

# Social Media exposure as predictor of adolescents' risky sexual behavior: the case of preparatory schools in Addis Ababa City, Ethiopia

<sup>1</sup>Hilawe Kinfemichael, <sup>2</sup>MVR Raju

<sup>1</sup> Full Time PhD Research Scholar at Andhra University, India

<sup>2</sup> Professor of psychology, department of psychology and parapsychology, Andhra University, India,

<sup>1</sup>Department of psychology and parapsychology

<sup>1</sup>Andhra University, Visakhapatnam, India

**Abstract:** *The current study was aimed at identifying the relations and prediction power of social media exposure on adolescent risky sexual behavior in Addis Ababa city preparatory schools. This study used a mixed method approach particularly convergent parallel mixed method design; a total of 448 preparatory schools students in the age group 17-20 were selected by stratified random sampling technique followed by simple random sampling method. Self-administered questionnaires and semi-structured interview were used to collect the required data from the study participants. The finding of this study indicated that SME showed higher significant correlation with ARSB [ $r=.602$ ,  $P<.001$ ]. There was a significant difference among boys and girls in ARSB ( $M=31.8$ ,  $SD=9.62$ ) and [ $M=28.57$ ,  $SD=8.78$ ;  $t(446) = 3.00$ ,  $p<.05$ ] respectively. boys were more exposed to risky sexual behavior than girls. Adolescents from non intact families were found to be more vulnerable to ARSB with intact families ( $M=28.96$ ,  $SD=9.07$ ) and non- intact families [ $M=31.55$ ,  $SD=9.44$ ;  $t(446) = -2.73$ ,  $p<.05$ ]. The independent variable (SME) explained 68.8% of the variance in adolescent risky sexual behavior (ARSB). SME made a significant unique contribution to the model with ( $\beta=.244$ ,  $P<0.05$ ). The results from the semi-structured interview also proved the findings of the self reported questionnaires. The findings of this study provided justification for intervention targeting on adolescents' risky sexual behavior. Providing the necessary knowledge and skills for both parents and adolescents was recommended.*

**Index Terms - Social media exposure (SME), Adolescent risky sexual behavior (ARSB)**

## INTRODUCTION

Adolescent sexuality is very complicated. The spirit of young people exploring their sexuality independent of supervision has caused generations of parents to get embarrassed and fear in that adolescents' move away from their parents physically and emotionally. These days, social Medias are becoming a central force in the lives of people in general and in adolescents in particular. Generally defined, social Medias help people in the creation, sharing, and/or communication of a range of contents among individuals through digital technologies. People use social media sites such as Facebook, Twitter, Viber, YouTube, Teligram, Snapchat, Myspace and others to create and sustain relationships with others (Boyd & Ellison, 2007). The internet interactions report showed that e-mail was by far the most dominant form of contact, followed by chat and instant-messaging (Baym et al., 2004). The media is a point where normative influences via social interactions and media influences come together. These technologies now include blogs, wikis, media (audio, photo, video, text) sharing tools, networking platforms and virtual worlds (Bryer & Zavatarro, 2001). Younger students tended to use Facebook more frequently than older students to keep in touch with friends from high school or from their hometown (Pempek et al., 2009). Different studies reveal that teenagers are among the most unlimited users of social network sites (SNS). Using social media like Facebook, YouTube, Whatsup, Myspace, Viber, Twitter and other has become part and parcel of modern adolescence. According to the survey by Common sense media research study, (2012) 90% of American teens have used social media, three-quarters of them have a social networking site and nearly one in three teens visits their social networking profile several times in a day. Nine out of 10 (90%) 13- 17-year-olds have used some form of social media. Three out of four (75%) teenagers currently have a profile on a social networking site and one in five (22%) has a current Twitter account and 68% of all teens say Facebook as their main social networking site, compared to 6% for Twitter, 1% for Google Plus

and 1% for MySpace and 25% don't have a social networking site (Common sense media research study, 2012). Many adolescents use social media sites; for instance, a national survey in 2009 found that 73% of online teenagers use Social network sites, there was an increase from the 55% that was three years earlier (Lenhart, Purcell, Smith, & Zickuhr, 2010).

