Family Systemic Factors and Students Risky Sexual Behavior: The Case of Adigrat, Mekelle and Axum Universities.

Asefa Tesfay
Assistant Professor
Adigrat University

Abstract
Adolescents are at high risk for a number of negative health consequences associated with unplanned and unsafe sexual activity, including infection with human immunodeficiency virus, other sexually transmitted diseases and unintended pregnancy. The main aim of this study was to explore the main family systemic predisposing factors that reinforce university students to engage in such behavior. Using multi-stage stratified random sampling 150 university students were used as participants for the quantitative approach and FGDs and interviews were used for the qualitative part. As a result, this research has attempted to pinpoint the predisposing factors associated with the family systems. In this study about 150 participants were selected using multistep stratified random sampling technique for the quantitative part and 12 interviewees and 48 focus group discussants were included using purposive sampling technique for the qualitative part from the three universities found in Tigray. Besides, questionnaires for the quantitative approach and interview, FGD and observation for the qualitative one were used in order to collect the data. Therefore, both in the quantitative and qualitative analyses of this study found that family economy, parent education level and follow up were found the most significant factors associated with university students risk sexual behaviour. The result of this study was consistent and inconsistent with previous studies on the topic.

Key Words: Family, Risk, Sexual, Adolescence

CHAPTER ONE

1. Background

The World Health Organization (WHO) defines adolescent people as those between the ages of 10 to 19 years (UNICEF, 1997). Today’s adolescent and young adults constitute the largest cohort ever to enter the transition to adulthood. Evidence showed that nearly half of the global population was less than 25 years old and nearly 90% live in developing countries. About 1.7 billion people of the world’s population were between the ages of 10 and 24 (UNICEF, 1997). Most of the world’s youth are living in developing countries. Adolescence is a period characterized by immature exploration and experimentation behaviors of adolescents and subjection to peer influences.

When viewed from various behavioral, cognitive and developmental perspectives, young people can be labeled as the vulnerable group; because this segment of population is threatened by sexual and reproductive health problems. These days, most young people are exposed to risky behavioral practices in their teens. Moreover, negative behavioral practices during adolescence period predispose adolescents to sexual and reproductive health problems (Friedman LH, Edstron GK, 1983). Adolescents have been exposed to various sexual and reproductive health (SRH) problems because of their risky sexual behaviors without necessary precautions. Particularly these days, young people are highly suffering from the tragedy of HIV/AIDS. Millions of young people have been infected with HIV and millions of them have died of it. Adolescent females have been jeopardized by
the pandemic and other reproductive health risks such as unwanted teenage pregnancy, unsafe abortion-related complications, and dropout from schools (WHO, 2003, 20004, and 2005).

Quantitative and qualitative studies of the sexual knowledge and practices of adolescents reveal that a substantial number of boys and girls in many developing countries engage in sexual intercourse before their 15th birthdays (UNICEF, 1997). Early and unprotected sexual initiation can trigger a succession of harmful physical, emotional, and social outcomes, especially for girls (MOH, 2006). Moreover, compared with adults, adolescents are less likely to have the foresight, skills, cognitive maturity, information, and support they need to protect themselves from unwanted pregnancy, HIV, and sexually transmitted infections. In addition, the rising number of new HIV infections among these young demographic signals an urgent need to identify behavior and situations that contribute to sexual and reproductive health in adolescence (UNICEF, 1997).

In Ethiopia, over 65% of the population is under 25 years of age. Ethiopia is a nation whose youth have profound reproductive health needs and are disadvantaged in their access to sexual and reproductive health information and services. Gender inequality, sexual coercion, early sexual debut, unwanted/unplanned adolescent pregnancy, abortion, sexually transmitted infections and HIV/AIDS are the major sexual and reproductive health problems in Ethiopia. Different factors for sexual and reproductive health problems have been operating at individual, peer, and family and community level (Abubeker A, 2004).

Although Ethiopia has developed a national youth policy in 2004, yet much is expected to the provision of reproductive health care to university/college students (Abubeker A, 2004). Adequate systems such as, information education communications (IEC), appropriate guidance and counseling services are not yet rendered to deal with students’ sexual and reproductive health problems which might be due to paucity of research findings.

As stated by a study done in Ethiopia among in-school and out of school youth aged 15- 24 to describe the association between Khat chewing, alcohol consumption and risk sexual behavior, sexual initiation among in school youth of 15-19 was found to be 5.2%, one of the lowest figures recorded (Mesfin K, Hassen T. S, Ghimijha F, Teshome T, 1999). Numerous thesis works have also been produced investigating the sexual behavior of high school students in Addis Ababa and other towns. A thesis conducted among in school youth of Addis Ababa in 2002, came up with a proportion of 11.1% sexually active youth. 17.7% of these had more than one sexual partner and consistent use of condom was reported to be 58.7% (Fantahun M. Chala F., 1994).

A study on similar population conducted on Dessie preparatory schools, North Ethiopia, in 2004, reported a proportion of 25.8% sexually active youth. The mean age of sexual debut was 17+1.55 years. Out of these, 43.1% had history of sexual encounter with more than one partner and consistent condom use was 44% (Sebsebe D, 1983).

In a cross sectional study conducted in Agaro, Ethiopia (2004), 25% of the in-school youth were claimed to be sexually experienced and the average age of sexual debut was 16.74 years. 54 percent of them used condom at least once and 46.9% reported using condom always (Mesfin Belew, Dereje Kebede, Mesfin Kassaye and Fikre Enqousellassie, 2000).
In another study conducted among Bale in-school youth, south east Ethiopia, in 2004, 30.8% of the study participants (72.1% of males and 29.9% of the females) was sexually active and the mean age at first sexual intercourse was 15.87 ± 1.84 years. The main reason forwarded for sexual initiation was, personal desire. Forty eight percent of them had sexual encounter with multiple sexual partner. Majority, 58.1%, have never used condom during any sexual intercourse episode, while only 19.4% of them used consistently (Gebere S, 1990).

