

Running head: Social Media Usage and Sexual Behavior

**Social Media Usage, Sexual Behavior and Risk Perception among
Adolescents' of Some Private High Schools in Addis Ababa.**

Mohammed Reshid Ahmed

**Addis Ababa University
College of Education and Behavioral Studies
School of Psychology**

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Mohammed Reshid Ahmed

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School of Psychology

This is to certify that the thesis prepared by Mohammed Reshid Ahmed entitled Social Media Usage, Sexual Behavior and Risk Perception among Adolescents' of Some Private High Schools in Addis Ababa and Submitted in Partial Fulfillment of The Requirements for The Degree of Master of Arts (Developmental Psychology) Complies With The Regulations of The University and Meets The Accepted Standards.

Signed by the examining committee

_____	_____	_____
Advisor	Signature	Date

_____	_____	_____
Examiner	Signature	Date

_____	_____	_____
Examiner	Signature	Date

_____	_____	_____
Chair of department or	Signature	Date

Graduate program coordinator

Abstract

The major purpose of this study was to assess the relationships among adolescents' Social media usage, sexual behavior and risk perception. A descriptive survey was employed as a study design. Questionnaire was used to gather data from a random sample of 300 (150 male and 150 female) students of grade 9th through 12th in the selected five private high schools of Bole sub-city. Descriptive statistics, Chi-square, t-test, ANOVA and correlations were used to analyze quantitative data. Descriptive statistics revealed that entertainment, communication with people far away and making companionship (34.3%, 20% & 16%) were the major reasons to school adolescents' social media usage respectively. Weak positive correlation was found between social media usage and sexual behavior [$r(298) = .222, P < .05$]. However, sexual behavior was moderately correlated with the frequency use of social media sites used [$r(298) = .694, P = < 0.05$]. Descriptive statistics found that the majority (61.3%) of the respondents had high risk perception while 30.7% of the respondents had low risk perception to social media usage. When looking in to the conclusion, adolescents' sexual behavior in relation to social media usage by default had weak positive correlation. However, their sexual behavior was moderately correlated with the frequency use of social media sites. Hence, among the practical recommendations forwarded, School administrators and teachers should plan and advise school students to use social media sites for educational issues than entertainment, or for companionship. Also, school students should be aware that using social media sites frequently boost to enter sexual behavior.

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List of Abbreviations

Age C	Age Category
AIS	Addis International School
ANOVA	Analysis of Variance
B/n G	Between Groups
D.V	Dependent Variable
Demog.V	Demographic Variable
df	Degree of Freedom
EPS	Ethio-Parents School
FS	Fana School
G.L	Grade Level
KMS	Kidiste-Mariam School
RP	Risk Perception
S.D	Standard Deviation
S.E	Standard Error
SB	Sexual Behavior
SNM	Social Network Media
VAS	Vision Academy School
W/n G	Within Groups

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Chapter One

Introduction

1.1. Background of the study

Adolescence is a period of human development between childhood and adulthood, though the age range can vary with cultural and historical circumstances, it begins at approximately from 10 to 13 years of age and ends between the ages of about 18 and 22 (Santrock, 2005). From this one can understand that the onset of puberty (biological determinant) generally marks the entry in to the period of adolescence while the question of when adolescence ends and emerging adulthood begins is less clear. This is because, as to the above definition, the period of adolescence is culture specific and quite different between and within societies. Which means, while in some cultures the transition from adolescence to adulthood is very short it is also very much extended to the others.

The development of identity and sexual behavior are among the major psychological events in human development. The period of adolescence as a stage of human development is a fundamentally important time for searching one's identity and active involvement in sexual activities (Marcia, 1993; King, 1996). In addition, Steinberg (1993) explained that with pubertal changes, sexuality becomes the most important aspect of development during adolescence. Hence, figuring out how to deal with sexual desires and how to incorporate sex in to social relationships is one of the major tasks of adolescents.

Regarding this, Perrino (2005) described that many agents and agencies play a vital role on the socialization process of children and adolescents including family, peers, schools and the media.

Also, many studies were conducted to prove whether the ascribed agents had a contribution or influence on adolescents' sexual behavior or not. For instance, studies conducted both internationally and nationally about parental role shows that adolescents with whom parents had discussed about life issues were less likely to be sexually active than their counterparts did (Somers and Ali 2011; Clifford, Luqman and Amos, 2002; Getnet, 2007). Hence, it seems that parents are from one of the influential socialization agents on socializing adolescents' sexual behavior.

Schools, being one of the major contexts, play a significant role in the development of adolescents' sexuality and sexual identity (Epstein and Johnson, 1998; An Ghail, 1994). What makes school an important context is the fact that adolescents spend most of their time in school compared to any other places outside their home (Eccles, 1989).

Regarding peer pressure Leigh and Andrews (2002); Wakgari (2007) found that those adolescents whose peers exhibit negative behaviors (such as substance use and school truancy) are more likely to engage in high-risk sexual behaviors. In addition, adolescents with friends who have engaged in sexual intercourse are also likely to engage in intercourse.

However, the leading media researchers now view the media in general, as a context of adolescent development, as acting as a "super peer" that influences adolescents' sexual attitudes and behaviors (Brown, Halpern, and Engle 2005 cited in Roger, 2007). Today, regardless of the type of media consumed, children and adolescents are constantly witnessing media-based characters being reinforced, being punished, or not experiencing any consequences for their actions (Kerish, 2010). For instance, there is increasing evidence that exposure to sexual content on traditional media such as television is a significant contributor to many aspects of young

people's sexual knowledge, beliefs, expectations, attitudes, and behaviors. In other words, Television plays a meaningful role in sexual socialization (Donnerstein and Smith, 2001; Gunter, 2002).

Moreover, adolescents who are exposed to more sexual content in the media, and who perceive greater support from the media for teen sexual behavior, report greater intentions to engage in sexual intercourse and more sexual activity (Engle, Brown and Kenneavy, 2006). Similarly stemming from concerns about teenage pregnancy, sexually transmitted infections, and human immunodeficiency virus, renewed attention has focused on possible connections between media use and adolescent sexual behavior (Monique, 2005).

Many studies authenticated different possible factors that contribute to adolescents' behavioral problems including risky sexual behavior. Among the factors puberty, is a biological factor, has a potential cause for adolescents' behavioral problems. Regarding this, Steinberg (2005) described that Pubertal development has been correlated with a variety of behavioral changes; among the behaviors hypothesized to be influenced by pubertal maturation is the rise in sexual activity and interests.

The other possible factor is the context in which adolescents' grown up; for example, most adolescents make uninformed sexual decisions because of lack of proper guidance and information from the sides of their parents and other members of the society (Kimmel and Weinner, 1995). Similarly Steinberg (1993) described that the main influences on adolescents' sexual behavior are social, not biological.

However, to date, the Bio-psycho-social approach emphasizes that biological, psychological, social factors interact to produce the problems that adolescents and people of other ages develop (Santrock, 2005).

In consequence, adolescents' initiative to sexual practices becomes inevitable for the aforementioned rationale. Besides, engagement in risk behaviors peaks during adolescence. Adolescents are over-represented in nearly every category of risk behavior, such as drug use, alcohol consumption, smoking, skipping school, and unsafe sexual activities (Boyer, 2006).

Similarly, the understanding the researcher holds is that sexual activity associated with health risks begins in adolescence though sexual development is one part of a healthy psycho-social development. Adolescents' are dispossessed of the crucial information and guidance from their parents, peers and the media, adolescence is the stage of fuss over in drugs and alcohols, as well as accounts for the greater proportion in sexual activity.

Nowadays, especially, the internet has created a phenomenon for people to use different SNM sites such as Face- book, Whats-up, Viber, You-tube, and Twitter to create and sustain relationships with others. These SNM sites let those who use them create personal profiles, while connecting with other users of the sites. Users can post photographs, upload or download what they need at any time, and send personal or public messages to whomever they choose. Hence, it seems that the emergence and development of new communication technologies deeply infiltrate adolescents' lives positively or negatively.

An international study regarding SNM usage by Lenhart and Madden (2007) reported that 73% of teens between the ages of 12 and 17 owned profile in SNM sites. Also, with regard to frequency of use, 57 (59.4%) students visited a social networking site several times a day (Sponsil and Gitimu, 2012).

Regarding gender, women were four to five times more likely than men to use social networking sites (Tufekci, 2008). Also educational experience of men and women seemed to play a factor in social media use as well (Lenhart, Purcell, Smith and Zickur, 2010). Although there are exceptions, most social network site users primarily interact on these sites to support pre-existing social relations, as opposed to meeting new people (Boyd and Ellison, 2007).

However, in consequence to SNM usage, adolescents are reflecting their sexual behaviors using SNM sites. In line with this, a study by Loss (2012) reported that as adolescents are prone to display risky health behavior in the offline world, it is likely that they use their online profiles and communications to report on unhealthy behaviors too. This may in turn enhance the perceived attractiveness of risky behavior within the adolescent SNM users' cohort.

Pertaining to risk perception to SNM usage, a study by Liao, Khoo, and Hwang (2005) indicated that there is reason to be concerned about risk perception of adolescents' Internet use as 16% of adolescent Internet users in Singapore have had a face-to-face meeting with someone first encountered online. Out of these adolescents, 22% of them went alone for the meeting, 27% have met more than six persons, and 9% met someone who introduced himself/herself as a child on the Internet but turned out to be an adult.

Generally, standing from the above different studies and findings one can understand that adolescent's sexual behavior depends on how they are socialized from different agents such as the parental role, peer pressure, school setting and both the traditional media and the newly emerged social media. However, this paper intends to look in to the relationships among adolescents SNM usage, sexual behavior and risk perception.

1.2. Problem Statement

Today, in our country, media in general and SNM sites in particular as a context have created an appropriate situation on the internet for adolescents' to have relationships, communication and discussion directly with their friends.

According to Internet World Statistics Report (IWSR, 2012) the population of Ethiopia has reached 87,302,819, out of which the internet users are 960,331 which means 1.1% of the population. Surprisingly the SNM-face-book users have reached 902,440 with a 1% penetration rate.

Similarly as to the researcher's observation at different sub city of Addis Ababa many school adolescents' use Face-book and other SNM sites on the Internet cafe's for different reasons.

However, they did different activities at the same time. For instance, they were posted either their own or any erotic photos, upload or download any video including porno films and post things they did offline at any time, chatting with different people including sexual issues and had an appointment to meet in-person contact for the person they know online through SNM.

Hence, the foregoing observational statement suggests the problems that school students faced using these sites such as vulnerability to risky sexual behaviors. In addition, if they are not familiar with the consequences that followed due to their activities using SNM sites there will be a probability of continuing with the trend they had including sexual intercourse.

In line with this, Moreno, Parks, Zimmerman, Brito, and Christakis (2009) conducted a study on the display of health risk behaviors on SNM-MySpace by adolescents. From a total of 190

subjects, 58.4% were male. At baseline, the result revealed that 54.2% of subjects referenced sex and 85.3% referenced substance use on their social networking site profiles.

From the above finding one can understand that SNM usage has a correlation with the display of risky sexual behaviors. Also, the researcher assumed school students may imitate these behaviors from SNM sites and be reinforced to apply it including sexual intercourse.

Hence, it was important to undertake this study for the following rationales:-

- Several investigators in our country have studied sexuality by relating with different predictor variables like the role of family, peer pressure, schools and others. However, no research has been done to relate the influence of SNM usage as a predictor of adolescents' sexual behavior, as far as the present researcher's knowledge is concerned. To put it differently, it tries to fill the gap that other researchers' did not treated locally, that is SNM usage as a major predictor of adolescents' sexual behavior and risk perception.
- Considering the SNM-Face-book penetration rate (1%) compared to the total internet user (1.1%) and the other usage of SNM sites in our country, though empirical data were not presented with particular reference to adolescents SNM usage.
- Today SNM sites are becoming very popular among adolescents and provide new risks and opportunities, as international studies on the above indicated.

1.3. Research Questions

This study aims to answer the following major research questions related to the relationships among adolescents' SNM usage, sexual behavior and risk perception.

1. What are the major reasons that necessitate school adolescents' usage of SNM sites?

2. Is there age, sex and grade level difference in the types and frequency of use of SNM sites used among school adolescents?
3. Is there a relationship between adolescent's SNM usage and sexual behavior?
4. Is there age, sex and grade level difference with respect to sexual behavior?
5. What is the level of school adolescents' risk perception to SNM usage?

1.4. Objective of the Study

The main objective of this study was to assess the relationships among adolescents' SNM usage, sexual behavior and risk perception. Specifically, this study intends to: -

- Find out the major factors that motivate school adolescents' SNM usage.
- Explore whether there is age, sex and grade level difference among school adolescents in the frequency and types of SNM usage.
- Pinpoint the extent of correlation between SNM usage and sexual behavior.
- Examine what school adolescents' risk perception look like to SNM usage.

1.5. Significance of the Study

Firstly, the findings of this study would help directly the people such as; school adolescent students, and the school community. Secondly and indirectly, it would help for Parents, MOE and NGOs who can be an important stakeholder of the issue to be aware of the matter and take appropriate measures pertaining to the problem. Specifically,

This research is hoped to be significant for the school adolescent students as it will help them to be aware of the consequences of chatting and displaying sexual matters using SNM sites

in their lives. Simply, it helps them to take appropriate measures on their sexual behaviors related to SNM usage.

Also, this research work is hoped to provide a better awareness for the school teachers and other responsible personnel regarding the influence of cyber based SNM usage. It tells to what extent adolescent students' of the schools are exposed to risky SNM usage related sexual behaviors and to design specific measures that helps to minimize, if possible prevent, the problems that students are experienced from SNM usage.

This study is also important in creating awareness in the sides of parents to what extent their adolescents' are exposed for different websites that will have pros and cons on their life. Moreover the study can tell parents to make a follow up and open discussion regarding the websites their adolescents' should use and also what activities they should do's and don'ts.

The study indirectly, being sensitive issue, can attract the attention of MOE and NGO working on adolescents' developmental problem behaviors by informing them to design corrective strategies pertaining to SNM usage. Thus, it could be used as an input for their organizational planning, budgeting, and policy formulation process.

Generally, as it is a baseline work on this issue in Ethiopia (no research has been done) at least to the knowledge of the present researcher, different personalities could use it as a stepping stone for further investigating the situation and view the problem from a different perspective. Thus more problems would be able to be identified and more solutions would be devised. Hence the condition of the adolescent students' would be improved.

1.6. Delimitation of the Study

Though there are different socialization agents; such as family, peers, schools and the community that influence adolescents' sexual behavior and risk perception, this study was delimited only in investigating the relationships among adolescents SNM usage, sexual behavior and risk perception. This was because the investigator went to fill the gap that other researches were not treated SNM usage as a predictor variable to sexual behavior.

Addis Ababa is selected as the site of this study because the examiner assumed that there will be high internet user high school students in Addis Ababa than in the other urban, sub urban and country side residents. Also, the schools are private because students of private schools are somehow from high and middle class families. Thus, it is likely to observe students use smart phones and tablet computers that enable them to use Internet and search different SNM sites in addition to the accessibility of internet on the private schools.

Moreover, the study was delimited to the selected five private schools only. Namely the selected schools were; Addis International School, Kidiste-Mariam School, Vision academy School, Fana School and Ethio-Parents School.

Generally, this was because of time and financial constraints in to account. That is to say the delimitation of the issue to be the relationships among social media usage, sexual behavior and risk perception; the site of this study to be Addis Ababa, and the schools to be private. .

1.7. Operational Definitions of Terms

Social Media (SM): - refers to the web sites that are used by the selected secondary and preparatory private school students. The SM sites such as face-book.com, Whats-up.com, twitter.com, Viber.com, and You-tube.com were considered.

The term SM may be used interchangeably with social network media (SNM) or with cyber-based SNM.

Also, it is considered as predictive variable to adolescents' sexual behavior and risk perception.

Sexual behaviors: - involve solitary sexual activities like masturbation, fantasies and interpersonal sexual behavior such as kissing, touching (stimulating beast) and sexual intercourse (Steinberg, 1993). However sexual behavior, in this study, refers to sexual practices one has such as chatting about sexual issues, posting photo that is sexually attractive or erotic, uploading/downloading sex related video files and leading to making sexual intercourse with people they know due to their SNM usage.

The term sexual behavior may be used interchangeably with SNM usage related sexual behavior.

It is considered as a dependent variable too.

Risk perception: - refers to the level to which school adolescents understand the influence of SNM usage on their sexual behavior or how they perceive their vulnerability to risks associated with their use of SNM sites.

In addition it is treated as a dependent variable with three levels ranging from high risk perception to average risk perception and low risk perception.

Adolescence: -Though the definition of adolescence spans the second decade of life, in this study, are those of at the age range of between 14/15-20/21 years old and who attends their education in the selected secondary and preparatory private schools of Bole sub city in Addis Ababa in the academic year of 2006 E.C.

