# LIFE SATISFACTION AND RISKY BEHAVIOR AMONG ARBAMINCH UNIVERSITY STUDENTS

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**JUNE, 2013** 

LIFE	SATISF	<b>CACTION</b>	AND	RISKY	<b>BEHAVIOR</b>	<b>AMONG</b>	<b>ARBAMINCH</b>
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#### **Abstract**

**Background:** Life Satisfaction has been linked to a wide range of physical, academic, emotional, psychological and social indicators of functioning in children and adolescents. Some of the risky behaviors that correlated with decreased life satisfaction are physical aggression, violence, possession of guns, suicide ideation, low academic performance, sexual risk-taking, and substance use.

**Objective:** This study aimed to assess life satisfaction and its relationship with risky behavior among Arbaminch University students.

Methods: A cross sectional institution based study was conducted in Arba Minch University from March 24-28/2013. Four hundred twenty eight students participated in the study. The total sample size was proportionally allocated to the six colleges based on the number of regular undergraduate students. Pre-tested instruments were used for data collection and the data were analyzed using SPSS version 16.0 statistical software. Spearman's rank correlation coefficient was calculated to examine the relationship between life satisfaction and risky sexual behavior and substance use. Multivariate linear regression analysis was performed and the effect of independent variables on the regression life satisfaction was quantified.

**Results:** Three hundred seven (71.8%) of respondents were satisfied with their life. Regarding to satisfaction with different life domains, 79.6% of the respondents satisfied with family domain, 78.6% of the respondents satisfied with self domains and 72.6% of the respondents satisfied with friend domain. But 61.8% and 61.9% of respondents dissatisfied with university and living environment domain respectively. Correlation analyses revealed that higher satisfaction with overall life significant and inverse correlation with having multiple sexual partners (rho=-0.20, p=0.025), never use condom (rho=-0.2, p=0.037) and use of alcohol (rho=-0.23, p=0.002). Finally, gender, self-esteem and life meaning were significant predictor of students' life satisfactions.

**Conclusions:** Significant numbers of respondents were satisfied with their lives. Satisfaction with overall life had significant and inverse correlation with having multiple sexual partners, never use condom and use of alcohol. This shows that those students who are satisfied with overall life are less likely to engage in risky behaviors.

**Key words:** life satisfaction, risky sexual behavior, substance use, university student.

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#### **ACRONYM**

AIDS- Acquired Immune Deficiency Syndrome

**CI-** confidence interval

**EDHS-** Ethiopian Demographic Health Survey

**HIV**- Human Immune Deficiency Virus

MSLSS- Multidimensional Students' life satisfaction scale

**PSS**- Proportional to sample size

Rho- The expression of spearman correlation coefficients

**SD-** Standard division

SES- Socio-economic status

SNNPR- South Nation Nationalities People Region

**SRS-** Simple random sampling

**STDs**- Sexually Transmitted Disease

**STI**- Sexually Transmitted infection

SWB- Subjective Well- being

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**CHAPTER ONE: INTRODUCTION** 

1.1. Background of the Study

Subjective well-being (SWB) is the field in the behavioral sciences in which people's

evaluations of their lives are studied. The three components of subjective well-being are the

relative presence of positive affective, absence of negative affective and perceived quality of life

or life satisfaction (1).Life satisfaction is defined as a cognitive evaluation of one's life as a

whole and/or of specific life domains (2). It is conceptualized as an overall cognitive evaluation

of the condition of one's life (3). Measures of life satisfaction range from multi-item scales to

single questions aimed at assessing global life satisfaction (1, 4).

Life satisfaction has been linked to a wide range of physical, mental, academic, emotional,

psychological and social indicators of functioning in children and adolescents (1). The need to

address to youth life satisfaction is supported by the different practical findings, that life

satisfaction serves to protective factors adolescents who experience stressful life events from

developing additional externalizing behavior problems(5). This indicates as improving of

subjective well-being in youth as a protective factor against hard time and difficulties during

their life time.

The college student may face not only academic challenges, but also challenges to maintaining

healthy lifestyle in this new environment. Different research have found that happiness and life

satisfaction to be extremely important for college student and studies show that high level

satisfaction with life has impacts academic performance in college students (6, 7).

Risky behavior defined as behaviors for which there are unknown consequences and the

potential for those consequences to have a negative health outcome (8). Risky behavior includes

risky sexual behavior, substances use, violence involvement, and poor academic performance.

The prevalence and severity of risk behaviors may be higher in college students compared to

young adults who do not attend college (9). Use of substance such as alcohol, khat leaves and

tobacco has become one of rising major public health and socio-economic problem worldwide.

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Recent trend indicate that the use of substances increase dramatically particularly in developing countries (10).

Risky sexual behavior defined as engaging in sexual encounters at an early age, no or inconsistent use of condoms and having multiple sexual partners (11). Studies finding from Sub-Saharan African countries, many of which are predominantly school based show high prevalence rates of sexual intercourse; infrequent use of condoms and other contraceptives; high prevalence of two or more lifetime sexual partners among young people (12).

Some of the risky behaviors that correlate with decreased life satisfaction are physical aggression, violence, possession of guns, suicide ideation, poor academic performance, sexual risk-taking, and substance use.

#### 1.2. Statement of the problem

Life satisfaction is important aspect subjective well being and it leads to positive and healthy life style in youth. The need to address to youth life satisfaction is supported different practical findings, that life satisfaction serves to protective factors adolescents who experience stressful life events from developing additional externalizing behavior problems(5).

Studies have shown that low level of life satisfaction associated with different risky behaviors like, alcohol, tobacco and other drug use, violent behavior and sexual risk-taking behaviors. Study in Hong Kong show that low level of life satisfaction result in substance abuse, criminal behavior, intention to engage in problem behavior and global problem behavior (13). Similarly study finding among 4758 American high school students shows that dissatisfaction with life cause, suicide behaviors and dissatisfaction with life expose adolescent to aggressive behavior (14, 15).

Low level of life satisfaction expose youth for different negative with mental and physical health consequences. Study finding shows that dissatisfaction with life related to high anxiety, depression, causes poor mental and physical health and results stress (14, 16, and 17).

Researches also find out the effect of low level of life satisfaction on academic achievements, findings among university student show that lower level life satisfaction in student results low academic performance (18).

The prevalence and severity of risk behaviors may be higher in college students compared to young adults who do not attend college (9). Study done in Kenya university students show that 71% of males and 47.6% of females reported having had sexual intercourse. In similar study the initiation of sexual intercourse 19% of students reported their first sexual experience during their university years. From those sexual active students only 18% of male and 14 % females using a condom every time they had sex in the last month (19). According to the EDHS 2011 report the prevalence of premarital sexual intercourse had been 1.9 percent in age group 15-19 and 9 percent in age group 20-24 among women respectively. Also it had been 3.8 percent in age group 15-19 and 14.7 percent in age group 20-24 among unmarried men (20).

Study among preparatory students of Gondar town about 39% reported having unprotected sex (sex without condom); 43.3% of sexually active students had more than one sexual partner; 5% reported having sex with sex workers; 15% reported having sex under the influence of alcohol; 31.7% undergo sexual intercourse in unusual route and 5% shared sharps (21).

Risk sexual behaviors like unprotected sex, multi partnership, no or inconsistence use of condoms are extremely determinate to health of adolescents and young adults putting them at high risk to HIV/AIDS and other Sexual transmitted diseases (STDs) (22). In Sub-Sahara Africa, adolescents are greatly vulnerable to STIs as they engage in risky sexual behaviors, such as unprotected sex, multiple sexual partners and young age at sexual debut (23, 24).

The harmful use of drugs is recognized as a major public health problem throughout the world. A study done on substance use among university students at the West Indies show that six-month prevalence rate for alcohol was 70% and 28% of students were identified as regular users (25). Finding from undergraduate medical students of Addis Ababa University in Ethiopia shows lifetime use of alcohol was reported by about 31% of respondents (26). According to EDHS 2011 result shows that, substances use is among the adolescent population in Ethiopia had been showing that tobacco use 1.5 percent and 3.6 percent in age group 15-19 and 20-24 respectively (20).

Psychoactive substance abuse is the devastating consequences for a person, a family and a community as a whole. It is currently a serious ongoing public health problem in Ethiopia. Students are among the high-risk population of substance abusers. If young people increasingly take drug, they are susceptible to serious health problem; their childhood will be meaningless; this practice leaves them little chance to have a healthy lifestyle in the future (27). Among youths, the use of alcohol and other drugs has also been linked to unintentional injuries, physical fights, academic problems and illegal behavior (28).