Similar study done among students of Ambo high school, Ethiopia, in 2006, claimed 19% of the study subjects had experienced sexual intercourse. The overall mean age at first sexual intercourse was 15.91 ± 1.8 years. The mean ages at first sexual intercourse for male and female respondents were 16.08±1.708 years and 15.66 ± 1.975 years, respectively. More than half, 56.4% claimed to have more than unisexual partner and only 27.6% reported consistent condom use (Gebere S, 1990).

1.2 statement of the problem

Sexual risk behaviors are defined as sexual activities that may expose an individual to the risk of sexually transmitted infections (STIs) including HIV and unplanned pregnancies. Some of these behaviors include unprotected sexual intercourse, multiple sexual partners, forced or coerced sexual intercourse and sexual intercourse for reward. However, lack of knowledge about consequences of these negative behaviors and poverty has been identified as factors that increase the chances of adolescents engaging in risky sexual behaviors. Adolescents face different challenges related to their sexuality which have an influence on their perception of the world and themselves. There has been increasing public health concern about the reducing age of initiation of adolescents into sexual activities. The rate of risky sexual behaviors and the spread of STIs continue to be on the increase due to many factors including dearth of information regarding adolescent sexuality (UNICEF, 1997). Each year, approximately one million young women aged 15-19 become pregnant; the vast majority of these pregnancies are unplanned (EMOH 2006). Abstaining completely from sexual activity will eliminate these risks and where abstinence is not a reasonable choice or goal, preventive measures are imperative (Friedman LH, Edstron GK, 1983). They observed that unsafe sex was second among the top ten risk factors in the world burden of all diseases globally. Fifty to seventy five percent of first teenage pregnancies, in Sub-Saharan Africa are unwanted and unplanned, while 25-57.5% of induced abortions in Ethiopia occur among young women aged 15-20 years (Ministry of Health, 2002).

Even though this is fact about Ethiopia and its youth population, this problem is not only under researched topic but also full of confusions. According to some studies, Sexual risk behavior, like many other problematic behaviors of youth, has been studied for quite some time in general and third world countries in particular (see B.A. Kotchicketal. 496 Evans, & Edmundson, 1997). Therefore, this study was aimed to systematically explore the main family related factors that increase university students risk sexual behaviors which in turn precipitate their sexual and reproductive health problems. Based on the statement of the study this research will answer the following research questions:

1. What are the main familial predisposing factors that associate with students’ risky sexual behaviors?
2. Which familial factor/factors significantly contribute to students’ risky sexual behaviors?
3. Which sex group is significantly vulnerable to sexual risky behavior as a result of family factors?
1.3. Objectives of the Study
The general objective of the study is to investigate factors that affect university students’ risky sexual behaviors.

Specific objectives
More specifically the study is intended to answer the following specific objectives:
- To assess the main familial predisposing factors that affect university students’ risky sexual behaviors.
- To investigate the familial factor/factors significantly contribute to students’ risky sexual behaviors?
- To explore which sex group is significantly vulnerable for risk sexual behavior as a result of family factors.

1.4. Significance of the study
The findings of this study is going to be distributed to the beneficiaries through print and digital media and then it will help teenagers, primary care givers and educators about the risks and consequences of involving in risky sexual behaviors at a younger age. It would also contribute to existing knowledge and enhance the development of strategies that will positively influence the attitudes of adolescents regarding sex related matters. Furthermore, this study would sensitize everyone including families, educators, communities, health care professional especially nurses and policy makers. Such sensitization would invariably help to empower adolescents on sexual issues and reduce their risk taking behaviors.

Dissemination of the Results
The finding report will be submitted to Adigrat University the funding agent. As deemed necessary, it will also be communicated in scientific conferences and will be sent for publication to a relevant scientific journal.

Chapter two
Literature review
This review examines adolescents’ sexual risk behavior and its associated risks factors that influence their sexual risk-taking behaviors. The overarching purpose of this review is to present the available research within a conceptual frame work that is called a multi-systemic perspective. Thus, the specific goals of this review are the following: First, to present an overview of sexual activity and risky sexual practices among Ethiopian university students. Second, it offers a multi-systemic conceptual model that organizes the available findings in to a useful framework for both understanding and preventing adolescent risk behavior. Third, it summarizes findings on the factors associated with sexual risk behavior from recent research in the world.

Factors associated with youth sexual activity
According to a literature review of one study, different studies have shown gender (sex), early puberty, substance use, low parental education, parental absence, self-esteem, grade, perceived peer sexual norms, and cultural and family patterns of early sexual activity to be some of the predictors of youth sexual activity (Fekadu Z, 2001).
In a study done in Ethiopia, among in-school and out of school youth aged 15-24, to describe the association between Khat chewing, alcohol consumption and risk sexual behavior over 90% of the in-school youth did not use Khat or alcohol and only 7.5% of them used Khat every day or once weekly. Khat use was strongly associated with initiation of sexual activity with four fold increased odds in both daily and weekly users while alcohol use was strongly and linearly associated with initiation of sexual activity by four fold (Yazachew M., 2003).

A number of qualitative studies done among in and out of school youth in Ethiopia have also revealed a close link between alcohol consumption and Khat use with sexual activity among the youth (Seifu A. 2001, Abate S. 2001). As one youth based study describes, Khat chewing and alcohol consumption often in combination provide a fertile environment for the execution of pre-contemplated ideas on sex (Seifu A. 2001).

LITERATURE REVIEW ABOUT MULTI-SYSTEMIC FACTORS

This review examines the literature on adolescent sexual risk behavior from a Multi systemic perspective. According to this perspective, an accurate and comprehensive understanding of adolescent sexual risk behavior must necessarily include some knowledge of both the personal and the environmental factors which may contribute to the decision to become sexually active and, subsequently, the decision to engage in risk-promoting sexual behaviors.

