

Prevalence of Premarital Sexual Practice and Associated Factors among Adolescents of Jimma Preparatory School Oromia Region, South West Ethiopia

Ayanos Taye^{1*} and Iyobe Asmare²

¹Department of Nursing, College of Health Sciences, Jimma University, Ethiopia

²Department of Nursing, College of Health Sciences, Debreberhan University, Ethiopia

*Corresponding author: Taye A, Department of Nursing, College of Health Sciences, Jimma University, Ethiopia, Tel: +251 924981; E-mail: ayanostm@gmail.com

Received date: Jan 02, 2016; Accepted date: Jan 29, 2016; Published date: Feb 06, 2016

Copyright: © 2016 Taye A, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Background: Sexual activities among adolescent have been reported to be increasing worldwide. Several studies in Sub-Saharan Africa have also documented increasing premarital sexual activities among adolescents.

Objective: To assess the prevalence of premarital sexual practice and associated factors among adolescent of Jimma preparatory school, Jimma zone, south west Ethiopia.

Methods: Cross-sectional study was conducted in Jimma preparatory school from Feb 1-27, 2014. Simple random sampling was used. Data was collected through self-administered questionnaire and analyzed using frequency, percentage and chi-square. The study was conducted till June, 2014.

Result: In this study a total of 352 students give their response to the questions asked, and the response rate was 92.5%. Of this 197 (56%) males and 157 (44%) female adolescents were participated in the study. About 25% of the participants had had premarital sex at the time of survey. Among those adolescents who had had premarital sexual intercourse the main reason for initiation was falling in love which accounted for 47.7%. This study also revealed age ($\chi^2 = 12.2, p < 0.001$), place of residency at ($\chi^2 = 23.1, p < 0.001$), attending religious activity at ($\chi^2 = 59.4, p < 0.0002$), mothers' literacy at ($\chi^2 = 18.2, p < 0.001$) and fathers, literacy at ($\chi^2 = 25.5, p < 0.001$) were associated with their involvement in premarital sexual practice.

Conclusion and Recommendation: Considerable amount of school adolescents had started premarital sexual activity that may predispose them to different sexual and reproductive health problem. Alcohol drinking, seeing sexual related film, peer influence, etc. were found to be contributing factor to the practice. Therefore an integrated effort needs to be initiated to address such adolescents' sexual and reproductive health problems through establishing and strengthening school anti HIV/AIDS clubs, sensitizing parents, community members and the public focusing on parent-child communication and discussion on sex related issues.

Keywords: Adolescent; Premarital sexes; Prevalence

Background

World Health Organization (WHO) defines adolescent people as those between the ages of 10-19 years [1]. Adolescent is the time of transition from childhood to adult hood during which young people experiencing following puberty and human beings faced once in their life time [2].

The world today is experiencing a rapid increasing in the number of young people. Today adolescents constitute approximately one-fifth of the world's population with more than four-fifth in developing countries [3].

Premarital sex is penetrative vaginal or sexual intercourse performed between couples before marriage. Some people who advocate virginity and abstinence argue that those people engaged in such sexual practice may have sex with many sexual partners and may have high number of life time sexual partners. As a result, they may be liable to acquire STIs including HIV. Beside, females, particularly adolescent girls may end up with unwanted pregnancy, abortion,

teenage deliveries and various complications of these including death. Moreover, the girls may drop out from school to rare their children and in most cases they become economically dependent upon their parents [4].

The trend in sexual activity of adolescents at younger age increase in the world. In many countries the majority of young people are sexually active before age of 20, premarital sex is common among 15-19 years old [5].

The sexual activities in which young people engaged are risky which can result in HIV infection including other sexually transmitted disease or unwanted pregnancies. Different studies suggested that many young people have got the necessary information from different sources with regard to HIV and AIDS; they do not bring behavioral change in different groups of the population [6].

However the major problem is to bring about behavioral changes in different groups of the population. Adolescents in many developing countries rarely discuss about sexual matter with their parents [7]. Peer pressure and economic problem forces young adult to engage in sexual activity at earlier age [8].