Life satisfaction has been associated with several health and academic outcomes and risky behavior in youth. Majority of studies were carried out in developed countries, resulting in limited data on the association between life satisfaction and risky behavior among university students in developing countries. The relationship between life satisfaction and risky behavior among Arba Minch university students is not known.

So, this study will explore the level of life satisfaction and risky behavior among Arba Minch university students as well as association between these two factors, in Arba Minch University students.

**CHAPTER TWO: LITERATURE REVIEW** 

2.1. Life satisfaction in youth

Different contextual and personality factors contributed to perceived life satisfaction for the

combined group of adolescents, but no one factor accounted for a large amount of variance.

Gender

Different study findings show that weak relation socio-demography variables and life

satisfaction. However few number of study findings shows that gender difference and income

has relation to life satisfaction, study done among high school adolescents showed that males

high satisfied than females (14, 29).

Income

Another socio-demography variable is income. Study done in-coming college students show that

family income is strongly related to life satisfaction (30). similarly finding among a Canadian

prairie city university students show that high SES background are more satisfied with life than

low SES (31).

**Psychological Variables** 

Self-esteem

The other predictor of life satisfaction in youth is Self-esteem, study done among university

students and Croatian high school student show that Self-esteem is strongest predictor of life

satisfaction among students (31, 32).

Life Meaning

Meaning in life an established indictor of well-being and a contributor to optimal human

functioning is conceptualized as the presence of life meaning and the search for life meaning.

The presence of life meaning refers to the extent to which individuals consider their lives as

significant, meaningful and purposeful, but the search for meaning in life represents individuals'

active searching to have a sense of significance, meaning, and purpose in life. In college student

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and adult samples, self-reported life meaning has been correlated with life satisfaction while the search for life meaning has been associated with lower overall well-being (33-36).

#### . Religiousness

Studies show that intrinsic religiousness strongly associated with life satisfaction. Intrinsic religiousness represents the internal motivation to live according to one's religious beliefs whereas extrinsic religiousness signifies engaging in religiousness as a means to an end, such as for the external factors of protection and social status (37). Study done in coming college students show that intrinsic religiousness has been closely connected to psychological adjustment psycho-spiritual health and life satisfaction (29).

#### 2.2. Risky Behaviors

Risky behavior definition includes behaviors for which there are unknown consequences and the potential for those consequences to have a negative health outcome (8).

#### 2.2.1. Risky sexual Behaviors

There is a number of different definitions of risky sexual behavior will be explored in an attempt to gain a broader understanding of the concept. One such definition according to Irwin, Igra, etal state that risky sexual behavior also includes engaging in sexual encounters at an early age, no or inconsistent use of condoms and multiple sexual partners (11).

#### Prevalence of factors associated with risky sexual behavior

Different research has examined possible harmful effects of youth engaging in sexual risk-taking behavior, such as, victimization, substance abuse, and adolescent pregnancy.

Study done in Kenya university students show that 71% of males and 47.6% of females reported having had sexual intercourse. In similar study the initiation of sexual intercourse 1 9% of students reported their first sexual experience during their university years. From those sexual active students only 18% of male and 14 % females using a condom every time they had sex in the last month (19) .

Study done in Tanzanian among adolescents age 10-19 years show that One hundred forty three (23.4%) adolescent respondents (24.6% males and 22.0% females) reported being sexually active. Of these, about 42.0% reported having had multiple sexual partners and 61% did not use condoms at the last sexual intercourse (39).

Study in Haramaya University students' show that 28 % of the study population sexual active, ever use condom 64.1% and 20.4% of students use condom consistently (38). Study among preparatory students of Gondar town about 39% reported having unprotected sex (sex without condom); 43.3% of sexually active students had more than one sexual partner (20).

#### 2.2.2. Substance use

Substance use involves the ingestion of any alcohol, drug, medication or toxin that does not result in serious physiological or psychological problems (40). Worldwide, Use of substances such as alcohol, khat and tobacco has become one of the intensifying most important public health and socio-economic problems.

#### Prevalence of alcohol, khat and tobacco use in youth

Alcohol use was found to be more common among younger students who were in the lower classes and also among students from homes where parents had post-secondary/university education.

A cross-sectional study done on substance use among university students at the St Augustine campus of the University of the West Indies show that six-month prevalence rate for alcohol was 70% and 28% of students were identified as regular users (25).study done in Kenya high school student the results showed that 265 (57.9%) of the respondents had consumed alcohol at least once in their lives (41). Similarly finding from undergraduate medical students of Addis Ababa University in Ethiopia shows lifetime use of alcohol was reported by about 31% of respondents (26). Another finding from high school students in Dire Dawa, the life-time alcohol drinking prevalence in the schools was 34.2% and the current prevalence was 19.6% (42).

A Cross-sectional Survey was conducted in May 2006 among students (15–25 years old) in Secondary (High) Schools and all Colleges in Southwest of the Kingdom of Saudi Arabia show overall prevalence of khat chewing in all the studied population of students was 21.4%. The life time khat chewing prevalence in the schools was 18.4% and the current prevalence was 10.9% (43). Study conducted in Hossana health science college students' show that the prevalence of alcohol use was found to be 21.7% and Khat 27.7% (19).

The prevalence rate of tobacco use during the past six months was 17% tobacco was the most commonly abused drugs 34.7 %( 41). The prevalence of life-time cigarette smoking in the schools was 13% and the current prevalence was 5.6% (43). According to EDHS 2011 result shows that, substances use is among the adolescent population in Ethiopia had been showing that tobacco use 1.5 percent and 3.6 percent in age group 15-19 and 20-24 respectively (20).

#### 2.3. Relationship between life satisfaction and risky behavior

Life satisfaction has been found to be related to an individual's health and overall wellbeing. Several studies have examined the relationship between life satisfaction and health factors such as obesity, alcohol use, suicidal thoughts, physical activity, stress, in different populations.

Study conducted by Robert et al. Life satisfaction and suicide among high school adolescents shows that there is strong relationship between life satisfaction and suicide attempt (14). Study result among South Carolina high school students on the relationship between life satisfaction, risk-taking behaviors, and youth violence show that life satisfaction was negatively associated with carrying guns and with the number of physical fights a youth reported engaging in during the preceding (43).

Another study conducted among student on association between life satisfaction and sexual risk-taking behaviors show that, ever having sexual intercourse, age of first intercourse, having two or more lifetime sexual intercourse partners, and having one or more partners in the past 90 days associated with life dissatisfaction in the study (44).

Comparative Study done among tobacco user and non-user adolescent age from 16-19 show that tobacco users has low life satisfaction in comparison to non- users (45). Study conducted in 130 high school student show that significant relation inverse bivariate links between adolescent life satisfaction and use of alcohol, cigarettes, and marijuana (46). In general life satisfaction is negative relation with health risky behavior, risky sexual behavior and substance use (47).

Even though there is handful research which shows that the prevalence and determinants of sexual risky behavior and substance use in college and University students but no research which assess students level of life satisfaction and its relation to risky sexual behavior and substance use. So study contributes one literature relationship life satisfaction and risky behavior.

## **Conceptual framework**

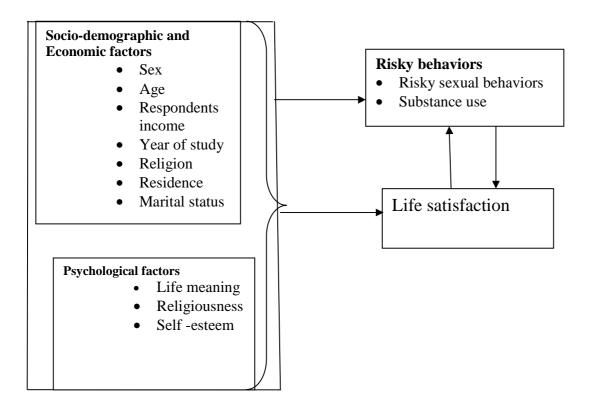


Figure 1.The conceptual framework of the study; designed by reviewing different literatures

#### **Chapter Three: Significance of the study**

Different research shows risky behavior practice in college and University- age students. The physical and psychological impact of risky behaviors have been widely examined and supported, but less research has been conducted on life satisfaction. And no previous research has shown that life satisfaction among university students relationship with their risky behavior in Ethiopia.