Here the attention is on three systems of influence believed to be primary Contributors to adolescent sexual risk behavior: the self, family, and extra familial systems. Although it is acknowledged that higher order systems, such as cultural, economic, or societal systems, may also exert influence on behavior, researchers believe the impact of such Macro systems permeates through micro-level systems, such as the self, family, and extra familial systems, to affect behavior (Bronfenbrenner, 1979).

A multi systemic perspective would suggest that the relations among these systems are transactional and interactional, with each system exerting both direct and indirect effects on behavior. It is assumed that systems interact with each other, such that risks or resources from one serve to either potentiate or buffer against the effects of others, and that each system influences other systems as well as behavior itself. In this sense, one system may serve as a partial or full mediator of the effects of other systems or factors within other systems on behavior.

This review is intended to serve as a ``jumping-off'' point for systematic research that may support or disconfirm these theoretical hypotheses. The following literature review will present a summary of the correlates of adolescent sexual risk behavior within the familial systems.

The Family System

Familial influences on adolescent sexual activity can be divided in to two primary categories: family structure variables and family process variables.

There is evidence that structural factors, such as single parenting, SES, and Parental education, should not be ignored. For example, Baumeisteretal.(1995) examined familial characteristics of Latina adolescents in two
groups, one never pregnant and another pregnant or parenting, and found that living with an intact family (i.e., parents married or living with a partner) significantly discriminated between the two groups. Additionally, Devine et al. (1993) found that parental divorce during early adolescence was a significant predictor of sexual risk behavior for females in later adolescence. Other family structure variables, such as SES, may be related to adolescent sexual risk behavior. In one study of urban adolescents, living in poverty, especially when combined with low academic skills, was related to early pregnancy (Gordon, 1996). Roosa et al. (1997) found similar associations between SES and risk for teenage pregnancy. Studies such as these would suggest that family structural variables warrant greater attention in sexual risk behavior research with adolescents. In terms of family processes, parenting behavior has been identified as an important source of influence on adolescent sexual activity. Throughout the socialization process, parents transmit their own standards of conduct, both directly through their parenting practices and indirectly through their own observable behavior. In regard to the direct transmission route, three dimensions of parenting parental monitoring of adolescent behavior, parent-adolescent relationship quality, and parent-adolescent communication have been identified as important variables in reducing adolescent sexual risk-taking behavior.

Parental monitoring or supervision of adolescents' social activities has been consistently associated with less frequent sexual behavior. While frequency of sexual activity is not, by itself, among the behaviors considered to be risky in this review, less frequent sexual activity would certainly decrease an adolescent's risk for negative sexual outcomes. Parental support and involvement has also been shown to be indirectly related to decrease sexual risk behaviors, as noted by Metzler et al. (1994), who included perceived parental support in their model of the social context of sexual risk-taking, alongside other family variables, peer influences; academic factors and academic competence in early adolescence are inversely related to risk sexual practices.

Chapter three

Methodology

3.1. Research design

Based on the specific objectives and the nature of the research questions of the study required, this study used both qualitative and quantitative approaches. The design of this exploratory and explanatory research is a cross-sectional for quantitative one because this design allows for the identification of variables related to risky taking sexual behavior (see Devine et al., 1993). Multiple case study design was used for qualitative approach for it allows see things from the participants’ perspective about the phenomena.

3.2. Population

The research population of this study were more than 50,000 students of Adigrat, Mekelle and Axum universities. They are the only three Ethiopian federal higher institutions found in Tigray where the researchers were acquainted with and living in which in turn helped them to access the participants easily.

3.2.1. Exclusion Criteria

The following categories of participants were excluded from the study for convenience sake. □ non regular students of any of those three universities like extension, distance, summer etc. □ students who are not Ethiopians like those from Eritrea, Somalia etc.
any post graduate students of those universities
those who are not able to complete the questionnaire without assistance such as the visually impaired

3.2.2. Inclusion criteria
Ethiopians who are in the first degree regular enrolment in those three universities
students who are following their education in the studied year (2015/16 G.C)

Note: for the sake of convenience and clarity from this part onwards the researcher tried to treat the quantitative and qualitative parts separately.

3.3 For the quantitative part

3.3.1. Sample and sample size

The sampled size for this study was a total of 150 participants from the three universities and about 50(25 females and 25 males) participants from each university disproportionally were taken for two major reasons i.e. first, the population was homogenous and second, the universities had almost equivalent number of regular under graduate students. As far as the size of the sample is considered, it was done based on two major rules of thumbs. Green (1991) makes two rules of thumb for the minimum acceptable sample size, the first based on whether you want to test the overall fit of your regression model (i.e. test the $R^2$), possible to use the formula 50 + 8k(50+(8*15)=170), where $k$ is the number of predictors, and the second based on whether you want to test the individual predictors within the model (i.e. test b-values of the model), then he suggests a minimum sample size of 104 + 15 = 119. This study wanted to test both then the average of their sum, around 145 was taken.

3.3.2. Sampling procedure and sampling techniques

For the quantitative part; participants were selected using multi stage stratified random sampling technique. The multi stage stratification variables, top to bottom, were university, campus, college, department, batch and then gender. Initially, using simple random sampling method, one campus from each university, 2 colleges from each campus and then 2 departments from each selected were selected. Finally, participants were selected from the two the departments in each university (Law and accounting) based on simple random sampling technique. Accordingly, at about 75 males and 75 females were included in the study as sampled participants.

