5-6	73	17.8
7-8	47	11.4
Desired number of child (n=411)		
≤4	291	70.8
≥5	120	29.2
prefer small or large family (n=411)		
Small	359	87.3
large	52	12.7

Reasons for preferring large and small family

The respondents who desired large family size were asked to mention some reasons regarding their choice. Among the reasons that motivated adolescent to prefer large family than small family were More helping hands and guaranteed support at old age, You can't tell how many of them will die in infancy and Children are source of wealth creation for parent or community were motivations rank high.

Similarly, the respondents who desired small family size were equally asked to mention some motivations regarding their choice. The data show that the motivation for small family size was borne mainly by the need to provide effective parental control and discipline for the children, to free one-self from problems that come with large family size, the need for them to have their basic needs adequately provided, and health considerations. Health need of the respondents, account for the most popular reasons why adolescents desire small family size.

5.7 Traditionalism of adolescents

Regarding the traditional views of the study subjects was assessed by whether adolescents approve premarital sexual intercourse and importance of religion in their lives. Eighty eight (21.4%) respondents disapprove sexual intercourse before marriage. Fifty one (12.4%) respondents neither disapprove nor approve premarital sexual intercourse and the remaining majority of respondents approve premarital sexual intercourse.

The other is the respondents were asked how important their religions in their lives; almost all of them answered that religion is somewhat important, important or very important in their life. Of these 69.0% (276) of the respondents answered religion is very important in their life.

Table 7. Traditionalism of adolescent girls in YSSPS, Yabello, 2012.

Characteristics	Frequencies (n)	Percent (%)
Approval of sex before marriage		
Strongly disagree	54	13.1
Disagree	34	8.0
Neither agree or Disagree	51	12.4
Agree	133	32.4
Strongly Agree	139	33.8
Importance of religion in your life		
Not at all important	3	0.7
A little important	8	1.9
Somewhat important	70	17.0
Important	54	13.1
Very important	276	76.2

5.8 Expected opportunity cost

On assessment of opportunity cost of respondents last semester/year academic performance measures based the respondents report. Slightly more than half (51.1) had scored average grade point 60-79 which categorized as good. (Figure 2)

On the assessment study subjects' educational inspiration; 21.7% (89) of them inspire to complete grade 12. (Figure 3)

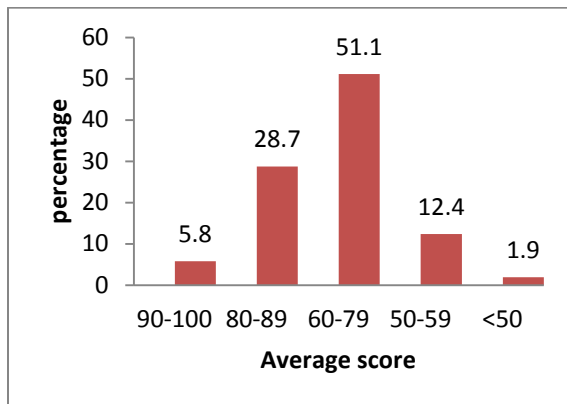


Figure 2. Distribution of average grade score of adolescent girls in YSSPS, Yaballo, 2012.

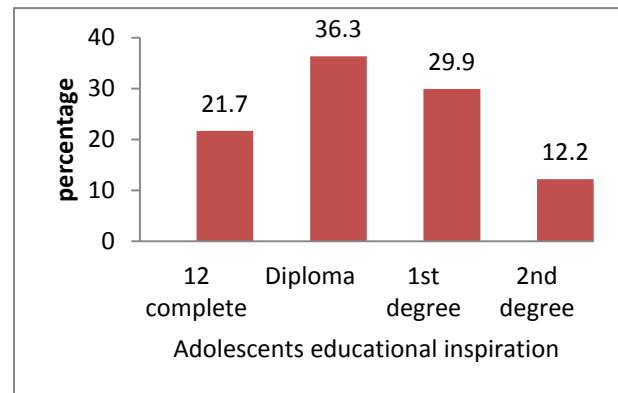


figure 3. Distribution of educational inspiration of adolescent girls in YSSPS, Yaballo, 2012.

5.9 self-esteem and locus of control

5.9.1 Self-esteem

Self-esteem is measured on Rosenberg scale which contains four likert scale labeled as strongly agree, agree, disagree and strongly disagree. The mean score of the respondents was 19 ± 5.05 . Three hundred fifteen (76.6%) the respondents have the score normal to high. Among these 79.7% (251) of the respondents in normal score range (score on the scale 15-25) and 20.3% (64) the score high on the Rosenberg scale (score >25). Ninety six (23.1%) of the respondent have less than 15 (low score on Rosenberg scale).

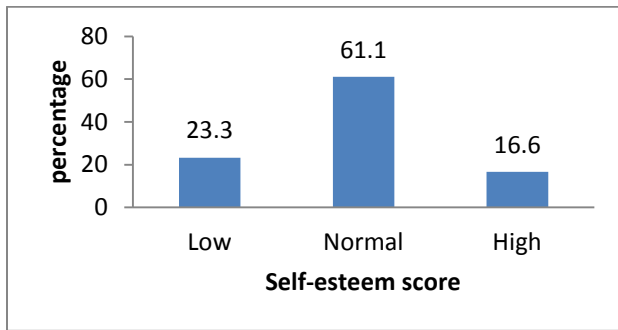


Figure 4. Self-esteem score of adolescent girls in YSSPS, Yaballo, 2012

5.9.2 Locus of control

There were three separate scales used to measure one's locus of control: Internal Scale, Powerful Others Scale, and Chance Scale. There were seven items on each of the three scales, which are presented to the subject as one unified attitude scale of 21 items. To score each scale add up the points of the circled answers for the items appropriate for that scale. The specific content areas mentioned in the items are counterbalanced so as to appear equally often for all three dimensions. Mean scores of respondents in internal locus of control scale was 33.87 ± 8.186 , powerful other scale was 20.93 ± 11.47 and that of chance scale 24.27 ± 9.434 .

5.8 Factors influencing desired age of marriage

After controlling for the effects of potentially confounding variables using multivariate stepwise logistic backward logistic regression (using variables having significant association; $p < 0.05$ in bivariate analysis), age, religion, ideal age of marriage and internal locus of control were found to be statistically significantly associated with desired age of marriage.

Among socio-demographic characteristic age and religion are independently associated with desired age of marriage. Adolescents who are in age group between 15 and 17 is 5.83 (AOR, 95%CI=2.86-11.90) more likely to desire to marry at age less than 24 other variables kept constant. Being Muslim 3.41 (AOR, 95%CI=1.02-11.35) times more likely to desire to marry at age less than twenty four years. Being Catholic 11.0(AOR, 95%CI=1.27-96.0) times more likely to desire to marry at age less than twenty four years.

Adolescent whose mother is illiterate 5.98 (AOR, 95%CI=1.86-19.26) times more likely to desire to marry at age less than twenty four years.

Those who had married friend 2.82 (AOR, 95%CI=1.33-5.99) times more likely to desire to marry at age less than twenty four years than those did not have married friends. Those ever had sexual intercourse 2.0 (AOR, 95%CI=1.02-3.94) times more likely desire to marry at age less than twenty four years.

Adolescents' internal locus of control independently significantly associated with reduced odds of desire to marry at age less than twenty four (AOR=0.95, 95%CI=0.90-0.99) after adjusted for age, religion, mother's education, had married friends ever had sexual intercourse, and person live with.

Table 8. Factors influencing desired age at marriage of adolescent girls in YSSPS, Yaballo, 2012.