So, the present findings will have several implications for future research and healthy practice. Finding from this study will be used as literature on what factor associated with student life satisfaction during their university stay and how it's associated with risky behavior. From a practical perspective, the present findings provide important information to develop risky behavior prevention strategies in higher education setting.

## **Research Questions**

Research Question 1: What is the level of life satisfaction among Arba Minch University students?

Research Question 2: Is there any relationship between life satisfactions and risky sexual behaviors?

Research Question 3: Is there any relationship between life satisfaction and substance use?

#### **CHAPTER FOUR: OBJECTIVE**

## 4.1 General objective

 To assess life satisfaction and its relation with risky behavior among Arbaminch University student.

## 4.2 Specific objectives

- To determine life satisfaction among Arbaminch University students.
- To assess relationship between life satisfaction and risky sexual behavior among Arbaminch University students.
- To assess relationship between life satisfaction and substances use among Arbaminch University students.

**CHAPTER FIVE: METHODS and MATERIALS** 

5.1. Study area and period

The study was conducted from March 24-28, 2013 in Arbaminch University. Arba Minch

University is one of 33 universities in Ethiopia. It is found in SNNPR, Gamo Gofa zone and

located 505Km South of Addis Ababa, 276 Km South West of Awassa, the capital city of

SNNPR state and 856 km southwest from Jimma. It was established as Arba Minch water

institute in 1985 GC by Diploma level and advanced to University in May 26 /2004 GC by the

Government of Ethiopia as an autonomous higher education institution. It comprises six

colleges; water technology which is recently named as Institute of technology, College of

Medicine and Health Science, College of Agriculture, College of Natural Science, College of

Business and Economics and College of Social Science and Humanities. The total number of

regular undergraduate students enrolled in the 6 colleges in 2012-2013 academic years was

13018.

5.2. Study design:

• Cross-sectional study design was applied.

**5.3.** Population and sample

**5.3.1. Source population:** 

• The source population were all regular undergraduate Arbaminch University

students in the academic year of 2012/2013.

**5.3.2** Study population:

• Selected regular undergraduate students from source population.

**Inclusion and exclusion criteria** 

**Inclusion criteria** 

All regular undergraduate students in Arba Minch University

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**Exclusion criteria** 

Those students at other place because of practical attachment and seriously ill during data

collection time

5.4. Sample size determination and sampling technique:

5.4.1 Sample size determination:

The sample size was calculated by using a single population proportion formula

 $n = (Z\alpha/2)^2 p (1-p)$ 

 $d^2$ 

Considering the following assumptions; by assuming proportion of students who satisfied with

their life to be P = 50%. This has been preferred for the sample size determination due to lack of

similar studies in Ethiopia. Marginal error (d) 5%, confidence interval of 95% and Za/2 is the

value of the standard normal distribution corresponding to a significant level of alpha ( $\alpha$ ) 0.05,

which is 1.96. The calculated sample size is **384**. Considering non-response rate of 15%, the total

sample size was 442 students.

 $n = (1.96)^2(0.5)(0.5) = 384$ 

 $(0.05)^2$ 

Where: n= sample size

z=confidence interval

d= margin of error

p= proportion of students satisfied with their life

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#### **5.4.2 Sampling technique:**

In Arba Minch University there are six colleges. The total sample size was proportionally allocated to the six colleges based on the number of regular undergraduate students. The enumerated list of all regular students prior to the study period was secured from the respective registrar offices of the six colleges. Then stratified sampling was employed. The variable of stratification was by batches of students assuming that as the number of years staying at the university influences their satisfaction with life and risky behavior practice. Then from each batch proportional probability sample populations were draw. Then to select individual respondents from each stratum/each year of study from each college, simple random sampling was applied by using computer generated random number method.

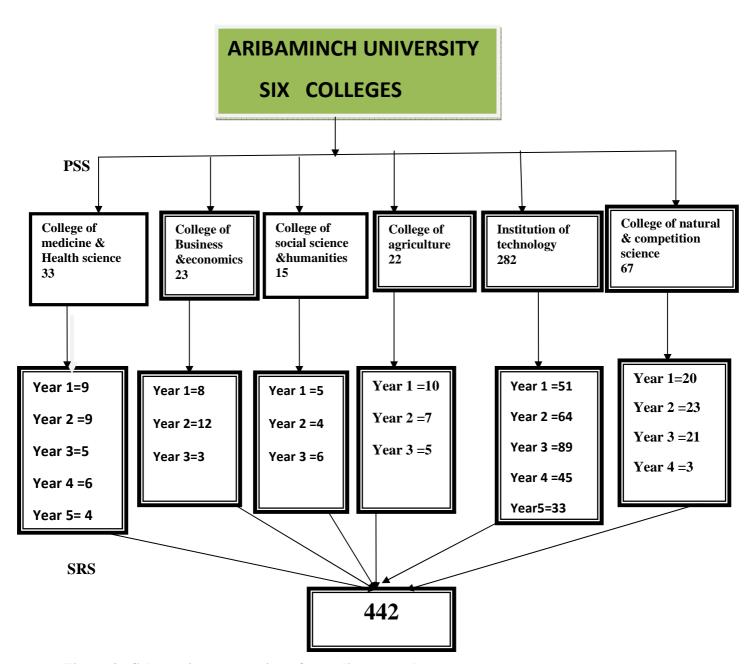


Figure 2 Schematic presentation of sampling procedure

#### **5.5 Variables:**

#### **Dependant variable:**

## **Independent variables:**

## Socio-demographic and economic variables

- Age
- Sex
- Respondents monthly income
- Year of study
- Religion
- Residence
- Marital status

## **Psychological factors**

- Life meaning
- Religiousness
- Self -esteem

## Study variables

• Life satisfaction

#### Risky behaviors

- Risky sexual behavior
- Substance use

#### 5.5.3. Data collection instrument and procedures

#### **5.5.3.1 Data collection instrument:**

The following instruments were adapted from similar studies and the questionnaire consisted of Seven main parts:

Demographic Questionnaire Items

Included items on age, gender, religion, field of study, study year, residence and ethnicity. In addition, one item measures socio-economic status (SES), respondents' monthly income.

Life Satisfaction Instruments

Multidimensional Students' Life Satisfaction Scale (MSLSS) is developed to assess children and adolescents' satisfaction with respect to the areas of life most pertinent during youth development. Specifically, students are instructed to rate their satisfaction with their family life, friendships, school experiences, self, and then living environment. Response options were on a 6-point scale that ranges from 1 = strongly disagree to 6 = strongly agree. Reliability check showed that the scale has high internal consistency (Cronbach's  $\alpha = 0.83$ ). To assess life satisfaction in different domain there were different number of items in each domain was used, to assess satisfaction with family 7 Items, to assess satisfaction with friends 9 items, to assess satisfaction with school 8 Items which was modified to 3 items in context of university satisfaction, to assess satisfaction with living environment 9 items adapted and to assess satisfaction with self 7 Items. Over all 34 items were used to assess life satisfaction based on MSLSS (49).

The scoring system was done a score for each domain was obtained by summing the individual items within the domain. Similarly, a total satisfaction score was calculated by summing all 34 item scores. Respondents who scored the sum score of 136 and above were considered as satisfied and below 136 were considered as dissatisfied with their life.

Risky sexual behavior Questionnaire Items

Risky sexual behavior in this study is defined as having multiple sexual partners or never or inconsistence use of condoms during sexual intercourse. Items included to assess risky sexual behavior were having two or more sexual intercourse partners and inconsistence and never condom use within the past 12 months sexual intercourse. And was presented in 'yes-no' format.

#### Substance use Questionnaire Items

Substance use in this study is defined as the use of alcohol, khat and/or tobacco by respondents within 30days prior to study period. Substance use in this study was assessed in terms alcohol, khat and/or cigarette use either in ever and within 30 days. The questionnaires adapted from different literature which was similar objective (20, 26). Because of the most prevalent substance used in Ethiopia alcohol, khat and cigarette used to assess substance use.

Religiousness Questionnaire Items

**Eight items** were used to measure the extent to which respondents view their religion as an integral part of their life and identity. Each item was scored on four point scale ranging from strongly disagrees (1) to strongly agree (4). And negatively worded statements (3, 5, 6 and 8) were reverse scored. All eight items taken together yield a maximum score of 32 and a minimum of 8. Higher score on each item indicates higher level of internal religiosity (50).