Chapter Two

2. Review of Related Literature

This chapter reviews some related theoretical literatures and empirical studies on adolescence sexual behavior and risk perception pertaining to SNM usage, though not all, and out of which conceptual framework have been developed. In addition, a summary and implications of the literatures reviewed were dealt with.

2.1. Adolescence: Definition and its Concepts

Though adolescence has different connotations by different psychologists, most agree that it is a period of transition from childhood years to adulthood years. As it seems generally used today, adolescence refers to the period of life between childhood and adulthood – roughly corresponding to the teenage years (Kimmel et al., 1995). Steinberg (1993) defined it as a time of growing up, of moving from the immaturity of childhood to the maturity of adulthood.

Both Kimmel et al., (1995) and Steinberg (1993) agreed that adolescence is a period of transition. It is a time when individuals become biologically interested in sex and capable of having children; psychologically, they become wiser, more sophisticated and better able to make their own decisions; socially, they are permitted to work, to get married; financially, they are expected to support themselves (Steinberg, 1993).

These transitions, though positive and successful to some adolescents, due to the rapid biological, psychological and social changes put a complex menu of life situations on too large group of adolescents (Santrock, 2002).

Psychologists who study adolescence usually classified it in to three periods. These are:

1. Early adolescence (approximately 11-15 years of age)
2. Middle adolescence (approximately 15-18 years of age)
3. Late adolescence covers 18-21 years of age (Steinberg, 1993).

2.2. Sexuality in Adolescence

Adolescence is a time of exploration and experimentation of sexual fantasies and sexual realities (Santrock, 2002). Though not an entirely new issue that surfaces for the first time during adolescence, sexuality is one of the major aspects of psychosocial development (Steinberg, 1993). This means, sexual activity and sexual development occur in childhood years and continue after adolescence. It is during early adolescence that an increase in the sex drive will be sought as a result of hormonal changes (Kimmel et al., 1995).

However, like any other aspects of psychosocial growth, the development of sexuality is determined largely by its context. Of particular importance is the way in which adolescents and children are exposed to and educated about sexuality (Steinberg, 1993).

2.3. Theoretical Approaches to Media Effects and Adolescents' Risk Perception

Theory is a set of testable statements derived from axioms of a model (Cobb, 2001). Different theories emphasize on different aspects of development and give different justifications for developmental changes. This study, specifically, concerned with a developmental change that is associated with the stage of adolescence i.e. adolescents' sexuality. In this respect, some selected media effect theories that may explain adolescents' exposure to problem behaviors in general and their sexual behaviors in particular as well as theory based justification to risk perception are presented.

Regardless of age or developmental status, the theoretical approaches most frequently applied to media effects research are cultivation theory, social learning and social cognitive theory and Uses and Gratification theory.

Thus, in this section, from the ascribed three media affect theories two of them as well as theory that explain about adolescents' justification to risk perception such as; Cognitive dissonance theory will be discussed.

2.3.1. Social learning and social cognitive theory.

Social learning theory and social cognitive theory were both developed by Albert Bandura. The former one posits that behavior is a learned response resulting from observations made in the world. For example media influences on the acquisition of most behaviors. In contrast the later (social cognitive theory) explains that behavior is more of a "choice" than a "response" to the environment, and that there are also cognitive, emotional, and motivational influences on behavior (Bandura, 1973).

Hence, as to these theories, media such as Video games, television, comic books, the Internet, and so on all provide youth with ample opportunities for observational learning. It is for this reason, regardless of the type of media consumed, children and adolescents are constantly witnessing media-based characters being reinforced, being punished, or not experiencing any consequences for their actions (Roger, 2007).

This theoretical perspective predicts, for example, that adolescents learn sexual behaviors and their likely consequences by engaging with the media and are more likely to be influenced by relevant models. According to this perspective, adolescents will seek to emulate the behavior

of others when those models are valued to the observer and when the models are rewarded for their behavior (Bandura, 1973).

To sum up, different individuals can be a model to the observer. Thus, as to these theories, if one adolescent posted erotic pictures using SNM sites, another individual who uses SNM sites is likely to imitate it and may engaged in that behavior too.

2.3.2. Uses and gratifications approach to media consumption.

According to the uses and gratifications perspective, enjoyment is the key reason to media consumption. Although the needs of youth are many and varied, multiple “uses” and associated “gratifications” of media consumption are arousal, companionship, escape, habit, learning, passing time, and relaxation (Sparks, 2001 as cited in Kerish, 2010).

To conclude, this theory asserts that adolescents may use media including SNM sites for the sake of different reason. Out of which relaxation, passing time, companionship, habit, arousal and learning by writing or posting for what they are interested, may be related with sexual issues, or by reading and observing what is posted by their friends are the major ones.

2.3.3. Cognitive dissonance theory.

This theory declares that adolescents who engage in risky behaviors may deny potentially negative consequences and emphasize the benefits of this behavior to justify their behavior (Festinger, 1957). Specifically he states that inconsistency between two cognitions creates an aversive state analogous to hunger or thirst that gives rise to a motivation to reduce the inconsistency.

As to him, cognitions are elements of knowledge that people have about their behavior, their attitudes, and their environment. As such, a set of cognitions can be unrelated, consonant, or dissonant with each other.

To windup, this theory, emphasizes that adolescents' may deny the impact of something in their lives by looking or justifying only to the positive side.

2.4. An Overview of Definitions on SNM Sites

The first version of Internet, known as web 1.0, allowed content to be viewed by the consumer. In contrast web 2.0, allowed users to both read and write content. Social media represent a set of web 2.0 tools that are centered on interaction and the sharing of content with others. In the new world of social media, internet users are both creators and consumers of content while the traditional media such as TV is left unidirectional in the flow of messages (Moreno and Kota, 2013).

In one study conducted by Boyd et al., (2007) defined social network sites as public web-based services that allow users to develop a personal profile, identify other users ("friends") with whom they have a connection, read and react to postings made by other users on the site, and send and receive messages either privately or publicly. Individuals may choose to send private messages, write on other user's walls, organize social activities, and keep informed about other user's daily activities.

Out of the types of SNM sites some of the well known ones are Face-book and Twitter. Face book is one of the SNM sites that allow members to create an online profile, communicate with other profile owners, and build an online social network. Creating a profile allows members

to display interests and hobbies, upload pictures and video, and post comments about current events or emotions (Moreno et al., 2013).

Similarly Fox and Warber (2013) described that Face-book enables a user to create a public or semi-public profile, identify and connect with other users, and trace these first degree connections to identify members farther out in the collective network.

Twitter is also another type of SNM sites in which short text comments, limited to 140 characters and also called micro blogs or “tweets,” are shared with users, creating an ongoing, continuously updated stream of information. In addition to generating tweets, Twitter users can “follow” the Twitter posts of other Twitter users. Followers are notified of and given the opportunity to view every twit generated by the person they are following (Moreno et al., 2013).

With this in mind, many websites enable individuals to have a link online and communicate and share what they need. Also, many of them offer downloadable images that are sexually provocative.

2.5. Studies on SNM Sites that are Popular among Adolescents and their Usage in terms of Age, Gender and Educational Level: The Global Scene.

SNM sites have created a phenomenon on the internet that has gained popularity over the last decade. People use social media sites such as Face book, Twitter, and MySpace to create and sustain relationships with others (Boyd et al., 2007). Similarly Moreno et al., (2013) described that there are several different types of SNM sites available but the common SNM sites used by adolescents include Face-book and Twitter.

Considering age as a factor for SNM usage Lenhart et al., (2010), found that 57% of social network users are 18-29 years old and have a personal profile on multiple social media websites. However, younger students tended to use Face-book more frequently than older students to keep in touch with friends from high school or from their hometown (Pempek, Yermolayeva, and Calvert, 2009). Moreover one study reported that 73% of teens between the ages of 12 and 17 owned different SNM profile (Lenhart et al., 2007).

With regard to frequency of use, one study indicated that 57 (59.4%) students visited a social networking site several times a day (Sponsil et al., 2012). Similarly Quan-Haase and Young (2010) found that 82% of college students reported logging into Face-book several times a day.

Regarding gender, women were four to five times more likely than men to use social networking sites (Tufekci, 2008). Specifically one study reported that women are more likely than men to have a personal profile on Face-book, but men are more likely than women to sustain a profile on LinkedIn (Lenhart et al., 2010).

Moreover, Sheldon (2008) found that women were more likely to use social media for maintaining relationships with family and friends, passing time, and entertainment, but men were more likely to use social media to meet new people. College women were also more likely than men to use the internet for relational communication, such as contacts with friends, family, and romantic partners (Baym, Zhang, Kunkel, Ledbetter, and Mei-Chen, 2007).

Also, academic status seemed to play as a factor in social media use as well. In line with this, a study by Lenhart et al., (2010) reported that both sexes were more likely to use social network sites frequently if they had college experience. Similarly, the findings of Sponsil et al.,

(2012) study revealed that all sampled (96) participants did use some form of social media by college students.

2.6. Studies on SNM Sites that are Popular among Adolescents' and their Usage in terms of Age, Gender and Educational Level: The National Scene.

Since SNM usage in our country is a rather new issue no evidence or research finding was found that shows the popular sites among adolescents' in terms of age, gender and educational level. However, as explained in the problem statement section school adolescents were observed using SNM sites like Face-book, Watts-app, You-tube and Twitter.

2.7. Reasons to SNM Usage

There are many reasons for young adults to join social networking websites as they try to communicate within their social system. Although there are exceptions, most social network site users primarily interact on these sites to support pre-existing social relations, as opposed to meeting new people (Boyd et al., 2007). Similarly Zhao, Grasmuck and Martin (2008) described SNM sites like Face-book are predominantly used to continue with one's existing offline networks. Also, another study found that Face-book was not used to meet new people, just to maintain existing social ties (Quan-Haase et al., 2010). However, Passing time and entertainment were other major factors in using social media sites (Sheldon, 2008).

Moreover, a study by Sponsil et al., (2012) revealed that communication with family and friends was the most popular reason students used social media, with 91.7% of participants indicating this was the reason. Also, 59.4% said they used the sites for entertainment and 57.3% said they used the sites when they felt bored. Additional reasons reported included planning

activities (33.3%), companionship (11.5%), and other reasons such as communicating with people far away (10.4%).

Other study by Pempek et al, (2009) found that, the majority of respondents reported that lurking activities of reading other individuals profiles or news feeds or looking at photographs were performed frequently.

2.8. Adolescents Sexual behavior in relation to SNM Usage

Like other type of media, social media are not inherently good or bad. The impact of SNM is dependent as to the type, frequency and the purpose of their use. It is indeed that it has a potential benefits and risks for adolescents interacting with social media (Moreno et al., 2013).

As to Willard (2005) young people are using Internet communities and matching services to make connections with others for sexual activities, ranging from online discussions about sex to “hook-ups.” In the context of these relationships, they posted or provided sexually suggestive or explicit pictures or videos.

Similarly researchers Baumgartner, Valkenberg and Peter (2010) conducted a study to assess causality in the relationship between adolescents’ risky sexual online behavior such as: searching online for someone to talk about sex, searching online for someone to have sex, sending intimate photos or videos to someone online, and sending one’s telephone number and address to someone and their perceptions of these behaviors. Their study revealed that both perceived vulnerability and perceived risks were significant predictors of risky sexual online behavior 6 months later.

As to Loss (2012) qualitative study, the participants were ($n = 30$, 60 per cent female). The average age was 21.6 years. He found that 5851 Face-book 'posts' (comments, profile texts, photographs, etc.) of 30 students shows that to present themselves in an attractive way to their online peer audience. The Face-book users tended to associate risky behaviors with positive attributes, such as achieving something or being social.

Put it differently, Moreno, et.al, (2009) conducted a study on the display of health risk behaviors on my space by adolescents. From a total of 190 subjects, 58.4% were male. At baseline, the result revealed that 54.2% of subjects referenced sex and 85.3% referenced substance use on their social networking site profiles. Generally from the above findings one can understand that SNM usage has a correlation with the display of risky behaviors including sexual behavior.

2.9. Adolescents Risk Perception in relation to SNM Usage

With regard to adolescents risk perception, it is often assumed that due to cognitive development during this period, adolescents are particularly susceptible to a personal fable (Boyer, 2006), that is, the erroneous belief that one is unique and invulnerable.

Similarly Cobb (2001) described that, adolescents' perception of invulnerability is their egocentric thinking associated with their developmental stage, especially younger adolescents perceive that they are risk-free and will not encounter any kind of risk for future too. This is mainly because they have imaginary audiences. That means they perceive that other people are aware of what they are thinking and doing.

Consequently, they tend to deny their feelings of risks and continue to involve in risky sexual activities (Elkind, et.al as cited in Kimmel et al., 1995). This perceived invulnerability has long

been regarded as the main reason why adolescents engage in risks (Greene, Kremer, Walters, Rubin and Hale, 2000).

A number of survey reports to off-line study showed that adolescents' sexual behaviors are influenced by the ways they perceive their vulnerability to risks associated with their activities. That is to say, adolescents who perceive invulnerability to risks are more likely to involve in risky sexual activities (UNICEF, 2002).

However, personal fable research assumes that even if adolescents' have high risk perceptions, they may still fail to feel personally vulnerable (Johnson, McCaul, and Klien, 2002). For example: sexually active adolescents may understand that risky sexuality is dangerous generally but fail to acknowledge that risky sexuality may have negative consequences for them personally.

Principally as to the online interaction study conducted by Liao, et.al, (2005) indicated that there is reason to be concerned about risk perception of adolescents' Internet use as 16% of adolescent Internet users in Singapore have had a face-to-face meeting with someone first encountered online. Out of these adolescents, 22% of them went alone for the meeting, 27% have met more than six persons, and 9% met someone who introduced himself/herself as a child on the Internet but turned out to be an adult.

Similarly as to the Pew (2001) study, adolescents were not particularly worried about meeting strangers online; 52% of adolescent Internet users expressed no worry at all about being contacted online, and only 23% expressed some level of concern.

Moreover girls, older adolescents, frequent Internet users, chat room participants, and those who communicated online with strangers were found to be at greater risk for receiving online sexual solicitation (Wolak, Finkelhor, and Mitchell 2008).

2.10. Summary of Review Literature

The review has focused on the theoretical explanations and studies conducted regarding a) adolescents' media consumption in general and SNM usage in particular, b) the nexus between SNM usage with sexual behavior and risk perception.

The theories reviewed as a theoretical framework to the present study were social learning/social cognitive and uses and gratification theory.

Social learning asserts that an individual can learn something by imitating the behavior of others considering the reinforcement and punishment that model person had whereas, the social cognitive theory emphasizes emotional, psychological and motivational aspects of the persons affects the observed behavior to be replayed or not.

The uses and gratification theory declared that, though needs of adolescents varied, enjoyment is the key reason to media consumption. Thus, adolescents SNM usage in one or the other way is related to enjoyment, passing time, to continue with pre-existing relations with family, friends and relatives.

The findings reviewed from different studies showed as there is a relationship between adolescents SNM usage and display of sexual behaviors. For instance, as to Willard (2005) young people are using Internet communities and matching services to make connections with others for sexual activities, ranging from online discussions about sex to "hook-ups." In the

context of these relationships, they posted or provided sexually suggestive or explicit pictures or videos.

Also, since correlation was observed between SNM usage and display of sexual behavior, perception of risk related to SNM usage was recommended to be dealt with. For instance, as to the online interaction study conducted by Liao, et.al, (2005) indicated that there is reason to be concerned about risk perception of adolescents' Internet use as 16% of adolescent Internet users in Singapore have had a face-to-face meeting with someone first encountered online. Out of these adolescents, 22% of them went alone for the meeting, 27% have met more than six persons, and 9% met someone who introduced himself/herself as a child on the Internet but turned out to be an adult.

2.11. Implication

In research tradition, the implication of consulting review of literature on studies conducted by others helps to examine the current knowledge and gaps between researches done before and a research underway.

Furthermore, it helps an investigator to have a deep knowledge about his research problem under investigation. Accordingly, an attempt has been done to review both on international and national studies.

The reviewing works have witnessed that there is research carried out on the area in an international level. The findings revealed that there is a relationship between adolescents' SNM usage with the display of sexual behavior and risk perception. However, up to the present researcher's reviewed of literatures and knowledge, no research is found conducted in an Ethiopian context.

So that, conducting this research is very timely and crucial. In addition, the present research geared to dig out whether SNM users had sexual intercourse with people they know first in an offline world or SNM sites other than being limited to the display of sexual behaviors on SNM sites. That is to say, though the study mainly focuses on the display of sexual behaviors like chatting about sexual matters, posting erotic photos, downloading/uploading porno films, inter exchanging addresses, and meeting in-person-contact; it is also inclusive of sexual intercourse they had; which is generally termed as SNM usage related sexual behavior.