3.3.3. Data collection instrument and procedure

Researchers of the present study, initially developed the survey questionnaire in English based on the main ideas of the formerly collected qualitative data of this study and the literature review of previous works on the topic and then translated it into Amharic, the working language of Ethiopia. Besides, to maintain the “content and spirit” of every original item another translator back-translated the questionnaire. Some necessary modifications were made based upon comments from peer reviewers who checked the face and content validity of the instrument. Before the main data were collected, to check the reliability of the instruments a pilot study was conducted on students of Mekelle university Ayder campus who were the non-participants of the main study and it was found with crombach alpha .68 reliability.

As far as the data collection procedure is considered, it was in line with the research ethical and legal principles of different universal research institutions. One week in advance of the day designated for data collection, the researcher communicated and decided the data collection date with the department heads of the selected
departments of each university. The issue of confidentiality was ensured by removing all personal identifiers from the questionnaire. Regarding the informed consent issue, during the data collection day, participants were asked their informed consent and given the chance to refuse or to discontinue participation at any time. After getting their agreement, the researcher was available throughout the administration of the questionnaires to clear any confusion just in case.

3.3.4. **Data analyses technique**
Data including participants’ personal information and responses on the variables will be analyzed using the computer statistics program entitled *Statistical Package for the Social Sciences (SSPS version 20)*. *Descriptive statistics* (frequencies and percentages), mean comparison of the discrete predictors, partial correlation, *multiple regression*, and *Analysis of Variance* (ANOVA) were computed to answer the above research questions.

3.3.5. **Variables of the study:** the predictor and outcome variables were selected based on the previous researches and the emphases given to them in the qualitative data collection by participants.

**Criterion variables**
- Risky sexual behavior; mainly resulted in unwanted pregnancy, inconsistent use of condom, experience of STI, commercial sex, casual sex and multi sexual partner.

**Predictor variables**
- Familial system: family economic status, parent involvement and parent educational level

3.4. **For the qualitative part**

3.4.1. **Sample and sampling techniques**
For the qualitative part; using purposive sampling technique, an intensive semi structured interviews were conducted with the university’s clinic head and head of proctors as well as a female and male students from each university. Besides, some voluntary night club managers and waitresses were interviewed. On top of that two students’ sex disaggregated focus group discussion, each consisted eight members, were conducted in each university. All the six FGD were run by the facilitators aided with notes and tape recorders. The interview and focus group guiding questions/ points were developed by the researchers based on the reviewed literatures. Point of idea saturation was the assurance to end the in-depth interview and focus group discussion. Moreover, as the topic is too sensitive and socially desirable, both participant and non-participant observation were used as the main data collection tool. It was the researchers themselves made redundant participant observation in the three cities where the universities are named after and located.

3.4.2. **Method of Data Analysis**
The qualitative data were analyzed after the analysis of quantitative data. Data were transcribed in to an English text by replaying the recorded interviews and discussions. Concepts were merged in their thematic areas and a manual thematic framework analysis was employed. The results were summarized and presented in narrative forms.

**Chapter four**
**Results**
This chapter discussed both the qualitative and quantitative findings one after the other for the three dimensions of risk sexual behavior predisposing factors and then cross tabulated the results of the two approaches.
4.1. Qualitative Findings

Six FGDs were conducted among the purposely chosen two sex disaggregated groups from each university. Each group was consisted of eight members and the discussion was tape recorded and led by the researcher for the male group and a female instructor for the females’ group from the respective university. Besides, in-depth interviews were conducted with purposely selected bodies like the head of the university clinics, head of proctors, female and male students from each university. Furthermore, a more impressive and valuable information has gathered from the participant observation. Those qualitative data were conducted to augment the quantitative study and to identify the main risky factors related to risk sexual behavior the participants’ points of views.

4.1.1. Result from the qualitative data about Prevalence of risky behaviors among out of school youth

Almost all of the qualitative data sources undoubtedly witnessed the rampant prevalence of youth risk sexual practices. Besides, they also witnessed that it is increased in a very alarming rate from time to time. Especially, the participants of the in depth interview from the clinic area highlighted STIs and abortions were very common like above 30 up to 50 cases of abortions per a month and occurrence of STIs were a usual phenomenon. Even though, rejected by the counter female participants, the males in the FGD discussed that it is becoming common, especially for females, to have more than one sexual partner for different “purposes" like for money, enjoyment etc.

Males who need to have girlfriend are forced to accept an agreement to share her with others when she found it necessary. In support of this idea he mentioned that there is a demarcation between the campus and the town from which the campus boyfriend and the outside partner could possess her freely. This means, he continued, the one could not even complain whatever things are happening out of his territory in relation to the girl. (One male participant said)

It was explained that there were some females who are working as waitresses in night clubs and khat houses” (a place where youths chew Khat and smoke shisha). In line with this argument, the researchers observed that one known night club at mekelle where all waitresses were university students. The interview informants claim that male students are committing sex with bar ladies and commercial sex workers. They also added that it was common to most of female students to be non-café and to have rented house out of the campus. According to their explanation the sources of the money are sugar dads and commercial sex. Even the female FGD discussants witnessed that females are victims of the risky sexual practice for natural and cultural reasons. One dominant female from the interview said that most of female students have at least one “ande sewye” in our terms which means sugar daddy. Some participants added that homosexuality and group sex are also becoming common practices.

4.1.4. Result of the qualitative data about Family related predisposing factors

Majority of the discussants without exception claimed that parents didn’t discuss sexuality issues openly with their children. Except few educated families majority think that it is not good to discuss sex related issues openly with children. They even did everything hidden. Some of the reasons forwarded by the participants why parents
didn’t want to discuss these issues openly were: It is considered as a taboo topic and culturally unacceptable and Parents even consider it as remembering their children about sex and they fear that it will induce early sexual practices. Some of the participants who were young expressed that their current risky sexual behaviors would have been changed if their families had informed them everything openly like what sex means, when to be done, with whom to do it, how to do it etc.