Meaning in life Questionnaire Items

The degree to which respondents felt their life is meaningful or is currently searching for meaning was measured by the short form of the Meaning in Life Questionnaire. Two items were to measure meaning in life. While the other two items, were used to measure the search for life meaning. Respondents were asked to respond to these items on a seven-point Likert type scale ranging from (1) absolutely untrue to (7) absolutely true (30). Those who have score high in presence of life meaning and low score in search for meaning have meaning in life.

Self-esteem Questionnaire Items

**Ten items** were used to assess the respondents' self esteem with 4 point Likert-type scales, ranging from strongly disagree to strongly agree. And negatively worded statements 3, 5, 8, 9 and 10 were reverse scored. All ten items taken together yield a maximum score of 40 and a minimum of 10. Higher score on each item indicates higher level of self-esteem (51).

**5.6. Data collection method:** 

Per-tested self-administered questionnaires were used for data collection. The survey

questionnaires were administered in English since the medium of instruction in Ethiopia

particularly in high schools and Universities is in English.

**5.7. Data collectors:** 

Six health professional were recruited to coordinate data collection. Training was given by the

principal investigator for 2 days for coordinators on the purpose of the study, questionnaires, data

collection methods, process of assigning respondents, and ethical concerns during data collection

time. In addition, to handle any problem, ensure data quality, and check proper completeness of

questionnaire the coordinators were assigned to each college.

**5.8.** Operational definitions and definition of terms:

**Life satisfaction:** sum of satisfactions score at 136 and above

**Risky behavior:** is includes substance use and risky sexual behavior among respondents.

Risky sexual behavior: is sexual practice with multiple sexual partners and/or never or

inconsistency use of condom during sexual intercourse.

Multiple sexual partners: when someone engaged on sexual intercourse with more than one

sexual partner.

**Ever sexual intercourse**: respondents who had sexual intercourse at least once in the past.

**Substance use:** If respondents had ever and within 30days used khat, alcohol and cigarette.

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#### 5.9. Data processing and analysis:

Data were coded, entered into computer, cleaned and analyzed using SPSS version 16.0. For uniform scoring of items of point Liker scale response format; negatively worded items were reversed that higher score was given in agreement with positive statements and disagreement with negative statements. The mean score of the scales was computed for each satisfaction domain and overall life satisfaction.

**Data analysis:** analysis was based on outlined above in research questions

- Descriptive Statistics: frequency Means and standard deviations were obtained for continuous variables while the categorical variables were assessed by computing frequencies and proportions.
  - For life satisfaction scores, after all items each domains were summed up then mean score was computed for each domains. Then, the total score was converted to 100 percent for possible comparisons of the mean scores.
- **ANOVA's** and **Independent samples** *t***-test** was conducted to examining life satisfaction mean scores difference across socio-demography variables, with the alpha level for significance set at 0.05.
- Spearman's rank correlation coefficient was calculated to identify any significant correlation of life satisfaction with risky behaviors. Alpha level was set at .05 and 0.01 to indicate statistical significance.
- **Pearson correlation coefficient** was calculated life satisfaction with psychological factors. Alpha level was set at .05 and 0.01 to indicate statistical significance.
- **Multivariate linear regression** was conducted to assess the effect of socio-demography and psychological variables on students' life satisfaction and 95% confidence intervals.

In the first model, the effects of socio-demographic variables were assessed while in the second model the effects of psychological variables were considered. Finally, explanatory variables which had statistically significant association with life satisfaction (P < 0.05) were entered to the final regression model.

#### **5.10. Data quality control:**

Questionnaires were adapted from similar literatures. Pre-test was conducted before the actual data collection with a 5% of sample population in Wolayta Sodo University students similar to the study population to see for the accuracy of responses and to estimate time needed. Training was given for coordinators for 2 days. The completeness and consistency of the data collection was checked before the respondent leave. The principal investigator was also involved in all data collection process, coding, entering to computer, cleaning and analysis.

#### **5.11 Ethical consideration:**

Ethical clearance was obtained from the Ethical committee of College of public Health and medical sciences, Jimma University. Official letter was delivered to Arba Minch University and permission was secured before data collection. Respondents informed as they could skip questions that they were not want to answer fully or partly and to quit the process at any time if they wanted to do so and, their participation was voluntary. They informed that the information collected from them was confidential and used only for research purpose. After assuring the confidentiality nature of responses and obtaining informed written consent from the respondents, the questionnaire distributed by data collection coordinators at privacy data collection rooms.

#### **5.12 Dissemination plan**

The findings of this study will be presented to Jimma university and communicate with Arba Minch University.

#### **Chapter Six: Result**

#### 6.1. Socio-demographic characteristics of the respondents

Of the 442 self-administered questionnaires, 428 returned making a response rate 97.0%. Table 1 presents background characteristics of the respondents. Accordingly, 313 (73.1%) of the respondents were males. The mean age of the respondent was 21.3 (SD=2.2) and 247 (57.7%) of respondents were orthodox religion follower. One hundred nineteen (27.8%) were 3rd year students. In terms of marital status, majority 414 (96.7%) of the respondents were single. One hundred forty five (33.9%) of respondents were from ethnic group of Amhara. Nearly all, 424 (99.4%) of respondents were live in campus and mean monthly income of respondents' was 282 birr.

 $Table\ 1\ Socio-demographic\ characteristics\ of\ the\ respondents,\ March,\ 2013\ (n=428)$ 

Socio-demographic characteristics		Frequency	Percentage	
Sex	Male	313	73.1	
	Female	115	26.9	
Age	≤20	184	43.0	
	>20	244	57.0	
Religion	Orthodox	247	57.7	
	Protestant	98	22.9	
	Muslim	56	13.1	
	Catholic	27	6.3	
Ethnicity	Amhara	145	33.9	
	Oromo	115	26.9	
	Tigray	39	9.1	
	Gurage	32	7.5	
	Others*	97	22.7	
Previous residence	Rural	174	40.7	
	Urban	254	59.3	
Batch	First year	103	24.1	
	Second year	116	27.1	
	Third year	119	27.8	
	Fourth year	55	12.9	
	Fiveth & above year	35	8.2	

<sup>\*</sup>Afar, Gambela, Somale, Benshan Gumgumz,

#### 6.2. Respondents' life satisfactions

Table 2 presents the respondents' mean score to life satisfactions scale. Five life satisfaction domains mean score also assessed. Consequently, the means—score of the life satisfaction domains ranged from 61.8 to 79.6 with (SD= 11.1-22.9). The highest satisfaction score was obtained on family domain with mean score of 79.6 followed by satisfaction with self-domain with mean score of 78.6. However, satisfaction with university and living environment domains were lower mean score 61.8 and 61.9 respectively. The overall mean score of life satisfaction was found to be 71.8 with SD= 9.2 (range of possible score 16 -100). (71.8%) of respondents were satisfied with their life.

Table 2Respondents' mean score to life satisfactions scale, at Arba Minch University, March 2013

Domains	Mean ±SD	Range of possible score
Family	79.6± 16.5	16-100
Friend	$72.6 \pm 12.2$	16- 100
University	$61.8 \pm 22.9$	16-100
Living Environment	$61.9 \pm 11.1$	16-100
Self	$78.6 \pm 14.8$	16-100
Overall satisfaction	$71.8 \pm 9.2$	16-100

#### 6.3. Mean life satisfaction differences across socio-demographic characteristics

Independent sample t test and one-way analyses of variance performed in order to compare groups with different socio-demographic characteristics on the mean score of life satisfaction. Inspection of Q-Q Plots revealed that life satisfaction was normally distributed for all groups and that there was homogeneity of variance as assessed by Levene's Test for Equality of Variances. Therefore, an independent t-test and ANOVA was run on the data as well as 95% confidence intervals (CI) for the mean difference. In terms of gender, results of an independent samples ttest showed significant difference in the scores for male (M=71.2, SD=9.2) and female (M=73.4,SD=9.2) respondents; t (426) =-2.2, p=0.031). These results indicate that male respondents reported less in overall life satisfaction score than females. Table3 presents life satisfactions mean difference across socio-demography variables. Similarly, significant difference in the scores for respondents' monthly income less than average monthly income (M=70.6, SD= 9.0) and respondents' monthly income greater than average monthly income (M=73.0, SD=9.2);  $(t_{426}=-2.7, p=0.008)$ . The mean life satisfaction score for respondents who had monthly income less than average monthly income was significantly smaller than those respondents who had monthly income greater than average monthly income. When examining life satisfaction scores by religion, ethnicity and batch results of an ANOVA indicated no significant differences at the p < 0.05, the religion (F<sub>4, 423=</sub>, p = 0.268), ethnicity (F<sub>3, 424</sub>=, p = 0.302) and batch (F<sub>4, 423</sub>=, p = 0.067).