Adolescents look for and encounter sexual content in a number of ways such as texts, images, videos, information about birth control to graphic pornography including sexually explicit material, information about sex, sexual health, sexual norms and sexual communications via social networking sites. For instance, in a study of profiles on several social networking sites, including Facebook, female participants from the U.S. reported that they post "cute" pictures, while male participants were more likely to share pictures and comments that they described as self-promoting and that contained sexual content or references to alcohol (Peluchette and Karl, 2008). Likewise; on a teenage dating site, teen girls' self-descriptions contained significantly more references to sex than boys' did (Pujazon-Zazik et al. 2012). These media portrayals have become a model for adolescents and potentially put young teens at risk for teen pregnancy or for sexually transmitted diseases (Brown and Bobkowski, 2011). While parents and friends have commonly been cited as the most frequent sources of information about sex, the internet is becoming progressively more popular information source (Bleakley, Hennessy, Fishbein, & Jordan, 2009; Dolcini, 2014; Stevens, Gilliard-Matthews, Du-naev, & Todhunter-Reid, 2015). Adolescents also used the internet to obtain information that is not traditionally included in sexual education such as pleasure-based sex, masturbation and sex positions (Daneback et al., 2013). A nationwide poll showed that half of teens, ages 13 – 18 often communicate through internet with someone they have not met in person and one third has talk about potentially meeting face to face (Pelly Klaas Foundation, 2006). Buhi et. al, (2013) found that 15% of teens reported meeting someone first online before later having sex with them; among these teens, 57% reported having met more than one sex partner online. A study conducted in Tanzania by John and Diana, (2015) revealed that there was an association between students social media exposure and sexual behavior and their sex i.e. scores on the sexual behavior index was higher for male student than for female, this implies that male students were more likely to engage into risk sexual behavior than their female counterparts. Mohammed, (2014) found that sexual behaviour was highly correlated with the frequency and use of social media sites used [ $r = .694, P < 0.05$ ].

*Regarding gender differences* in social media usage /exposure, women are more likely than men to have a personal profile and four to five times more likely than men to use social networking sites such as Facebook, but men are more likely than women to sustain a profile on LinkedIn (Lenhart et al., 2010 and Tufekci, 2008). Moreover; Sheldon, (2008); Baym, Zhang, Kunkel, Ledbetter, & Mei-Chen, (2007) found that overall 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. Other study in Nigeria showed that, With regard to activities enjoyed on social media, more than half of the respondents (64.9%) enjoyed sex chat and sexy movie/music/picture compared to about 19.9% of them who enjoyed non-sex chat; in this study, majority of the respondents (80.1%) have had sexual intercourse compared to about 19.9% of them who have never had sexual intercourse; about 45.1% of them had their first sexual intercourse by 10-14 years of age and about 49.6% had sex by 15-19 years of age i.e. more than half of them (52.7%) personally requested sex (Alfred and Michael, 2016); respondents who began the use of social media by aged 9 or below (49.9%) were more likely to have an earlier sexual intercourse than those who began social media usage at aged 10 and above. This finding seemed to show that the more early adolescents began to use social media sites, the more they are exposed to risky sexual behavior at their early ages.

#### **STATEMENT OF THE PROBLEM**

Adolescence is a state of transition from childhood to adulthood, which is a time of important physiological and psychological change (Kathleen, 2009). Risky sexual behaviors, including early sexual introduction, unprotected sexual intercourse, unwanted pregnancy and having multiple sexual partners, occur in a broader context due to the over exposure of adolescents' to sexual contents in social media sites. As the authors of this study witnessed, internet access enhances the exposure of adolescents in particular to expose for the various social medias such as Facebook, twitter, YouTube, whatsApp and others by using both internet cafés and SMART phones that enables them to post either their own or any erotic photos, upload or download any video including porno films, exchange phone numbers, chatting with different people on issues including sexual concerns and have an appointment to meet in-person with

whom they know in these medias. It is believed that these behaviors may contribute to risky sexual behavior of adolescents. Therefore; it is urgent and important to see the effects of social media sites on adolescents' development of risky sexual behaviors.

#### RESEARCH QUESTIONS

- Are there significant relationships among social media exposure and adolescents' risky sexual behavior?
- Is there significant difference in risky sexual behavior between male and female students?
  - ◆ Is there a difference in risky sexual behavior between adolescents parental marital status?
- To what extent does social media exposure of adolescents' contribute to risky sexual behaviour of adolescents?

#### OBJECTIVE OF THE STUDY

##### General objective:-

- ▶ To investigate the relations and predictive power of social media exposure on adolescents' risky sexual behavior in particular reference to Addis Ababa city preparatory schools.