More than half of the two sex disaggregated focus group discussion participants in each university emphasized the importance of parental involvement, supervision and open communication throughout the child’s life in general and in university in particular. Even what the adult interviewees capitalized on was the complete freedom that university students enjoy as a mother of all the other risk factors. They said if parents want to save their children from risky sexual behavior, they should have a mechanism to know their sons’ and daughters’ academic and behavioral conditions.

Together with the high peer pressure, lack of parental involvement accounts a significant share for university students’ misbehavior. Parents in Ethiopia are not even aware of what life in university looks like. Some students who are academically dismissed are coming back when entry call is made by their university as a normal students and their parents are equipped them with necessary materials.

I know one ex-engineering female student who was dismissed three years ago but still acts to her parent as if she is about to graduate in the coming two years. They are also sending her a good deal of money in every month (a young female student explained).

The majority of the qualitative data informants pointed out that peer pressure is the most significant risk factor. As university is the place where communal life is mandatory, almost no one wants to suffer from the consequences peer rejection and mocking. Likewise, the researchers observe how much they are influencing and being influenced each other. For instance, the researcher personally knows a drug addict student for about four years. When he was first year student, he was doing things alone but now he influenced many of his class mates and made them drug addict.

I was virgin and clever student before my university life. When I come here, I introduced with one girl and became dorm mates. We were nice to each other; especially she had been supporting me financially which I was shorthanded for. I was thankful and grateful for it. However, I was suspicious enough about her financial source because she once told me that she is from the poor family. One night I asked her about it and she took me downtown and introduced me with two middle adult males and then they bought us a dinner and invited us a bottle of wine. I resisted not drinking but she pressurized me and I started drinking soon after I got drunk. Without knowing where and whom with the next day morning I found myself at bedroom with the person I didn’t see before and after that moment. Since then my life was spoiled and got dismissed from university as a result of that frustration and desperation. Now I am here in this town where my life transferred from bad to worse being waitresses at night club the job which I used to hate.

In nutshell, participants condemned those parents who are sending too much and too less amount of money. Both extreme amounts are pushing adolescents to unwanted behaviors. The victims of the sexual risk practices are either those from rich family because they have the money or students from poor family because they have
nothing to cover their basic necessities like modes, soap, pen etc. what the focus group discussion participants appreciated about was the financial help the some universities are providing for poor students. They said even though it is small money, it is saving much life from unnecessary risks. Therefore, according to their deduction parental economic status has a good deal of correlation with students’ appropriate or inappropriate behaviors.

“The today’s parents have to be blamed for the way they managed their offspring’s rearing practice. Most parents are becoming lenient and sluggish. Parents changed their attention to the economical need of the child by forgetting the moral, educational, social needs. (An old informant strongly states)

In addition to above main ones, the interview participants mentioned family educational status, parental divorce, family size, family modeling, parenting style and so on as significant predisposing factors. According to the participants’ recommendation family structures and family processes should be given a due consideration.

4.2. The quantitative findings

This part presents the quantitative analysis of the selected and dominant predisposing factors from the family systems. The selection of the following predictors was based on their dominance from the qualitative result and their predictive value on previous studies.

4.2.1.1. Demographic characteristics

Among the total 155 respondents, 150 responded to the questionnaire correctly which makes the response rate 96.77%. From the study participants, 75 (50%) were males and 75 (50%) were females. The researcher took 50 participants from each university disproportionally. For every detail about the demographic characteristics of the respondents see table one below. As it is clearly stipulated in the table1 below, most of the respondents were first year, from the poor family background, illiterate parents, lower academic performance and not connected to religion.

The following table shows that the mean differences observed on risk sexual behavior scale among the levels/categories of the pure categorical predisposing factors. The main purpose of mean comparison was to compare and contrast the within mean differences in each nominal scale variables and the magnitude of their differences.

Besides, such type of mean comparison helps to get rid of the confusion created by the negative sign of beta values and the correlation coefficients of each discrete predictor variables. Thus, readers or beneficiaries can clearly understand which group of one discrete predictor was highly affected by risky sexual behavior.
Table 1- Mean comparison between each family system predictor variable on risk sexual behaviour result

<table>
<thead>
<tr>
<th>variables</th>
<th>levels</th>
<th>N</th>
<th>mean</th>
<th>Std. deviation</th>
<th>Eta</th>
<th>Eta²</th>
</tr>
</thead>
<tbody>
<tr>
<td>gender</td>
<td>male</td>
<td>75</td>
<td>22.63</td>
<td>12.927</td>
<td>.086</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>75</td>
<td>20.41</td>
<td>12.862</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic performance</td>
<td>upper</td>
<td>64</td>
<td>13.33</td>
<td>10.732</td>
<td>.580</td>
<td>.337</td>
</tr>
<tr>
<td></td>
<td>middle</td>
<td>17</td>
<td>21.24</td>
<td>13.618</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>69</td>
<td>29.19</td>
<td>9.560</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>In university</td>
<td>57</td>
<td>26.46</td>
<td>10.093</td>
<td></td>
<td></td>
</tr>
<tr>
<td>family economic status</td>
<td>poor</td>
<td>63</td>
<td>28.32</td>
<td>9.845</td>
<td>.500</td>
<td>.250</td>
</tr>
<tr>
<td></td>
<td>middle</td>
<td>34</td>
<td>21.18</td>
<td>13.111</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>rich</td>
<td>53</td>
<td>13.66</td>
<td>11.536</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents educational level</td>
<td>≥1st degree</td>
<td>37</td>
<td>15.33</td>
<td>12.36</td>
<td>.392</td>
<td>0.1536</td>
</tr>
<tr>
<td></td>
<td>diploma</td>
<td>47</td>
<td>16.29</td>
<td>16.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Can Read&amp; write</td>
<td>35</td>
<td>20.32</td>
<td>13.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>illiterate</td>
<td>31</td>
<td>21.32</td>
<td>14.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: grand mean=21.54 and standard deviation= 12.899

As it is clearly stipulated in the above table males and females mean difference were not that significant though male students were found as victims of the risk behavior in previous researches. Moreover, students who were academically poor and from poor family were found with high mean score in risk sexual behavior result. Besides, the other predictors with great mean difference were parental education and family socio-economic status.