Table 3comparisons of mean score of life satisfaction among different socio- demography variables among respondents, in Arba Minch University, March 2013

Variables		Mean life satisfaction	T test	p-value
		(SD)		
sex	Male	71.2 (9.2)	$t_{426}$ =-2.2	0.031
	Female	73.4 (9.2)		
Age	≤20	71.9 (9.6)	$t_{426} = 0.2$	0.88
	>20	71.8 (8.9)		
Income	≤282	70.6 (9.0)	$t_{426} = -2.7$	0.008
	>282	73.0 (9.2)		
Previous	Rural	145.8(19.3)	$t_{426} = -0.7$	0.490
residence	Urban	147.0(18.4)		
			F test	
	Orthodox	71.5 (9.5)		
Religion	Protestant	72.3 (8.8)	T 40	
	Muslim	72.0 (9.7)	$F_{4,423}=1.3$	0.268
	Catholic	65.7 (11.4)		
	Others	70.3 (9.4)		
Ethnicity	Oromo	71.7 ( 8.7)		
	Amhara	71.8 (8.6)	$F_{3,424}=1.2$	0.302
	Tigray	69.7 (10.4)		
	Others	74.5 (8.8)		
Batch	First year	71.6 (9.7)		
	Second year	72.6 (8.4)	$F_{4,423=}2.2$	0.067
	Third year	70.5 (9.2)		
	Fourth year	71.1 (9.8)		
	Fiveth year & above	75.4 (9.0)		

## 6.4. Sexual behavior of the respondents

Table 4 presents sexual behavior of the respondents. Accordingly, 166 (38.7%) of the respondents have had sexual intercourse and males account the majority of them 136 (81.9%). About 131 (78.9%) of respondents had sexual intercourse in 12 months prior to the study period. Among these, 67 (51.1%) had sex with two or more partners.

Results also showed that among respondents who reported to have ever had sexual intercourse, 113 (68.1%) had used a condom at least once. Regarding the frequency of condom use, among those that ever used a condom, 53 (47.0%) used it consistently, 38 (33.6%) used occasionally and 22 (19.4%) used rarely. The study also showed that 40 (35.0%) of respondents had sex without condom in past 12 months prior to survey.

Table 4 Respondents' Sexual behavior at Arbaminch University, March 2013

variables		N	%
Ever had sexual intercourse (n=428)	Yes	166	38.7
	No	262	61.3
Ever had sexual intercourse in past 12 month (n=166)	Yes	131	78.9
	No	35	21.1
In the past 12 month, how many sexual partners did you	One only	64	48.9
have sex (n=131)	Two or more	67	51.2
Ever used condom (n=166)	Yes	113	68.1
	No	53	31.9
How frequently use condom (n=113)	Always	53	46.9
	Occasionally	38	33.6
	Rarely	22	19.5
Had sex without condom in past 12months (n=131)	Yes	40	30.5
	No	91	69.5
Do you use condom in last sexual encounter	Yes	95	84.0
	No	18	16.0

#### 6.5. Correlation of life satisfaction with risky sexual behavior

To examine the relationships between respondents' overall life satisfactions and risky sexual behavior, spearman's rank correlation coefficient was calculated. The results of the analyses presented in Table 5. Consequently, the correlation between life satisfaction domains and risky sexual behavior showed that satisfaction with family domain was significant and inverse correlation with having multiple sexual partners (rho=-0.24, p=0.005).while, satisfaction with friend, university, living environment and self domains did not significantly correlate to risky sexual behaviors.

The overall life satisfaction was significantly and inversely correlated with having multiple sexual partners and never use of condoms (rho=-0.2, p=0.025) and (rho=-0.16, p=0.037) respectively. However, overall life satisfaction did not significantly correlate to inconsistent use of condoms. Overall, these results indicate that higher scores on the overall life satisfaction correlated with reducing risky sexual behaviors.

Table 5Correlations between life satisfaction and risky sexual behavior, March 2013

	Life satisfaction dimension					
Risky sexual behavior	Family	Friend	School	Living	Self	Overall
	rho	rho	rho	environment	rho	satisfaction
	(p-value)	(p-value)	(p-value)	rho (p-value)	(p-value)	rho(p-value)
Having multiple	-0.2	-0.2	0.04	-0.02	-0.11	-0.2
partners	(0.005)	(0.051)	(0.666)	(0.854)	(0.209)	(0.025)
Never use of condom	-0.1	-0.15	-0.13	0.01	-0.08	-0.16
	(0.215)	(0.062)	(0.092)	(0.882)	(0.340)	(0.037)
Inconsistent use of	-0.05	-0.13	-0.09	-0.04	-0.13	-0.12
condom	(0.581)	(0.184)	(0.331)	(0.682)	(0.168)	(0.212)

#### 6.6. Substance use among the respondents

Table 6 displays substances commonly used by the respondents. Hence, ever use of alcohol was reported by about 182(42.5%) of the respondents and 131(7.0%) reported drinking alcohol in the Past 30days. Khat and cigarettes use were notably lower than alcohol use; about 24% of the respondents reported ever use khat and 10.7% of respondents reported ever use cigarette.

Of those ever used substances, 80 (75.5%) chewing khat in the past 30 days and 20(43.5) smoke cigarette currently.

Substance use in terms of gender; majority of males had drunk alcohol at list once in their lifetime. This was higher compare to female. Twenty (11.0%) of females were drinking alcohol in past 30 days. The prevalence of khat chewing was 90(21.0%) among males and 16(3.7%) among females. Current cigarette smoking was 20(43.5%) among males and six (13.0%) among females. Overall substance use was higher in males than females.

Table 6 substance use among Arba Minch University students, Ethiopia, March 2013

Substance use		Male	Female	Total n (%)
		n (%)	n (%)	
Ever drunk alcohol (n=428)	Yes	150 (35.0)	32(7.5)	182 (42.5)
	No	163(38.1)	83(19.4)	246 (57.5)
	Total	313(73.1)	115(26.9)	428(100)
Drunk alcohol within the last	Yes	111(61.0)	20(11.0)	131 (72.0)
30 days (n=182)	No	38(20.9)	13(7.1)	51 (28.0)
	Total	149(81.9)	33(18.1)	182(100)
Ever chewed khat (n=428)	Yes	90(21.0)	16(3.8)	106 (24.8)
	No	223(52.1)	99(23.1)	322 (75.2)
	Total	313(73.2)	115(26.8)	428(100)
Chewed khat within the last 30	Yes	67(63.2)	13(12.3)	80 (75.5)
days (n=106)	No	24(22.6)	2(1.9)	26 (24.5)
	Total	91(85.9)	15(14.1)	106 (100)
Ever smoked cigarette	Yes	38(8.9)	8(1.8)	46(10.7)
(n=428)	No	275(64.3)	107(25)	382(89.3)
	Total	313 (73.1)	115(26.9)	428(100)
Currently smoking	Yes	20(43.5)	6(13.0)	26 (56.5)
cigarette(n=46)	No	18(39.1)	2(4.4)	20(43.5)
	Total	38(82.6)	8(17.4)	46(100)

#### 6.7. Correlation life satisfaction with substance use

To examine the relationships between respondents' life satisfactions and substance use, spearman's rank correlation coefficient calculated. The results of the analyses presented in Table 7. Consequently, the correlation between life satisfaction domains and substance use showed that only satisfaction with self and family domains were significantly and inversely correlated with alcohol use (rho=-0.19, p=009) and (rho=-0.19, p=0.01) respectively. These results indicate that higher family satisfaction and self-satisfaction correlated with lower frequency of alcohol use. While none of life satisfaction domains had significantly correlated with cigarette and khat use.

The correlations analysis revealed that overall life satisfaction was significantly and inversely correlated with alcohol use (rho=-0.23, p=0.002) and correlations were weak in magnitude. These results indicate that higher scores on the overall life satisfaction correlated with lower frequency of alcohol use. However, cigarette and Khat use did not significantly correlated with life satisfactions.