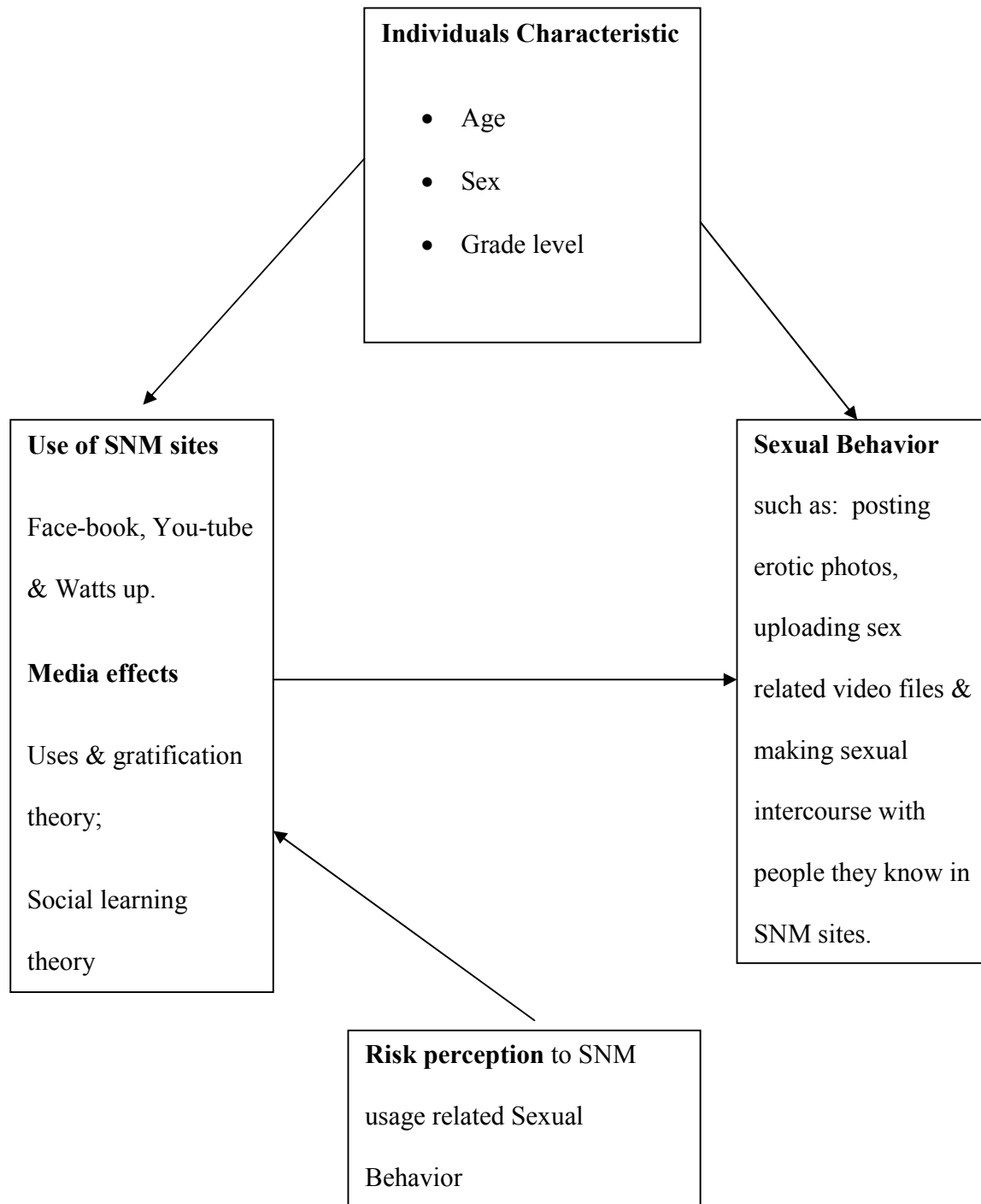
2.12. Conceptual Framework

It is known that adolescents' will form relationships with different agents such as; family peers, school, media and others like community, for the sake of their overall development in general sexual behavior in particular. As stated on the theoretical framework part too, there is a potential that adolescents can be influenced by media effects in their overall development.

Nowadays the possibility of two-way communication with people in media, especially using SNM sites becoming possible and begun revealed in existence or real world. Thus, efforts were made to investigate the relationships among adolescents' SNM usage, sexual behavior and risk perception.

Also, to organize knowledge systematically and to see how variables are related to one another, the researcher draws the following conceptual framework based on the contexts described on the background of the study and theoretical frameworks explained in literature review.

Fig.1 Conceptual Framework for the Study of Adolescents’ SNM Usage as Correlates of Sexual Behavior and Risk Perception



Legend: —→ Path to be analyzed in this study

Chapter Three

3. Methodology

In this chapter, the study design, data sources (description of the study site, the participants and study population, target population as well as sample size and sampling procedure), instrument of the study (construction, validation, pilot study and reliability as well as administration), scoring of the data and analysis techniques, and also ethical issues to be considered will be dealt with.

3.1. Study Design

A descriptive cross-sectional survey was employed as appropriate design for the present study. Because, utmost, the nature of research questions were geared to answer; adolescents' SNM usage as well as to see whether association exists between SNM usage and sexual behavior in one hand and level of risk perception on the other hand. Hence, it was simply to assess what is prevailed among the variables correlation and it is for this reason that the design was descriptive.

Regarding this Kothari (2004) described that the major purpose of descriptive research is description of the state of affairs as it exists at present. Which means that the researcher has no control over the variables; he can only report what has happened or what is happening.

Also the data collected was from various groups which were categorized based on students' sex and grade levels, hence cross sectional, at different private schools that constitutes large number of student population which leads a survey method to be used for getting self reported answers.

Regarding this Gabrenya (2003) described that a survey or self reported research is used when asking someone to tell the researcher what he or she did, plans to do, would do, wants to do, or might have done and is distinctly different from observing his or her actual behavior.

Thus, it is on the bases of the above argument a descriptive cross-sectional survey was appropriate study design for the present study.

In addition the type of this study research approach was quantitative in its nature, because the data collected from the participants were through close-ended questionnaire.

3.2. Data Sources

3.2.1. Description of the study site.

This study was carried out on private school adolescents' who live in Addis Ababa. Addis Ababa, which is the capital city of Ethiopia, consists of 10 sub cities. Addis Ababa is selected as a research site for the study due to the fact that, compared to other cities of Ethiopia, school adolescents in this city have high access to different sources of sexual information such as: to different types of media e.g. electronic and print. Specific to the intention of this study school adolescent's have high access to internet café in addition to their smart phones and tablet computers.

Bole sub city was selected from the ten sub cities of Addis Ababa through purposive sampling. Because the researcher assumed that students who learnt in Bole private schools are from high and middle class family that contributes for better accesses to have smart phones and tablet computers in addition to the accessibility of internet in the schools. In fact, this enables them to use and search different SNM sites which in turn makes them active in risky problem behaviors including sexual behavior based on their activities or observations from it.

In this sub city, there were 28 private high and preparatory schools. Among these, five schools were selected using lottery method.

3.2.2. The study population.

The general populations of this study were 1730 private school adolescents aged 14-21 years and attending their education in the academic year 2006 in the selected five schools; these included students from grade 9 and 10, through preparatory program (i.e. 11th and 12th). This was taken from the record offices of all schools.

Out of the general population i.e. 1730, there were 1389 SNM users (665 males and 724 females) of the ascribed five selected private schools (grade nine-through-twelfth). These were identified by entering and asking each class room student's to raise their hands whether they were using SNM sites and then by counting those who use with the help of school coordinators of each school.

3.2.3. The participants and sampling procedure.

Even if there are various formulas for calculating the required sample size, the researcher preferred application software that suggests the optimal sample size in a given population size, a specific margin of error and a desired confidence interval which were developed by Krejcie and Morgan in 1970.

Therefore, according to Krejcie et al., (1970) application software formula and recommendation for the population size of 1389, a sample size of 300 was referred as appropriate at 95% confidence interval or 5% marginal error and thus the researcher took 300 samples for the present study.

Thereafter, at base line, using stratified random sampling technique students were categorized in to strata based on sex and grade level; there by ensured that each sex and grade level were represented with equal sample size i.e. 150 samples to each sex and 75 samples to each grade level. Regarding this Greenfield (2002) described that stratified sampling is employed for selecting representative sample from the population grouped in to strata.

Also, using equal allocation method 37/38 students from both sexes were selected to be the representative sample of each grade level. This was because the researcher assumed that no big difference observed among both sexes of SNM users as well as went to see gender wise distribution among the variables of the study.

Finally the researcher used proportional stratified sampling to determine the sample sizes for each grade level section of all schools (see table-1 below).

Table 1

Population and the sample size determined through stratified, equal allocation and proportional stratified sampling for the selected private schools (grade 9th-through-12th).

<i>Name of Schools</i>	<i>Total population</i>				<i>SNM users</i>				<i>Sample size of each</i>			
	<i>Grade level</i>				<i>Grade level</i>				<i>Grade level</i>			
	9 th	10 th	11 th	12 th	9 th	10 th	11 th	12 th	9 th	10 th	11 th	12 th
AIS	53	54	69	78	40	45	60	65	10	11	11	13
KMS	96	84	153	105	50	42	130	80	12	10	24	16
VAS	47	30	45	45	42	23	44	45	10	6	8	9
FS	29	66	27	51	23	53	22	45	6	13	4	9
EPS	195	179	164	160	150	150	150	130	37	35	28	28
Sub-total	420	413	458	439	305	313	406	365	75	75	75	75
Grand-total	1730				1389				300			

3.3. Instrument

To gather the desired information from the participants a self-developed close ended questionnaire were used as a research instrument.

3.3.1. Procedures.

3.3.1.1. Construction.

In an attempt to develop the instrument, the researcher has gone through certain phases. Initially, as with any piece of research, the process started with an interest in an area one wishes to explore further. Accordingly, the researcher has used literatures and theories from different sources.

In addition, to substantiate the information gained from the literatures, the principle of grounded theory approach was used as a base to get a local type of preliminary data about SNM usage, the reasons that motivates them to use and the kinds of sexual behaviors they showed through SNM sits from few sampled participants in Super Holly Savior School before the pilot study was conducted (see annex B). Regarding this, Goulding (2002) assured that usually researchers adopt grounded theory when the topic of interest has been relatively ignored in the literature or has been given only superficial attention.

Based on these, the researcher tried to find out what aspect of each construct is more related and appropriate with the issue to be investigated both from the literatures and the preliminary questions used to develop the main instrument. Then after, the researcher wrote items that are supposed to address the objective of the present study.

The questionnaire was comprised of four parts. Part one was related to participants' demographic characteristics and consists of 3 items, Part two was related with the adolescents' SNM usage which consists of 4 items, and the other two parts of the questionnaire i.e. Part three and part four was related with the adolescents' SNM usage related sexual behaviors and risk perception, each consists of 14 and 12 items respectively.

Also, the researcher tried to address the assumptions that entertain on how to construct a questionnaire. For instance, the lengths of the items, the dimensions as well as nature of statements were considered.

3.3.1.2. *Validation.*

Since SNM usage related sexual behavior and risk perception is a rather new research field, no validated measures exist. Hence, to measure the content validity of the instrument it was given to two PHD holders and one PHD candidate experts in school of psychology at Addis Ababa University. In this respect, the title of the study, the problem statement with the research questions and the questionnaire were given to them. This was done for the ease of testing the degree to which the instrument can measure what it was intended to measure.

The comments and suggestion given by these experts were:

- Modification of some items that lacks clarity;
- Similarity of some items and
- Substituting similar questions by other questions

Taking the comments and suggestions given by the subject wise experts in to consideration, the ambiguities and misunderstandings found in some items were cleared and additional items were added. By doing so, the content validity of the questionnaire were assessed and modified.

In addition, the questionnaire was translated by three experts who were experts in the Department of Linguistics at Aksum and Woldiya university but currently PHD candidates at Addis Ababa university. In line with this, Brislin's (1986) recommendation for translation and back-translation of the survey measures from one language to another was followed to ensure

conceptual equivalence between the original instruments (in English language) and the Amharic versions. That is to say, the questionnaire was first translated into the Amharic language by one language expert. Then, another language expert back-translated the questionnaire in to English language.

Very minor differences that were observed in the forward and backward translations were corrected by other third language expert.

After assessing the content validity of the instrument in these ways, the questionnaire becomes ready for the actual pilot study.

3.4. Pilot Study

A pilot study is conducted for the purpose of revising and determining the specificity, relevance and clarity of the instruments. That is to say, conducting a pilot study helps to know the reliability of the instrument, since reliability is concerned with the ability of an instrument to measure consistently. Regarding this, Tavakol (2011) described that an instrument cannot be valid unless it is reliable. Hence, the present study was pilot tested to check the reliability of the instrument. Beside this, the pilot was conducted to get lessons there by making certain amendments prior to administering the instrument for the main study.

Accordingly, the draft questionnaire for this study was first pilot tested on 40 SNM user students', five from each grade (9, 10, 11, and 12) of both sexes drawn from non sampled private school to the main study (namely, Super Holly Savior).

The items on part III which measures sexual behavior and the items on part IV which measures risk perception were scale type. Hence, to measure the reliability of each scale item total statistics and Cronbach Alpha were computed using SPSS version 20.

Accordingly, 0.670 and 0.804 reliability statistics were found to sexual behavior and risk perception respectively, indicating that the scales had good reliability (see Appendix C1 and C2).

For the items on part II which measures SNM usage, item total statistics and split half method were computed. Accordingly, 0.71 reliability statistics were found and thus accepted.

3.5. Data Scoring

Items that are not added together were computed independently of each other. For instance, items which measures about SNM usage on part II whereas, items that can be added together were computed together such as; items that measures sexual behavior and risk perception on part III and IV. To be specific, after part IV was computed, scores above and below the mean were referred and then the middle score was taken as a cut-off-point to categorize level of risk perception in to high, average and low. The researcher considered the culture, beliefs and values of the participants when decided the cut-off-point (i.e. score 36).

3.6. Administration

The data were collected through a self-administered and self reported questionnaire. This was because the subject matter is highly a sensitive issue and discussion about sexuality in Ethiopia is not easy. In fact many people do not openly respond to questions on sexual issues because of cultural, religious, privacy and other factors. Hence, the data was collected by the researcher himself in order to avoid students' shyness to the people they know in the school compound and by making themselves in the ways they could feel free.

Filling the questionnaire approximately took about 30 minutes and it was collected right after students' tea break and before the onset of the teaching-learning process.

3.7. Analysis Method

Before the main data analysis had been undertaken, reliability of the questionnaire was re-established. Then after, a comparison was made with the reliability of the pilot study. This was because; there was no standardized reliability statistics for a comparison to made and check its appropriateness across cultures. It was done simply to re-check the internal consistency of the items.

Table 2

A Summary table of reliability of the instrument before and after poor items was modified to the main data analysis of the present study.

Descriptions	Alternative Items		Scales Items			
	Part II		Part III		Part IV	
	SNM Usage		sexual behavior		Risk Perception	
	B	A	B	A	B	A
Number of Items	4	4	14	14	12	12
Reliability	0.71	0.74	0.670	0.926	0.804	0.611

B= before poor items are modified i.e. items used to the pilot study.

A= after poor items are modified i.e. items used to the main study.

As it has been shown on table 2 above, equal numbers of items were used for both the pilot study and main study except modification on to the items. Hence, 4 items were used about SNM usage specifically, about SNM site used, SNM frequently used within a week and reasons that motivates them to use SNM sites. 14 items to sexual behavior as well as 12 items risk

perception to SNM usage together with the 3 background items made up a pool of 33 items and become ready for the study analysis.

From the similar table 2 shown above, changes were observed in each parts of the reliability statistics with respect to before and after items were modified. What was interesting was a decline in reliability statistics of risk perception. However, the researcher assumed that the scale had good reliability. Hence, the reliability findings of the re-established instrument were accepted to continue with the main data analysis of the present study.

In doing so, to analyze the collected data, different statistical techniques such as descriptive statistics, correlation, both parametric and non-parametric tests were computed using statistical package for social sciences application software program (SPSS) version 20. Also, for all statistical methods the critical and calculated values were compared at 0.05 alpha levels (two-tailed) with appropriate degrees of freedom (df). Specifically: -

Descriptive statistics had been used in order to see the general distribution of demographic characteristics as well as to examine the major reasons that inspire school adolescents to SNM usage. In its particular case frequency and percentage were computed.

To see whether the types of SNM usage differ by the adolescents' demographic characteristics Pearson's Chi-square and its exact test were used. In line with this, Field (2009) described that Chi-square test is used to test whether the relationship exists between two or more categorical variables or for the data presented in frequency. Exact test, in some cases, was computed when the assumption of chi-square was violated in the present study.

