ORIGINAL ARTICLE

PREDICTORS OF SEXUAL VALUE SYSTEMS AMONG JIMMA UNIVERSITY STUDENTS, SOUTHWEST ETHIOPIA

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ABSTRACT

BACKGROUND: *Many parents lack the necessary knowledge about sexuality, and many others are not at ease to discuss sexuality issues with their children. As a result, schools and television assume ever-more influence over many children. The sexual behavior of individuals can be predicted when the effect of these phenomenon on the sexual value-system of individuals is known. The objective of this study was to identify the sexual value systems of Jimma university students and determine socio-demographic factors and sources of sex information that affect their sexual value systems.*

METHODS: *A cross-sectional survey using quantitative data collection methods was conducted on randomly selected 713 (460 male and 253 female) students in May 2008. Data were collected using a piloted questionnaire administered by trained data collectors, and analyzed using SPSS for windows version13.0. Descriptive statistics, multinomial logistic regression, and chi-square tests were computed. Statistical tests were considered significant at the level of significance of 0.05.*

RESULTS: *The mean age of the respondents was 20.9 (sd ±2) and the sex ratio was181.82. Regarding their sexual value systems, 400 (56.0%) were absolutists, 178 (25.0%) were relativists, and 136 (19.0%) were hedonists. Male gender, Orthodox Christianity or having no religion, the habit of watching love related films or reading love related materials, classroom sex education perceived as 'sex is natural, but one should recognize its harm and use before practicing it', and being a senior student in the university were found to be independent predictors of hedonistic and relativistic sexual value systems.*

CONCLUSION: *A significant proportion of the students had hedonistic or relativistic sexual value systems. Sex education emphasizing both the importance of abstinence and the available options when abstinence is no longer needed or impossible, regulating explicit sex videos and reading materials, and giving adequate emphasis to males are recommended.*

KEY TERMS: *sexual value system, hedonism, relativism, absolutism*

INTRODUCTION

Families lay down the basic sense of self, establishing one's initial motivations, values, and beliefs (1).Because humans have such a long period of dependence before becoming independent adults, family is the main avenue for socialization of young children to their culture. However, schools and television are assuming ever-more influence over many children as increasing number of mothers are joining the work force when their children are very young, many parents lack the necessary knowledge about sexuality, and still others are not at ease to discuss sexuality issues with their children (*2, 3*).

High divorce rates, sexually transmitted diseases, unwanted pregnancies, abortions, and related health problems frequently follow romantically-driven decisions on sexual relationships. The psychological and socioeconomic cost of these problems and the impact of their cascade on the national social welfare, with the universal nature of sexual relationships, are immense (1, 2).

Despite efforts made by schools, health institutions, mass media, governmental and nongovernmental organizations to promote reproductive health, unwanted pregnancies, abortions, sexually transmitted infections including HIV/AIDS are not declining proportionally (4, 5, 6). In addition to that, there are evidences that premarital sex is increasing even at ages earlier than ever before, divorce rates are shooting up, and prostitution has flourished in major towns and cities (6, 7, 8). This may be, at least partly, attributable to the failure of the sex education strategy to focus on the development of the appropriate sexual value system which guides the sexual behavior of young people. Evidences show that sex education focusing only on facts outside a value frame work makes young people even more romantic rather than enabling them to make matured reproductive health decisions (2, 9).

The knowledge of sexual value systems with factors influencing it is extremely important in the prediction and control of behaviors related to sexuality. Until the time of this study, there was no documented information about the sexual value systems of young people in Ethiopia, and the study area in particular.

This study was conducted to identify the sexual value systems of Jimma university students, and to

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determine the effect of their socio-demographic characteristics and their exposure to sex information.

METHODS

The study was conducted in Jimma University main campus from May 12, 2008 – May 23, 2008. Jimma University is an institution of higher education located in Jimma, Ethiopia, 357km Southwest of the capital, Addis Ababa. Students in the university are from all over Ethiopia, with a good combination of ethnic, religious, cultural, and other socio-demographic backgrounds. A cross-sectional quantitative survey was conducted on a total of 713 regular undergraduate students of all years (460 males and 253 females) selected randomly using the complete list of the students from all faculties and discipline categories as a sampling frame.