 $Table\ 7 correlation\ between\ respondents'\ life\ satisfactions\ and\ substance\ use$ 

Life satisfaction dimensions							
substance use	family	friend	school	living	Self	Overall satisfaction	
rho(p-value) rho(p-value) rho(p-value) environment rho(p-value) rho(p-value)						rho(p-value)	
rho (p-value)							
Current alcohol use	-0.19	<b>-</b> 0.12	-0.05	-0.1	-0.19	-0.23	
	(0.010)	(0.114)	(0.526)	(0.190)	(0.009)	(0.002)	
Current khat chewing	-0.16	-0.04	-0.11	-0.12	-0.07	-0.18	
	(0.104) $(0.694)$ $(0.256)$ $(0.239)$ $(0.455)$ $(0.279)$						
Current cigarette smoke	-0.21	0.003	-0.14	-0.23	-0.18	-0.1	
	(0.161)	(0.983)	(0.338)	(0.132)	(0.234)	(0.512)	

#### 6.8. Psychological factors

In this study psychological factors; life meaning, self-esteem and religiousness were assessed. Majority 266(62.0%) of the respondents reported high self-esteem score. As well as 253 59.1% of respondents had life meaning and more than half of respondents reported high religiosity scores Table 9 displays correlation between life satisfaction and its' domains with psychological variables. Consequently, religiosity, life meaning and self-esteem had significant and positively correlated with family domain (r=0.21, p<0.001), (r=0.24, p<0.001) and (r=0.24, p<0.001) respectively.

Similarly religiosity, life meaning and self-esteem had positive correlation with friend domain (r=0.21, p=0.001), (r=0.24, p=0.001) and (r=0.29, p=0.001) respectively. Satisfaction with University had also significant correlation with religiosity (r=0.11, p=0.028), life meaning (r=0.199, p=0.001) and self-esteem (r=0.18, P=0.001). Living environment had significant correlation with religiosity (r=0.16, p=0.001), life meaning (r=0.14, p=0.005) and self-esteem (r=0.14, p=0.004). Satisfaction with self had weakly correlated with religiosity (r=0.15, p=0.002) and life meaning (r=0.16, p=0.001) whereas; moderately correlated with self –esteem (r=0.31, p=0.001)

Regarding to correlation between overall life satisfaction and psychological variables, religiosity and life meaning had moderate correlation (r=0.269, p=0.001) and (r=0.308, p=0.001) respectively. Whereas; self-esteem had strong correlation (r=0.41, p=0.001).

Table 8 correlations between respondents' life satisfaction and psychological variables,  ${\bf March~2013}$ 

	Life satisf	action Dimer	nsions			
Psychological factors	Family	Friend	School	Living	Self	Overall satisfaction
ractors	r(p-value)	r(p-value)	r(p-value)	environment	r(p-value)	r(p-value)
				r(p-value)		
Religiosity	0.21	0.21	0.11	0.16	0.15	0.27
	(0.001)	(0.001)	(0.028)	(0.001)	(0.002)	(0.001)
Life meaning	0.24	0.24	0.20	0.14	0.16	0.31
	(0.001)	(0.001)	(0.001)	(0.005)	(0.001)	(0.001)
Self-esteem	0.34	0.29	0.18	0.14	0.31	0.41
	(0.001)	(0.001)	(0.001)	(0.004)	(0.001)	(0.001)

#### Predictive Analyses

#### 6.9. socio-demography variables determinant of respondents' life satisfaction

In model one a simultaneous multiple linear regression was conducted to determine the proportion of the variance in life satisfaction scores accounted by socio-demography variables. The data are linear checked by Scatterplot of the data, and the data seem to be moving in a straightline,dataarelinear). The sum of life satisfaction score is normally distributed.

The relationship between socio-demographic variables and life satisfaction score is quantified in table 8 below. Socio-demographic variables were found to be explaining 6.7% of the variability in the life satisfaction score ( $R^2 = .067$ ). Accordingly, gender and batch appeared to be statistically associated with life satisfaction score.

The life satisfaction score for female respondents increased by an average of 5.0 (95% CI: 9.79 to 0.15) as compared to male respondents. Fiveth year students had 7.88unit greater satisfaction score when compared to third year students (95% CI: 1.41 to 14.36).

 $Table\ 9 Socio-demographic\ determinants\ of\ respondents'\ satisfaction\ with\ their\ life\ at\ Arbaminch\ University,\ March\ 2013$ 

Socio-demographic Variables	Unstandardized	p-value	95% CI for B
	B coefficient		
Sex			
Male* (reference)			
Female	5.00	0.043	(9.79, 0.15)
Age	-0.30	0.634	( -1.52,0.93)
Income	0.01	0.061	(0.00, 0.02)
<b>Previous Residence</b>			
Urban*(reference)			
Rural	-0 .64	0770	(-3.68, 4.96)
Religion			
Orthodox*(reference)			
Protestant	-5.64	0.088	( -12.13,0.85)
Muslim	-4.34	0. 141	(-10.13,1.45)
Catholic	-7.40	0.572	(-33.16,18.36)
Ethnicity			
Amhara*(reference)			
Oromo	1.60	0.548	( -3.63, 6.82)
Tigray	-4.79	0 .157	( -11.44,1.86)
Gurage	6.48	0.074	(-0.64, 13.59)
Marital status			
Single*(reference)			
Married	1.01	0.880	(-12.17, 14.2)
Divorced	-1.01	0.915	(-19.57, 17.54)
Widowed	-22.12	0.097	(-48.22, 3.99)
Batch			
1 <sup>st</sup> year	-1.27	0.622	( -6.32,3.78)
2 <sup>nd</sup> year	2.12	0.299	(-1.89,6.14)
3 <sup>rd</sup> year*(reference) 4 <sup>th</sup> year	-1.27	0.535	(-7.02, 3.65)
5 <sup>th</sup> year and above	8.62	0.049	(0.04, 17.21)

#### 6.10. Predicting Student's Life Satisfaction from psychological variables

Variables related to psychological factors entered into the second model. Table 10 shows the regression estimates for the model with psychological variables and life satisfaction score. Accordingly, all psychological variables; religiosity, self-esteem and life meaning were significant predictors of life satisfaction. The model explained 21.9% of the variations in life satisfaction score (R2 =0.219). As respondents' internal religiosity score increase by one unit, respondents' life satisfactions increase by 1.48 units (95%CI: 0.98, 1.98). Besides, as positive self-esteem, its effect on life satisfaction score becomes more positive. As respondents' self-esteem score increase by one unit, respondents' life satisfactions increase by 3.45 life satisfaction score (95%CI: 2.82, 4.08). Life meaning score increase by one unit, 1.12 life satisfaction (95%CI: 0.79, 1.44).

Table 10 psychological variables as predictors of respondents' life satisfaction at Arbaminch University, March 2013

Psychological variables	p-value	Unstandardized	Standardized	95% CI for B
		B coefficient	<b>B</b> Coefficient	
Religiosity	0.0001	1.48	0.27	(0.98, 1.98)
Self-esteem	0.0001	3.45	0.46	(2.82, 4.08)
Life meaning	0.0001	1.12	0.31	(0.79, 1.44)

## 6.11. Predictors of respondent' satisfaction with life

Variables, which are significant in model one and two, included in the final model. Table 11 shows the regression estimates and the relative effect of each predictor variable for respondents' satisfaction with life. Variables, which had statistically significant association with life satisfaction displayed in the table 11. The final model explained 23.6% of the variation in respondents' life satisfaction. As represented in table 11, gender, self-esteem and life meaning were final predictors of respondents' life satisfaction.

Table 11 Predictors of respondents' life satisfaction at Arbaminch University, March 2013

<b>Explanatory Variables</b>	p-value	Unstandardized B coefficient	Standardized B coefficient	95% CI for B
Gender	0.036	3.89	0.09	(0.26, 7.52)
Self-esteem	0.0001	1.39	0.30	(0.95, 1.82)
Life meaning	0.0001	0.75	0.21	(0.43, 1.07)

## **Chapter Seven: Discussion**

The study was attempted to assess life satisfactions and its correlation with risky sexual behaviors and substance among University students. It revealed that the majority of respondents reported positive life satisfaction, which is consistent with studies done among University students in Maryland and Canadian prairie city where more than half students satisfied with their life (30, 31). This similarity may be similar with age group and similar educational level.

Satisfaction with different dimension of life is important to achieve positive overall life satisfaction. Hence, the study examined satisfaction with life domains among respondents; in this study, 79.6% of respondents were satisfied with family domain and it was found the highest satisfaction score. 'Enjoy being at home with family' and 'my parents treat me fairly' items were highest score from seven family domain items. This is similar, Canadian University satisfaction with family relationship aspect of life higher than other aspect life (31). The other life satisfaction domain higher satisfaction reported by respondents is self, more than 78.0% of respondents satisfied with self-domain. In present study 'I like myself' and 'I like to try new things' were achieved the highest mean score in self-domain items. This shows individual satisfaction with self and family domains important factor to develop positive life satisfaction.