Studying sexual behavior and its associated problems have been one national agenda of many researchers today. This is because many adolescents and young adults are sexually active at the age of 20s. They are highly affected by sexual related problem and the prevalence of HIV/AIDS, early child bearing and early onset of sexual activity among people in different countries of the world [9].

The premarital sexual activity of young people can expose them to the risk of unintended pregnancy, abortion and STDs [10]. Sub-Saharan Africa remains the most affected region in the global AIDS epidemic. Although just over 10% of the world's population live in this region, more than two out of three (68%) adults and nearly 90% of children infected with HIV live there. more than three out of four (76%) of global death is due to AIDS related illnesses in 2007, occurred in sub-Saharan Africa .this proportion is clear evidence of the unmet need for antiretroviral treatment in the region [11].

Several studies in Sub-Saharan Africa have also documented high premarital sexual practice among adolescents [12]. However, viewing adolescents as a specific group with their own needs is a relatively recent practice, especially in developing countries [13].

Because of cultural taboos, adolescents in many developing countries rarely discuss sexual matters explicitly with their parents. Most information for their patchy knowledge comes from peers of the same sex who may themselves lack adequate information or are incorrectly informed [14].

School adolescents are a group of young people who came from different areas with different family background. Many gaps between adolescents' background may make them to be involved in premarital sexual activity and expose to HIV/AIDS and high rate of STIs. It is known that there is no effective cure of HIV/AIDS and the only effective treatment is prevention. This can be achieved largely through changing behavior related to sexuality by studying why people are driven into premarital sex. The effect of premarital sexual practice on adolescents is not only being risk of HIV/AIDS but also it includes effects like: early pregnancy, abortion and other sexually transmitted disease so this study will play an important role on creating awareness about these risks.

Since large numbers of adolescents are involved in unprotected sexual activities with their teenage, studying premarital sexual behavior beginning from teenagers is necessary. Therefore, this study will play invaluable role on inspiring teenagers about the risk of premarital sexual practice so as to prevent themselves from these risks.

Since there is no baseline survey related to school adolescents' sexual behavior in the area, this study will also provide baseline information to undertake further study on large scale. So this research will have its own contribution for those who will conduct another research.

Methods and Materials

A School based cross-sectional study design was conducted in Jimma town at Jimma preparatory school from February 1-27, 2014. Jimma town is located in Oromia National Regional State, in Jimma zone, Jimma Woreda at a distance 356 Km from Addis Ababa. Its astronomical location is 7°4' North Latitude and 36°5' East Longitude. Jimma town was founded in 1837. Jimma is one of the reform towns in the region and has a city administration; municipality and 13 kebelles. The towns have a structure plan prepared in 2009. The study was conducted till June, 2014.

Based on the 2007 Census conducted by the CSA, this Zone has the three largest ethnic groups reported in Jimma were the Oromo, Amhara and Yem. Oromiffa was spoken as first language by 90.43% and 5.33% spoke Amharic; the remaining 4.24% spoke all other primary languages reported. The majority of the populations were Muslim, Ethiopian Orthodox Christianity and Protestantism respectively. Currently there are 1 preparatory school, 2 high school, 8 elementary school and 1 university which have 4 campus.

Sample size determination and sampling technique

To determine the sample size for the study, the following assumption is considered, due to the presence of related studies in the area, assume 50% of school adolescent are sexually active (ever had sex before marriage) and this is taken as ($p = 0.05$), margin of error (0.05) and standard normal distribution value for the 95% confidence interval (1.96) are considered. The final sample size was 186. After calculating the sample size, the study subject was selected by using simple random sampling technique. Proportion allocation to the section was used grade as strata and stratified into two strata grade 11 and 12.

Data collection procedure

Different data collection tools were used to collect relevant information based on the study objectives. Pre-test of the questionnaire for clarity and consistency of the questions was done one week prior to the actual data collection. Then necessary correction was made based on the feedback of the data collectors.

By using self-administer questionnaire, information about students about premarital sexual practice, socio demographic characteristic of the respondents, major factor contributing for the involvement of the respondents into premarital sexual activity and another related data will be collected. The principal investigator was coordinating the overall activity of the study.

Data was collected, cleared, edited and analyzed using frequency, percentage and chi-square. The result was presented using tables and diagrams as needed.