The sample size for this study was calculated using the variance of a continuous dependent variable (not reported in this article) as it was found to maximize it. The details have been included in the part of the study under consideration for publication elsewhere.

The dependent variable was sexual value system (a set of thoughts, attitudes, and values about sex that guides sexual behavior) of the respondents which was measured at categorical level by classifying respondents into absolutist, relativist or hedonist depending on their self reports. The independent variables of the study were socio-demographic characteristics of the students (including age, sex, level of education, place of origin, ethnicity, religion, church or mosque attending habit, marital status, history of terminated sexual partner, sexual experience, and history of parental divorce), and exposure to sex information (including love films , love related radio programs, love related reading materials at least ones a week, the students' perception of the general theme of information obtained from school sex education, and the students' experience of discussing sexual matters with parents).

Data were collected using piloted and pre- coded Amharic version questionnaire after informed consent was obtained from respondents. The questionnaire was administered by trained instructors in classrooms arranged for that purpose. Supervision was done to ensure independence of responses and to maximize response rate. The questionnaires were collected immediately after completion by the respondents.

Analysis was done using SPSS for window version 13. Multinomial logistic regression, descriptive statistics, and chi- square test were used during analysis. Statistical tests were considered significant when P- value $\leq$ 0.05.

The following operational definitions were used:
Absolutist: A sexual value system based on strict codes, usually based on religion, which dictates what is right or wrong
*Relativist***:** A sexual value system in which a person's sexual practice depends on the person with him/her, how they feel about each other, and the nature of the relationship.
Hedonist: A sexual value system in which a person does a sexual act if she/he feels good for her/him self and perceives that no one is hurt in the process.

RESULTS

Out of the 713 study participants, 460 (64.5%) were males and 253 (35.5%) were females. The age of the respondents ranged from 17-34 years with mean 20.9 (sd$\pm$2) and sex ratio 181.82. Of the 709 respondents who reported their marital status, 683 (96.3%) were single, and the other 26(3.7%) were married. Two hundred twenty six (31.6%) reported that they had sexual experience at an average age of 18.8 (sd$\pm$ 2.4) years (males 18.7, females 19.5), out of which 148 (20.8%) have reported history of terminated sexual partner. Similarly, 93 (13.1%) reported that their parents were divorced.

Four hundred forty six (64.3%) came from urban setting, 275 (40.3%) were Amhara by ethnicity followed by Oromo 182 (26.6%), 444 (62.8%) were Orthodox Christian, and 617 (86.8%) had the habit of frequently attending church or mosque programs. Two hundred fifty two (35.7%) of the respondents were first year, 210 (29.8%) second year, 177 (25.1%) third year, and the remaining 66 (9.4%) were fourth year and above students. Regarding their faculty, 120 (16.9%) were from Medical Sciences, 135 (19.0%) Public Health, 117 (16.4%) Business and Economics, 43 (6.0%) Humanities and Social Sciences, 66 (9.3%) Technology, 155 (21.8%) Education, 46 (6.5%) Natural sciences, and 30 (4.2%) were from faculty of Law. One respondent did not report his/ her faculty (Table 1).

Table 1. Some socio-demographic characteristics of the study participants, Jimma University, May 2008.

characteristics		Number	Percent
Sex (n= 713)	Male	460	64.5
	Female	253	35.5
Marital status (n= 709)	Single	683	96.3
	Married	26	3.7
Place of origin (n= 709)	Urban	456	64.3
	Rural	253	35.7
Ethnicity (n= 683)	Amhara	275	40.3
	Oromo	182	26.6
	Tigre	79	11.6
	Guragie	68	10.0
	Others*	79	11.6
Religion (n=707)	Orthodox	444	62.8
	Protestant	144	20.4
	Muslim	84	11.9
	Others**	35	5.0
Church/Mosque attending habit (n=711) Yes		617	86.8
	No	94	13.2
Level of education (n=705)	Year-one	252	35.7
	Year -two	210	29.8
	year-three	177	25.1
	year four/or above	66	9.4
Faculty (n= 712)	Medical sciences	120	16.9
	Public health	135	19.0
	Business and Economics	117	16.4
	Humanities and Social sciences	43	6.0
	Technology	66	9.3
	Education	155	21.8
	Natural sciences	46	6.5
	Law	30	4.2
Sexual experience (n=710)	Yes	226	31.8
	No	484	68.2
History of terminated sexual partner (n=711)	Yes	148	20.8
	No	563	79.2
Parental divorce (n=708)	Yes	93	13.1
	No	615	86.9