Whereas, (6 1.9%) of respondents reported dissatisfaction with living environment. This may be due to significant number of students reported 'the number of student high in dorm' and 'dissatisfaction with the campus environment' items. This may leads students for lower score for living environment satisfaction. Similarly, 61.8% of students reported dissatisfaction with University. The study also revealed that more than one-third of students were 'dissatisfied with university choice' and 'overall university satisfaction' items of university domain. Therefore, this shows that considering students' need when allocating students to different university. This finding supported by study done among Canadian prairie city university students; majority of students were satisfied with their life than university satisfaction (31). In generally, satisfaction with life domains results showed that to improve students' life satisfaction during their university stay more work expected related to living environment and university.

Monthly income and gender was the only socio-demographic variable that significantly associated with respondents' life satisfaction. In this study, males were less satisfied with their lives than females. This finding is contradict with study conducted in Maryland university students; no gender difference on overall life satisfaction (30). There may be different reasons, for example, as result showed in this study that female students had less engaged in risky behaviors compares to male students and risky behaviors had inversely correlated with life satisfaction. Hence, high involving in risky behaviors makes males to reduce their overall life satisfaction.

Respondents who had higher than average monthly income were more satisfied with their lives than who had lower than average monthly income. This finding supported by previous findings, which were conducted among freshman University students in Maryland, and in Canadian prairie city university student; those students who had high parental income were more satisfied with their life than low parental income (30, 31). This similarity may be due to university students income was associated with different aspect life. For example, high income may have lower levels of stress and greater access to social and academic opportunities, and these factors may lead to a greater overall satisfaction with life.

This study also explored the relationship between risky sexual behavior, substance use and life satisfaction. Consequently, satisfaction with family domain was significant and negatively correlated with having multiple sexual partners. This shows that students who were satisfied with their family had lower number of sexual partners than who were not satisfied with their family. As well as, this finding implies that higher satisfaction with family domain had significant in reducing risky sexual behavior among students. However, satisfaction with other aspects of life did not significantly correlated to risky sexual behaviors. There has been no research on this relationship to discuss.

Similarly, overall life satisfaction had significant and inverse correlations with having multiple sexual partners and never use of condom. This result suggests that higher life satisfaction correlated with increase condom use and reduced number of sexual partners. This finding is similar with study done among high school students in south Columbia shows that dissatisfaction

with life associated with having two or more sexual partners and ever having sexual intercourse (45). In generally, this study showed that the important of improving overall life satisfaction among students to reduce risky sexual behaviors.

The study also revealed that correlation between life satisfactions domains and substance use. Consequently, in the present study only two life satisfaction domains correlated with substance use. Alcohol use was significant and inverse correlation with family and self-domain satisfaction. This finding implies that those students who had higher satisfaction with family and self-domains were reducing alcohol use compare to those students who had lower satisfaction with these domains. Khat chewing and cigarette smoking did not significantly correlate with all life satisfaction domains. There was no study, which assesses correlation between life satisfaction domains and substance use to discuss.

Alcohol use was significantly and inversely correlation with overall life satisfactions. The result implies that students who had satisfaction with overall life satisfaction significantly decrease alcohol use. This finding is consistent with other studies conducted in South Florida high school students (46). Khat chewing and cigarette use had no significant correlation with life satisfaction. This study finding indicates that satisfaction with lives had no statically significant differ in khat and cigarette use. These results contradict other studies findings conducted in India adolescent age from 16-19 and south Florida which is weak and inverse bivariate association (45, 46). There may be different reasons for these difference; first the study area and study population may difference, second the prevalence of these substance use lower among students compare to others studies.

Finally, the study was examined the influence of independent variables on students' life satisfaction. Consequently, results showed that socio-demography variables together explained 6.7% of the variance in overall life satisfaction scores. Only gender and batch was socio-demography variables statically significant predictor of students' life satisfaction.

Similarly, all psychological variables were 21.9% of the variance explained in overall life satisfaction scores. All psychological variables were significant predictor of overall life satisfaction. This finding was similar with other study finding conducted among Maryland University students (30). The most important predictor psychological variable to student's life satisfaction was their self-esteem. Student with high self-esteem had higher level of life satisfaction. This finding is consistent with the results of study conducted in prairie city, which have demonstrated that self-esteem is crucial to consider when predicting higher level of life satisfaction among adolescents (31).

Finally, all independent variables put together explain 23.6% of variation in students' life satisfaction. Self-esteem, life meaning and gender were the final predictor of overall students' life satisfactions.

# **Chapter Eight: Limitations of the study**

- It is difficult to find cause-effect association due to cross-sectional design that used did not allow testing this directly.
- Respondents may underreport or over report risk behavior engagement for a number of reasons
- No study done on relationship life satisfaction with risky sexual behavior and substance use in Ethiopia as well as limited number of literatures to discuss especially the same to our study population.

## **Chapter Nine: Conclusions**

Significant numbers of respondents were satisfied with their lives. Satisfaction with family and self-domain had higher mean score. However, respondents reported dissatisfaction with living environment and University. This shows that more work expected to improve students' satisfaction with living and university. The data also indicated that more than one-fourth of students engaged in risky sexual behavior. Magnitude of substance use among respondents was considerable, although not very high, but lower than the findings of other studies, that reported for adolescents and young adults. The study also indicated that satisfaction with life and family domains had significantly and inversely correlated with having multiple sexual partners and never use condom. Similarly, use of alcohol had inverse correlation with family and self domains and life satisfactions. This was shows that those students who are satisfied with overall life and family and self aspect of life are less likely to engage in risky behaviors. This result indicates the importance of promotion life satisfaction among students.

# **Chapter Ten: Recommendation**

#### **Arba Minch University**

- Attention must be given to students' needs with regard to dormitory condition and campuses compound to improving satisfaction with living environment and university.
- More attention must give to improve students' overall life satisfaction in order to reduce risky behaviors among students.
- Establishment of anti-substance use club

#### Arba Minch University HIV/AIDS office and students' clinic

Promotion safe sexual behavior

#### **Future Research**

 Additional studies are needed focusing on others study design rather than cross-sectional study design to know cause-effect.

#### **ANNEXES**

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#### **ANNEX II: Consent form**

#### JIMMA UNIVERSITY

# COLLEGE OF PUBLIC HEALTH AND MEDICAL SCIENCES DEPARTMENT OF HEALTH EDUCATION AND BEHAVIORAL SCIENCES

#### POST-GRADUATE SCHOOLS IN MASTER OF PUBLIC HEALTH (MPH/HE/HP)

Study Title: Life satisfaction and risky behavior among Arbaminch University students

Informed consent form

Dear student:		
My name is	and I am health professional working in	and I am
gathering information concerning	ng life satisfaction and risky behavior. The purpose of	this study
is to assess life satisfaction ar	nd its relation with risky behaviors in Arba Minch	university
students. You are being asked to	participate in this study because your are selected to p	articipate.

You may receive no direct benefit from participating in this study but the information gathered helps education and health sectors who work in interventions to prevention risky behavior and enhance students' quality of life and educational achievement. Participation in study cause no any harm on you.

In all probability the responses will be used in publications and research reports presenting statistical data, but all personally identifying material will be removed. Your participation in this study entirely VOLUNTARY. If you decide not to participate, you are free to withdraw your consent and discontinue participation at any time without any penalty. But your honest participation will have contribution to generate information that can be used in the enhance life satisfaction and preventing risky behavior in higher education.

## **Information sheet**

Please do not put your name or identification numbers on this form.

Are you willing? Yes [] continue! No [] end

**General direction**: Read the instructions of each part and your rights during the time of data collection either to participate or refuse to give answers to questions you don't want to answer.

# **ANNEX III: Questionnaires**

# Part 1: Socio-demographic and economic characteristics

The following questions are bout your background information. Please encircle the choice which applies to you for each of these questions. In case, there is no a choice that applies to you in the list, please write your answer in the space provided.

s.no	Socio-demographic & economic variables.	Response format
Q101	Sex of the respondent	1. Male 2. Female
Q102	Age in year	·
Q103	Religion	1. Protestant 2. Orthodox 3. Muslim
		4. Catholic 5. Others
Q104	Ethnicity	1. Oromo 2. Amhara 3. Tigray
		4. Gurage 5. Others
Q105	Marital status	1. Single 2. Married 3. Divorced
		4. widowed
Q106	Previous residence	1. Rural 2. Urban
Q107	You monthly income (in birr)	·
Q108	Academic year	1.Year one 2.Year two 3.Year three
		4. Year four 5. five and above
Q109	Field of study	·
Q10	Where do you live now?	1. In campus 2.outside campus

# **Part 2: Student Life Satisfaction Survey**

Here are questions that ask you to indicate your satisfaction with life. In answering each statement, circle a number from (1) to (6) where (1) indicates you strongly disagree with the statement and (6) indicates you strongly agree with the statement.