To see adolescents' demographic characteristics difference in the frequency use of SNM sites an independent sample t-test and a one- way ANOVA were computed. Then after,

Bonferroni and Tukey post hoc comparison were used for both unequal and equal sample sizes respectively, since the number of N to age category were different while the number of N to grade level left similar. Regarding this, Paulson (2003) described that Bonferroni and Tukey multiple comparison procedure is applicable to compute for both unequal as well as equal sample sizes. Indirectly the rationale behind using Bonferroni's post hoc comparison was to keep Type I errors guarantee when sample sizes are unequal.

To determine the relationship between the variables i.e. SNM usage with its frequency of use; which is the predictor variable, adolescents' sexual behavior i.e. dependent variable, Spearman's rho and Pearson's correlation was employed. Besides, independent sample t-test and one-way ANOVA were computed to see differences among each demographic characteristic sexual behavior. In addition, post hoc comparisons were computed.

Lastly, in order to look in to the general risk perception level of the respondents to SNM usage, descriptive statistics such as: frequencies and mean were computed. Then after, to look in to each demographic characteristics difference on risk perception an independent sample t-test and one-way ANOVA were employed.

3.8. Ethical Considerations

In order to run with the research work especially to collect the desired data from both the identified study site institutions and participants of the study it is recommended to pass through ethical issues and get an informed consent.

Hence first of all, the researcher contacted all the selected private school directors by presenting the support letter given from school of psychology and held a discussion about the issue to be investigated. Some of the directors were refused the consent rehearsing the report

presented by local mass media Radio in relation to studies conducted on one of the Bole sub-city high school. Accordingly, they presumed if the present study conclusion reaches on positive correlation between SNM usage and sexual behavior, student parents will not send their children to learn in these schools.

Also, they said that these schools are well known in discipline still now. Thus, if your study may indicate to the reverse of our name it will be harsh for us to continue with excellence of discipline.

Finally after a big deal with them it was reached on consent orally and then they requested again to see the questionnaire to check whether students can be harmed or not in filling out the questionnaire and to give their final consent after a week for the data collection.

After all, they permitted to collect the data needed from the participants by recognizing that filling the questionnaire will not harm students in any ways (see annex D1 up to D5).

The second important consent to get was from the participants of the present study. In order to get genuine responses, it was felt that consent must be given from them. Accordingly, information on the purposes of the study was given verbally to them and participation was made voluntary; measures were taken in keeping respect, dignity and freedom of each participant. Also, they were assured of complete confidentiality of their information and similarly if they could not feel free in filling the questionnaire they were told to stop automatically and leave the hall. Then after, the questionnaires were distributed to the students and completed by themselves. (See annex D6)

This procedure of an informed consent was applied on both of the schools selected to the pilot study and the main study.

Chapter Four

4. Findings

This chapter deals with the presentation of the data gathered through close ended questionnaire, analysis of the data based on the selected appropriate statistical methods and interpretations based on reporting styles of each statistical method.

4.1. Background of participants

Table 3

Descriptive Statistics to Demographic Characteristics of school Adolescents

Demographic characteristics		N	%
Sex	Male	150	50
	Female	150	50
Age	B/n 11-14	5	1.7
	B/n 15-18	211	70.3
	B/n 19-21	84	28.0
	9 th	75	25
G. L	10 th	75	25
	11 th	75	25
	12 th	75	25

As it is indicated on table-3 above, there is an equal size distribution of both sexes of participants and the grade levels (50%, 25%) respectively. However, the majority (70.3%) of participants were found in the age category between 15 to 18 years old while the least (1.7%)

number of participants were found between 11 to 14 years old age category. Hence, it indicated that the results of this study could be more reflective to the age category between 15 to 18 years old and 19 to 21 years old respectively.

4.2. Reasons by school adolescents' to SNM usage

To answers the major reasons that motivate school adolescents SNM usage, descriptive statistics were used and presented as follows. .

Table 4

Descriptive Statistics on Adolescents' Reason to SNM Usage

Alternatives	Frequency	Percent
For entertainment	103	34.3
To communicate with people far away	60	20
To get rid of my boredom.	28	9.3
To make companionship	48	16
To continue pre-existing social relations with family and friends	23	7.7
To meet new people whom I don't know in person	16	5.3
To spend time	5	1.7
To read other individuals' profiles or looking at photographs	17	5.7
Total	300	100

As indicated on the above table 4, the majority (34.3%, 20% and 16%) of respondents' reason to SNM usage were entertainment, communication with people far away and making

companionship respectively. However, spending time, meeting new people they don't know in person contact and reading other individual's profile (1.7%, 5.3% and 5.7%) were the least reasons for them to SNM usage.

4.3. Differences in the types of SNM usage as a function of demographic characteristics

To answer differences in the types of SNM sites used as a function of each demographic character, cross-tabulation and Chi-square test were used and presented as follows.

Table 5

Cross-Tabulation and Chi-Square Test to differences in the Types of SNM Sites Used as a function of Sex wise distribution

Description		Face- book	You- tube	MyS pace	Twit ter	Viber	Watss -app	Total	X ² Value
	Count	91	15	0	4	0	40	150	
Sex	Male	%	47.2	100	0	100	0	100	50
	Female	%	52.8	0	0	0	100	0	50
	Count	102	0	0	0	48	0	150	107.627 ^a
	Count	193	15	0	4	48	40	300	
Total	%	100	100	0	100	100	100	100	

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 2.00.

b. The standardized statistic is -.884.

As shown on the above table 5, differences revealed in the types of SNM usage between both sexes i.e. males used Whats-app, You-tube and Twitter SNM sites while females used only Viber. However, to some extent similarity was observed between both sexes in the types of SNM

usage i.e. both males (64%) and females (70.7%) used Face-book and did not use MySpace at all (0 %).

As shown on the same table 5 above, the analysis reveals that 2 cells had expected count less than 5, so an exact significance test was selected for Pearson's chi-square: [$X^2(4, N= 300) = 107.627$, exact $p= 0.001$]. This indicates that there was a significant difference between both sexes in types of SNM usage. That means Male's and Female's do differ in the types of SNM usage. That is to say, a correlation existed in the types of SNM usage between males and females. Also, Males used multiple SNM sites than Females.

Table 6

Cross-Tabulation and Chi-Square Test to Differences in the Types of SNM Used as a function of Age wise distribution

Description		Face-book	You-tube	Twitt-er	Viber	Whats-app	Total	X^2 Value
Age category	Count	5	0	0	0	0	5	18.984 ^a
	11-14 %	2.6	0	0	0	0	1.7	
	Count	139	7	0	37	28	211	
	15-18 %	72	46.7	0	77.1	70	70.3	
	Count	49	8	4	11	12	84	
	19-21 %	25.4	53.3	100	22.9	30	28	
	Count	193	15	4	48	40	300	
	Total %	100	100	100	100	100	100	

a. 8 cells (53.3%) have expected count less than 5. The minimum expected count is .07.

b. The standardized statistic is .641.

As depicted on the above table 6, majority (70.3%) of the SM users were found in age range between 15 to 18 years old while the least (1.7%) number of SNM users were found in age range between 11 to 14 years old. Cognizant of this fact, the respondents in the age category between 19 to 21 years old had used different types of SNM sites while respondents in the age category between 11 to 14 years old had used only one type of SNM site.

As shown from the same table 6 on the above, the analysis reveals that 8 cells had expected count less than 5, so an exact significance test was selected for Pearson's chi-square: $[X^2(8, N= 300) = 18.984, \text{ exact } p= 0.048]$. This indicated that there was less significant difference for the types of SNM used among the 3 age categories. That means the respondents in the age category between 19 to 21 years old used different SNM sites (Face-book, Viber, WhatsApp, You-tube and Twitter) than the other age category between 15 to 18 years old (used Face-book, Viber, Whats-app, and You-tube) as well as between 11 to 14 years old (only used Face-book). So that, it implies that types of SNM usage correlates with an increment of age.

Table 7

Cross-Tabulation and Chi-Square Test to differences in the Types of SNM Usage as a function of Grade Level distribution

Description		Face- book	You- tube	Twitt er	Viber	Whats -app	Total	X ² Value
G. L	Count	64	0	0	11	0	75	42.413 ^a
	9 th %	33.2	0	0	22.9	0	25	
	Count	45	2	0	14	14	75	
	10 th %	23.3	13.3	0	29.2	35	25	
	Count	42	6	0	12	15	75	
	11 th %	21.8	40	0	25	37.5	25	
	Count	42	7	4	11	11	75	
	12 th %	21.8	46.7	100	22.9	27.5	25	
Total	Count	193	15	4	48	40	300	
Total	%	100	100	100	100	100	100	

a. 8 cells (40%) have expected count less than 5. The minimum expected count is 1.00

b. The standardized statistic is .641.

As shown on the above table 7, differences are revealed in the types of SNM usage among the four grade levels. That is to say, Grade 12th students used SNM sites; Face-book, You-tube, Twitter, Watts-app, and Viber; grade 10th & 11th students used Face-book, You-tube, Watts-app, and Viber SNM sites while grade 9th students limited to Viber use. However, all grade levels used Face-book (9th =33.2%, 10th =23.3%, 11th =21.8% and 21.8%) and did not used MySpace at all (0 %).

Also, as shown from the same table 7 on the above, the analysis reveals that 8 cells had expected count less than 5, so an exact significance test was selected for Pearson's chi-square: [$X^2(8, N=300) = 42.413$, exact $p = 0.001$]. This indicated that there was a difference for the types of SNM sites used among the grade levels. So, it implies that types of SNM usage correlates with an advancement of grade level.

4.4. Differences in the Frequency Use of SNM Sites used as a Function of Demographic Characteristics

To answer differences in the frequency use of SNM sites used within a week, Independent sample t-test for gender and F-test for age category and grade level characters were used respectively. Accordingly, the statistics are presented as follows.

Table 8

Independent Sample t-test for differences in frequency use of SNM Sites as a function of gender Category

D.V	Demog. C	Category	N	Mean	S.D.	S.E	t	Sig.
Frequency use of SNM sites	Gender	Male	150	2.87	1.441	.118	-4.756	0.000
		Female	150	3.60	1.221	.100		

* $P < 0.05$, two-tailed.

As revealed on the above table 8, statistical differences are observed in the frequency use of SNM sites between males and females, t-test: [t (298) = -4.756, P = 0.001]. That is to say, the mean of females (M=3.60, S.E= .118) is significantly greater than that of males (M=2.87, S.E=.100). Hence, it implies that females used SNM sites frequently than males.

Table 9

A Summary Table of One-Way ANOVA to the Frequency Use of SNM Sites within a Week as a Function of Age Categories

D. V	Demog	Descriptive Stat			DF	F	Sig
	. C						
Frequency							
Use of	Age.C	N	Mean	S.D	B/n. G	W/n.G	
SNM							
Sites							
Within a							
week							
	11-14	5	1.40	.548			
	15-18	211	2.82	1.326	2	297	59.485 .000
	19-21	84	4.38	.675			
	Total	300	3.23	1.383			

P<0.05, two-tailed

As it is depicted on table 9 above, there is a difference in the mean frequency use of SNM sites within a week as a function of the three age categories. That means, the mean for 11- 14 years old ($M = 1.40$) is less than from the mean of 15-18 years old ($M = 2.82$) and also the mean of 15-18 years old ($M = 2.82$) is less than from the mean of 19-21 years old ($M = 4.38$).

Cognizant of this fact, the F-ratio for the between age categories difference is significant: [F (2, 297) = 59.485, $P < .05$]. In other words, age matters to the frequency use of SNM sites within a week.

Furthermore, Bonferroni's Post hoc Comparison test (see appendix F1) showed that the mean frequency use of SNM sites within a week for 11- 14 years old is significantly different from the mean of both the 15 to 18 years old and the 19 to 21 years old respectively (sig.= 0.024, sig.= 0.001).

Also, the mean frequency use of SNM sites within a week for 15 - 18 years old is significantly different from the mean of both 11 - 14 years old and the 19 - 21 years old (sig.= 0.024, sig.= 0.001).

Similarly, the mean frequency use of SNM sites within a week for 19 - 21 years old is significantly different from the mean of both 11 - 14 years old and the 15-21 years old (sig.=0.001). So that, it implies that the 19 - 21 years old students used SNM sites frequently within a week than the other age categories.

Table 10

A Summary Table of One-Way ANOVA to Differences in the Frequency Use of SNM Sites within a Week as a Function of Grade Level

D. V	Demog.C	Descriptive Stat			DF	F	Sig
Frequency							
Use of	G. L	N	Mean	S.D	B/n.G	W/n.G	
SNM							
Sites							
	9 th	75	1.73	.777			
	10 th	75	2.72	1.085	3	296	164.316
	11 th	75	3.91	.888			
	12 th	75	4.57	.574			
	Total	300	3.23	1.383			

P<0.05, two-tailed

As it is shown on table 10 above, difference is observed in the mean frequency use of SNM sites within a week as a function of the four grade levels. That means, the mean for grade 9th ($M = 1.73$) is less than from the mean of grade 10th ($M = 2.72$), grade 11th ($M = 3.91$) and from the mean of grade 12th ($M = 4.57$).

Cognizant of this fact, the F-ratio for the between grade level difference is significant: [F (3, 296) = 164.316, $P < .05$]. In other words, an advancement of grade level matters to the frequency use of SNM sites within a week.

Furthermore, Tukey HSD Post hoc Comparison test (see appendix F2) showed that the mean frequency use of SNM sites within a week for each grade level was significantly different from each other (sig. =0.001).

In addition, Tukey HSD homogeneous subsets (see appendix F3) showed that each grade levels mean was found in different subsets. That means the mean frequency use of SNM sites within a week to each grade level was significantly different to each other.

So that, it implies that grade 12th students were more likely in visiting SNM sites frequently within a week than the other offset grade levels.

4.5. Correlation between SNM usage and Sexual Behavior

In order to answer the nexus between adolescents SNM usage and sexual behavior correlations were computed and presented as follows.

Table 11

Correlation between SNM Usage and Sexual Behavior

Description		SNM Usage	Sexual Behavior
SNM usage	Correlation Coefficient	1.000	.222**
	Spearman's rho Sig. (2-tailed)	.	.000
	N	300	300
	Sexual Behavior Correlation Coefficient	.222**	1.000
Sexual Behavior	Sig. (2-tailed)	.000	.
	N	300	300

** . Correlation is significant at the 0.01 level (2-tailed).

The data reported on table 11 above revealed that the correlation between rank ordered types of SNM usage with sexual behavior was +0.222 and the probability of achieving this correlation by chance was less than 0.001 (i.e. $P=0.000$). Therefore, there is a positive correlation, though it is weak, between the rank ordered types of SNM usage with sexual behavior [$r(298) = .222, P < .05$].

Also, the scatter gram (see Fig. 2) showed that the scatter of points are wide, indicating that the correlation is low. The slope of the scatter lies in a relatively straight line, indicating a linear rather than a curvilinear relationship. The line moves from the upper left to the upper right, which signifies a positive correlation. Hence, there was no evidence of a curvilinear relationship.

Table 12

Correlation between Frequency Use of SNM Sites within a Week and Sexual Behavior

Description		SNM sites Frequently Used within a week	Sexual Behavior
	Pearson Correlation	1	.694**
SNM sites Frequently Used within a week	Sig. (2-tailed)		.000
	N	300	300
	Pearson Correlation	.694**	1
Sexual Behavior	Sig. (2-tailed)	.000	
	N	300	300

** . Correlation is significant at the 0.01 level (two-tailed).

As shown on the above table 12, the correlation between the frequency use of SNM sites used within a week and sexual behavior was +0.69 and the probability of achieving this correlation by chance was less than 0.001 (i.e. $P=0.000$). Therefore, there was a moderate positive correlation between frequency use of SNM sites used within a week and sexual behavior: [$r(298) = .694, P < 0.05$]. So, it implied that sexual behavior was moderately correlated with the frequency use of SNM sites used.

Also, the scatter gram (see Fig. 3) the scatter of points was relatively medium, indicating that the correlation is moderate. The slope of the scatter lies in a relatively straight line, indicating a linear rather than a curvilinear relationship. The line moves from the lower left to the upper right, which signifies a positive correlation. Hence, there was no evidence of a curvilinear relationship.

4.6. Demographic Characteristics Difference in Sexual Behavior

To answer differences in SNM usage related sexual behavior by each demographic character, an Independent sample t-test and a One-way ANOVA were computed and presented as follows.

Table 13

Independent Sample t-test for gender difference in Adolescents' sexual behavior

D. V	Demog.C	Category	N	Mean	S.D	S.E	t	Sig.
Sexual behavior	Gender	Male	150	42.20	13.557	1.107	.461	0.645
		Female	150	41.47	13.748	1.123		

*P<0.05, two-tailed.

As revealed on table 13 above, no difference was observed in the mean score of sexual behavior between male (Mean= 42.20, S.E= 1.107) and female (Mean= 41.47, S.E= 1.123). Also, an independent t-test showed no statistical difference between both sexes sexual behavior: [t (298) = .461, P > 0.05].