4.2.2. Results of the quantitate analyses on family system factors

This part included the ANOVA and multiple regression analyses of the family system predisposing factors for risky sexual behaviours. Among the main family related factors investigated in this study were family economic status, parents’ education, family follow- up& communication. They were selected based previous works and the dominant themes of the qualitative part of this study.

4.2.2. 1. Result of the ANOVA Analysis for the family system predisposing factors

The ANOVA analysis was computed in order to see if there is a significant difference in risk sexual behaviour among students because of the familial-system factors. Thus, the following table shows the sum of squares and mean of squares for the variance in students’ risk behaviour.

Table 5: ANOVA Summary Table for the self-system factors on students’ risk behavior

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>6188.038</td>
<td>1</td>
<td>6188.038</td>
<td>49.229</td>
<td>.000a</td>
</tr>
<tr>
<td>Residual</td>
<td>18603.402</td>
<td>148</td>
<td>125.699</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24791.440</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression</td>
<td>9408.639</td>
<td>3</td>
<td>3136.213</td>
<td>29.766</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>15382.801</td>
<td>146</td>
<td>105.362</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24791.440</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), family economic status
b. Predictors: (Constant), family economic status, parents education, family follow-up& communication
c. Dependent Variable: risk behavior (unplanned& unsafe sex)

The result of the ANOVA in the Table shows that there was risk behaviour difference among students because of their family related predisposing factors. The risk behaviour difference among students because of their family economic status was found to be statistically significant (F=49.229, df1=1, df2=148, p<*.05). However, the risk
behavior difference was also significant for the remaining self-related predictors (F=29.766, df1=3, df2=146, p<.05). This means, all the three predictors in combination were found to be good predictors of risk sexual behavior.

### 4.2.2.2. Results of Multiple-Regression

Multiple regression analysis was computed in order to see the combined and independent predictive value of the familial system predictor variables for the variation on the criterion variable and also to check whether it is statistically significant or not. The predictor variables were the familial -system Variables (family economic background, parent educational status and family fellow up) and the criterion variable was risk sexual behaviour. The Table below also presents the regression coefficient (R), squared multiple correlations or regression coefficient of determination (R²), and adjusted squared (R²_adj) when all the predictors were entered simultaneously.

#### Table 6: Model Summary Table of all familial-system predisposing factors in Predicting Students’ risk sexual behavior

<table>
<thead>
<tr>
<th>model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std. Error of Estimate</th>
<th>Change statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.616</td>
<td>.380</td>
<td>.367</td>
<td>10.265</td>
<td>R² change 15.284</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>F change</th>
<th>df1</th>
<th>df2</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.284</td>
<td>3</td>
<td>46</td>
<td>.000</td>
</tr>
</tbody>
</table>

- a. Predictors: (Constant), family economic status
- b. Predictors: (Constant), family economic statuses, parent educational status, family follow up and communication

Regressing risk sexual behavior on the familial-system predictor variables revealed that overall the model significantly predicted risk sexual behavior (F=15.284, p < .05). This means, results presented in above Table indicates that all the predictors in combination yielded a statistically significant and positive multiple correlation (R = .616, df1=3, df2=146, F=15.284, *p<.01) which is a regression coefficient between predicted and actual scores on the criterion variable. The regression coefficient of determination (R² = .380) represents the proportion of variance accounted for by the predictor variables. That is, 38.0% of the total variance in Students’ risk sexual behavior was explained by the seven predictors. As to the independent contribution of the predicators, see the standardized betas in the Table below.

#### Table 7: Summary Table of stepwise Regression Analysis for family system predisposing factors’ independent Predictive power on Students’ risk sexual behavior

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized</th>
<th>Standardized</th>
<th>t</th>
<th>Sig.</th>
<th>Zero order</th>
<th>partial</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>14.258</td>
<td>.000</td>
<td>3.196</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>family economic status</td>
<td>-4.975</td>
<td>-4.722</td>
<td>-3.109</td>
<td>.002</td>
<td>-0.500</td>
<td>-0.364</td>
</tr>
<tr>
<td>parent education</td>
<td>-2.612</td>
<td>-3.543</td>
<td>-3.109</td>
<td>.002</td>
<td>-0.392</td>
<td>-0.249</td>
</tr>
<tr>
<td>family follow up &amp; communication</td>
<td>-6.802</td>
<td>-3.543</td>
<td>-3.543</td>
<td>.001</td>
<td>-0.475</td>
<td>-0.281</td>
</tr>
</tbody>
</table>

- a. Predictors: (Constant), family economic background, parent educational status, family follow up and communication
- b. Dependent Variable: risk behavior (unplanned & unsafe sex)
- c. Note: Total N = 150

Codes: family economic background: poor=1, middle=2; rich=3

The above multiple regression indicated that the three familial predictor variables predicted students’ risk sexual behavior significantly; when all of the predictors were included three of them added unique variance. Those were family economic background, parent educational status, family follow up and communication respectively.
Besides, in order to determine which of the treated variables (those which have significant beta weights) were more influential in predicting the variance in students’ risk behavior, multiple-regression was conducted by entering family economic background, parent educational status and communication, as predictors. The three predictors of the familial-system variables had statistically significant contribution for the variability in risk behavior, relatively family economic status ($\beta = -0.339$, $t=-4.722,*p<0.05$) had strongest and significant effect on sexual risk behavior, which was followed by family follow up and communication, ($\beta=-.263$, $t=-3.543$, *p<0.05), and parent education ($\beta=-.218$, $t=-3.109$, *p<0.05) with their such strong and significant effect for the variation in students’ risk behavior. These Beta weights presented in the above Table indicated the magnitude of variance explained by each predictor independently when all the predictor variables were entered. Accordingly, the variation in risk behavior accounted for by family economic status was 33.9% (12.88% out of the 38.0%: their combined contribution), by family follow up and communication was 26.3 % & by parent’s educational status was 21.8 % respectively in descending order. The result shows that family economic status was found to be the strongest family related predisposing factors on predicting risk sexual behavior.