Characteristics	Desired Age at first marriage		COR(95%CI)	AOR(95%CI)
	Less than 24 n (%)	≥24 n (%)		
Age				
15-17	257(89.9)	29(10.1)	3.05(1.75-5.32)***	5.83(2.86-11.90)***
18-19	93(74.4)	32(25.6)	1	1
Religion				
Orthodox	109(77.3)	32(22.7)	1	1
Protestant	106(83.5)	21(16.5)	1.51(0.82-2.80)	1.15(0.54-2.45)
Muslim	80(95.2)	4(4.8)	5.93(2.02-17.43)**	3.41(1.02-11.35)*
Catholic	42(97.7)	1(2.3)	12.44(1.65-94.0)*	11.0(1.27-96.0)*
Others	13(81.2)	3(18.8)	1.30(0.34-13.45)	0.81(0.15-5.35)
Place of birth				
Urban	191(83.8)	37(16.2)		
Rural	159(86.9)	24(13.1)	1.28(1.04-2.24)*	1.17(0.98-2.75)
Person live with				
Both parents	202(86.7)	31(13.3)		
Single/grandparents	27(73.0)	10(27.0)	0.41(0.18-0.94)*	0.21(0.075-1.56)
Brother/sister	53(81.5)	12(18.5)	0.68(0.32-1.41)	0.61(0.24-1.51)
Friend	44(95.7)	2(4.3)	3.4(0.78-14.65)	3.34(0.64-17.46)
Alone	14(87.5)	2(12.5)	1.07(0.23-4.95)	0.86(0.15-5.80)
Other	10(71.4)	4(28.6)	0.38(0.11-1.30)	0.17(0.03-0.97)
Maternal education				
Illiterate	161(68.8)	73(31.2)	3.60(1.60-8.20)***	5.98(1.86-19.26)***
1-4	22(64.7)	12(35.3)	1.52(0.51-4.49)	3.19(.82-12.35)
5-8	49(76.6)	15(23.4)	1.20(0.48-2.89)	2.15(0.73-6.37)
9-12	28(70.0)	12(30.0)	3.54(1.0-12.30)	6.0(1.39-25.95)
12+	31(79.5)	8(20.5)	1	1
Friends married				
Yes	204(91.1)	20(8.9)	2.86(1.61-5.09)**	2.82(1.33-5.99)**
No	146(78.1)	41(21.9)	1	1
Ever made sex				
Yes	244(88.7)	31(11.3)	2.23(1.30-3.90)*	2.0(1.02-3.94)*
No	106(77.6)	30(22.1)	1	1
Thought about marriage				
Yes	23(10.5)	196(89.5)	2.10(1.20-3.70)**	1.67(0.81-3.45)
No	38(19.8)	154(80.2)	1	1
Locus of control				
			0.94(0.90-0.98)**	0.94(0.90-0.99)*

Adjusted for age, religion, place of birth, person live with, maternal education, had marriage friend, ever had sexual intercourse, thought of marriage, locus of control.

*significant at $p < 0.05$, ** $p < 0.01$, *** $p < 0.000$,

5.9 Factors influencing desired fertility preferences

After controlling for the effects of potentially confounding variables using multivariate logistic regression (using variables having significant association; $p < 0.05$ in bivariate analysis), ethnicity, birth places, desired age of marriage, influential person and internal locus of control were found significantly associated with desired fertility preferences. Among socio-demographic characteristics of the adolescent Ethnicity is significantly associated with desired fertility preferences. Those who are Amhara is 4.27 (AOR, 95%CI=1.172-10.63) times more likely to desire five or more children than being Oromo. Being Burji has 4.29 (AOR, 95%CI=1.58-11.63) times more likely to desire five or more children.

Adolescent who born in rural area is 2.14 (AOR, 95% CI=1.23-3.71) times more likely to desire five or more children in the future than those adolescents born in urban area.

Those who desire to marry at age less than eighteen years of age have 4.42 (AOR, 95%CI=1.13-7.60) times more likely to desire to have five or more children when compared to those who desire to marry at age equal or greater than 24 years. Adolescent who desire to marry at age of 18-19 years have 2.90 (AOR, 95%CI=1.11-7.60) times higher odds of having children five or more children in their life time in the future than those who desire to marry at age greater or equals to 24 years of age. Those who desire to marry at age 20-21 years or 20.5 years on average have 3.35 (AOR95% CI=1.31-8.60) times more likely to desire to have five or more children in their life time in the future than those desire to marry at age 24 years or more.

Adolescents who believe that their parent determine who and when to marry 2.56 (AOR, 95%CI=1.40-4.83) times more likely to desire to have five or more children in the future in when compared to those who believe they themselves determine when and who to marry.

Adolescents those who ever thought to have the child have 1.73(AOR, 95%CI=1.01-2.96) times higher odds of desire to have five or more children than those who didn't think of have children.

Individual who have higher internal locus of control have 6% (AOR, 95% CI=0.91-97) times lower odds of desire to have five or more children in their life time.

Table 9. Factors influencing desired fertility preferences of adolescent girls in YSSPS, Yaballo, 2012.

Variables	Desired Family preference		COR(95%CI)	AOR(95%CI)
	≤4 n (%)	≥5 n (%)		
Ethnicity				
Oromo	238(72.3)	91(27.7)	1	1.
Amhara	23(62.2)	14(37.8)	1.59(0.79-3.23)	4.27(1.72-10.63)**
Burji	12(50.0)	12(50.0)	2.62(1.13-6.03)*	4.29(1.58-11.63)**
Others	18(85.7)	3(14.3)	0.44(0.13-1.52)	0.45(0.09-2.24)
Place of birth				
Urban	171(75.0)	57(25.0)	1	1
Rural	120(65.6)	63(34.4)	1.58(1.03-2.42)	2.14(1.23-3.671)**
Number of sibling				
<6	114(78.6)	31(21.4)	1	1
≥6	177(66.5)	89(33.5)	1.85(1.15-2.96)*	1.64(0.95-2.83)
Preparation for marriage				
Prepared	129(78.2)	36(21.8)	1.86(1.18-2.93)***	0.88(0.51-1.54)
Not prepared	162(65.9)	84(43.1)	1	
Desired age of marriage				
<18	8(47.1)	9(52.9)	8.52(2.47-29.30) **	4.42(1.13-17.34)*
18-19	59(59.6)	40(40.4)	5.13(2.12-12.43) **	2.9(1.11-7.60)*
20-21	75(64.7)	41(35.3)	4.14(1.73-9.93)**	3.35(1.31-8.60)*
22-23	96(80.7)	23(19.3)	1.81(0.73-4.51)	1.52(0.58-4.02)
≥24	53(88.3)	7(11.7)	1	1
Influential person				
Myself	210(76.6)	24(23.4)	1	1
Parents	37(54.4)	31(45.6)	2.75(1.58-4.78)***	2.56(1.40-4.83)**
Friends	33(61.1)	21(38.9)	2.10(1.13-3.86)*	2.0(0.97-4.07)
Other	11(73.3)	4(26.7)	1.19(0.37-3.88)	1.34(0.38-4.71)
Thought to have child				
Yes	138(63.0)	81(37.0)	2.30(1.473.60)**	1.73(1.01-2.96)*
No	53(79.7)	39(20.3)	1	1
Self-esteem				
Low	55(59.1)	38(40.9)	0.51(0.31-0.82)***	1.36(0.76-2.45)
Normal-high	235(74.1)	82(25.9)		
Internal locus of control			0.93(0.90-0.95)***	0.93(0.9-0.96)***

Adjusted for Ethnicity, place of birth, number of sibling, preparation for marriage, desired age of marriage, believed influential person, thought to have child, self-esteem and locus of control.

1: reference category, * significant at p<0.05, ** p<0.01, ***p<0.000

5.10 Focus Group Discussion Results

1. What is marriage for you? Is it important? Why?

Most of the discussants considered marriage as important event in life and way of making the generation continuous and addressed religion plays immense role in the issues of marriage. For example one the 19, protestant, came from rural, and 12 grade student said; *“marriage is important. After birth both male and female need each other. For example as we see in many religions one man is important for one woman.”*

But they discussed that there should be preconditions like achievement of predetermined goal before one rush to marriage. For example one of the discussant, 18, protestant, grade said; *“Marriage is important. There are times for marriage. Now I am student and on education; marriage is not important for me because if I marry now I must give birth, if give birth I will give up my education. Therefore after completing my education I will marry and pass my “ash”.”* Ash means giving offspring so that replacement will be made and generation continuous.