This indicates that both sexes have similar sexual behavior. In other words, both sexes sexual behavior were almost low.

Table 14

A Summary Table of One-Way ANOVA to Differences in Adolescents' Sexual Behavior as a Function of Age Categories

D. V	Demog. C	Descriptive Stat			DF		F	Sig
S.B	Age. C	N	Mean	S.D	B/n. G	W/n. G		
	11-14	5	25.80	3.633				
	15-18	211	37.44	12.728	2	297	67.966	.000
	19-21	84	53.83	6.995				
	Total	300	41.84	13.635				

P<0.05, two-tailed

The data presented in table-14 above showed a difference in the mean of sexual behavior as a function of the three age categories. That is to say, the mean of sexual behavior for 11- 14 years old (M = 25.80) is less than from the mean of 15-18 years old (M =37.44) as well as from the mean of 15-18 years old (M =53.83).

Cognizant of this fact, the F-ratio for the between age categories difference is significant: [F (2, 297) = 67.966, $P < .05$]. In other words, those who were in the age category between 19-21 years old showed more involvement in sexual behavior than from those who were in the age category between 15-18 and 11-14 years old.

Furthermore, Bonferroni's Post hoc Comparison test (see appendix F4) showed that the mean of sexual behavior for 11 - 14 years old is significantly different from the 19 to 21 years old mean (sig.=0.001) but not significant to the 15-18 years old mean. Also, the 15-18 years old mean is significantly different from the 19-21 years old mean (sig.= 0.001) but not significant with the 11-14 years old mean. Similarly, the 19-21 years old mean is significantly different from the other both two age categories mean (sig. =0.001). Therefore, an overall significant difference for sexual behavior was observed only in the 19-21 years old mean.

This implies that sexual behavior was more revealed in the age category between 19-21 years old than the 11-14 and 15-18 years old category.

Table 15

A Summary Table of One-Way ANOVA to Differences in Adolescents' sexual behavior as a Function of Grade Level

D. V	Demog. C	Descriptive Stat			DF	F	Sig.
Frequency	G. L	N	Mean	S.D	B/n.G	W/n.G	
Use of SNM sites	9 th	75	25.15	5.090			
	10 th	75	36.59	6.971	3	296	293.442 .000
	11 th	75	50.83	7.527			
	12 th	75	54.79	7.606			
	Total	300	41.84	13.635			

P<0.05, two-tailed

As shown on the above table-15, there is a difference in the mean of sexual behavior among the four grade levels. That is to say, the mean of sexual behavior for grade 9th (M = 25.15) is less than from the mean of grade 10th (M =36.59), grade 11th (M =50.83) and from the mean of grade 12th (M= 54.79).

Cognizant of this fact, the F-ratio for the between grade level difference in the mean of sexual behavior is significant: [F (3, 296) = 293.442, P < .05]. It means that an advancement of grade level matters to more involvement of SNM usage related sexual behavior.

Furthermore, Tukey HSD Post hoc Comparison test (see appendix F5) showed that the mean of sexual behavior among each grade level was significantly different from each other (sig. = 0.001). However, though Tukey HSD range test found an overall significant difference between the four grade levels. It is implied that grade 12th students were more involved in SNM usage related sexual behavior than the other offset grade levels.

Similarly, Tukey HSD homogeneous subsets (see appendix F6) showed that each grade levels mean was found in a different subsets. That means, the mean sexual behavior of each grade level was significantly different to each other.

4.7. Risk Perception Level among the Respondents

To answer perception of risk related to SNM usage sexual behavior descriptive statistics were used and presented as follows.

Table 16

Descriptive Statistics to General Risk perception level among the Participants

Description	Frequency	Percent (%)
Low perception	92	30.7
Average perception	24	8.0
High perception	184	61.3
Total	300	100.0

As the data presented on the above table-16, majority (61.3%) of the respondents have high risk perception while 30.7% of the respondents have low risk perception to SNM usage and also 8% of the respondents have average risk perception to SNM usage.

4.8. Differences in Risk Perception Level to SNM Usage Related Sexual Behavior as a Function of Demographic Characteristics

Though answering differences in the risk perception level of participants related to SNM usage sexual behavior was not the main intention of the present study, the following statistical methods were used and presented as follows.

Table 17

Independent Sample t-test for gender differences on Risk Perception to SNM usage

D.V	Demog. C	Category	N	Mean	S.D	S.E	t	Sig.
Risk perception to SNM usage	Gender	Male	150	37.65	6.313	.515	-.704	0.482
		Female	150	38.14	5.650	.461		

*P<0.05, two-tailed.

As shown on the above table17, little differences were observed in the mean score of risk perception to SNM usage related sexual behavior between males (Mean= 37.65, S.E= .515) and females (Mean= 38.14, S.E= .461). Furthermore, an independent t-test showed less significant statistical difference between both sexes risk perception to SNM usage: [t (298) = .461, P=0.482]. This indicates that both sexes had almost similar risk perception to SNM usage. That is to say, cognizant of the cut point, they had high risk perception level to SNM usage related sexual behavior.

Table 18

A Summary Table of One-Way ANOVA to Differences in Adolescents' Risk Perception to SNM Usage as a Function of Age Categories

D. V	Demog. C	Descriptive Stat			DF		F	Sig
Risk Perception to SNM Usage	Age. C	N	Mean	S.D	B/n. G	W/n. G		
	11-14	5	35.80	4.087	2	297	12.049	.000
	15-18	211	36.91	5.983				
	19-21	84	40.51	5.290				
	Total	300	37.90	5.985				

P<0.05, two-tailed

As data presented on the above table 18, there is a difference in the mean of risk perception to SNM usage related sexual behavior as a function of the three age categories. That is to say, the mean for 11- 14 years old (M = 35.80) is less than from the 15-18 years old (M =36.91) as well as from the mean of 19-21 years old (M =40.51).

Cognizant of this fact, the F-ratio for the between age categories difference is significant: [F (2, 297) = 12.049, P < .05].

Besides, Bonferroni's Post hoc Comparison test (see appendix F7) showed that the mean risk perception of SNM usage related sexual behavior for 11 to14 years old (Mean= 35.80) is not significantly different from the 15 to 18 years old (Mean= 36.91, sig.=1.00) but significantly

different from the 19 to 21 years old (Mean= 40.51, sig= 0.023). Also, the 15 to 18 years old mean (36.91) is significantly different from the 19 to 21 years old mean (40.51, sig.= 0.001) but not significantly different from the 11 to 14 years old mean (35.80, sig= 1.00). As well, the 19 to 21 years old mean (40.51) is significantly different from the other both two age categories mean (35.80 and 36.91; sig. =0.001).

Therefore, there is only a significant difference among the 19 to 21 years old mean of risk perception to SNM usage related sexual behavior compared to the other means of age categories. So that, it implies that high risk perception to SNM usage related sexual behavior was more revealed in the age category between 19-21 years old than the 11-14 and 15-18 years old category.

Also, cognizant of the cut-point the 15 to 18 years old mean (36.91) and the 19 to 21 years old mean (40.51) can be categorized to high risk perception level while the 11 to 14 years old mean (35.80) categorized under low risk perception level of SNM usage related sexual behavior.

Table 19

A Summary Table of One-Way ANOVA to Differences in Adolescents' risk perception to SNM usage as a Function of Grade Level

D. V	Demog. C	Descriptive Stat			DF	F	Sig
Risk perception to SNM usage	G. L	N	Mean	S.D	B/n. G	W/n. G	
	9 th	75	34.25	5.165			
	10 th	75	36.36	4.546	3	296	28.374 .000
	11 th	75	41.68	6.023			
	12 th	75	39.29	5.367			
	Total	300	37.90	5.985			

P<0.05, two-tailed

As shown on the above table 19, there is a difference in the mean of risk perception to SNM usage among the four grade levels. That is to say, the mean of grade 9th (M = 34.25) is less than from the mean of grade 10th (M =36.36), grade 11th (M =41.68) and from the mean of grade 12th (M= 39.29).

In addition, the F-ratio for the between grade level difference is significant: [F (3, 296) = 28.374, P < .05]. In other words, grade level matters to risk perception of SNM usage.

Moreover, Tukey HSD Post hoc Comparison test (see appendix F8) showed that the mean of grade 9th (Mean=34.25) is significantly different from the means of grade 11th and 12th (Mean= 41.68 and 39.29, sig. = 0.001 respectively) but it was not significantly different from the mean of grade 10th (Mean=36.36, sig. = 0.073). Also, the mean of grade 10th (Mean= 36.36) is significantly different from the means of grade 11th and 12th (Mean= 41.68 and 39.29, sig. = 0.001 and 0.004 respectively) but it was not significantly different from the mean of grade 9th (Mean= 34.25, sig. = 0.073). Similarly, the mean of grade 11th (Mean= 41.68) is significantly different from the means of grade 9th, 10th & 12th (Mean= 34.25, 36.36 & 39.29, sig. = 0.001 to both grade 9th & 10th; 0.031 to grade 12th). As well, the mean of grade 12th (Mean= 39.29) is significantly different from the means of all three grades (Mean= 34.25, 36.36 & 41.68, sig. =0.001, 0.004 & 0.031 respectively).

Therefore, there is a significant difference between the four grade levels risk perception to SNM usage related sexual behavior.

In addition, Tukey HSD homogeneous subsets (see appendix F9) showed that both 9th and 10th grade levels mean are found in the same subsets while the other grade levels mean found in a different sub sets. That means the means of grade 9th and 10th risk perception to SNM usage related sexual behavior was almost similar while the other grade levels mean of risk perception to SNM usage related sexual behavior was significantly different to each other. However, cognizant of the cut-point, it implies that grade 11th and 12th students have high risk perception level to SNM usage related sexual behavior while only grade 9th students had low risk perception and grade 10th students seems to have average risk perception.

4.9. The Findings of Additional Answers filled in the Blank Space

Respondents of the present study added the following answers in the blank space provided for the following items respectively: -

1. The reasons that motivate them to use SNM sites: -
 - To know and communicate with students of other schools.
 - To learn new things.
 - To save money that is spent due to calling and SMS using cell phones, especially with people live abroad.
2. Types of SNM sites they used: -

Females have written that they used SNM sites: - Skype, Instagram, Tumbler and 2go application. While Males were used SNM sites: - Hi5, Google plus, and Snap-chat. However, both were written that they used Nimbuzz application.

Hence, still there is a difference in the types of SNM sites used between both sexes, though little similarity exists such as the use of Nimbuzz application.

Chapter Five

5. Discussions

In this chapter, discussions are made based on the literature reviewed in chapter two and according to the objectives of the study. Accordingly, the findings are discussed in the following order:

- The major reasons that motivate school adolescents SNM usage.
- Demographic characteristics difference in the types and frequency of SNM usage among school adolescents.
- The relationship between adolescent's SNM usage and sexual behavior.
- Demographic characteristics difference with respect to SNM usage related sexual behavior.
- The level of school adolescents' risk perception to SNM usage.

5.1. Major reasons that motivate school adolescents SNM usage

The findings of this study reveal that the majority (34.3%, 20% & 16%) of respondents' reason to SNM usage were entertainment, communication with people far away and making companionship respectively. Hence, it seems to share the results of a survey by Sheldon (2008) which examined that entertainment and passing time were the major factors in using social media sites for students.

However, these findings of the present study seem not to confirm the results of different studies. For example: Boyd et al., (2007); Zhao et al., (2008); Quan-Haase et al., (2010); Sponsil et al.,

(2012) which pointed out that communication with family and friends was the most popular reason students used social media.

The possible explanation to these differences with other studies findings could be said many things. However, the researcher generally assumed that the school adolescents' reason to SNM usage is related with uses and gratification perspective to media consumption. That is to say, enjoyment is the key reason to media consumption, although the needs of youth are many and varied Sparks 2001, (cited in Kerish, 2010).

5.2. Demographic characteristics difference in the types and frequency of SNM usage among school adolescents.

The second objective of this study was to assess the demographic characteristics differences on the types of SNM sites used and also differences in the frequency use of SNM sites used within a week.

The results of this study indicate significant differences between demographic characteristics (sex, age and grade level) to both the types of SNM sites used and frequency of use.

To be specific, with regard to the types of SNM sites used Pearson's exact test showed a significant difference between sexes. That means, Males used Whats-app, You-tube and Twitter SNM sites while females used only Viber in addition to their similarity with males for Face-book usage, which accounts the greater proportion from the other presented all types of SNM sites (Male=64% & Female=70.7%).

The findings of the present study seem to confirm with the results of a study by Lenhart et al., (2010) which reported that women are more likely than men to have a personal profile on Face-book, but men are more likely than women to sustain a profile on LinkedIn. This means that there is a difference on both sexes SNM sites used, though the present study showed a communality of both sexes with slight differences on Face-book usage.

Also, the results of this study indicate significant differences among the age categories for the types of SNM sites used. That means the respondents in the age category between 19 to 21 years old were likely to use multiple SNM sites than the other age categories (two-tailed Pearson's exact $p=0.001$). These findings seem to confirm a study result by Lenhart et al., (2010) which reported that 57% of social network users are 18-29 years old and have a personal profile on multiple social media websites. However, the findings of the present study seem not to confirm the results of a study by Lenhart et al., (2007) which reported that 73% of teens between the ages of 12 and 17 owned different SNM profile.

In addition to sex and age category, the present study finding also reveal significant differences among grade levels to the types of SNM sites used, Pearson's exact test significant at two-tailed level, $P= <0.001$. That means grade 11th and 12th were more likely in using different or multiple SNM sites than the other grade 9th and 10th respondents.

These findings seem not to confirm with the other study conducted by Lenhart et al., (2010) which pointed out that Men and women were more likely to use social network sites frequently if they had college experience.

Generally speaking, the present study findings reveal that differences were observed among all demographic characteristics to the types of SNM sites used.

The possible explanation to these differences seem an advancement both on age and grade level that matters to the multiple use of SNM sites, though sex also played its own role. In addition, it is an existed fact that grade 12th students will going to join universities right after their promotion. Hence, it seems for this reason that grade 12th students used multiple SNM sites than grade 9th students.

The other main difference observed across all demographic characteristics was the frequency use of SNM sites within a week.

Specifically, the present study finding showed a significant difference in the mean frequency use of SNM sites within a week between males and females t-test: [t (290.2) = -4.756, P < .05]. That means the mean of females (M=3.60, SD=1.221) was significantly greater than that of males (M=2.87, SD=1.441).

These finding seems to support somehow to the study conducted by Tufekci (2008) which reported that women were four to five times more likely to use social networking sites than men.

Also, a one-way ANOVA shows a significant difference in the mean frequency use of SNM sites within a week for the three age categories: [F (2, 297) = 59.485, P < .05]. Furthermore, Bonferroni's range test found that an overall significant difference among each age categories, especially the 19 to 21 years old students frequently visited SNM sites within a week than the other age categories.

Similarly, the present study findings show a difference in the mean frequency use of SNM sites within a week among the grade levels [F (3, 296) = 164.316, P < .05]. Furthermore, Tukey HSD

post hoc test found an overall significant difference between the four grade levels; especially grade 12th students were more likely to visit SNM sites frequently than the other grade levels.

These findings seem to confirm with the study conducted by Quan-Haase et al., (2010) which found that 82% of college students reported logging into Face-book several times a day. Also, as explained on the above grade 12th students are an approached grade level to university students. That is why; they visited SNM sites frequently too.

Generally speaking, the present study reveals that sex, age and grade level matters to frequent use of SNM sites.

5.3. The relationship between adolescent's SNM usage and sexual behavior

The third objective of the present study was to assess the correlation between SNM usage and sexual behavior. In addition, frequency use of SNM sites was correlated to see if differences were observed in sexual behavior.

Accordingly, though it is weak, positive correlation was found between rank ordered types of SNM usage and sexual behavior: $[r (298) = .222, P < .05]$. Also, frequent use of SNM sites within a week was moderately correlated with sexual behavior: $[r (298) = .694, P = <0.05]$.

The finding of the present study, somehow, seems to confirm with the qualitative study conducted by Loss (2012) which founds out that 5851 Face-book 'posts' (comments, profile texts, photographs, etc.) shows that respondents put themselves in an attractive way to their online peer audience.

Similarly, the present study finding supports the results of Moreno et al., (2009) conducted on the display of health risk behaviors on My Space by adolescents. From a total of 190 subjects, 54.2% of subjects referenced sex on their social networking site profiles.

However, more than half of the participants in the findings of the above two studies revealed SNM usage related sexual behavior compared to the present study finding.