*= *include wolayta, hadya, and others*
**= *include catholic, no religion,* 'waqffata'

Two hundred ninety four (41.3%) reported that they watch love films at least once a week, 374 (52.8%) of 709 respondents reported that they listen to love related radio programs at least once a week, and 352 (50.9%) reported that they read love materials at least once a week. Four hundred fifty eight (64.5%) reported that they had sex education in the class room. Out of 435 respondents who responded to questions on the content of the classroom sex education, 167 (38.4%) reported the message to be "abstain from sex until married," 188 (43.2%) "abstain from sex until married; but if you do not want to abstain, take measures to avoid STDs and unwanted pregnancy," and the other 80 (18.4%) stated "sex is natural, but recognize its harm and use before

doing." The study also revealed that 280 (40.3%) of the respondents had discussed sexual matters with their parents (Table 2).

Four hundred (56%) (232 males and 168) were absolutists, 178 (25%) (127 males and 51 females) were relativists and 136 (19%) (101 males and 34 females) were hedonists. Male respondents were about two times more likely to be hedonists (OR= 2.15, 95%CI= 1.39-3.33), and two times more likely to be relativists (OR= 1.80, 95%CI = 1.23- 2.64) than absolutists compared to females. In other words, female respondents were more than two times likely to be absolutists than hedonists when compared to men respondents (OR= 2.15, 95%CI= 1.39-3.33). Similarly, respondents who attend mosque or

church frequently were eight times more likely to be absolutists than hedonists compared to respondents who do not attend church or mosque frequently (OR=7.99, 95%CI= 4.27- 14.77). The multinomial logistic regression analysis done to determine the effect of religion on sexual value systems showed that Protestants were about two times more likely to be absolutists than hedonists (AOR= 2.14, 95%CI= 1.18- 3.87), and Muslims were about 2.4 times more likely to be absolutists than hedonists (AOR=2.43, 95%CI= 1.21- 4.86) compared to Orthodox respondents when adjustment was done for sex and church/mosque attendance (Table 3).

Table 2. Exposure of respondents (students) to sex information, Jimma University, May 2008.

Exposure to sex information		Number	Percent
Watching love films (n=712)	Yes	294	41.3
	No	418	58.7
Listening to love related radio programs (n=709)	Yes	374	52.8
	No	335	47.2
Reading love related materials (n=692)	Yes	352	50.9
	No	340	49.1
Sex education in the classroom (n=710)	Yes	458	64.5
	No	252	35.5
Discussion of sexual matter with parents (n=694)	Yes	280	40.3
	No	414	59.7
Perceived content of classroom sex education (n=435)			
• Abstain from sex until married		167	38.4
• Abstain from sex until married; if you do not want to abstain, take measures to prevent STDs and unwanted pregnancy		188	43.2
• Sex is natural; but recognize its harm and use before making		80	18.4

There was no statistically significant association between sexual value system of the respondents and place of origin (P= 0.948), age (P= 0.068), and ethnicity (P= 0.126).

Watching love films were found to have the most statistically significant effect to make the respondents more hedonists (AOR= 2.38, 95%CI= 1.53- 3.70) and relativist (AOR= 2.22, 95%CI= 1.47- 3.36) than absolutist. Respondents reading love related materials were more relativist than absolutist (AOR= 1.92, 95%CI= 1.27- 2.93), respondents listening to love related radio programs and classroom sex education were 38% less likely to be relativist than absolutist (AOR= 0.62, 95%CI= 0.41- 0.95, and AOR= 0.62, 95%CI= 0.42- 0.92 respectively). After making adjustment for habit of watching love related films and reading love related materials, year -four and above respondents were found to be more hedonists (AOR= 2.22, 95%CI= 1.06- 4.63), and relativist (AOR= 2.53, 95%CI= 1.33- 4.83) than absolutists when compared to 1st year respondents (Table 4).