2. For you what is the ideal age of marriage? Why is that? At what you desire to marry? Why?

Majority of participant discussed that Ideal age of marriage should be 18 or more. All group agreed upon being eighteen is not enough for marriage. They also discussed that economic condition should be considered because the couple and child they give birth should have basic necessities.

One of participant, 19, protestant, rural and 12 grade said *“it is not enough being 18 for marriage because human is not like animal or snake that lives on eating soil. For example that person should be able to support himself. If the person is a farmer he or she should able to support himself, should not depend on the on the other, thus if he marry the girl he should not worry about what to give her, if she give birth he should able to fulfill all basic needs. Similarly the girl should not say I have to marry because she is old enough, she should support herself, self-sufficient. She should not expect from her husband.”*

Similarly majority of participants discussed that their desired age of marriage is 18 or more than 18.

One the participant, 19, protestant, grade 12 said *“legally one should marry at age 18. Personally I prefer 21 or 22 year.”*

3. What are condition or factors that influence age of marriage?

Majority of participants discussed that desired age of marriage is influenced by personal desire, family pressure, peer influence, being poor and culture.

One of the participants, 17, protestant, grade 11 said; *“friends lead you in wrong way. So one girl marry look at her friends and involve in sexual activity and finally decides to marry before she is mature or old enough.”*

One of discussant, 19, grade 10 said *“other pressure comes from friends. If you don't have boy friend or man that can buy you fashionable things, friends call you lazy. In that way she marries even that man older than her before she becomes mature.”*

One of the participant, 19, catholic, grade 12 said; *“There are many things for early marriage. If female don't attend school and stay home, she feels when she look at her friends or equal ages. When she turns 15, parent say she is grown up, why she don't go, why you don't marry say the mother, father, many other people, due to this girls catch their eye and desperately they go for marriage.”*

One of the participant, 18, Orthodox, grade 12 said *“the age at marriage should be at least 18 and not less than that. The reasons for early marriage, for example when the girl turn 13 and there is nobody asked the family to marry her, then the parent say what you do in home, you are 13, what she do here while she is 13, and disturb her mind by different kinds of reasons. At that time when one person or boy ask her, whether he have not since she has problem with family, because the parent chase at her she give herself to that person no matter she is not interested in that marriage.”*

The group discussed the consequences of early marriage and they listed as early start of child bearing and rearing, disruption of marriage and dropping school.

4. What types of marriage do you prefer, monogamous or polygamous? Why?

All group come to consensus that monogamous union is preferable because of risks of health like fear of HIV and STIs, economic pressure on family and lack of fair treatment among wives and children and religious restriction.

One of participant, 19, protestant, grade 12 said; *“as known for one girl one person is important and for one person one girl is important. Above this God don’t like and our religion doesn’t allow as.”*

One of the participant, 18, protestant, grade 12 said; *“one person should live with one, as religion teaches us one woman is for one man and one man is for one woman. In town for example, in my village the wives hate each other. The reason is that they share handful money and husband goes to one house at a time. The children don’t equally love their father whether female or male they say our father love them or their mother than ours. Therefore one person should stay married to one person.”*

5. At what age one woman should have her first child? At what age do you like to have your first child? Why?

Most of the participant discussed the ideal age at first birth should be equal or greater than 20 years.

One of the discussant, 18, Muslim, grade 10 said; *“one girl should have child when she is full grown. Twenty to thirty five years of age is the perfect ideal age to have first child. I personally wish to have to have my first child at 25-30.”*

From FGDs the adolescents have well awareness about consequences of early child birth. They were also discussed the consequences in maternal and child perspectives and they listed maternal consequences; lack of skill and knowledge of handling new born baby, tearing of birth canal and excessive bleeding as a result immature birth canal and loss of live as a result of these and other related maternal conditions. Regarding consequences of early birth on the child, they listed the child could die as it pass though immature birth canal and baby many lack adequate care if first birth is followed by another without adequate spacing and children could grow in poor situation.

6. How many children one family should have? How many children you like to have in the future? Why?

Most of the participants discussed four children is enough and they desire to have four less children in future.

One of the participant, 19, protestant, grade 12 said; “ *as being seen in our area the number of children that couples should have must be balanced with their wealthy that at most four children. If you have four children; two females and two males it is easy for parent to teach them. When they give birth more than this, it creates pressure on society, living area and on government at large. The pressure created when the people have children that they cannot support. It becomes problems to people living in that area. Therefore the number children should not be more than four.*

The group reached in consensus and the listed the reasons for limiting number of children. These includes; economic burden to the family, inadequacy of care for children, maternal health risk related to having many births and economic burden to society and country at large.

But there are participants that disagree with limiting number of children to four. They suggested the number of children should be determined by economic capacity of family.

One participant, 18 and grade 11 said; “*The number of children one family would have should depend on the income. Depending on their income it’s okay for family to have five, six or more children.*”

6. Discussion

This study tried to assess the desire of marriage and desired fertility preferences among adolescent girls in Yaballo Senior and Secondary and Preparatory School. Moreover, the study tried to see the association between desired age of marriage and desired fertility preferences with demographic variable, family demographic variables, and attitudes towards marriage, traditionalism, opportunity cost, self-esteem and locus of control.

Overall great majority of adolescent girls (91.5%) believed that marriage is important, quite important or extremely important. Consistent with study the U.S. (NSFG) 92% in the proportion of seniors who said that having a good marriage & family life were "extremely important" and "quite important" (17). But lower than the study conducted in United States, 97% said that marriage is extremely important, quite important and somewhat important (18). The difference observed could be due to difference in Study subjects.

Three hundred thirty seven (82%) preferred marriage to staying single. This was higher when compared with the study in United States, 64 % of adolescents prefer marriage to stay single (19). The difference observed could due to socio-culture differences.

In this study ideal age of marriage was more than eighteen years for 83% of adolescents. Similar to study in West Gojam (19) with over 75% feeling that a girl's ideal marriage age was at least age 18.

Age of adolescents is significantly associated with desired age marriage. But study in United States showed that adolescent's age is not related significantly to marriage expectations or desire (14). The difference could be due to difference in educational ambition. Seniors who have higher educational ambition expect and desire to marry and become parents at a later age than seniors with lower educational ambitions.

Religion is independently associated with desired age of marriage. Study in Nigeria showed that the reason to marry due to religious injunction. In socio-religious setting girls are particularly encouraged to be married and living in their husband's house at the time of the first menses (22). Similarly study in United States (6, 14) and Finland (12) showed the influence social. Also in FGD, participants discussed that due to cultural value, the parent and many other people worry about when the girl marry when she turn fifteen or more years.

Mother education is independently associated with adolescents' desired age of marriage. This could be due role modeling. As family is a source of role modeling (12), guidance and emotional regulation as well as values, norms and attitudes gained from uneducated mother could have affected desired age of adolescent. Other study showed that higher maternal education is associated with fewer transitions to marriage in young adulthood (15). In FGD, most of the participants discussed that parents' education affect age of marriage. They added that uneducated parents prefer give away their daughter at early age because they want fame and economic benefit from marriage of their daughter rather than educating her.

Having married friends strongly associated with desired age of marriage. This could be because of the fact that adolescents are always under pressure, mostly peer pressure. In FGD adolescents acknowledged the influence of peer pressure. Almost the entire participant discussed that peer influences can lead to initiation of sexual intercourse and end up with early or premature marriage.

The finding in this study shows that ever experience of sexual intercourse is associated with desired age of marriage. Similarly study in United States showed that early experiences with romantic relationships could have affected attitudes and expectations of marriage (18). Another study in United States showed that adolescents who are involved in serious relationships are more likely than others to think they will get married (21). But other study in United States showed sexual activity in adolescents increasing the likelihoods of expecting the "cohabitation then marriage" pathway instead of the "direct marriage" pathway (20).