The possible explanation to these differences seems because of the design of the study, the sample size determined, the type as well as content of the instrument. To its detail, the present study design was a descriptive survey which constitutes large (300) number of participants and a self reported questionnaire that asks not only chatting about sexuality or posting erotic photos but also their experience of sexual intercourse with the person they communicated through SNM sites. However, the above described studies for instance, a study by Loss (2012) was qualitative design with a small number of participants and a profile analysis for what they did in their SNM profile which does not include contents like their experience of sexual intercourse with people they know in SNM sites or in an offline world.

Hence, Loss's study may have strong empirical data, since he explored what they did in their profile but the present study may not reveal students' real sexual behavior as it described what they reported. In addition, participants of the present study may be conservative too because of cultural influence or other reasons.

5.4. Demographic characteristics difference with respect to SNM usage related sexual behavior

The fourth research question, though not a direct intension or objective of the present study, was to assess whether difference existed on adolescents SNM usage related sexual behavior across demographic characteristics. Accordingly:

The t-test indicated that there was no significant difference in the mean score of sexual behavior between both sexes: $[t(298) = .461, P > 0.05]$. That means the mean of males (Mean= 42.20, S.E= 1.107) and females (Mean= 41.47, S.E= 1.123) sexual behavior was almost similar.

Regarding age, a one-way ANOVA showed a significant difference in the mean score of sexual behavior for the three age categories: $[F(2, 297) = 67.966, P < .05]$. However, as Bonferroni's range test computed, it is implied that sexual behavior was more revealed in the age category between 19-21 years old than the 11-14 and 15-18 years old category.

Regarding grade level, a one-way ANOVA showed a significant difference in the mean score of sexual behavior among the four grade levels: $[F(3, 296) = 293.442, P < .05]$. Besides, Tukey HSD post hoc test found an overall significant difference between the four grade levels mean score difference to sexual behavior, especially; grade 12th students were more involved in sexual behavior than the other offset grade levels.

The findings of the present study generally showed that, more differences existed only in the age category between the 19 to 21 years old and 12th graders. Hence, the investigator assumed that advancement both in age and academic status plays a significant role in involvement of sexual behavior.

Hence, the present study seems to coincide with the study conducted by Willard (2005) which reported that young people are using Internet communities and matching services to make connections with others for sexual activities, ranging from online discussions about sex to “hook-ups.” In the context of these relationships, they posted or provided sexually suggestive or explicit pictures or videos. Also, it seems to confirm the study of Moreno, et.al, (2009) which reported that from a total of 190 subjects, 54.2% of subjects referenced sexual behavior on their social networking site profiles.

5.5. The level of school adolescents’ risk perception to SNM usage

The last but not the least objective was to describe adolescents’ risk perception level to SNM usage related sexual behavior. Accordingly, descriptive statistics of the present study revealed that majority (61.3%) of the respondents have high risk perception level while 30.7% of the respondents have low risk perception level and also insignificant number 8% of the respondents have average risk perception level to SNM usage related sexual behavior.

Moreover, the t-test and F-test reveal a significant differences on the means of demographic characteristics risk perception to SNM usage related sexual behavior. Specifically: little differences were observed in the mean score of risk perception to SNM usage between both sexes: [$t(298) = .461, P < 0.05$]. That means, the mean score of risk perception to SNM usage related sexual behavior for males (Mean= 37.65, S.E= .515) and females (Mean= 38.14, S.E= .461) was almost similar.

In addition, the mean score of both sexes were found to be above the cut-point (i.e. 36), which signifies high risk perception level to SNM usage related sexual behavior.

Generally, the study result implies that both sexes had high risk perception level to the following SNM usage related sexual behaviors. That is, chatting about sexual issues, sending erotic photo/video of oneself or any other erotic photos, uploading/downloading any sex related files, sending an address or telephone number for the purpose of making companionship or for the purpose of sexual intercourse, invite or being invited for sexual intercourse and making sexual intercourse with people you know in SNM sites.

This finding seems to confirm with the findings of a survey report to off-line study that showed adolescents' sexual behaviors are influenced by the ways they perceive their vulnerability to risks associated with their activities. That is to say, adolescents who perceive invulnerability to risks are more likely to involve in risky sexual activities UNICEF (2002).

From the above study finding, one could draw an implication to the present study in that; adolescents who have high risk perception level have high vulnerability assumption to risks associated with SNM usage related sexual behavior. And it seems for this reason that adolescents of the present study had low sexual behavior [$r(298) = .222, P < .05$] due to their high risk perception level to SNM usage related sexual behavior.

However, the present study seems not to confirm with the results of a general survey of Pew (2001) study which reported that adolescents were not particularly worried about meeting strangers online; 52% of adolescent Internet users expressed no worry at all about being contacted online.

Regarding age, a one-way ANOVA showed a significant difference in the mean score of risk perception to SNM usage related sexual behavior as a function of the three age categories [$F(2, 297) = 12.049, P < .05$]. Furthermore, Bonferroni's post hoc test found a significant difference

only between the 19 to 21 years old mean score of risk perception to SNM usage related sexual behavior compared to the other mean scores of age categories.

However, cognizant of the cut-point the 15 to 18 years old mean (36.91) and the 19 to 21 years old mean (40.51) were found in high risk perception level while the 11 to 14 years old mean (35.80) was found to be under low risk perception level of SNM usage related sexual behavior.

Regarding grade level, one-way ANOVA showed a significant difference in the mean score of risk perception to SNM usage related sexual behavior as a function of the four grade levels: [$F(3, 296) = 28.374, P < .05$]. Furthermore, Tukey HSD post hoc comparison found a significant difference, somehow, in the mean score of risk perception to SNM usage related sexual behavior among all grade levels ($M = 34.25, 36.36, 41.68, 39.29$ respectively).

However, the three upper consecutive grade levels were found to be above the cut-point mean score and fall on the level of high risk perception to SNM usage related sexual behavior (i.e. 10th = 36.36, 11th = 41.68 and 12th = 39.29 respectively) while the mean (34.25) of grade 9th found to be below the mean score of the cut-point i.e. had low risk perception.

Generally, the possible explanation to these differences across both age and grade level may be associated with the cognitive development during this adolescence period. Though the period of adolescence belongs to all age categories and grade levels to the present study, it can be assumed that as age increases cognitive maturity also advances, especially as the pragmatist perspective. Hence, those who were in the 19 to 21 years old age category as well as 12th graders are likely to have a better risk perception than those of in the age range between 11 to 14 years old and 9th graders.

However, Cobb (2001) described that adolescents' perception of invulnerability is their egocentric thinking associated with their developmental stage; especially younger adolescents perceive that they are risk-free and will not encounter any kind of risk for future too. Hence, this idea could be correlated to the present study finding in that those who were in the age group between 11-14 years old and 9th graders had low risk perception to SNM usage related sexual behavior.

Chapter Six

6. Summary, Conclusions and Recommendation

6.1. Summary

The primary objective of the proposed research project was to assess the relationships among adolescents' SNM usage, sexual behavior and risk perception in some selected private schools in Addis Ababa.

The study involved randomly selected students from grade 9th, 10th, 11th, and 12th in the selected five private schools right after Bole sub-city was chosen purposively in 2006 academic year.

In the study, attempted have been made to provide answers to the following basic research questions: -

- What are the major reasons that motivate school adolescents SNM usage?
- Is there age, sex and grade level difference in the types and frequency use of SNM sites used among school adolescents?
- Is there a relationship between adolescent's SNM usage and sexual behavior?
- Is there age, sex and grade level difference with respect to SNM usage related sexual behavior?
- What is the level of school adolescents' risk perception to SNM usage?

In order to deal with these basic research questions, the related literature was reviewed. With the help of questionnaire adolescents' SNM usage, sexual behavior and risk perception were assessed. Before analysis was computed, reliabilities were calculated for SNM usage

related sexual behavior and risk perception scale. Based on the data obtained through the questionnaire the findings were analyzed and the discussion was made in relation to the existing literature. Based on the analysis, the following major findings were obtained: -

- The majority (34.3%, 20% and 16%) of respondents' reason to SNM usage were entertainment, communication with people far away and making companionship respectively. However, spending time, meeting new people they don't know in person contact and reading other individual's profile (1.7%, 5.3% & 5.7%) were the least reasons for them to SNM usage. To know and communicate with students of other schools, to learn new things, and to save money that is spent due to calling and SMS using cell phones were additional reasons of SNM usage.
- Differences were found in the types of SNM sites used between both sexes i.e. males used Whats-app, You-tube and Twitter SNM sites while females used only Viber. However, to some extent a similarity was observed between both sexes in the types of SNM usage i.e. both males (64%) and females (70.7%) used Face-book and did not use MySpace at all (0 %). Skype, Instagram, Tumbler and 2go application were additional SNM sites used by female respondents while males were used Hi5, Google plus, and Snap-chat SNM sites. Similar to the communality of Face-book usage both sexes were used Nimbuzz application.
- Respondents in the age category between 19 to 21 years old used different SNM sites (Face-book, Viber, Whats-app, You-tube and Twitter) than the other age category between 15 to 18 years old (used Face-book, Viber, Whats-app, and You-tube) as well as between 11 to 14 years old (only used Face-book).

- Similarly, significant differences were found for the types of SNM sites used among all grade levels. That means the respondents of grade 11th and 12th used different SNM sites than the other grade 9th and 10th respondents.
- Statistical differences were observed in the frequency use of SNM sites used between males and females, t-test: [t (290.2) = -4.756, P < .05]; among the three age categories [F (2, 297) = 59.485, P < .05] and the grade levels: [F (3, 296) = 164.316, P < .05].
- Weak positive correlation was found between the rank ordered types of SNM usage and sexual behavior [r (298) = .222, P < .05]. However, sexual behavior was moderately correlated with the frequency use of SNM sites used [r (298) = .694, P = <0.05].
- Independent sample t-test showed no statistical difference between both sexes SNM usage related sexual behavior: [t (298) = .461, P > .05]. However, there was a difference as a function of the three age categories: [F (2, 297) = 67.966, P < .05] and the four grade levels: [F (3, 296) = 293.442, P < .05].
- Majority (61.3%) of the respondents found to have high risk perception while 30.7% of the respondents have low risk perception to SNM usage.
- An independent t-test showed less significant difference between both sexes risk perception to SNM usage: [t (298) = .461, P < 0.05]. That is to say, both of them had high risk perception level to SNM usage related sexual behavior. Similarly, F-test revealed differences as a function of the three age categories: [F (2, 297) = 12.049, P < .05]. It means that, high risk perception to SNM usage related sexual behavior was found in the age category between the 19-21 years old than the 11-14 years old. Also, F-test found differences as a function of grade level: [F (3, 296) = 28.374, P < .05].

That means high risk perception to SNM usage related sexual behavior was found in grades 11th and 12th students than in grade 9th and 10th students.

6.2. Conclusions

The study was limited to one study site selected purposively, though the procedures thereafter were random. It means the study lacks consideration of more diverse groups of adolescents from diverse location. Hence, the findings may not be inferred to the whole school adolescents of Addis Ababa.

The data from survey research is obtained through self-report thus there might be biased response due to less than accurate recall or discomfort surrounding sensitive questions. Hence, there may be a discrepancy between what school adolescents' report and what they actually do.

Despite the limitations, the results from this study contribute to the empirical knowledge base by providing a conceptual relationship of adolescent SNM usage with sexual behavior. Therefore, the following conclusions could be understood in line with the above limitations.

- Entertainment, communication with people far away and making companionship (34.3%, 20% and 16%) respectively were the major reasons for school adolescents' SNM usage.
- Gender; age and grade level has an association for differences in the types of SNM sites used by school adolescents; t-test: $[t(290.2) = -4.756, P < .05]$; among the three age categories: $[F(2, 297) = 59.485, P < .05]$ and grade level: $[F(3, 296) = 164.316, P < .05]$.

- There is Weak positive correlation between SNM usage and sexual behavior [$r(298) = .222, P < .05$]. However, sexual behavior was moderately correlated with the frequency use of SNM sites used [$r(298) = .694, P = <0.05$].
- There is no statistical difference between both sexes SNM usage related sexual behavior: [$t(298) = .461, P > 0.05$]. However, differences are revealed in sexual behavior as a function of the three age categories: [$F(2, 297) = 67.966, P < .05$] and the four grade levels: [$F(3, 296) = 293.442, P < .05$].
- Majority (61.3%) of the respondents found to have high risk perception while 30.7% of the respondents have low risk perception to SNM usage.

6.3. Recommendations

Based on the conclusions made from the findings, the following recommendations are forwarded: -

- ✓ SNM offers young people extensive opportunities and also can have positive uses, however, as this study reveals, some young people are at risk of being vulnerable to SNM usage related sexual behavior. Thus, directly, measures required from school adolescent students and the school community as well as from parents and the concerned bodies like MOE and NGO indirectly.
 1. School adolescent students should be aware that frequent use of SNM sites has a moderate association for entry in to risky sexual behavior than SNM usage by default. Hence, reducing the frequency of using SNM sites for entertainment reason is an important measure to protect oneself from risky sexual behavior.

2. School administrators and teachers should plan and advise school students to use SNM sites for educational issues than entertainment, or for companionship. Because it helps to prevent vulnerability associated with SNM usage related sexual behavior.
3. Parents should make a follow-up for what their adolescent students' do using SNM sites and give advice accordingly. Because if they do not make a follow-up, it is more likely that their children will continue their usual activities and face problems like SNM usage related sexual behavior.
4. Government and NGOs should design a strategy that announces the disadvantages of using SNM sites frequently by school adolescents' for entertainment reason. That means a plan that discourages students' SNM usage only for entertainment reason.
5. Generally as the present study is a baseline work on this issue in Ethiopia, at least to the knowledge of the present researcher, different personalities could use it as a stepping stone for further investigating the situation of SNM usage and view the problem from a different perspective. For instance, with the development of adolescents social capital and identity construction.

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APPENDICES

Appendix A

Questionnaire to be filled by secondary and preparatory school students

Appendix A1:- English Version

Addis Ababa University

College of Education and Behavioral Studies

School of Psychology

Dear respondents, this questionnaire is prepared to understand the relationships among adolescents' Social Media usage, sexual behavior and risk perception. It is simply used to conduct a research which is used for the requirement of Master's Degree in Developmental Psychology at Addis Ababa University.

Having this goal in mind, you are kindly requested to give your genuine responses for the given items. Your genuine responses to each question have a great value to the success of this study.

Thank you in advance for your cooperation!

Notice:-

1. Your responses will be kept confidential and used only for the research purpose. Also your name will not be disclosed in any way.
2. Be sure that the researcher offers no objection to sexual behavior or activity in which you could possibly involve using social network media.
3. There is no right or wrong answers for all items except for the demographic characteristics.
4. Please give your responses based on the direction given to each part of the questionnaire.

Part –I

Demographic characteristics

Following are lists of questions that are asking about your personal information. Please, give your responses by circling the option letter that contains your right choice and write your answer for the questions with blank spaces in the space provided.

1. Age: _____
2. Sex: A. Male B. Female
3. Grade level: A. 9th B. 10th C. 11th D. 12th
4. Name of your school: _____

Part –II

Social Network Media Usage

Dear respondents! The following questions contain alternative types of responses that ask for the information about your social network media usage. Please, give your responses by circling your right choices. If you have other responses, write your additional answers in the given blank spaces.

1. Please read the following listed social networking sites and circle by identifying that you currently use?
A. Face-book.com B. You-tube.com C. Twitter.com
D. MySpace.com. E. Viber.com F. Whats-up.com
If others, specify them _____
2. How often do you visit the social networking site you use within a week?
A. Always B. Mostly C. Undecided D. Sometimes E. Never

3. Dear respondents! The following listed alternatives are possible reasons for people to use SNM sites. Hence, please read and select one of your main reasons to SNM usage?

- A. For entertainment
- B. To communicate with people far away
- C. To get rid of my boredom.
- D. To make companionship
- E. To continue pre-existing social relations with family and friends
- F. To meet new people whom I don't know in person
- G. To spend time
- H. To read other individuals' profiles or news feeds or looking at photographs

If others, specify them _____

Part –III

Sexual behavior related to Social Media usage

Dear respondents! The items 1-14 have alternative response types that are asking information about your sexual behavior related with your SNM usage. Hence, please give your response by putting (✓) under the labeled number given in front of each item.

NB: 5 = Always, 4= Mostly, 3= Undecided, 2= Sometimes and 1 = Never

No.	Items	5	4	3	2	1
1.	How often have you ever searched for someone you know online to talk about sexuality in social network media?					
2.	How often have you ever sent erotic photo or video of yours to someone you know online in social network media?					
3.	How often have you ever sent an address or telephone number to someone you know online for the purpose of sexual intercourse?					
4.	How often have you ever searched for someone online that you know first in personal contact to talk about sexual issues in social network media?					
5.	How often have you ever posted any photo that is sexually arousing for someone who is in your contact list in social media?					
6.	How often have you ever attached sex related video files or porno films for someone who is in your contact list in social network media?					
7.	How often have you ever commented on any erotic photos that your friends have posted in social network media?					
8.	How often have you ever attracted on any erotic photo that your friends have posted in social network media?					
9.	How often have you ever commented on any sex related video files that your friends have uploaded in social network media?					
10	How often have you ever been attracted on sex related video files that your friends have uploaded in social network media?					