Table 4. Effect of some sources of sex information and level of education on sexual value system of students, Jimma University, May 2008.

Predictors		sexual value system					
		Absolutism		Relativism		Hedonism	
		N<u>o</u>	AOR (95%CI)	N<u>o</u>	AOR (95%CI)	N<u>o</u>	AOR (95%CI)
Watching love video [b] n= 712	Yes	129	*	91	2.22 (1.47- 3.36)	74	2.35 (1.35- 3.70)
	No	270		86	1	62	1
Reading love materials [b] n= 692	Yes	174	*	101	1.92 (1.27- 2.93)	77	1.47 (0.94- 2.29)
	No	218		66	1	56	1
Listening to [b] love related radio program n= 709	Yes	204	*	94	0.62 (0.41- 0.95)	76	0.75 (0.47- 1.17)
	No	194		81	1	60	1
Classroom sex education [b] n= 710	Yes	266	*	102	0.62 (0.42- 0.92)	90	0.91 (0.59- 1.41)
	No	132		74	1	46	1
Discussing with parents about sexual issues[b] n= 694	Yes	149	*	72	1.21 (0.82- 1.78)	59	1.20 (0.80- 1.81)
	No	245		94	1	75	1
Level of education [a] n= 705	year -1	153	*	59	1	40	1
	year-2	128		45	0.86 (0.53- 1.37)	37	1.02 (0.60- 1.71)
	year-3	88		47	1.21 (0.74- 1.97)	42	1.68 (1.00-2.82)
	year 4 or above	26		25	2.53 (1.33- 4.83)	15	2.22 (1,06- 4.63)

*= reference category
a= adjustment was done for watching love video and reading love materials
b= included in one multinomial logistic regression model

The multinomial logistic regression analysis done to determine the effect of perceived content of classroom sex education on sexual value systems of the respondents showed that respondents who perceive classroom sex education as 'abstain from sex until married' , and those who perceived the content of their classroom sex education as 'abstain from sex until married ; but if you do not want to abstain, take measures to avoid STDs and unwanted pregnancy' were more likely to be absolutists than hedonists when compared to those respondents who perceived the content of their classroom sex education as 'sex is natural, but you should recognize its harm and use before you make it' (AOR= 2.05, 95%CI= 1.03- 4.08 and AOR= 2.43, 95%CI= 1.23- 4.80 respectively) after controlling for sex. On the other hand, when sex was controlled, respondents who perceived the content of the message as 'sex is natural, but you should recognize its

harm and use before you make it' were found to be about two times more likely to be relativists than absolutists (AOR= 2.10, 95%CI= 1.11- 3.98), and about two times more likely to be hedonists than absolutists (AOR= 2.05, 95%CI= 1.03- 4.08) when compared to those respondents who perceived the content of their classroom sex education as 'abstain from sex until married' (Table 5).

In this study, parental divorce was not found to be associated with sexual value systems of the respondents (P=0.345). However, after adjusting for sex, respondents with a history of terminated sexual partner were about three times more likely to be hedonists than absolutists (AOR= 2.94, 95%CI= 1.83- 4.72), and three times more likely to be relativists than absolutists (AOR= 2.91, 95%CI= 1.88- 4.52) compared to those respondents without a history of terminated sexual partner. After

controlling for sex, respondents who had sexual experience were about 3.5 times more likely to be hedonists (AOR= 3.53, 95%CI= 2.30-5.39) and 3.5 times more likely to be relativists (AOR= 3.52, 95%CI= 2.38-5.21) than absolutist compared to those with no sexual experience (Table 6).

Table 3. Effect of gender and religion on the sexual value system of students, Jimma University, May 2008.