##### Specifically:-

- ▶ To investigate the relationships among social media exposure and adolescents' risky sexual behavior.
- ▶ To examine whether there exists a difference in adolescents' risky sexual behavior between male and female students in preparatory schools.
  - To see if there is a difference in risky sexual behavior between adolescents' parental marital status.
- ▶ To investigate the contribution of social media exposure on adolescents risky sexual behaviour.

#### METHOD

In this study the researcher used a **mixed method approach**; particularly **convergent parallel mixed method design** was used. Mixed methods are blends of methods involving the collection, analysis and integration of quantitative and qualitative data in a single or multiphase study (Hanson, Creswell, Plano Clark, Petska, & Creswell, 2005, p. 224). While convergent parallel mixed methods enable to give focus on the quantitative part to address the study's purpose through collecting data at a relatively the same time with the qualitative one and the qualitative data was used as a support to the quantitative findings Creswell, (2014).

**POPULATION, SAMPLE SIZE AND SAMPLING TECHNIQUE:** The populations of the study were both private and government preparatory schools (11<sup>th</sup> and 12<sup>th</sup> grades) in Addis Ababa city, Ethiopia. The city has ten sub cities, from these four of them were taken randomly. The sample size was determined by using Cochran's 1963:75 formulae for larger populations, it became 384. However; by considering outliers, missing items and incomplete items, 25% was added to it. Then, the final sample size taken was 448 participants. Stratified random sampling technique was used to select participants' proportionally from both private and government schools then participants were selected randomly based on sex and grade level.

**INSTRUMENTS OF DATA COLLECTION:** the scale for social media exposure measures the students media preference, the extent of time that is spend by students in different medias and the extent of sexual behavior manifested by the students due to social media usage. The scale has a five point likert type scored 1= None of the time 5= All of the time, and it also includes major issues like sexual initiation, social information-seeking and maintaining close relationships. In this study it has an alpha reliability of 0.825. Adolescent risky sexual behavior scale ask students the extent that they have had engaged in risky sexual behaviors such as unwanted pregnancy, abortion, sexually transmitted disease etc. And it was developed on the basis of YRBS. In this study it has an alpha reliability of 0.88.

**DATA ANALYSIS TECHNIQUE:** quantitative data analysis technique was used as a major tool for the analysis. Multiple regression analysis was conducted to determine how strong social media exposure was in predicting risky sexual behavior. Pearson product moment correlation was used to see the significant relationships among social media exposure and adolescent risky sexual behavior. An independent sample t-test was also used to determine if there were significant differences in adolescents' risky sexual behavior between the two sexes and in adolescents' parental marital status. In addition semi-structured interview was used to triangulate the quantitative findings with the qualitative one.

**RESULTS**

The purpose of the study was to investigate the relations and prediction powers of social media exposure and adolescents' risky sexual behavior of preparatory schools in Addis Ababa (both private and government schools), Ethiopia.

**Demographic characteristics of participants***Table 1 Demographic characteristic of participants*

		Frequency	Percent
Sex	Males	201	44.9
	Females	247	55.1
Government		397	88.6
School Type	Private	51	11.4
Parental marital status	Intact	313	69.9
	Non-intact	135	30.1
<b>Total</b>		<b>448</b>	<b>100.0</b>

Table 1 shows the demographic characteristics of participants included in the study. As it is shown above, there were 201 (44.9%) males and 247 (55.1%) of them were females. The number of female participants in this study was greater than that of the male participants. In the above table, 397 (88.6%) of the students were attending their schools in governmental or public schools where as 51 (11.4 %) of them were attending in private schools. Here the numbers of preparatory school students who were attending in governmental or public schools are much more than the private school students. Concerning parental marital status of the participants, 313 (69.9%) of the parents of the participants were intact (living together) while 135 or 30.1 percent of them were non- intact (divorced or widowed). However; intact families are more in number than non-intact families.

**Social media Exposure**

As it can be seen from Table 2 below, 5 (1.1%) of the students used Twitter, 36 (8%) of them used YouTube, 248 (55.4%) of them were using Facebook, 39 (8.7%) of them used Instagram, 53 (11.8%) used Viber, 20 (4.5%) used WhatsUp, 8 (1.8%) used Myspace and 39 (8.7%) were using other social media sites such as Teligram, Imo, Line and other sites. As it is evident from the table below, most participants were predominantly using Facebook, Viber and Instagram as their primary sites respectively. In this study, more than half percent of the participants were Facebook users. This could be due to Facebook is a web 2.0 plat form that lets them to review, post, download others profiles and what others have posted there.