Regarding the correlation of the predictors and criterion variable, zero order and partial correlations were computed to see the status of the relationship existed between the predictors and the outcome variable. Unlike the zero order, the partial correlation was mainly to see their relationship with the output variable while controlling the confounding effect of the other predictor variables. Therefore, accordingly three of the familial predisposing variables were found significantly related to students risk sexual behavior at .05 alpha levels. However, as you can see from the above table in the zero order correlation column the predictors were found with strong correlation coefficient with students’ risk sexual behavior. Negative sign for the predictors and risky behavior were nothing but related with the way how the levels or categories of each predictor were labeled or coded. This is to mean that when a predictor increases, sexually risk behavior decreases. Besides, according to the result of the correlation matrixes, family income was found with strong correlation coefficient than the others.

CHAPTER FIVE

DISCUSSION

This study investigated the main predisposing constructs that contribute to the university students risk sexual behavior. In this study both qualitative and quantitative approaches were used in order to triangulate their findings with each other. In addition to the manual thematic analysis for the qualitative data, rigorous quantitative data analyses techniques were computed to cross check whether the dominantly pinpointed predisposing factors in the qualitative data could be supported by the quantitative approach. Therefore, mean comparisons, analysis of variance, and stepwise multiple regression analyses were performed to answer all the above research questions. The findings of this study were both consistent and inconsistent with the results of past studies. Accordingly, the discussion of the results is presented in accordance the above leading question in this chapter.

Discussion on the family system predisposing factors

According to the result of this study, risky sexual behavior had negative and strongly significant correlations with three of the institutional predictor variables. In other words, risky sexual behavior was correlated positively and significantly with family income, family follow up, and parents’ education. However, to avoid the effect of multicollinearity, which severely affects measures of association, partial correlation analysis was conducted and
then, unlike their boosted zero correlation, three of the predictor variables (family income, family follow up, and parents’ education) were found with significant relationship. This means students who were from poor, uneducated and uninvolved parents were found to be in risky sexual life. The result was in agreement with the qualitative analysis of this study and previous studies. For instance, as noted by Metzler et al. (1994), who included perceived parental support in their model of the social context of sexual risk-taking, alongside other family variables, peer influences; academic factors and academic competence in early adolescence are inversely related to risk sexual practices. They consequently concluded that parental support and involvement are indirectly related to decrease sexual risk behaviors. In both correlation analyses sex of respondents had not meaningful association with the criterion variable.

In line to the idea of the qualitative approach of this study, the quantitative analysis proved that family economic background was found with very strong correlation coefficient and noticeable coefficient of determination with the outcome variable. Likewise, previous studies were also in support of this finding. To mention some, Gordon (1996) stated that family structure variables, such as SES (socio-economic status), may precipitated adolescents sexual risk behavior. It is not surprising to find such strong correlation between parent SES and children’s risky sexual behavior because as significant others throughout the socialization process, parents transmit their own standards of conduct, both directly through their parenting practices and indirectly through their own observable behavior. In support of the above findings, Hibret Alemu (2004) in his MA thesis work concerning the association of poverty and risk sexual practice found that poverty and HIV transmission are linked in a variety of ways. Poverty often leads to prostitution and sexual servitude or to trading sex for material goods.

To see whether or not the selected predictor variables significantly predict students’ risk behavior, ANOVA and multiple regressions were performed.

The result of the ANOVA and the multiple regression analyses showed that the combined effect of the three predictors was found strong and statistically significant predictors. This is like what the qualitative part of this study dictates. Previous research works on the topic stated that family structure variables and family process variables influences on adolescent sexual activity (e.g., Jemmott & Jemmott, 1992; Metzler, Noell, Biglan, Ary, & Smolkowski, 1994).

Stepwise multiple regression was computed to explore the significance of the independent predictive power of the family related variables and then three of them, family income, family involvement & parents education were found with big beta value and statistically significant t-statistic at .05 alpha level. This result was supported by the qualitative part of this study and previous researches. For instance, in one study of urban adolescents, living in poverty, especially when combined with low academic skills, was related to early pregnancy. Besides, Roosa et.al (1997) found significant contribution of SES on accounted for the variance in teenage pregnancy.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1. CONCLUSIONS

This research was aimed to draw attention to some of the socio-environmental factors that contribute to students’ sexual risk behavior in university. In recognition of many other factors addressed by numerous
previous researches discussed in the literature review, the findings of this research suggest that students’ sexual risk behavior on campuses is typically influenced by multi-systemic factors such as their poor academic performance, low family socio-economic status, low parent education level and lack of parental involvement and communication. Those factors were selected mainly based on their dominance in the qualitative data of this study along with past studies recommendations. These findings are not exhaustive in exploring factors that shape students’ sexual risk behavior. Nevertheless, it is critical to note that the Problem Behavior Theory provides a good theoretical framework for understanding the key factors that encourage students’ sexual risk-taking behavior.

Certainly, research in the area of adolescent sexual risk behavior has come a long way from the exploratory and mostly descriptive studies of several decades ago (e.g. Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953).