Predictors		sexual value system						
		Absolutism		Relativism		Hedonism		
		N<u>o</u>	OR (95% CI)	N<u>o</u>	OR (95% CI)	N<u>o</u>	OR (95% CI)	
Sex n= 713	Male	232	*	127	1.8 (1.23- 2.64)	101	2.15(1.39-3.33)	
	Female	168		51	1	34	1	
Church/ mosque attending habit n= 711	Yes	382	7.99(4.27-14.77)	136	1.15(0.62- 1.92)	99	*	
	No	17	1	42	1	35		
Religion[a] n= 707	Orthodox	232	1	118	1	89	*	
	Protestant	92	2.14(1.18- 3.87)	35	1.53 (0.81-2.92)	17		
	Muslim	61	2.43(1.21- 4.86)	11	0.69(0.29- 1.64)	12		
	Others	8	0.37(0.14- 0.99)	12	0.63(0.27- 1.49)	15		

*= reference category
a= adjusted for sex and church/ mosque attending habit

Table 5. Effect of perceived content of classroom sex education on the sexual value system of students, Jimma University, May 2008.

Predictor		sexual value system					
		Hedonism		Relativism		Absolutism	
		N<u>o</u>	AOR (95%CI)	N<u>o</u>	AOR (95%CI)	N<u>o</u>	AOR (95%CI)
Perceived content of classroom sex education n= 435 [a]	Abstain from sex until married	32	*	37	0.98 (0.46-2.07)	98	2.05 (1.03- 4.08)
	Abstain from sex until married or take measures to avoid STD and pregnancy	34	*	39	1.00 (0.48-2.11)	115	2.43 (1.23- 4.80)
	Sex is natural, but you should recognize its harm and use before practicing	21	*	26	1	33	1

a= adjustment was done for sex   *= reference category

Table 6. Effect of sexual experience on sexual value system of students, Jimma University, May 2008.

Predictors		Sexual value system					
		Absolutism		Relativism		Hedonism	
		N<u>o</u>	AOR (95%CI)	N<u>o</u>	AOR (95%CI)	N<u>o</u>	AOR (95%CI)
Sexual experience [a] n= 710	Yes	77	*	84	3.52(2.38-5.21)	65	3.53(2.30- 5.39)
	No	320		93	1	71	1
Terminated sexual partner [a] n= 711	Yes	50	*	55	2.91(1.87- .52)	43	2.94 (1.83- 4.72)
	No	348		122	1	93	1

a= adjustment was done for sex   *= reference category

DISCUSSION

One's sexual value system guides the decision when to make sexual intercourse. This study has revealed that only 56% of the students were absolutists. The remaining 46% of the students were either relativists (25%) or hedonists (19%). Relativists and hedonists may become exposed   for casual sex, running the risks of sexually transmitted diseases, unwanted pregnancy, social rejection from their promiscuous behavior, marital disharmony from infidelity, divorce or endless nagging with spouse, single parent family, and in the final analysis self-condemnation and decreased self-esteem with a generally unacceptable life. Among the absolutists, those who go into sex by the influence of substances, peer pressure, trick, rape or any other means against their sexual value system may also raise the actually exposed group of the students although it has not been quantified in this study.

In this study males were found to be more relativists and hedonists compared to females which may be explained by the limited cultural restrictions of the patriarchal society, or the tendency to experiment sex for the purpose of achieving perfection in sexual performance which many males desire, or the natural freedom from pregnancy or any combination of the factors aforementioned. The finding that females are more absolutists than hedonists or relativists does not necessarily mean that they are safer than males as any sexual mess males make in a heterosexual society directly affects females. This suggests that males should be the focus of intervention as they are carrying the center of gravity of the problem, rather than considering as apparently without-sexuality problems or with fewer number of problems.

In this study respondents who frequently attend church or mosque were about eight times more likely to be absolutists than relativists or hedonists compared to those who do not frequently attend church or mosque. Obviously every religion discourages relativism or hedonism in favor of absolutism. The results have also revealed that Orthodox Christians were more likely to be hedonists and relativists than absolutists compared to Muslims and Protestants, and those respondents who were categorized together as 'Other Religions' because of their small number were more hedonists and relativists than Orthodox Christians. It is well known that Orthodox Religion discourages hedonisms and relativisms through Chastity. The observed sexual value systems among the orthodox respondents may be due to cultural artifacts accumulated through long years from generation to generation (Orthodox Christianity is the oldest religion in Ethiopia). The finding that respondents under the category 'Other Religions' were more likely to be hedonists and relativists than absolutists did not allow interpretation as different religion followers as well as individuals with no religion were included in it.