The quality of data was ensured through proper training of data collector and pre-test of the questionnaire and close supervision of data collectors. All collected data was checked for completeness, accuracy and consistency by the principal investigator and communicated to the data collectors on the next day.

Ethical consideration

Formal letter was written from Jimma University Nursing department office to Jimma preparatory school by explaining objectives of the study and its significance, relevant permission will be asked to obtain desirable cooperation and necessary information during data collection.

At individual level the purpose of the study was discussed with all participants prior to their participation in this study. Furthermore, investigate or was informed that their participation in the study is voluntary and that they are not obliged to answer any question with which they are uncomfortable and are also free to withdraw their participation from the study at any time they want. Participants were assured that confidentiality was maintained.

Results

Among the total of 352 participants, 186 were males and majority 253 were between 15-17 years with mean age of 17 years. About three fifth were attending 12th grade during the study period. Nearly all respondents 341 were unmarried majority of the respondents 149 were orthodox followed by protestant 105 (Table 1).

Variables	Characteristics	Frequency	Percentage
Sex	Male	195	55.4
	Female	157	44.6
Age	15-17 years	253	71.8
	≥18 years	99	28.2
Grade level	11 th	166	47.1
	12 th	186	52.9
Religion	Orthodox	149	42.3
	Protestant	105	29.8
	Muslim	78	22.1
	Catholic	13	3.7
	Others	18	5.1
Ethnicity	Oromo	197	55.9
	Amhara	81	23
	Tigre	31	8.8
	Others	43	12.2
Marital status	Unmarried	341	96.8
	Married	11	3.2
Place residence	Urban	277	78.9
	Rural	75	21.1
Source Income	Family	323	92.7
	Relatives	3	—
	Friends	7	—
	Husband/wife	11	3.1
	Others	8	—
Attending religion	Always	150	42.6
	Often	76	21.6
	Sometimes	53	15
	Never	73	21

Table 1: Socio-demographic characteristics of the study population, Jimma preparatory school, Jimma town, Oromia region, 2014.

Oromo is the predominant ethnic group of the study population and 274 were living with both parents during the study period.

Variables	Characteristics	Frequency	Percentage
Mother alive	Yes	335	95.17
	No	17	4.83
Mother education level	Literate	319	90.6
	Illiterate	33	9.4
Occupation of mother	House wife	86	24.4
	Merchant	109	30.9
	Employer	127	36
	Others	30	8.5
Father alive	Yes	331	94.3
	No	41	5.7
Father education level	Literate	329	93.4
	Illiterate	23	6.6
Occupation of father	Daily laborer	28	7.9
	Merchant	79	22.4
	Employer	173	49.14
	Farmer	49	13.9

Table 2: Description of parents of the study population by life, level of education, occupation, Jimma preparatory school, Jimma town, Oromia region 2014.

	At least twice a week	13	3.6
	Less than twice a week	27	7.6
	Never	312	88.6
Types of drug (n=164)	Chat	75	45.7
	Cigarette	49	29.8
	Hashish	0	0
	Alcohol	40	24.39
	Other	0	0
Frequency of using this drugs	Every day	0	0
	At least twice a week	47	13.3
	Less than twice a week	64	18.18
	Never	241	68.6

Table 3: Description of study population about alcohol drinking, types of drug use, and frequency of using drugs, Jimma preparatory school, Jimma town, Oromia , 2014.

Among the total 352 participants 335 respond as their mother is alive and most the respondents' mothers are literate (90.6%) and being

employer and merchant are the leading occupation of mothers. The same is true for the father 311 (94%) are alive and most of them are literate and employer in their occupation (Table 2).

Most (88.6%) of the respondents were free from alcoholic drink and 75 of the participants were using Khat 49 were cigarette smoker (Table 3,4).

Sexual history of adolescents

89 (25.4%) adolescents reported having had premarital sexual intercourse at the time of survey of which 63 (70.78%) were males. Among those adolescents who had premarital sexual intercourse, the majority 79% had their first sexual intercourse between 18 -19 years. The main reasons for initiation of sexual intercourse is due to physical pleasure (fell in love) 47%, followed by for financial reward 25.8%. When respondents were asked about the reason not having had sexual intercourse they responded fear of parents 52.47% followed by fear of pregnancy 31%.