**Table 2** the type of social media sites that participants were used

		Media Type	Frequency	Percent
Type of social media sites used		Twitter	5	1.1
		YouTube	36	8.0
		Facebook	248	55.4
		Instagram	39	8.7
		Viber	53	11.8
		WhatsUp	20	4.5
		Myspace	8	1.8
		Other	39	8.7
	<b>Total</b>		<b>448</b>	<b>100.0</b>

The participants gave the following reasons for their engagement in various social media sites. As it is depicted in Table 3 below, most of them that is; 143 (31.9%) used it for entertainment, 57 (12.7%) of them

used it to communicate with people overseas, 58 (12.9%) to get rid of their boredom, 43 (9.6%) to make friendships, 48 (10.7%) to keep in touch social relations such as family and friends, 42 (9.4%) percent used it to meet people whom they do not even know, 19 (4.2%) of them to see other s profiles and photos and 38 (8.5%) of them used it for other purposes.

**Table 3** the reasons of participants for their engagement in social media sites

Reasons of using social media sites	Frequency	Percent
For entertainment and spend time	143	31.9
Communication with people abroad	57	12.7
Get rid of boredom	58	12.9
To make Friendship	43	9.6
To continue social relations with family and friends	48	10.7
To meet new people whom I don't know	42	9.4
To see others profiles and photographs	19	4.2
Other	38	8.5
<b>Total</b>	<b>448</b>	<b>100.0</b>

We can understand from the above result that, the majority of the participants' were using social media sites for entertainment, to get rid of boredom, to communicate people overseas, to continue pre-existing social relationships, to make friendships, to meet people whom they don't know respectively.

#### **Inter correlation matrix between the predictor and criterion variables**

As it is indicated in *Table 4* below, the correlations between social media exposure and adolescents' risky sexual behavior have been investigated independently between these categories. Preliminary analyses were performed to ensure no violation of the assumptions of correlation.

**Table 4** Inter-correlation matrix between SME and ARSB

	SME	ARSB
SME	1	.602**
		Sig. (2-tailed)
		.000

As it is revealed in *Table 4*, the relationship between social media exposure and adolescents' risky sexual behavior was investigated using Pearson product-moment correlation. There was a strong positive correlation between the two variables [ $r= 0.60$ ,  $n=448$ ,  $p<.001$ ]. This shows that, the more adolescents' were exposed to various social media sites, the higher they were vulnerable or exposed to risky sexual behaviors. Before looking at the regression analysis, the researchers checked whether the assumptions associated with regression were violated or not. There were no violations regarding multicollinearity, outliers, linearity, homoscedasticity and others. Therefore, in the model summary presented in *Table 5* below, the R squared value tells how much of the variance in the dependent variable i.e. adolescent risky sexual behavior (ARSB) was explained by the model.

**Table 5** Summary of the variance explained by the Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.829 <sup>a</sup>	.688	.683	5.20271

a. Predictor: (Constant), Social Media Exposure, b. DV: Adolescent risky sexual behavior

In this study, as it is shown in *Table 5*, the value is .688 this implies that the independent variable explained 68.8% of the variance in adolescent risky sexual behavior (ARSB). This is quite a good result particularly when compared with other results that are reported elsewhere.

**Table 6** Standardized and unstandardized coefficients table

Model		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
		B	Std. Error	Beta	t	Sig.	Tolerance	VI F
	(Constant)	15.346	2.107		7.284	.000		
1	Social Media Exposure	.188	.025	.244	7.587	.000	.685	1.461

The regression equation for the model is: **ARSB= 15.346 +.188SME**

In this study, as it is depicted in *Table 6*, the beta coefficient for social media exposure was .244, indicating that SME made a significant unique contribution to the model ( $\beta=.244, P<.05$ ). That means, when the students' social media exposure is increased by one level their exposure for ARSB will increase by a rate of 0.188 when the effect of other variables remains constant.