The sexual value system of the respondents did not have a statistically significant association with ethnicity, place of origin (urban/rural), or age of the respondents. Absence of a statistically significant difference on place of origin and ethnicities may be due to marked interactions among the different groups of respondents. But this study had not taken the full range of age, and therefore, conclusion cannot be warranted.

Among sources of sex information, love films and love related reading materials were found to have the most powerful effect to make the respondents more hedonist and relativist than absolutist. Explicitly acted pornography and expository reading materials with graphics may desensitize fear of breaking sexual norms, increase fantasy, and stimulate curiosity of experimenting sex, then changing the value systems when held as a habit. Respondents listening to love related radio programs and having had classroom sex education were more likely to be absolutists than relativists. Radio programs and classroom teachers influence their targets not to be casual in their sexual behaviors.

The effect of classroom sex education on the sexual value system of the respondents also depends on the type of its content. Students who perceived the content of their classrooms sex education as 'abstain from sex until married' or 'as abstain from sex until married; if you do not want to abstain, take measures to avoid sexually transmitted diseases and unwanted pregnancy' were more likely to be absolutists than hedonists when compared to those respondents who perceived the content of their classroom sex education as 'sex is natural, but you should recognize its harm and use before you make it'. Although 'abstinence only' education has been found to result in absolutistic sexual value system in the present study, other studies showed that it has no long-term impact on the attitudes and intentions of young people. It is even criticized for introducing fear, shame, and guilt, and showing negative impacts on youth's willingness to use contraception, including condom (10).

The message 'sex is natural, but you should recognize its harm and use before you make it', was found to make the respondents more likely to be hedonists than absolutists compared to the other messages. Evidences show that focusing only on enabling young people to make responsible sexuality-decisions without the appropriate value attached to it may make them more romantic (2,11). On the other hand, health education that promotes abstinence and includes information about contraception and condom builds young people's knowledge, attitudes and skills. Abstinence may also be impossible due to factors such as coercion, tricks, peer pressure, or substance influence in which case one must have the knowledge, attitude and skill to avoid pregnancy and /or disease (10).

Compared to year-one respondents, year-four or above students were found more likely to be hedonists and relativists than absolutists probably because students turn their face toward the other side of life after finalizing their academic work. If they lack the necessary knowledge, attitude, and skill of avoiding unwanted pregnancy and sexually transmitted diseases such as HIV/AIDS, they may end up in sticky ends of life. The findings remind that senior students have sexuality needs and liabilities that need to be identified and helped which otherwise can obstruct their future.

The sexual value systems of respondents with history of sexual experience or terminated partner were found more likely to be hedonists and relativists than absolutists. Whether the students had become hedonists and relativists because they had already lost the honor of virginity, or/and mastered the skills of how to go about that (trick, negotiation, or whatever) after sexual practice and terminating a partner, or they had sexual practice and terminated a sexual partner because they were hedonists and relativists could not be concluded from the present study. But it seems a vicious-circle that needs an urgent intervention directed at changing the value system of these groups of youth, prevention of disease, and unwanted pregnancy.

In conclusion, a significant proportion of the students had hedonistic or relativistic sexual value systems; male gender, Orthodox Christianity or having no religion, the habit of watching love related films or reading love related materials, classroom sex education perceived as 'sex is natural, but recognize its harm and use before you make it', and being a senior student in the university were found to be independent predictors of hedonistic and relativistic sexual value systems.

Based on the findings, I would like to recommend that the content of sex education should emphasize both the importance of abstinence for young people and the available options when abstinence is no longer needed or impossible. Explicit sex videos and reading materials should be regulated. I also recommend that sexuality interventions should give adequate emphasis to males. How sexual value systems develop among young people should be investigated further.

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