Watch film	Often	122	34.65
	Sometimes	165	46.9
	Never	65	18.46
Have sexual intercourse	Yes (n = 89)	Sex	males 63 70.78
			females 26 29.3
	Grade	11 th	32 36
		12 th	57 64
No	263	74.71	
Age at first sex (n = 89)	<18	18	20.2
	>18	61	79.81
	Physical pleasure	42	47.19
Reason to start sex (n = 89)	For financial reward	23	25.84
	Peer pressure	11	12.45
	Rape	5	-
	Drug influence	8	-
Reason not to start sex (n = 263)	Fear of parents	138	52.47
	Fear of pregnancy	82	31.17
	Fear of stis HIV/AIDS	72	27.37
	Religious	60	22.8
Discus father with	Often	139	39.5
	Sometimes	167	47.4
	Never	36	10.2

Discus mother with	Often	85	24
	Sometimes	136	38.36
	Never	130	36.9
Discus with close friends	Often	110	31.25
	Sometimes	210	59.6
	Never	32	9.2

Table 4: Distribution of sexual history of respondents in Jimma preparatory school, Jimma town, Jimma zone, Oromia region, 2014.

Variables		Premarital sex		Total	x ²	p- value
		yes	no			
Sex	Male	63 (32.3%)	132 (63.7%)	195	11.4	0.001
	Female	26 (19%)	131 (81%)	137		
Age	<18	18 (13.3%)	127 (86.7%)	135	12.2	0
	>18	61 (38.6%)	158 (61.4%)	219		
Grade	11 th	32 (23.9%)	134 (75.1%)	166		
	12 th	57 (44.2%)	129 (55.8%)	186		
Residence	Urban	54 (22.2%)	223 (77.8%)	277		
	Rural	35 (46.6%)	40 (53.4%)	75		
Attending religion	Regularly		199 (88%)	226		
	Not regularly	62 (49.2%)	64 (50.8%)	126		
Alcohol drink	Yes	25 (62.5%)	15 (37.5%)	40		
	No	64 (25.8%)	248 (74.2%)	312		
Watch film	Yes	68 (23.7%)	219 (76.3%)	287		
	No	21 (32.3%)	44 (67.7%)	65		
Peer influence	Yes	77 (24.1%)	243 (85.8%)	320		
	No	7 (19%)	25 (78.12%)	32		
Mother's literacy	Literate	38(12%)	281 (88%)	319		

	Illiterate	13(39.4%)	20 (70.6%)	33		
Father's literacy	Literate	36(11%)	293 (54%)	329	25.5	
	Illiterate	11(47.8%)	12 (52.2%)	23		

Table 5: Variables evaluated for possible association with premarital sexual inter course among adolescents of Jimma preparatory school, Jimma Zone, Oromia, 2014.

As can it can be seen from Table 5 the chi-square test indicates the relationship between respondent's socio cultural and demographic variables with the dependant variables.

Respondent's sex: The data shows that sex has an association with premarital sexual intercourse of the respondents, so that 26 (19%) of females and 63 (32.3%) of were males. The proportion of respondent who ever had sexual intercourse vary with sex, at ($\chi^2 = 11.4$, $p = 0.001$). This might be the exposure of males to different alcoholic and other sexual enhancing conditions than females.

Respondent's sex: As it can be seen clearly from the Table 6 age has a relationship with premarital sexual intercourse of the respondents so that 18(13.3%) students are below 18 years of age. The proportion respondents who ever had sex increase with age, about 38.6% of students are in the age group 18-19 years at ($\chi^2 = 12.2$, $p = 0.000$). The result of this study indicates that premarital sexual practice increase with age.

Educational level: As a survey revealed that, educational level of respondents associated with premarital sexual practice of school students with ($\chi^2 = 6.000$, $p = 0.000$). The proportion school adolescents ever had sex increase as their educational level increase from 11th to 12th, 32 (23.9) and 55 (44.2%) respectively. The data clearly shows that educational attainment is associated with elevated likely hood of being exposed to sexual relation.