The mean of desired age to have first child or parenthood was 22.7(SD=2.0). This similar to the study conducted on adolescents in high school in United States (23), and higher than the mean age at first birth 16.2 (SD=1.5) in conducted on determinants of adolescent fertility in Ethiopia (32). The difference observed could be explained by differences socio-demographic characteristics.

On average the desired fertility by the adolescent in this study is 3.85 children. These in lower when compared to the total fertility rate for Ethiopia is 4.8 births per woman according to Ethiopian demographic Health Survey (8). The difference observed could be socio-demographic difference and being educated associated with lower fertility desire as shown in many studies (16, 22, 27, and 32). Educated individual focuses on quality care for fewer number children than not educated. The other possible causes difference could be due that married women are more likely to desire more children than those unmarried (16).

Among socio-demographic characteristics of the adolescent Ethnicity is significantly associated with desired fertility preferences. This is consistent the study conducted Nigeria (22) and United States (14) that showed Ethnicity is significant associated with fertility desire or preference. Race or ethnic groups tend to be socialized differently about the value of marriage, parenting, nonmarital childbearing, and traditional family life the family context perspective suggests that race or ethnicity is related to adolescents' expectations and desires about marriage and childbearing or parenthood (6). But study in Ethiopia showed that ethnicity don't have any association with fertility preferences (32). The difference observed could be explained by difference our study we are assessed fertility intension of unmarried adolescent while study conducted in Ethiopia was on married adolescent. On the other hand difference in socio-demographic and socio-cultural differences could contribute to the difference observed.

Adolescents' birth place is significantly associated with desired fertility references. This is consistent with the study conducted in Nigeria (22) and Ethiopia (32) that showed women living in rural areas were more likely to be fertile than their counterparts living in urban area. As compared to those living in Addis Ababa, adolescents living in rural and other urban area outside Addis Ababa were four and two times more likely to be fertile.

In this study desired age of marriage and thought to have the child is independently significantly associated with desired fertility preferences of adolescents. This could be so that those who desire to marry at early age could be under social and cultural influence where early marriage and having more children is valued. Given these complex web of pervasive gender-based reproductive traditions, values and attitudes in society, adolescents may have been socialized into it from childhood as clearly reflected in their very strong desire and preference for a large family (22).

In our study adolescents who believe that their parent determines who and when to marry more likely to desire to have large family in the future. This could be as stated by Gray S. Becker, (1973) (6) to maintain that a family's values, cultural background, socioeconomic status, family structure, and other characteristics that directly affect adolescents' views about their future life course, including their expectations and desires about family formation. This could be due to that family and adolescents are under social and cultural influence where having more children is valued and considered as wealthy creation for parent or community, more helping hands and guaranteed support at old age.

Adolescents those who had thought to have the child more likely to desire to have more children than four than those who didn't think of have children. Study by Freedman R (1963) showed reproduction and the level of fertility tended to be crucial matters for family and society where they belonged. Therefore, they are determined by the cultural norms related to family (37).

Internal locus of control score significantly associated lower odds of desired age of marriage and fertility preferences of adolescents. The study in United States (14) showed that adolescents who have higher internal locus of control more likely to desire higher age of marriage. thus to who have high internal locus control more likely to achieve their intensions and favors the desire to have fewer children

7. Strengths and limitations of the study

Strengths

- The study tried touch the area of great important adolescents' future.
- Presence of qualitative study to obtain information that cannot be captured by quantitative study.
- The response rate is high.

Limitation of the study

- Desired fertility preferences can be affected by different situation and changes overtime.
- The study does not included several variables found to be important in related research, such as more detailed measures of family structure or parents' ages of marriage parenting, and amount of family income.
- It cannot be also generalizable at large since it includes one school adolescents.
- Finally, this study is based on cross-sectional data, which implies that the direction of causal relationships cannot always be determined.

8. Conclusion

We examined adolescents' desired age of marriage and fertility preferences. We found that most adolescents expressed strong support for marriage and believe it is better to get married than to go through life being single.

Great majority of adolescents desire to marry at age less than 24 years. The ideal age of marriage of significant number of adolescents in this study was lower. Even considerable number of adolescents said that their ideal age of marriage is less than the legal age marriage. Similarly there were adolescents who desired to marry at age less than legal age of marriage (eighteen).

Significant proportion of adolescents desired to have five or more children which is higher than four, targeted number of children the woman should have in population policy to limit fast population growth.

Desired age of marriage of adolescents is influenced by adolescent age, religion, maternal education, having married friend(s), experience of sexual intercourse and higher internal locus of control.

Desired fertility preferences or family sizes of adolescents determined by ethnicity, birth places, desired age of marriage, perceived influential person, thought to have child and higher internal locus of control.

9. Recommendations

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

- School should advocate and work towards providing adolescents reproductive health education with focus on increasing awareness among adolescents on the micro and macro advantages of appropriate age of marriage and lower fertility preference.
- Gender office and school should strengthen and establish community networks and partnerships involving girls clubs, teachers, elders, local government officials, adolescent, community and religious leaders, etc., that jointly work towards appropriate age of marriage and fewer children.
- School should work together to bring leading professional women to talk to adolescent girls as role models and a source of inspiration.
- There should school based peer education that focus on reproductive health education including marriage education and informed fertility preferences towards small family size.
- Yabello Woreda should design programs that involve all elements of society, including community institutions, and that can explicitly question the prevailing reproductive norm, raise awareness about their negative consequences marriage at young age and properly educate young people about the benefits of low family size.
- Finally, future studies should include in-school and out school adolescents to find what factors that affects desired age of marriage and desired fertility preferences.

10. References

1. WHO. Programming Adolescent Health and development Report of WHO/UNFPA/UNICEF study group on programming Adolescent health. 1999, Genève.
2. Jack Block, Richard W. Robin. A longitudinal Study of Consistency and Change in Self-esteem from Early adolescent to early adulthood. *Child development* 1993; 64:909-923.
3. Elisa Kennedy, Natalia Gray, Peter Azzordi, Mick Creati. Adolescent fertility and Family Planning in East Asia and Pacific: A review of DHS report. *Reproductive health* 2011;8 (11)
4. Zhu Zhi Moore, Pev Goindasamy, Julie DaVonzo, Genen Bizuneh, Albert Themm. Trends in Youth Reproductive Health in Ethiopia, 2000 and 2005. April 2008. The David Lucile and Packard Foundation.
5. UN. World Population Prospects; Population Division, 2008 Revision. 2009, New York.
6. Gray S. Becker. A theory of Marriage: Part I. *Journal of Political Economy* 1973; 18(4): 813-846.
7. DHS Data. Trends in Demographic and Reproductive Health Indicators in Ethiopia. The further analysis of the data. 2007 January. Calverton, Maryland.
8. Ethiopia Demographic and Health Survey 2011.
9. Huma Haider. Early Marriage and sexual and reproductive health. Helpdesk Research report. Governance and Social development Resource Center. 2011.
10. Zlidar, V.M., R. Gardner, S.O. Rutstein, L. Morris, H. Goldberg, K. Johnson. New survey findings: The reproductive revolution continues. (Population Reports, Series M, No. 17). Baltimore: Johns Hopkins Bloomberg School of Public Health, the INFO Project. 2003. Retrieved February 15, 2012, from <http://www.infoforhealth.org/pr/m17>
11. Ronald R. Rindfus, Larry Bumpass. Education and Fertility: Implication for the role of Women occupy. Prepared for presentation at the Annual meeting of the American Sociological Association; 1978 September San Francisco, USA.
12. Lars-Eric Malmberg, Jonas Ehrman, Tom Lithen. Adolescent and Parents Future Belief. *Journal of Adolescent* 2005; 28: 709-723.
13. Saima Hamid, Rob Stephenson, Birigitta Rubenson. Marriage decision Making, Spouse communication, and Reproductive Health among married Youth in Pakistan. 2011, 4: 5079-DOI. 10.3402/gha.v4i10.5079.
14. Robert D. Plotnick. Adolescent expectations and Desires about marriage and parenthood. *Journal of adolescent* 2007; 30: 943-963.
15. Schoen Robert, Nancy S. Lindale, Kimberly D., Yen-hysin Alice Cheng. Social background difference in early family Behavior. *Journal of Marriage and Family* 2007
16. Michael R.T, Tuna N.B. Early to marriage and parenthood by young men and women. The influential family background. *Demography* 1985; 22:515-544.
17. Barbara Dafoe Whitehead, David Popenoe. Change in Attitudes towards marriage, cohabitation and children 1975-1995. Next generation series. A publication of national marriage project, 2000.
18. Robert G. Wood, Sarah Avallar, Brian Goesling. Pathways to Adulthood and Marriage: Teenagers' Attitudes, Expectations, and Relationships patterns. U.S Department of Health and Human Services. October 2008.
19. Annabel Erulkar, Tekle-Ab Mekbib, Helen Amdemikael, Garry Conille . Marriage and sexual experience of adolescent girls and women in West Gojam Zone, Amhara region, Ethiopia. *Ethiopian Journal of Reproductive Health*. December 2009; Volume 3(3).
20. Manning W.D, Longmore M.A, Giordano P.C. The changing institution of marriage; Adolescent s' expectations to cohabitation and marry. *Journal of marriage and Family* 2007; 69:559-575.