Questions such as these present dilemmas and challenges to researchers in this field. The rapid advances in statistical methodology and measurement strategies offer tools with which to address the limitations noted in this review and to move our knowledge and understanding of adolescent sexuality to new heights. With these challenges and advances in mind, we offer the following recommendations for future research:

1. More attention must be given to comprehensive models that take into account factors from multiple systems of influence and their combined effects on adolescent sexual risk-taking behavior. Examples of such models would include mediational pathways in which familial (e.g., parent ± child relationship) factors influence sexual behavior through their effect on self-system variables, and models that consider nonlinear relationships among predictor and outcome variables (e.g., too much or too little parental strictness being related to more adolescent sexual risk behavior).

2. Many variables found to be related to the sexual activity of adolescents have not been studied with regard to sexual risk-taking behaviors. More research is needed to understand the role of these variables in promoting sexual risk or sexual safety.

3. Strategies to enhance the validity and accuracy of self-report of sexual behavior need to be further explored and developed. The use of computer-assisted interviewing offers particular promise; however, the practicality of its use with low literacy teens and those unfamiliar with computers still needs to be established.

4. By far, the most extensively studied sets of variables are those from the self-system. Future research should focus more attention on familial factors that may contribute to adolescent sexual risk behavior. Extra-familial contexts, such as school and neighborhood conditions, offer particular promise for inclusion as both targets and resources in prevention programs designed to reduce STD infection, pregnancy, and the transmission of HIV among youth. However, the specific factors within these contexts that are predictive of sexual risk behavior must be better specified or identified before they may be useful additions to prevention efforts. Furthermore, many of the self-system variables found to be related to sexual risk behavior are not amenable to change (e.g., age, gender, race) and may merely serve as proxies for the familial or extra-familial conditions or factors associated that truly influence behavior.

For practitioners working to reduce sexual risk behaviors and their resultant health hazards, the literature reviewed here and the multi-systemic perspective used to integrate the findings offer several guidelines. First, prevention and education efforts must be broad in scope and target factors from multiple systems of influence.
While skills and knowledge are important, adolescents who possess adequate knowledge about the risks involved with sexual activity and the competence to engage in risk reduction strategies are still having unprotected sex, becoming pregnant, and contracting STDs, including HIV. Prevention programs need to consider the broader context in which the adolescent lives. Familial and extra-familial sources of behavioral influence should not be ignored when designing prevention programs, and, to the extent possible, both family members and peers should be included in prevention efforts.

The findings of the present researcher proposed that parents are a very powerful socializing force in the lives of children and adolescents. Parents are in a unique and powerful position to shape young people's attitudes and behaviors and to socialize them to become sexually healthy adults. They can do this, in part, by providing accurate information about sex and its risks, consequences, and responsibilities, and by imparting skills to make responsible decisions about health. However, the strength of their impact, relative to other information sources, may arise from their unique ability to engage their children in dialogues about sexual development and decision-making that occur early and are continuous (i.e., not one-time events), sequential (i.e., building upon each other as the child's cognitive, emotional, physical, and social development and experiences change), and time-sensitive (i.e., information is immediately responsive to the child's questions and anticipated needs rather than programmed to a curriculum). Thus, we would encourage that prevention efforts include the family as an active treatment component.

Finally, the literature suggests that targets for intervention include both competencies specific to sexual behavior and more general areas of psychosocial or family functioning. For adolescents, individual knowledge regarding sexuality and risk reduction, attitudes about condoms and sexual self-efficacy represent specific competencies known to be related to reduce sexual risk-taking. For parents, specific targets for intervention include knowledge of adolescent sexual behavior, monitoring of dating behavior, and skills to communicate with their adolescent children about sex. However, broader indices of functioning, such as depression and anxiety, general parenting skills, and parent–child relationship quality, are all appropriate targets for interventions seeking to promote well-being and reduce sexual risk behavior among adolescents.

In this sense, we would encourage prevention and intervention efforts that have as their ultimate goal the development of healthy and well-adjusted youth. Risk reduction would be part, but only a part, of such programs, and the result would be teens and families that value and foster sexual health and safety as part of overall well-being.

As this literature review noted, numerous variables from the self, family, and extra familial systems have been found to be related to adolescent sexual behavior. Only recently have multisystem analyses that capture the complexity of the adolescent sexual experience been undertaken, yielding evidence for the influence of variables from all systems and suggesting that variables from across systems interact to increase the probability of adolescent sexual risk-taking behavior. Numerous issues face researchers and clinicians working with youth who are sexually active or who may soon become sexually active. Armed with recent advances in statistical and measurement technology, researchers in this field stand poised to make substantial contributions to our understanding of sexual risk behavior among adolescents. It is our hope that the suggestions offered in this review prompt researchers and clinicians alike to adopt a broad perspective toward adolescent sexual risk and
health in general, and, in doing so, take those important next steps toward advancing our knowledge and improving the lives and safety of today's and tomorrow's youth.

REFERENCES


Abubeker A. Youth reproductive health problems and service Preferences in Assebe Teferi, West Hararghe. (MPH Thesis) Department of Community Health, Faculty of Medicine, Addis Ababa University, 2004.


Gebere S. Sexual behavior and knowledge of AIDS and other STDs: A Survey of senior high school students, EJHD 4(2); 1990.


Mesfin Belew, Dereje Kebede, Mesfin Kassaye and Fikre Enqouselassie, The magnitude of khat use and its association with health, nutrition and socioeconomic status, EMJ, 2000; VOL

Mesfin K., Hassen T. S, Ghimijha F, Teshome T. Knowledge of “drug” use and associated factors as perceived by health professionals, farmers, the youth and law enforcement agenacies in Ethiopia. EJHD; August 1999; 13(2): 140 – 150


Yazachew M. Assessment of HIV/AIDS risk behavior difference between out of school club members and non-club member youth, Jimma and Agaro towns, South west Ethiopia (Master thesis) April 2003, Addis Ababa page 61.