Independent samples t-test was conducted to compare the mean score of adolescent risky sexual behavior for males and females. *Table 7* depicts that, there was a statistically significant difference in scores for males ( $M=31.8, SD=9.62$ ), and females [ $M=28.57, SD=8.78; t(446) =3.00, p<.05$ ]. This means that school boys were more vulnerable to risky sexual behavior than school girls. In the same table below, with regard to parental marital status, there was a statistically significant difference in scores for intact families ( $M=28.96, SD=9.07$ ), and non- intact families [ $M=31.55, SD=9.44; t(446) = -2.74, p<.05$ ].

**Table 7** Independent sample t- test based on sex and marital status of parents

That is, adolescents' from non- intact families (those, whose parents were single, divorced or widowed) were more exposed to risky sexual behavior than those who have intact family (who lived with their parents, other relatives or care givers).

In addition to the results from the self report questionnaires, semi- structured interview was conducted. The interview result shows the same as the quantitative finding. Almost all of the students interviewed were using at least one form of social media sites, with most of the students using facebook as their first choice. Their reason for this was that they

		Levene's Test		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
ARSB	Equal variances assumed	2.127	.145	3.000	446	.003	2.6123	.8707
	sex							
	Parental marital status	.333	.564	-2.73	446	.006	-2.5896	.9453

can post their photos, share, comment, download and also see others profiles. They said that they accepted and made friends of many people even if they do not know them. They chat with people even with opposite sex about various

topics including sexual issues, the majority of the students exchange phone numbers, and then there were times that they met these people whom they did not know them physically. Most of the participants specially boys said, they met people of opposite sex in face book or other, talked about many issues including sex and exchange their numbers and then they met for three or four days finally they had sex with them. Unless adolescents' know how and when to use these sites, the sites have a higher contribution in engaging adolescents in unprotected sexual relationships.

### **DISCUSSION**

The main purpose of the study was to investigate the relations and prediction power of social media exposure and adolescent risky sexual behavior in Addis Ababa city preparatory schools. Participants used various types of social media sites, and facebook users were the dominant ones. Same result was found by (Lenhart, 2015; and Common sense media research, 2012). The correlation matrix showed that there was a strong positive significant correlation between adolescent risky sexual behavior and social media exposure. This means that the more adolescents are exposing to social media sites, the higher their risky sexual behavior is. The findings of this study support previous research findings as well John and Diana, (2015) and Mohammed, (2014) in that they found an association between social media usage and risky sexual behavior. The findings of Alfred and Michael, (2016) also show that the majority of students who used social media sites were engaging in sexual behaviors than those who were not using it.

The study revealed that there was significant gender difference in adolescents' risky sexual behavior, in that boys were more vulnerable for risky sexual behavior than girls. The justification for this might be boys view sex as a recreation while girls are expected to delay sex in the culture they live in. There was also a significant difference in adolescents' parental marital status, in that participants from non-intact families were highly exposed to risky sexual behavior than adolescents with intact families. The justification that goes along with this result might be related to students' whose parents were living together may have a strong follow up and control than their counter parts. Results from the interview showed that participants were exchanging phone numbers and meeting with people whom they did not know them before physically and also made sex with them. This finding was similar with Pelly Klaas Foundation, (2006) teenagers in the ages 13 – 18 often communicate through internet with someone they have not met in person and one third has talk about potentially meeting face to face. Buhi et. al., (2013) found that 15% of teens reported meeting someone first online before later having sex with them.

### **CONCLUSION**

The findings of the study were drawn based on the data gathered from students' selected in Addis Ababa city preparatory schools. On the basis of the findings the following conclusions were drawn. It could be concluded that risky sexual behavior showed a significant and high association with social media exposure of adolescents. Significant differences were also found in risky sexual behavior among boys and girls that is boys were more vulnerable to risky sexual behavior than girls. There was also a significant difference in adolescents' parental marital status i.e. among intact and non intact families. In this study it was found that adolescents' from non intact family were more vulnerable to risky sexual behaviors than that of adolescents from intact family.

### **RECOMMENDATION**

Based on the results obtained, the following recommendations were forwarded.

- Parents should have awareness and understanding related to the effect of social media sites and must have an open discussion with their teens so that they can provide accurate and current information about social media sites.
- Concerned bodies especially those who are working with adolescents should help both parents and adolescents in providing the necessary information, skills and knowledge about how and when to use these sites.
- Above all, teachers, counselors, parents and the society at large should involve in gaining family based culturally appropriate training programs and this would prove to be helpful for the proper growth of adolescents.

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