21. Crissey S.R. Racial/Ethnic difference in marital expectation of adolescents: the role of romantic relationships. *Journal of Marriage and Family* 2007; 67:695-709.
22. G. Jonas, U.C. Isiogu-Abanihe. Adolescent reproductive Motivations and family size preferences in Nigeria. *Asian journal of Medical Science* 2010; 2(5):218-226.
23. Marjorie E. Starrels, Kristin E. Holm. Adolescent Plans for Family Formation: Is parental Socialization Important? *Journal of marriage and family* 2000; 62: 416-429.
24. Constance A. Nathanson, Schoen Robert. A bargaining theory of sexual behavior in women's adolescence. Conference on Social Science and Health Policy. 1992 March 4-6; Bethesda, Maryland.
25. Bomarosvsky Mirra. *Blue Collar marriage*. New York. Vintage books.
26. J.A. Henry, R. Parthasarathy. Assessment of marital and Family Expectations of a group Urban Single Young Adults. *Indian J Psychol Med.* 2010; 32(1): 42-48.
27. Rahman MM, Kabir M. Do adolescent support early marriage in Bangladesh? Evidence from study. *JNMA J Nepal Med Assoc.* 2005; 44(159): 73-8.
28. Sahlu Haile. Population, Development, and Environment in Ethiopia. Special Report. Issue 10. 2004
29. EDHS. Demographic and Health survey Key findings. 2005
30. Naushin Mahmood. The desire for Additional Children among Pakistani women. *The determinat. Pakistan development Review*1992; 31(1):1-30.
31. Sahah R. Hyford. The evolution of fertility expectations over life courses. *Demography* 2009; 46(4):765-783.
32. Alemayehu Tewodros, Haider Jemal, Habte Dereje. Determinants of adolescent fertility in Ethiopia. *Ethiop. J. Health Dev.* 2010; 24(1):30-38.
33. UN/POP/EGM. United Nations Expert group meeting on Adolescents, Youth and development. The population division department of economic and social affairs; 2011 July 21-22; New York, USA.
34. Amson Sibanda, Zewdu Woubalem, Dennis P. Hogan, David P. Lindstrom. The Proximate Determinants of the Decline to Below-replacement Fertility in Addis Ababa, Ethiopia.
35. Laurent T, Maria R Testa. Fertility Intensions and actual fertility; A complex relationships. *Population and Society* 2005; № 415.
36. Catherine Stevens-Simon, Jeanelle Sheeder, Robert Beach, Swan Harter. Adolescent Pregnancy: Do expectation Affect intension? *Journals of Adolescent Health* 2005; 37:15-22.
37. Freedman R. Norms for family size in underdeveloped area. *Proceeding for Royal Society, series B.* 1963; 159: 220-245.
38. Amir Erfani, Rodric Beaujof. Determinants of Attitude having children outside marriage. PSC Discussion paper series 2007 March; 21(1).
39. Kristin Anderson Moore, Susan M. Javielek, Carol Emig. Marriage from a Children's perspective: How Does family structure Affect children, and what can we do about it? *Children trends research brief.* 2002. Washington D.C.

ANNEXES

Annex 1. Informed consent form

Annex 1A: Informed-consent form (English Version)

Addis Ababa University

School of public Health

Study on “**Assessment of Desire for Marriage and Fertility preferences among Adolescent girls in Senior Secondary School; Borena, Ethiopia**”

Confidentiality and information format sheet

Dear respondent,

Hello, my name is _____. I am working in a research team of Addis Ababa University.

I am interested in learning more about desires of marriage and fertility preferences among adolescents. These questionnaires designed for a research work which will be approved by AAU, college of health science, school of public health to be conducted in partial fulfillment of masters’ degree in public health. We hope you will help us by answering these questions. None of your answers will be available to anyone .Do not write your name .All the information you give us will be kept private. Anyone who will not be willing to Participate in the study will have the right to discontinue at any time in the process.

Confidentiality and privacy will be maintained by ensuring the respondents answering.

The questions will be placed on a separate place where no one can see them. Therefore, we really need your honest and genuine response to questions prepared is highly appreciated and helpful to attain the objective of the study. The results of the study will hopefully serve as an important input for policy and intervention programs that aim at addressing adolescents’ desire for marriage and fertility preferences.

We thank you in advance for taking your time to answer our questions.

Would you be willing to participate in the study? Yes No

If yes, proceed to the next page

If no, please stop here

Thank you

If you need additional information, hear is the address of principal investigator.

Hirbo Shore: Mobile-0923252994 or e-mail: hamakiya@gmail.com

Annex 1B: Informed consent form (Afan Oromo Version)

Yuniversitii Fininnee

Barnoota Fayya Hawaasa

Qoranno “Assessment of Desire for Marriage and Fertility preferences among Adolescent girls in Senior Secondary School; Borena, Ethiopia”

Woraqaa icitii if odeefanoo

Kabajamaa/tuu

Ani maqaan kiyaa.....yoo jedhamu garee qoranna Yuniversitii Fininnee wajjiin hojjachaa jira. Fedhiin kiyya, fedhii fuudhaa fi baayinna ijjoollaa dargaggootni fuula duraaf horachuu barbaadan irratti qoran gegessuudha. Gaaffiwwan kun qorannaaf kan qophaa’an yoo ta’an, Yuniversitii finfinneetti, Koolleejii Saayinsii Fayyaa Hawaasaa, Mana barumsa Fayyaa Hawaasatti Ulaaga digrii maastara gutuuf kan qophaa,ee yoo ta’u dameewwan barnoota dhimmii kun ilaalatu mirkaneesse deema jira. Ati gaaffiwwan kanaaf deebii kennuun akka nuu gargaartu abdi guddaa qabna. Deebiwwan at deebiftu akka namii tokkoleen hin agarre ta,ee ykn icitiidhaan ol-keewama. Maqaa kee hin barreessitu yoo ta’u odeeffannoo at nuuf kennitu icitiidhaan ol-kaa’ama. Namii qorannaa kana irratti hirmaachu hin barbaane adeemsa keessa yeroo barbaadetti dhiisuu ykn dhaabu mirga qaba.

Gaaffiwwan addaan ba’anii akka namii arguu danda’utti kan barreffaman yoo ta’u, ati karaa keetin odeeffannoo dhugaa ykn haqaa kennuun, kaayoo qorannaa kanaa galmaan ga’uurratti gargaarsii kee murteessadha.

Firiiwwan qorannaa kanaa poolisii fi sagantaa dargaggoota karoorsuu irratti gargaara.

Dursinee yeroo kankee wareegde gaaffii keennaaf deebii deebisuun hirmaachuu keetif guddo si galateeffanna.