No.	Items	5	4	3	2	1
11.	How often have you ever gone alone to meet in-person contact for the person you know online in social network media for the purpose of making companionship?					
12.	How often have you ever been invited to sexual intercourse from social network media users you have online contact with?					
13.	How often have you ever invited sexual intercourse for social network media users you have online contact with?					
14.	If your answers for question no. 12&13 are in between “Always” and “Rarely”, how often have you ever made sexual intercourse with them?					

Part –IV

Risk-Perception to Social Network Media Usage

Dear respondents! All the following items contain alternative response types that are asking information about perception of risk related with your social network media usage. Please, read each items carefully to what extent they are risky or not at all, and give your right responses by putting (✓) under the labeled number given in front of each item.

NB: 5 = Strongly Agree, 4= Agree 3= Undecided 2= Disagree and 1= Strongly Disagree.

No.	Items	5	4	3	2	1
1.	Social media usage makes me vulnerable to sexual behavior.					
2.	Chatting about sexual issues with online friends using social network media?					
3.	Social media usage makes people vulnerable to sexual behavior.					
4.	Visiting always within a week to social network media sites makes me to engage in sexual matters.					
5.	Sending erotic photo/video of yours to people you know in social network media?					

No.	Items	5	4	3	2	1
6.	Posting any erotic photo to people you know in social network media?					
7.	Uploading any sex related video file to people you know in social network media?					
8.	Sending an address or telephone number to people you know in social network media for the purpose of making companionship?					
9.	Sending an address or telephone number to people you know in social network media for the purpose of sexual intercourse?					
10.	Being invited for sexual intercourse from people you know in social network media?					
11.	Invited people you know in social network media for sexual intercourse?					
12.	Making sexual intercourse with people you know in social network media?					

N.B: Make sure that you have filled all the 6 pages of the questionnaire.

This is the end of the questionnaire!

Thank you again for taking time to fill the questionnaire!!

Appendix A2: - Amharic Version

አዲስ አበባ ዩኒቨርሲቲ

የሥነ-ባሕሪ ትምህርት እና የሥነ ምግባር ትምህርት ተቋም

የሥነ-ባሕሪ ትምህርት ክፍል

በሁለተኛ ደረጃ እና በመሠናዶ ት/ቤት ተማሪዎች የሚሞላ የፅሁፍ መጠይቅ

ወድ ተማሪዎች! ይህ የፅሁፍ መጠይቅ የተዘጋጀው የማህበራዊ መገናኛ

አውታረ መረብ መጠቀም ከወጣት ተማሪዎች ወሲባዊ ባሕሪ ጋር ያለውን ግንኙነት እና

ተያይዞ ስለሚመጣው አደጋ ግንዛቤያቸው ምን እንደሚመስል ለመፈተሽ/ ለመገንዘብ

የሚደረግ ጥናት ነው። ይህ የፅሁፍ መጠይቅ የሚያገለግለው በአዲስ አበባ ዩኒቨርሲቲ

በእድገታዊ ሥነ-ባሕሪ ትምህርት ክፍል ለድህረ ምረቃ ጥናት የመመረቂያ ፅሁፍ

ማሟያ የሚሆን ነው።

ይህንን አጠቃላይ ዓላማ ግንዛቤ ውስጥ በማስገባት ለቀረቡት ጥያቄዎች የየራሳችሁን

ቅን እና ሐቀኛ መልሶች እንድትሰጡ ዘንድ በትሕትና ትጠየቃለችሁ። የአንተ/ቺ ቅን እና

ትክክለኛ መልሶች ለዚህ ጥናት መሳካት ትልቅ እሴት አለው።

ለትብብርህ/ሽ በቅድሚያ አመሰግናለሁ።

ማስታወሻ:

1. ያንተ/ቺ መልስ በማንኛውም አካል እንዳይታይ ተደርጎ በሚሰጠር እና በጥንቃቄ ለዚህ ጥናት ዓላማ ብቻ የሚውል ነው። በተጨማሪም ስማችሁ በምንም አይነት መንገድ አይጠቀስም።
2. እናንተ የማህበራዊ መገናኛ አውታረ መረብን ከመጠቀማችሁ ጋር ተያይዞ በነበራችሁ ወሲባዊ ባሕሪ ምንም አይነት ሂስ የጥናቱ ባለቤት እንደማይሰጥ እርግጠኛ እንድትሆኑ ይፈልጋል።
3. የግል መረጃ ሲቀር ለሁሉም ጥያቄዎች ትክክል ወይም ስህተት የሆነ መልስ የለም።
4. እባክህን/ሽን መልስህን/ሽን በእያንዳንዱ መጠይቅ ክፍል መመሪያ መሰረት ስጥ/ጩ።

1. እባክህን/ሽን ከታች የተዘረዘሩትን የማህበራዊ መገናኛ አውታረ መረብ አንብቦህ/ሽ

አሁን የምትጠቀምብትን/ሚባትን በመለየት አክብብ/ቢ?

ሀ. ፌስቡክ ለ. ዩ-ቱዩብ ሐ. ትዊተር

መ. ማይስፔስ ሠ. ቫይበር ረ. ዋትስአፕ

ረ. ሌላ ካለ ጥቀስ/ሽ _____

2. አብዛኛውን ጊዜ ወቅታዊነቱን የምታሻሽለውን/ይውን ማህበራዊ መገናኛ በሳምንት ውስጥ ምን ያህል ጊዜ ትጎበኛዋለህ/ሽ?

ሀ. ሁልጊዜ ለ. ብዙጊዜ ሐ. መወሰን አልቸም መ. አንዳንድ ጊዜ ሠ. ምንም ጊዜ

3. ወደ ተማሪዎች! ቀጥለው የተዘረዘሩት አማራጮች ሰዎች የማህበራዊ መገናኛ

አውታረ መረብን የሚጠቀሙባቸው ቀንደኛ ምክንያቶች ናቸው፤ ስለዚህ

እባክህን/ሽን ካነበብካቸው በኋላ ያንተን ቀንደኛ ምክንያት የምትለውን አንድ

ብቻ ምረጥጩ።

ሀ. ለመዝናናት

ለ. ውጭ ሀገር ካሉ ሰዎች ጋር ለመነጋገር

ሐ. ድብርቱን ለማስወገድ

መ. ለፍቅር ጓደኝነት

ሠ. ከቤተሰብ እና ጓደኞቹ ጋር የነበረኝን ማህበራዊ ግንኙነት ለመቀጠል

ረ. በአካል ከማለቃቸው አዳዲስ ሰዎች ጋር ለመገናኘት

ሰ. ጊዜ ለማሳለፍ

ሸ. የሌሎች ሰዎችን ማህደር ወይም የተዘገቡ ዜናዎችን ለማንበብ ወይም

ፎቶግራፎችን ለመመልከት

ሌላ ካለ ዓፍ/ፊ _____

ክፍል ሶስት

የማህበራዊ መገናኛ አውታረ መረብ ከመጠቀም ጋር የተያያዙ ወሲባዊ ባህሪዎች

ወደ ተማሪዎች! ሁሉም ከ1-14 የተቀመጡት አማራጭ ያላቸው ጥያቄዎች

ሲሆኑ ስለ አንተ/ቺ ማህበራዊ መገናኛ አውታረ መረብ መጠቀም ጋር ተያይዞ

ያለህን/ሽን የወሲባዊ ባህሪ መረጃ የሚጠይቁ ናቸው። ስለዚህ እባክህን/ሽን ለእያንዳንዱ

ጥያቄ የምትስማማበትን/ሚበትን መልስ የያዘውን የአማራጭ ቁጥር ላይ ይህን ✓

ምልክት በማስቀመጥ መልስ/ሺ።

ማስታወሻ:

5 = ሁልጊዜ

4= ብዙ ጊዜ

3 = መወሰን አልችልም

2 =አንዳንድ ጊዜ

1 = ምንም

ጥያቄዎች	5	4	3	2	1
1. በማህበራዊ መገናኛ አውታረ መረብ መስመር ላይ ከምታውቀው ሰው ጋር ስለወሲብ ነክ ጉዳዮች ለመነጋገር ምን ያክል ጊዜ ፈልገሃል/ሻል?					
2. በማህበራዊ መገናኛ አውታረ መረብ መስመር ላይ ለምታውቀው ሰው ወሲባዊ ባሕሪ የተላበሰ/የሚቀሰቅስ ያንተን/ቺን ምስል/ፎቶ ወይም ቪዲዮ ምን ያክል ጊዜ ልከሃል/ሻል?					
3. በማህበራዊ መገናኛ አውታረ መረብ መስመር ላይ ለምታውቀው ሰው ለወሲባዊ ግንኙነት አስበህ ያንተን/ቺን አድራሻ ወይም ስልክ ቁጥር ምን ያክል ጊዜ ልከሃል/ሻል?					

ጥያቄዎች	5	4	3	2	1
4. ከዚህ ቀደም በአካል ከምታውቀው ሰው ጋር ስለወሲብ ነክ ጉዳዮች ለመነጋገር በማህበራዊ መገናኛ አውታረ መረብ መስመር ላይ ምን ያክል ጊዜ ፈልገሃል/ሻል?					
5. የማህበራዊ መገናኛ አውታረ መረብ በሚጠቀሙ የጓደኞችህ ስም ዝርዝር ላይ ወሲብ ሊያነሳሱ የሚችሉ ማንኛውንም ፎቶ ምን ያክል ጊዜ ለጥፈሃል/ሻል?					
6. የማህበራዊ መገናኛ አውታረ መረብ በሚጠቀሙ የጓደኞችህ ስም ዝርዝር ላይ ወሲባዊ ነክ የሆኑ ቪዲዮችን ምን ያክል ጊዜ ቈንሃል?					
7. ማህበራዊ መገናኛ አውታረ መረብን በመጠቀም ጓደኞችህ በለጠፉት ማንኛውም አይነት ወሲብ ነክ ምስል/ፎቶ ላይ ምን ያክል ጊዜ አስተያየት ሰጥተሃል/ሻል?					
8. ማህበራዊ መገናኛ አውታረ መረብን በመጠቀም ጓደኞችህ በለጠፉት ማንኛውም አይነት ወሲብ ነክ ምስል/ፎቶ ላይ ምን ያክል ጊዜ ተማርከሃል/ሻል?					
9. ማህበራዊ መገናኛ አውታረ መረብን በመጠቀም ጓደኞችህ በጫኑት ማንኛውንም አይነት ወሲባዊ ነክ ቪዲዮ ምን ያክል ጊዜ አስተያየት ሰጥተሃል/ሻል?					

ጥያቄዎች	5	4	3	2	1
10. የማህበራዊ መገናኛ አውታረ መረብ በመጠቀም ጓደኞችህ በጫኑት ማንኛውንም አይነት ወሲብ ነክ ቪዲዮ ላይ ምን ያክል ግዜ ተማርከሃል/ሻል?					
11. በማህበራዊ መገናኛ አውታረ መረብ መስመር ላይ ለምታውቀው ሰው ለፍቅር ጓደኝነት አስበህ በአካል ለመገናኘት ምን ያክል ግዜ ብቻህን/ሽን ሄደሃል/ሻል?					
12. በማህበራዊ መገናኛ አውታረ መረብ መስመር ላይ ከምታውቀው ሰው ለወሲባዊ ግንኙነት ምን ያህል ጊዜ ተጋብሃል/ሻል?					
13. በማህበራዊ መገናኛ አውታረ መረብ መስመር ላይ ለምታውቀው ሰው ለወሲባዊ ግንኙነት ምን ያህል ጊዜ ጋብሃል/ሻል?					
14. ለጥያቄ ቁጥር 12 እና 13 መልስህ “አልፎ አልፎ” እና “ሁልጊዜ” በሚለው መካከል ከሆነ ከጋብዙህ/ሽ ወይም ከጋብዝቻቸው/ሻቸው ሰዎች ጋር ምን ያክል ጊዜ ወሲባዊ ግንኙነት ፈፀመሃል/ሻል?					

ክፍል አራት

የማህበራዊ መገናኛ አውታረ መረብ ከመጠቀም ጋር የተያያዘ የአደጋ ግንዛቤ

ወደ ተማሪዎች! የሚከተሉት ሁሉም ጥያቄዎች አማራጭ ያላቸው ሲሆን አንተ/ቺ ማህበራዊ መገናኛ አውታረ መረብ ከመጠቀምህ/ሽ ጋር ተያይዞ ለሚመጣው አደጋ ያለህን/ሽን የግንዛቤ ደረጃ የሚለኩ እና መረጃን የሚጠይቁ ናቸው። እባክህን/ሽን እያንዳንዱን ጥያቄ በጥንቃቄ አንብቦህ/ሽ ምን ያክል አደጋ ሊያስከትሉ እንደሚችሉ ወይም እንደማያስከትሉ ከቀረቡልህ አማራጮች ውስጥ የምትስማማበትን/ሚበትን የአማራጭ ቁጥር ላይ ይህን “✓” ምልክት በማስቀመጥ መልስ/ሺ።

ማስታወሻ:

- 5 = በጣም እስማማለሁ 4 = እስማማለሁ
- 3 = መወሰን አልችልም 2 = አልስማማም
- 1 = በጣም አልስማማም

ጥያቄዎች	5	4	3	2	1
1. የማህበራዊ መገናኛ አውታረ መረብ መጠቀሜ ለወሲባዊ ባህሪ መነሳሳት አጋልጦኛል።					
2. የማህበራዊ መገናኛ አውታረ መረብን በመጠቀም መስመር ላይ ካሉ ጓደኞች ጋር ስለወሲብ ነክ ጉዳዮች ማውራት?					
3. የማህበራዊ መገናኛ አውታረ መረብን መጠቀም ሰዎችን ለወሲባዊ ባህሪ መነሳሳት ያጋልጣል።					
4. የማህበራዊ መገናኛ አውታረ መረብን በቀን ውስጥ ብዙ ጊዜ መጎብኘቴ በወሲብ ነክ ጉዳዮች ትኩረት እንድሰጥ አድርጎኛል።					

ጥያቄዎች	5	4	3	2	1
5. በማህበራዊ መገናኛ አውታረ መረብ ለምታውቃቸው ሰዎች ወሲባዊ ባህሪ የተላበሰ የአንተን/ቺን ምስል እና ቪዲዮ መላክ?					
6. በማህበራዊ መገናኛ አውታረ መረብ ለምታውቃቸው ሰዎች ማንኛውንም አይነት ወሲባዊ ባህሪ የተላበሰ ፎቶ መላክ?					
7. በማህበራዊ መገናኛ አውታረ መረብ ለምታውቃቸው ሰዎች ማንኛውንም አይነት ወሲባዊ ነክ የሆኑ ቪዲዮዎችን መጫን?					
8. በማህበራዊ መገናኛ አውታረ መረብ ለምታውቃቸው ሰዎች አድራሻህን/ሽን ወይም ስልክ ቁጥር ለፍቅር ግንኙነት በማሰብ መላክ/መስጠት?					
9. በማህበራዊ መገናኛ አውታረ መረብ ለምታውቃቸው ሰዎች አድራሻህን/ሽን ወይም ስልክ ቁጥር ለወሲባዊ ግንኙነት በማሰብ መላክ/መስጠት?					
10. በማህበራዊ መገናኛ አውታረ መረብ በምታውቃቸው ሰዎች ለወሲባዊ ግንኙነት መጋበዝ?					
11. በማህበራዊ መገናኛ አውታረ መረብ ከምታውቃቸው ሰዎች መርጠህ/ሽ ለወሲባዊ ግንኙነት መጋበዝ?					
12. በማህበራዊ መገናኛ አውታረ መረብ ከምታውቃቸው ሰዎች ጋር ወሲባዊ ግንኙነት መፈፀም?					

ሁሉንም የመጠይቁ 8 ገጾች መሙላትህን/ሽን አረጋግጥ/ጭ።

ይህ የዕራፋ መጠይቅ መጨረሻ ነው።

ግዜህን/ሽን ወስደህ/ሽ መጠይቁን ስለሞላህ/ሽ በድጋሜ አመሰግናለሁ።

Appendix B

Preliminary questions used to develop the instrument of the study basing grounded theory approach

1. Do you use any form of SNM media on the internet?
2. If your response for Q1 is yes, please specify them?
3. What is your reason to use SNM sites?
4. Have you ever had sexual intercourse with people you know in SNM sites?
5. If your response for Q 4 is yes, would you specify the processes that makes you engaged to sexual intercourse with the person you know in SNM sites?
6. How do you see yourself to risks associated with SNM usage? Do you think are you vulnerable to SNM usage related sexual behaviors?