			Response rate					
		Strongly	moderately	disagree	Agree	Moderately	Strongly	
S.No	Family	disagree	disagree			agree	agree	
Q201	I enjoy being at home with my family.	1	2	3	4	5	6	
Q202	My family gets along well togeth	er. 1	2	3	4	5	6	
Q203	I like spending time with my parents.	1	2	3	4	5	6	
Q204	My parents and I doing fun thing together.	5 1	2	3	4	5	6	
Q205	My family is better than most.	1	2	3	4	5	6	
Q206	Members of my family talk nice to one another.	ely 1	2	3	4	5	6	
Q207	My parents treat me fairly.	1	2	3	4	5	6	
	Friends				<u> </u>			
Q208	My friends treat me well.		2	3	4	5	6	
Q209	My friends are nice to me. 1		2	3	4	5	6	
Q210	I wish I had different 1 friends		2	3	4	5	6	
Q211	My friends are mean to 1 me.		2	3	4	5	6	

My friends are great	1	2	3	4	5	6
I have a bad time with my friends	1	2	3	4	5	6
I have a lot of fun with my friends.	1	2	3	4	5	6
I have enough friends.	1	2	3	4	5	6
My friends will help me if I need it	1	2	3	4	5	6
School			•		·	
I expressed satisfaction with university choice.	1	2	3	4	5	6
I expressed satisfaction with university Experience.	1	2	3	4	5	6
I expressed overall satisfaction with university.	1	2	3	4	5	6
Living Environment						
I like the campus compound where I live.	1	2	3	4	5	6
I wish there were different students in my dormitory.	1	2	3	4	5	6
I wish I lived in a different dorm.	1	2	3	4	5	6
I wish I lived other dorm else.	1	2	3	4	5	6
	I have a bad time with my friends I have a lot of fun with my friends.  I have enough friends.  My friends will help me if I need it  School  I expressed satisfaction with university choice.  I expressed satisfaction with university Experience.  I expressed overall satisfaction with university.  Living Environment  I like the campus compound where I live.  I wish there were different students in my dormitory.  I wish I lived in a different dorm.	I have a bad time with my friends  I have a lot of fun with my friends.  I have enough friends.  I have enough friends.  I have enough friends.  I have enough friends.  School  I expressed satisfaction with university choice.  I expressed satisfaction with university Experience.  I expressed overall satisfaction with university.  Living Environment  I like the campus compound where I live.  I wish there were different students in my dormitory.  I wish I lived in a different dorm.  I wish I lived other dorm 1	I have a bad time with my friends  I have a lot of fun with my friends.  I have enough friends.  I expressed satisfaction with university choice.  I expressed satisfaction with university Experience.  I expressed overall satisfaction with university.  I wish I lived in a different dorm.  I wish I lived other dorm 1 2 2 3 4 5 5 6 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6	I have a bad time with my friends  I have a lot of fun with my friends.  I have enough friends.  I hav	I have a bad time with my friends  I have a lot of fun with my friends.  I have enough friends.  I hav	I have a bad time with my   1

Q224	I like my dorm students.	1	2	3	4	5	6
Q225	The number of students in dorm high	1	2	3	4	5	6
Q226	My class room and dorm is nice.	1	2	3	4	5	6
Q227	I enjoy in University compound.	1	2	3	4	5	6
	Self						
Q228	I think I am good looking.	1	2	3	4	5	6
Q229	I am fun to be around.	1	2	3	4	5	6
Q230	I am a nice person.	1	2	3	4	5	6
Q231	Most people like me.	1	2	3	4	5	6
Q232	There are lots of things I can do well.	1	2	3	4	5	6
Q233	I like to try new things.	1	2	3	4	5	6
Q234	I like myself	1	2	3	4	5	6

# Part 3: Risky sexual behavior survey

Here some questions which asses your sexual behavior please circle your answer.

		Response format	Skip rule
s.no	Sexual behavior		
Q301	Ever had sexual intercourse?	1. Yes 2. NO	If no skip to
			( part 4)
Q302	Have you ever had sexual intercourse in the past	1. Yes	If no skip to
	12 months?	2. No-	(Q304)
0202	In the most 10 months have many according to the most	4.0.1.2.7	
Q303	In the past 12 months, how many sexual partners did you have?	1. One only 2. Two	
		or more	
	Condom use		
Q304	Have you ever used condom?	1. Yes 2. No——	If no skip to
			( part 4)
Q305	How frequently did you use condom?	1. Always	
		2. Occasionally	
		3. rarely	
Q306	Had sex without condom in last 12 months?	1. Yes	
		2. No	
Q3o7	Do you use condom in your last sexual	1. Yes 2. No	
	encounter?		

# **Part 4: Substance use survey Questions**

Here some question which assess your current and lifetime substance use please circle your answer.

S.N	Alcohol use	Response	Skip rule
Q401	Have you ever taken drink that contain alcohol (tela, teji, areke wine, beer, draft etc?	1. Yes 2. No————	►If no skip to (Q404)
Q402	During in the last 30 days, have you take drinks contain alcohol?	1. Yes 2. No	
Q403	Have you currently drinking alcohol?	1. Yes 2. No	
	Khat use		
Q404	Have you ever chewed khat?	1. Yes 2. No	If no Skip to (Q407)
Q405	In past 30 days, have you chewed khat?	1. Yes 2.No	
Q406	Have you currently chewing khat?	1. Yes 2. No	
	Cigarette smoking		_ <u> </u>
Q407	Have you Ever smoked cigarette?	1. Yes 2. No	→If no Skip to (part 5)
Q408	Have you Currently smoking cigarette?	1. Yes 2. No	

# Part 5: Intrinsic religiousness survey Questions

Here some question which assess religiousness related questions. Circle your answer.

S.N		Response rate				
		Strongly disagree	disagree	Agree	Strongly agree	
Q501	My faith involves all of my life				4	
Q502	In my life I experience the presence of the Devine.	1	2	3	4	
Q503	Although I believe in my religion, I feel there is many more important my life.	1	2	3	4	
Q504	My faith sometimes restricts my actions.	1	2	3	4	
Q505	I try hard to carry my religion over into all my other dealings in life.	1	2	3	4	
Q506	It doesn't matter so much what I believe as long as I lead a moral life.	1	2	3	4	
Q507	My religious beliefs are what really lie behind my whole approach to life.	1	2	3	4	
Q508	Although I am religious person, I refuse to let religious considerations influence my everyday affairs.	1	2	3	4	

# **Part6: Meaning in Life survey Questions**

Here some questions assess your meaning in life. Please circle your answer

		Response Rate						
S.No		Absoluly untrue	Mostly	Somewha t untrue	Can't say true or false	Somewha t true	Mostly	Absolutel y true
Q601	My life has a clear sense of purpose	1	2	3	4	5	6	7
Q602	I have a good sense of what makes my life meaningful	1	2	3	4	5	6	7
Q603	I am seeking a purpose or mission in life	1	2	3	4	5	6	7
Q604	I am searching for meaning in my life	1	2	3	4	5	6	7

# **Part 7: self esteem survey Questions**

Here is a list of statements dealing with your general feelings about yourself. Please circle

		Response rate				
S.No_		strongly disagree	disagree	agree	strongly agree	
Q701	I feel that I am a person of worth,	1	2	3	4	
Q702	I feel that I have a number of good qualities.	1	2	3	4	
Q703	All in all I am inclined to feel that I am a failure.	1	2	3	4	
Q704	I am able to do things as well as most other people.	1	2	3	4	
Q705	I feel I do not have much to be proud (over-confidence) of.	1	2	3	4	
Q706	I take a positive attitude toward myself.	1	2	3	4	
Q707	On the whole, I am satisfied with myself.	1	2	3	4	
Q708	I wish I could have more respect for myself.	1	2	3	4	
Q709	I certainly feel useless at times.	1	2	3	4	
Q710	At times I think I am no good at all.	1	2	3	4	