Qorannaa kana irratti hirmaachuu ni barbaada? Eyyee

lakki(iyyoo)

Yoo deebin kee “eyyee” ta’e kan armaan gadiit darbi(fufi)

Yoo hirmaach hin barbaanne asumatti dhaabii; hirmaanna keetiif galatoom

Yoo oddeeffannoo dablataa barbaadu ta’ee

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ANNEX 2: Questionnaire
Annex 2A. English Version

s.no	1. Socio-demographic characteristics Variables		Variable code
101	Grade level		1. 9 th 2. 10 th 3. 11 th 4. 12 th
102	How old are you? Write completed years		-----
103	What is the ethnic group you belong?	1. Oromo 2. Amhara 3. Gurage 4. Tigre	5. Somali 6. Burji 7. Konso 88.Others
104	What is your religion?	1. Muslim 2. Orthodox 3. Protestant 4. Catholic 5. Other	
105	Where was your birth place?	1. Urban 2. Rural	
106	With whom do you live now?	1. I live with both of my parents 2. I live with my mother only 3. I live with my father only 4. I live with brothers/sisters 5. I live with grandparents 6. I live with cousins 7. I live with a stepfather or stepmother 8. I live with my friends 9. I live alone 89.Other specify _____	
107	What is your source of income?	1. working 2.parents 3.scholarship 4.relative 89. Other specify _____	
2. Family characteristics			
201	Are your parents married to each other?	1. Yes 2. No->205	
102	If question 201 is “Yes”, What is type of marriage is it?	1. Monogamy 2. Polygamy	
203	If Q#201 is “yes” are they currently living together?	1. Yes 2. No	
204	If Q#203 is “No” what happen?	1. I don’t have parent now 2. I have only one parent 3. They are divorced or separated 4. Other	
205	Where your parents currently live?	1. Town 2. Countryside	
206	How many siblings do you have?		
207	What is your mother’s educational level?	1. Illiterate 2. 1-4 3. 5-8	
		4. 9-12 5. 12+	

208	What is your father's educational level?	1. Illiterate 2. 1-4 3. 5-8	4. 9-12 5. 12+
209	What is your mother's occupational status	1. Housewife 2. Farmer 3. Merchant 4. Governmental employee 5. Non-governmental Employee 6. Day laborer 7. unemployed 8. Others (specify) _____	
210	What is your father's occupational status	1. Farmer 2. Merchant 3. Governmental employee 4. Non-governmental Employee 5. Day laborer 6. driver 7. Unemployed 8. Others (specify) _____	
211	Do you have married sister?	1. Yes	2. No
212	Do you have married brother?	1. Yes	2. No
213	Do you have married friend?	1. Yes	2. No
214	Have you ever made boy?	1. Yes	2. No
215	Have you ever had sexual intercourse?	1. Yes	2. No

3. Attitude towards marriage			
301	How important is good marriage and life?	1. Extremely important 2. Quite important 3. Important 4. Not important	
302	Is it better to get married than stay single?	1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree	
303	How well prepared are you for marriage?	1. Very well 2. Well 3. Fairly well 4. Poorly	

4. Desired for marriage			
401	Have you thought at all about marriage	1. Yes 2. No->403	
402	If "401" is "yes", do you expect to get married?	1. Yes 2. No 3. Uncertain	
403	What is your ideal age for you to marry?	1. <18 2. 18-19 3. 20-21 4. 22-23 5. 24-25 6. 26-27 7. 28-30 8. 30+	
404	What is the ideal time from now for you to get married?	1. <1 year 2. 2-3 years 3. 4-5 years	

		4. > 5 years
405	At what age do you desire to get married?	1.<18 2.18-19 3. 20-21 4. 22-23 5.24-25 6. 26-27 7. 28-30 8. 30+
406	Who do you think will have greatest influence in deciding who and when to marry?	1. Individual 2. Parents 3. Friends 4. Kinsmen 5. Priest/imam Other-----
407	Do you expect to stay married to same person for life?	1. Yes 2. No 3. Uncertain
408	When you think of your future, do you see yourself living with someone without being married?	1. Not at all 2. A little 3. Somewhat 4. Probably 5. Definitely
5.Desired Fertility Preferences		
501	Have you thought at all about whether you would like to have children?	1. Yes 2. No
502	If it were up to you, what is your ideal age at first child?	1.<18 2.18-19 3. 20-21 4. 22-23 5.24-25 6. 26-27 7. 28-30 8. 30+
503	At what age do you expect to have your first child?	1.<18 2.18-19 3. 20-21 4. 22-23 5.24-25 6. 26-27 7. 28-30 8. 30+
504	How many children you would like to have? (Circle your answer)	1, 2, 3, 4, 5, 6, 6+
505	For you what represent large family size?	1. >2 children 2. >3 children 3. >4 children 4. >5 children 5. >6 children
506	For you what represent small family size?	1. <7 4. <4 2. <6 5. <3 3. <5 6. <2
507	Which family do you prefer?	1. Large 2. Small->509
508	If you prefer large family size, Why?	1. Children are source of wealth creation for parents or community 2. More helping hands and guaranteed support at old age 3. Cultural/religious considerations 4. You can't tell how many of them will die in infancy 5. Many children is source of fulfillment and joy for parents 6. Personal decision/wish 7. Want to have a large family like my parents 8. No response 9. Others
509	If you prefer small family size; why?	1. To provide effective parental control and discipline for children 2. The need to have basic needs for children 3. To free oneself from problems that comes with large family size. 4. Health consideration 5. It is sin to have many children that cannot care for their needs

		adequately 6. No response 7. Other reasons.....
510	Do you expect to have nonmarital birth?	1. Yes 2. No->601 3. I don't know
511	If Q#510 is "yes", when do you expect to have non marital birth?	1. Before 18 2. 18-19 3. 20-21 4. 22-23 5. 24-25 6. 26-27 7. 28-30 8. 30+
6 Traditionalism		
601	A person should only have sex if they are married.	1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree
602	How important is religion in your life?	1. not at all important 2. a little important 3. somewhat important 4. important 5. very important
7.Opportunity cost indicators		
701	What is your average score?	1. Excellent (90-100) 2. Very good(80-89) 3. Good(60-79) 4. Fair(50-59) 5. Poor(<50)
702	What level of educational attainment do you expect in the future?	1. 12 complete 2. Diploma 3. 1 st degree 4. Second degree(masters degree)

Table. Self-Esteem Scale

	STATEMENT	Strongly Agree	Agree	Disagree	Strongly Disagree
1	I feel that I am a person of worth, at least on an equal plane with others				
2	I feel that I have a number of good qualities				
3	All in all, I am inclined to feel that I am a failure				
4	I am able to do things as well as most other people				
5	I feel I do not have much to be proud of				
6	I take a positive attitude toward myself				
7	On the whole, I am satisfied with myself				
8	I wish I could have more respect for myself				
9	I certainly feel useless at times				
10	At times I think I am no good at all				

Table. Locus of control

Direction

Following is a series of attitude statements. Each represents a commonly held opinion. There is no right or wrong answers. You will probably agree with some items and disagree with others. We are interested in the extent to which you agree or disagree with such matters of opinion.

For each of the following statements, indicate the extent to which you agree or disagree by writing in the appropriate number.

№	Statements	strongly disagree (-3)	disagree somewhat (-2)	slightly disagree (-1)	slightly agree (+1)	agree somewhat (+2)	strongly agree (+3)
1	Whether or not I get to be a leader depends mostly on my ability (I).						
2	To a great extent my life is controlled by accidental happenings(c).						
3	I feel like what happens in my life is mostly determined by powerful people (P).						
4	When I make plans, I am almost certain to make them work (I).						
5	Often there is no chance of protecting my personal interests from bad luck(C)						
6	When I get what I want, it's usually because I'm lucky (C).						
7	Although I might have good ability, I will not be given leadership responsibility without appealing to those in positions of power (P).						
8	How many friends I have depends on how nice a person I am (I).						
9	I have often found that what is going to happen will happen (c).						
10	My life is chiefly controlled by powerful others (P).						
11	People like myself have very little chance of protecting our personal interests when they conflict with those of strong pressure groups (P).						
12	It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune(C).						
13	Getting what I want requires pleasing those people above me (P).						
14	Whether or not I get to be a leader depends on whether I'm lucky enough to be in the right place at the right time(C).						
15	If important people were to decide they didn't like me, I probably wouldn't make many friends (P).						
16	I can pretty much determine what will happen in my life (I)						
17	I am usually able to protect my personal interests (I).						
18	When I get what I want, it's usually because I worked hard for it (I).						