Appendix C

Results of the pilot study

Appendix C1

Cronbach's Alpha and item total statistics for sexual behavior.

Reliability Statistics

Cronbach's Alpha	N of Items	N	%
.670	14	40	100

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SNM201	27.33	60.071	.178	.669
SNM202	27.30	57.344	.288	.654
SNM203	26.83	56.302	.332	.647
SNM204	27.38	57.420	.318	.649
SNM205	27.20	59.344	.182	.670
SNM206	27.30	57.446	.289	.654
SNM207	27.40	60.195	.242	.660
SNM208	27.25	56.090	.360	.643
SNM209	27.53	56.769	.386	.640
SNM2010	27.53	58.153	.273	.656
SNM2011	27.60	59.733	.249	.659
SNM2012	27.43	54.097	.564	.617
SNM2013	27.68	64.020	.008	.688
SNM2014	27.13	54.830	.393	.637

Appendix C2

Cronbach's Alpha and item total statistics on perceptions of risk related to SNM usage

Reliability Statistics

Cronbach's Alpha	N of Items	N	%
0.804	12	40	100

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RP001	36.13	116.676	.048	.823
RP002	35.50	97.026	.632	.772
RP003	35.03	111.769	.223	.808
RP004	35.80	110.728	.198	.813
RP005	35.45	100.869	.513	.784
RP006	35.50	98.769	.580	.777
RP007	35.23	97.974	.641	.772
RP008	35.50	105.436	.356	.799
RP009	35.25	97.679	.606	.774
RP010	35.25	96.756	.660	.770
RP011	35.28	98.563	.571	.778
RP012	34.98	104.948	.384	.796

Appendix D

Written and Oral Informed Consent both from the schools and the participants

Appendix D1: - Assurance of the schools Consent Message

The undersigned agree to accept responsibility for scientific, ethical and technical conduct of the research project in our school entitled as the relationships among Adolescents' Social Media Usage, Sexual Behavior and Risk Perception: the case of some selected private high schools in Addis Ababa.

Name of the Candidate Mohammed Reshid

Date.....signature.....

Approval of the School Consent Message

Directorsignature.....date

Appendix D6

Oral Consent Message of the Participants

Good morning/afternoon students.

My name is Mohammed Reshid. Currently I am postgraduate student at Addis Ababa University, school of psychology. I am conducting behavioral survey in your school and would very much appreciate your participation in this survey.

The main purpose of this study is to collect information on the relationships among adolescents' Social media usage, sexual behavior and risk perception: the case of some selected private high schools in Addis Ababa.

In fact, the questionnaire explores lot of very personal areas but at the same time the information obtained from you through this questionnaire is very essential to the successful completion of the study. I, therefore, request you to kindly fill in this questionnaire as accurately and carefully as possible.

Regarding confidentiality, the whole process of questionnaire administration is set up in such a way that utmost secrecy is maintained. To assure this, you are not expected to write your name in any of the questionnaire pages. Only the researcher has the access of the information and used it for the study purpose.

Thank you for voluntariness to participate in this study!!

Appendix E

Reliability for re-established instrument

Appendix E1

Cronbach's Alpha and item total statistics for sexual behavior

Reliability Statistics

Cronbach's Alpha	N of Items	N	%
0.926	14	300	100

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SNM201	38.79	161.738	.651	.921
SNM202	38.79	156.800	.761	.917
SNM203	39.17	163.473	.616	.922
SNM204	38.44	162.247	.669	.921
SNM205	38.56	160.602	.684	.920
SNM206	38.93	157.831	.720	.919
SNM207	38.40	161.699	.698	.920
SNM208	38.97	161.303	.660	.921
SNM209	38.47	159.206	.679	.920
SNM2010	38.75	159.126	.700	.920
SNM2011	39.21	159.678	.679	.920
SNM2012	38.29	161.023	.672	.920
SNM2013	39.43	165.316	.566	.924
SNM2014	39.86	172.072	.461	.926

Appendix E2

Cronbach's Alpha and item total statistics for perceptions of risk related to SNM usage.

Reliability Statistics

Cronbach's Alpha	N of Items	N	%
0.611	12	300	100

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RP001	36.25	33.365	.126	.613
RP002	36.02	32.127	.266	.590
RP003	33.89	29.741	.421	.560
RP004	35.22	28.933	.352	.569
RP005	34.48	27.260	.482	.537
RP006	34.34	30.599	.253	.592
RP007	34.24	28.843	.404	.558
RP008	35.54	33.112	.132	.613
RP009	33.90	33.713	.057	.629
RP010	33.69	31.493	.327	.580
RP011	35.57	31.336	.206	.602
RP012	33.73	33.497	.115	.615

Appendix F

Post hoc Comparison tests

Appendix F1

Bonferroni's Post hoc Comparison test to the mean frequency use of SNM sites

within a week as a function of age categories.

(I) Age	(J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
11-14	15-18	-1.420*	.530	.024	-2.70	-.14
	19-21	-2.981*	.540	.000	-4.28	-1.68
15-18	11-14	1.420*	.530	.024	.14	2.70
	19-21	-1.561*	.151	.000	-1.93	-1.20
19-21	11-14	2.981*	.540	.000	1.68	4.28
	15-18	1.561*	.151	.000	1.20	1.93

*. The mean difference is significant at the 0.05 level.

Appendix F2

Tukey HSD Post hoc Comparison test to the mean frequency use of SNM sites within a week as a function of grade level.

(I) G.L	(J) G.L	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
9 th	10 th	-.987*	.139	.000	-1.35	-.63
	11 th	-2.173*	.139	.000	-2.53	-1.81
	12 th	-2.840*	.139	.000	-3.20	-2.48
10 th	9 th	.987*	.139	.000	.63	1.35
	11 th	-1.187*	.139	.000	-1.55	-.83
	12 th	-1.853*	.139	.000	-2.21	-1.49
11 th	9 th	2.173*	.139	.000	1.81	2.53
	10 th	1.187*	.139	.000	.83	1.55
	12 th	-.667*	.139	.000	-1.03	-.31
12 th	9 th	2.840*	.139	.000	2.48	3.20
	10 th	1.853*	.139	.000	1.49	2.21
	11 th	.667*	.139	.000	.31	1.03

Appendix F3

Display of Tukey HSD homogeneous subsets to the mean frequency use of SNM sites within a week as a function of grade level.

Students grade level	N	Subset for alpha = 0.05			
		1	2	3	4
9th	75	1.73			
10th	75		2.72		
11th	75			3.91	
12th	75				4.57
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 75.000.

Appendix F4

Bonferroni's Post hoc Comparison test to Adolescents' sexual behavior as a function of age categories.

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
11-14	15-18	-11.641	5.127	.072	-23.98	.70
	19-21	-28.033*	5.216	.000	-40.59	-15.48
15-18	11-14	11.641	5.127	.072	-.70	23.98
	19-21	-16.393*	1.462	.000	-19.91	-12.87
19-21	11-14	28.033*	5.216	.000	15.48	40.59
	15-18	16.393*	1.462	.000	12.87	19.91

*. The mean difference is significant at the 0.05 level.

Appendix F5

Tukey HSD Post hoc Comparison test to Adolescents' sexual behavior as a function of grade level.

(I) G.L	(J) G.L	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
9 th	10 th	-11.440*	1.123	.000	-14.34	-8.54
	11 th	-25.680*	1.123	.000	-28.58	-22.78
	12 th	-29.640*	1.123	.000	-32.54	-26.74
10 th	9 th	11.440*	1.123	.000	8.54	14.34
	11 th	-14.240*	1.123	.000	-17.14	-11.34
	12 th	-18.200*	1.123	.000	-21.10	-15.30
11 th	9 th	25.680*	1.123	.000	22.78	28.58
	10 th	14.240*	1.123	.000	11.34	17.14
	12 th	-3.960*	1.123	.003	-6.86	-1.06
12 th	9 th	29.640*	1.123	.000	26.74	32.54
	10 th	18.200*	1.123	.000	15.30	21.10
	11 th	3.960*	1.123	.003	1.06	6.86

*. The mean difference is significant at the 0.05 level.

Appendix F6

Display of Tukey HSD homogeneous subsets to Adolescents' sexual behavior as a function of grade level.

Students grade level	N	Subset for alpha = 0.05			
		1	2	3	4
9th	75	25.15			
10th	75		36.59		
11th	75			50.83	
12th	75				54.79
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 75.000.

Appendix F7

Bonferroni's Post hoc Comparison test to Adolescents' risk perception of SNM usage as a function of age categories.

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
11-14	15-18	-1.105	2.613	1.00 0	-7.40	5.19
	19-21	-4.712	2.659	.232	-11.11	1.69
15-18	11-14	1.105	2.613	1.00 0	-5.19	7.40
	19-21	-3.607*	.745	.000	-5.40	-1.81
19-21	11-14	4.712	2.659	.232	-1.69	11.11
	15-18	3.607*	.745	.000	1.81	5.40

*. The mean difference is significant at the 0.05 level.

Appendix F8

Tukey HSD Post hoc Comparison test to Adolescents' risk perception of SNM usage as a function of grade level.

(I) G.L	(J) G.L	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
9 th	10 th	-2.107	.866	.073	-4.34	.13
	11 th	-7.427*	.866	.000	-9.66	-5.19
	12 th	-5.040*	.866	.000	-7.28	-2.80
10 th	9 th	2.107	.866	.073	-.13	4.34
	11 th	-5.320*	.866	.000	-7.56	-3.08
	12 th	-2.933*	.866	.004	-5.17	-.70
11 th	9 th	7.427*	.866	.000	5.19	9.66
	10 th	5.320*	.866	.000	3.08	7.56
	12 th	2.387*	.866	.031	.15	4.62
12 th	9 th	5.040*	.866	.000	2.80	7.28
	10 th	2.933*	.866	.004	.70	5.17
	11 th	-2.387*	.866	.031	-4.62	-.15

*. The mean difference is significant at the 0.05 level.

Appendix F9

Display of Tukey HSD homogeneous subsets to Adolescents' risk perception of SNM usage as a function of grade level.

Students grade level	N	Subset for alpha = 0.05		
		1	2	3
9th	75	34.25		
10th	75	36.36		
11th	75		39.29	
12th	75			41.68
Sig.		.073	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 75.000.

Figure 2: - A Scatter gram for the correlation between rank ordered SNM sites used and SNM usage related sexual behavior.

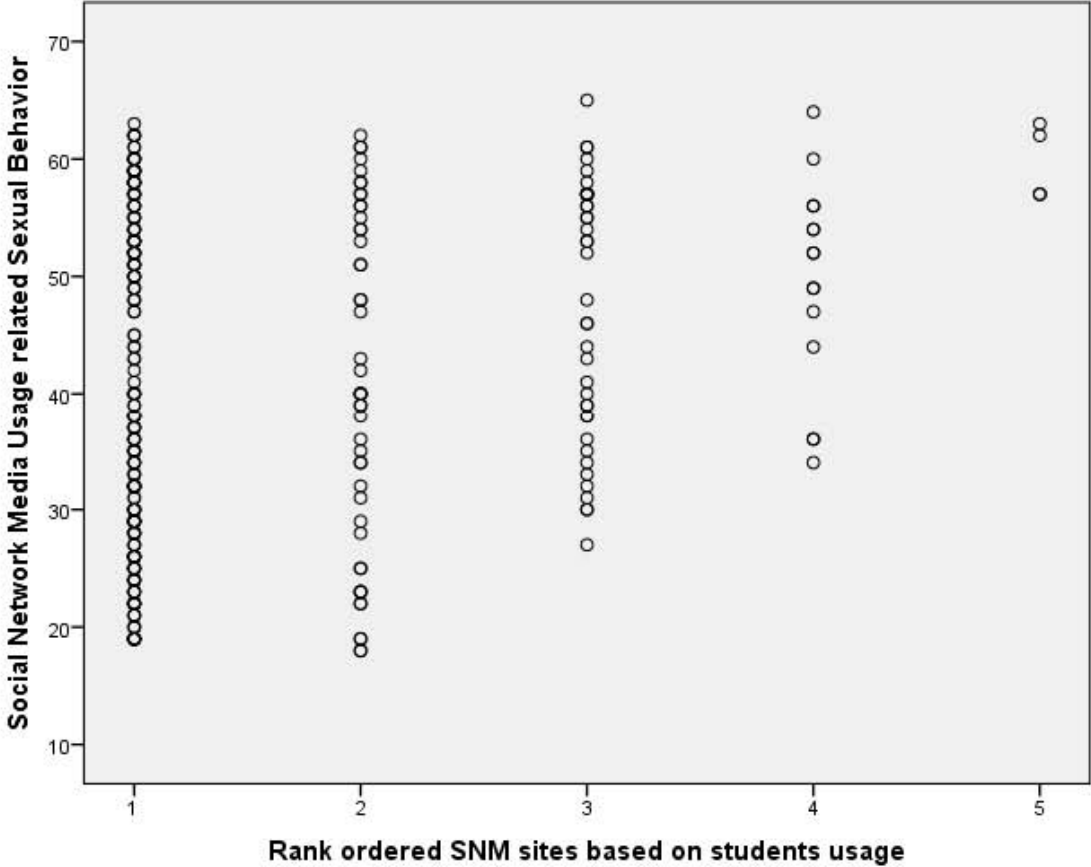
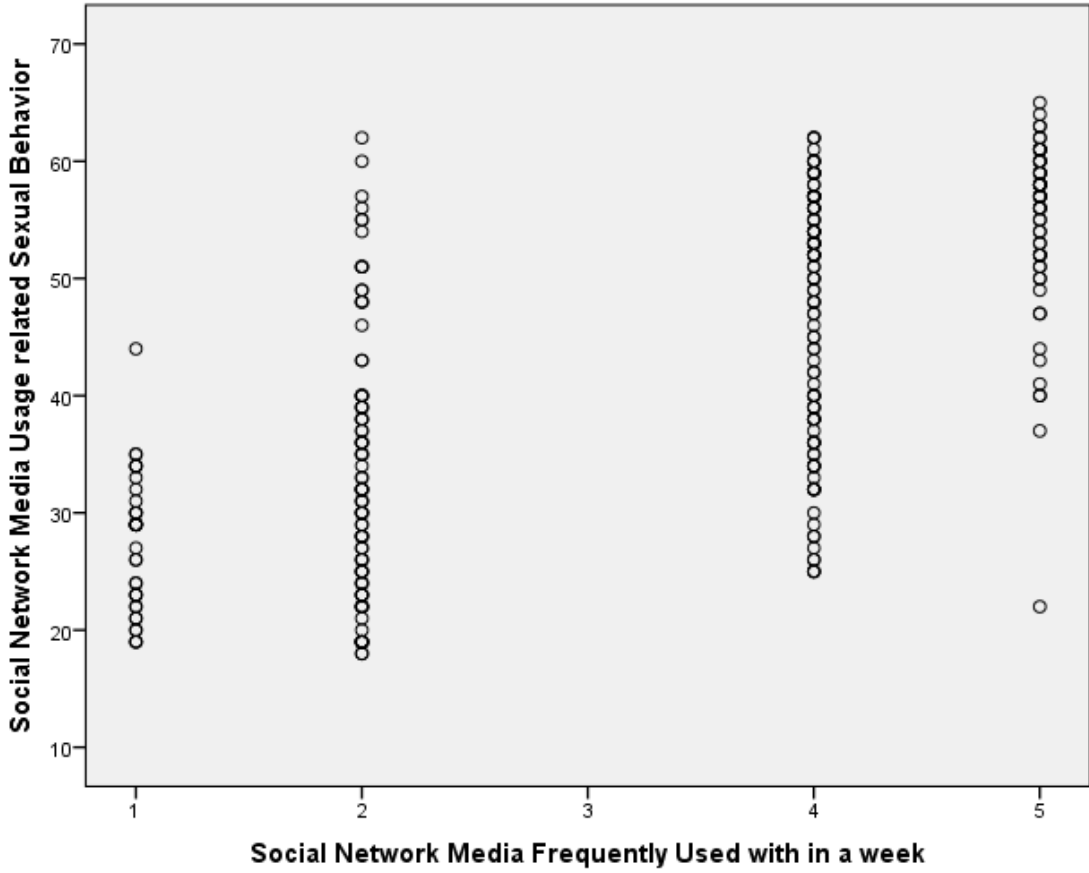


Figure 3: - A Scatter gram for the correlation between frequency use of SNM sites and SNM usage related sexual behavior.



Declaration

I, the undersigned, declare that this thesis is my original work and has not been presented for a degree in this or any other university and that all sources of materials used for this thesis has been duly acknowledged.

Candidate name: Mohammed Reshid Ahmed

Signature: _____

Place: Addis Ababa, Ethiopia

Date o submission: 26/5/14

This thesis has been submitted for examination with my approval as an advisor of the candidate.

Advisor's Name: Dame Abera (PhD)

Signature: _____

Date: _____