19	In order to have my plans work, I make sure that they fit in with the desires of people who have power over me (I).						
20	My life is determined by my own actions (I).						
21	It's chiefly a matter of fate whether or not I have a few friends or many friends (C).						

Annex 2B: Afan Oromo Versions

Gaaffillee filaanoo qabanif filaadhu, kan filaate irrati maari fi kan bakki kennamef baaka duwwa saani keessatti barreessi.

Gabatee 1: Amaloota Hawaassuma

Lakk	Amaloota Hawaassumaa		
	Jijjiiramaa	Coodii	
101	Kutaa meeqa barata?	1.9 2.10 3.11 4. 12	
102	Umriin kee meeqa? (woggaa guutu qofa barreessi)	-----	
103	Sabnii keemaali?	1.Oromo 2.Amaara 3.Burjii 4.Konsoo 88. kan biraa--- -----	
104	Amantaan kee maali?	1.Muslima 2.Ortodoksii 3.Protestant 4.Kaatolikii 5. kan bira.....	
105	Eessatti dhalate?	1.Magaala 2.Baadiyaa	
106	Amma eenyu wajjiin jiraata?	1.Matii koo wajjiin 2.Haadha koo wajjiin 3.Abba koo wajjiin 4.Obboleeyyan wajjiin jiraadha 5.Akkoo fi/akaaku wajjiin	6.Abuyya ykn adaada wajjiin 7.Haadha/abbaa buddeen wajjiin 8.Hirriyaa wajjiin 9.Kophaa jiraadha 88. kan biraa
107	Maddii galii kee maalii?	1.Hojjachun 2.maatii 3.gargarsaan 4.firaa 88. kan biraa.....	
2. Amaloota maatii keeti(gaafatamaa)			
201	Haadhaa fi abbaan kee wol-fuudhan moo?	1.Eyyee 2. Lakkii	
202	201f "eeyyee" yoo jette, Abbaan kee haadha worraa meeqa qaba?	1.Tokkuma 2. Lama ykn lama oli	
203	201f" Eeyyee" yoo ta'e haadhaa fi abbaan kee amma wajjin jiraatan moo?	1.Eyyee 2. Lakkii	
204	203f yoo deebin kee " lakkii" ta'e, maaf wajjiin hinjiraane?	1.Haadhaa fi abbaa hin qabu 2.Haadha ykn abbaa qofa qaba 3.Wol-hiikan jiru 88.Kan bira	
205	Maatin amma Eessa jiraatu?	1.Magaala 2. Baadiyaa	
206	Obboleeyyan meeqa qabda?	-----	
207	Sadarkaan barnota haadha ykn harmee keeti maali?	1.Hin baranne 2.Kutaa1-4 3.Kutaa 5-8 4.Kutaa 9-12 5.Kuataa 12 oli	
208	Sadarkaan barnoota abbaa keeti maali?	1.Hin baranne 2. Kutaa1-4 3.Kutaa 5-8 4.Kutaa 9-12 5.Kuataa 12 oli	
209	Hojjiin harmee ykn haadha keeti maali?	1. Hojji mana keesaa 2. qonnaan/ horsiite bultu 3. Daldaaltu 4.waajira mootuma	5. Dhaabata mit-mootummaa 6. hojji guyyaa 7.hojji hin qabdu 88. kan biraa(ibsi)
210	Hojjiin abbaa keeti maali?	1. Qonnaan bulaa	5. Hojjataa Guyyaa

		2.Daldaala 3. Waajira Mootummaa 4.Dhaabata mit-mootummaa	6. Konkolaachisaa 7. Hojjii Hin qabu 88. kan biraa(ibsi).....
211	Obboleetii fuute ykn heerumte qabda?		1. Eyyee 2. Lakkii
212	Obboleessa fuudhe qabda?		1. Eyyee 2. Lakkii
213	Hiriyya fuute ykn heerumte qabda?		1. Eyyee 2. Lakki
214	Hiriyyaa dhiira godhatee beektaa?		1. Eyyee 2. Lakkii
215	Wal-qunnamtii saala dhageetee beekta?		1. Eeyyee 2. Lakkii(iyyoo)
2. Ilaalcha fuudhaaf qabdu			
301	Fuudhuu ykn heerumuun hagam barbaachisa jette?		1.baayisee barbaachisaa 2.guddo barbaachisaa 3.barbaachisaa 4. hin barbaachisu
302	Osoo hinfuudhin mannaa fuudhuu woyya.		1.Sirriitti na ilaalata 2.Na ilaalata 3.Haga tokko na ilaalata 4.Na hin ilaalatu
303	Fuula duraaf Heerumuuf ykn fuudhuuf hagam qophii goote jirta?		1. Sirriitti qophaa'ee jira 2.Qophaa'ee jira 3.Hanga tokko qophaa'ee jira 4.Hin qophoofne
Gabatee 4. Fedhii ykn hawwii fuudhaa ilaalchisee			
401	Waa'ee fuudha ykn heerumu yaadee beekta?		1.Eyyee 2. Lakii
402	401f "eyyee" yoo ta'e, ni fuudha ykn heeruma jette yaada ?		2.Eyyee 2. Lakkii
403	Akka keeti dubartiin tokko umrii meeqati fuudhu ykn heerumu qaba?		1.<18 2.18-19 3. 20-21 4. 22-23 5.24-25 6. 26-27 7. 28-30 8. 30+
404	Fuudhuuf ykn heerumuuf waggaa meeqatti na hafe jette yaada?		1.<1 2. 2-3 3. 4-5 4. 6 oli
405	Ati umrii meeqatti heerumu ykn fuudhu feeta?		1.< 18 2. 18-19 3.20-21 4.22-23 5.24-25 6.26-27 7.28-30 8.30+
406	Eenyuu fi yoom akka fuudhu ykn heerumu kan sii murteessu ykn dhiibbaa taasisu enyu jettee yaada?	1.Anuam murteefata 2.Maatii kooti 5.Fira kooti	3.Hiryyoota kiyya 4.Abbaa amantaa 88.Kan bira-----
407	Jiru keet keessati nama tokkotti heerume ykn fuudhe wajjin jiraadha jette eegda?		1.Eeyyee 2.Lakkii 3.Hin beekkamu
408	Fuula duraaf osoo walhinfuudhin tokko waliin ni jiraadha jette yaada?	1.Gonkuma hin ta'u 2.Xiqqoo ni ta'a 5. Eyyee ni ta'a	3.Hamma tokko 4. Ta'uu danda'a
5. Hawwii ijjoolee godhachuu ilaalchisee			
501	Waa,ee ijjoolee godhachuu ykn horachuu yaadde beektaa?		1.Eyyee 2. Lakkii
502	Osoo at murseesitu ta,ee,umrii meeqati ilmee jalqabaa dhaluu ykn godhachuu jette yaada?		1.<18 2.18-19 3. 20-21 4. 22-23 5.24-25 6. 26-27 7. 28-30 8. 30+
503	Umrii meeqati ilmee jalqabaa da'uu ykn horachuu barbaada?		1.<18 2.18-19 3. 20-21 4. 22-23 5.24-25 6. 26-27 7. 28-30 8. 30+
504	Ijjoolee meeqa dhaluu ykn godhachuu barbaada/hawwita?		1. 1-2 2. 3-4 3. 5-6 4. >6
505	Akka yaada keetitti namii tokko yoo ijjoolee meeqa qabaate ijjoolee baay'ee qaba jedhama?		1.>2 2. >3 3. >4 4. >5 5.>6 6.>7
506	Akka yaada keetitti namii tokko yoo ijjoolee meeqa qabaate maatii ykn diqqaa qaba jedhama?		1.<8 2. <7 3.<6 4. <5 5.<4 6. <3
507	Ijjoolee baay'ee moo muraasaa horachuu barbaada?		1.Baayee 2. Muraasa
508	Yoo 507f "baayee" jette, maalf ijjoolee baayee horachuu barbaada?	1.ijjooleen qabeenyaadha 2. yeroo jaarrumaa gargaarsa taati. 3.Aadaa ykn amantiin waan deegaruuf.	

		4. hagam akka du'an waan hin beekneef baayisuu wayya 5. ijjooleen gammachuudha 6. murtii kiyyaa ykn fedheeti 7. akka maatii kiyyaa ta'uu barbaada. 8. deebii hin qabu. 88. kan biraa.....
509	507f "muraasa" jette, maaf barbaade?	1. Too'annaa barbaachisa gochuuf 2. Wantoota bu,uura gochuuf 3. Rakkoo baayinna ijjooleetiin dhufu irraa ofi baasuuf 4. Ijjoolee baayisanii wantoota barbaachisa yoo hin guunneef cubbu ta'a 5. Deebii hin qabu 88. Kan biraa.....
510	Osoo hin fuudh ykn hin heerumin ilme'e ni dhala ykn godhadha jettee yaade beektaa?	1. Eeyyee 2. Lakii 3. hinbeekamu
511	139f "eyyee" yoo jette, umrii meeqa ta,a jette yaa,a	1. <18 2. 18-19 3. 20-21 4. 22-23 5. 24-25 6. 26-27 7. 28-30 8. 30+
6. Traadishinaalism hirmataa		
6.1	Namii tokko yo fuufhe ykn heerume qofa wal-qunnamtii saala guchuu qaba.	1. gonkuma sirrii miti 2. sirrii miti 3. sirrii ykn sirrii miti hin jedhu. 4. sirrii dha 5. Baayyee sirriidha
6.2	Jiruu keeti keessati amantii hagam barbaachisaadha?	1. Gonkuma hin barbaachisu 2. Xiqqoo 3. Hama tokko 4. Barbaachisaa 5. Baayyee barbaachisa
7. Bu'aawwan argatu (oportunity cost)		
701	Qabxii kee jiddu galeessn maal fakkaata?	1. Baayee baayyeeaa 2. Baayee gaarii 3. Garii 4. Quubsaa 5. Yeraa
703	At sadarkaa barnoota kam dhaqaba jette yaada?	1. Kutaa 12 xummuru 2. Dipilooma 3. Digrii tokkoffaa Mastaraa ykn 4. digrii lammaffaa fi oli

Iskeeli-kabaja ykn ilaalch at ofii qabdu kan ibsu. Kan armaan gadii kun himoota waa'ee ilaalcha walii gala kan ati ofii qabdu ibsa. Deebiin sirrii fi sirrii hinta'in hinjiru. Hima waa'ee kiyya ni ibsa jette amantu sirriitti waa'ee kiyyaa ibsa, waa'ee kiyya ibsa, waa'ee kiyya hin inbsu ykn gonkumaa waa'ee kiyya hin ibsu jette filatu mallattoo kanaan kaa'i (✓).

L a k		Sirriitti waa'ena kiyya ibsa (+3)	Waa'ee Kiyya ibsa (+2)	Waa'ee kiyya hin ibsu (+1)	Gonkumaa waa'ee kiyya hin ibsu (0)
1	Ani nama barbaachisaadha, yoo akkam diqaate nama biraatin wal-qixxee yaada jedhutti natty dhaga'ama				
2	Ani ga'umsaa barbaachisaa qabaa yaada jedhutti natty dhaga'ama				
3	Guutumaa, guututti ani womaa hin danda'u yaada jedhutti mnatti dhaga'ama				
4	Waan namii baa'een hojjatu hojjachu ni danda'a yaada jedhutti natty dhaga,ama				
5	Waan ofiin boonu baay'ee hin qabu yaada jedhutti natty dhaga,ama.				

6	Ofii (mataa) kiyyaaf yaada gaarii qaba				
7	Guutumatii ofitti ni amana ykn ofitti quufe jira.				
8	Osoo caalmaatti kabaja of qabaadhe jedhe hawwa				
9	Ani faayida womaatu hin qabu				
10	Ani womaayyu hin danda'u yaada jedhutti natty dhaga'ama				

Gabate: ilaalcha too'naa of qabduu.

Kanneen armaan gadii kun himoota waa'ee ilaalcha too'annaa ati ofii qabdu ibsa. Deebiin sirrii fi sirrii hinta'in hinjiru. Hima waa'ee kiyya ni ibsa jette amantu sirriitti waa'ee kiyyaa ibsa, waa'ee kiyya ibsa, waa'ee kiyya hin inbsu ykn gonkumaa waa'ee kiyya hin inbsu jette filatu mallattoo kanaan kaa'i ($\sqrt{\quad}$).

Lakk.	Himoota	Sirriitti na ilaala (+3)	Hamma tokko na ilaala (+2)	diqqoo na ilaala (+1)	Diqqoo nah in ilaalu (-1)	Hamma tokko na ilaala (-2)	Gonku maa nah in ilaalu (-3)
1	Hoogganaa ta'uu fi ta'u dhabuun kiyya irra caalatti dandeetti kiyya irratti hundaa'a.						
2	Jiruun tiyya baayinaan wantoota tasa ta'aniin too'atama.						
3	Wantootni jiruu kiyya keessatti ta'an namoota olaantumma qabaniin murtaa'a.						
4	Yeroo karoora baasu, akka fiixaan baasu ofitti amana						
5	Yeroo baayee fedhii mataa kiyyaa (personal interest) carraa hama irraa bararuuf carraa hin qabu.						
6	Waan barbaade yoo argadhe, sababni isaa carraa waan qabuufi.						
7	Osoo dandeettii gaha qabaadhellee, yoo namoota olaantummaa(angoo) qaban yoo hin gammachiifne angoon hooggantummaa naaf hin kennamu.						
8	Baayinni hirriyyoota ani qabuu dansuma(gaarummaa) kiyya irratti hundaa'a.						
9	Yeroo baayee wantootni ta'uuf daamu ta'ee argama ykn matti mulata.						
10	Jiruun tiyya irra caalatti namoota biraatin too'atama						
11	Namni akka kiyyaa, namoota alaantummaa qabaniin yoo walii hin galle ta'ee fedhii mataa ofii (personal interest) eeggachuuf carraa diqqaa qaba.						
12	Sababa wantootni akka carraa ta'aniif fuula duratti fageessanii karoora baasuun faaydaa hin qabu.						
13	Waan barbaade argachuuf namoota olaantummaa qaban gammachiisuu gaafata.						
14	Hoogganaa ta'uu fi dhabuun kiyya kan murtaa'u, bakkaa fi yeroo barbaachisaatti carraa garrii qabaachuudha.						
15	Osoo namootni barbaachisaa ta'an na jibban ta'ee, hirriyyoota baayee hin qabu ture.						
16	Jiruun tiyya maal akka taatu sirriitti murteessu ni danda'a.						
17	Yeroo baayee fedhii tiyya eegachuu ni danda'a.						
18	Yoo waan barbaadu argadhu ta'ee, yeroo baayee sababa ciminaan hojjadhuufi.						
19	Akka karoorii kiyya fiixaan ba'u, fedhii namoota olaantumma qabaniin ta'uusaa mirkkanneeffachuu qaba						
20	Jiruun tiyya gocha kiyyaan murtaa'a						
21	Hirriyyaa muraasa ykn baayee qabaachuun waan carraati						

ANNEX 3. Conceptual framework

Figure 2. Conceptual framework of adolescents' desires for marriage and fertility preference.