Residence: The data clearly shows that, pace of residence is associated with premarital sexual intercourse of school adolescents with ($\chi^2 = 23.1$, $p = 0.000$). This revealed that school adolescents who were from rural 35 (46.6%) were sexually active than those from urban 54 (22.2%). This may be due to poor family control low religious activity.

Religiosity: Respondents attending their religion activities are very statistically associated with premarital sexual practice of school students with at ($\chi^2 = 59.4$, $p = 0.000$). This revealed school adolescents premarital sexual practice increase among those who do not attend their religious activity regularly 62 (49.2) than who followed their religion contniously 27 (12%). Thus, adolescent people who attend religion activities frequently are expected to inter into sexual intercourse than those who do not attend regularly.

Alcohol drinking: The Table 6 above indicates that school adolescents who ever had had taken alcohol were more likely involved into sexual activity than their counterparty who had not taken alcoholic substance at ($\chi^2 = 21.36$, $p = 0.244$). This revealed that Alcohol drinking was associated with adolescents' involvement in sexual activity.

Seeing pornographic film: It is clearly shown in the above table 6 that the exposure of school adolescents to sex film is significantly

associated with adolescents' involvement in sexual activity at ($\chi^2 = 2.08$, $p = 0.149$). They are more sensitive to peer pressure and adolescent sexually exploited areas.

Peer influence: Talking on sexual related issue with close peer is associated with adolescents involvement in sexual activity premarital at ($\chi^2 = 2.78$, $p = 0.095$). Adolescents who talk with their peers about sex related issue 77 (24.1%) were more likely involved premarital sexual activity than those who do not talk 7 (19%). Peer influence on sexual initiation reflects the idea that adolescents decisions about whether or not initiate sexual activity are strongly bound to social context.

Parents' education: As the Table 6 above displays the parents' education is associated with sexual involvement of school adolescents. The proportion of school adolescents those from un educated mother 13 (39.42%) were more involved premarital sexual activity as compared to respondents mother who were educated 38 (12%) at ($\chi^2 = 18.2$, $p = 0.000$) and so father' education status at ($\chi^2 = 25.5$, $p = 0.000$). Thus the proportion school adolescents premarital sexual activity decrease as educational level of parents is increased. This may be due to educated parents give more attention to their children discouraging sexual activity.

Discussion

The overall prevalence of premarital sexual practice in the study population was 28.2%.The proportion of male adolescents who were involved in premarital sex 63 (17.89%) was about twice the proportion female adolescents 26 (7.38%). This finding is relatively low compared to other prior study study findings in the country. In Addis Ababa proportion was 39.8% for males and 5.6% for females [15].

The study conducted in Nekemte showed that among those adolescents who had premarital sex, the majority (57.2%) had their first sexual intercourse between the ages of 15 and 17 years [16]. Early and premarital sexual practice is becoming common and one of the risky sexual behaviors of adolescents and young people. The current study showed that among those preparatory school adolescents who had premarital sex, 18 (20.2%) and 61 (79.8%) reported having had first sex before 18 years [15-17] and at age of 18 and above respectively.

Although adolescents sexuality is often affected by hormonal influences, the role of psychological factors is not insignificant .The desire to maintain relationship with friends peer pressure , lack of guidance poor modeling of elders ,living with single parents or nether and poor religious activity are important in term of influencing adolescents sexuality [17-19]. In this study , the main reason claimed by adolescents for starting the first sexual intercourse were falling in love or physical pleasure 42 (47.19%), for material gift or financial reward 23 (25.84%). In addition watching pornographic films and alcohol drinking are major contributing factors to premarital sexual practice in the study area.

In this study being male, twelfth grade student and age 18 and above were found to be positively and significantly associated with premarital sex in the study area. Similar studies showed that a much higher percentage of young men reported having had premarital sex than young women [20].

This may be due to cultural norms that encourage and approve sexual experimentation of boys and the value given to virginity for girls. Ageless than18 and regular attending religious activity were found to be protective against premarital sex.

Various studies have shown that younger girls enter into sexual relationship with older wealthy men who can assist them school related expenses, or purchase of material goods [21]. The current study showed that 23 (25.84%) of adolescents were involved in sex for material gift or financial support.

Conclusion

Premarital sexual practice of adolescents and associated factors has been examined.

- The study found that about 25.4% of school adolescents practiced premarital sexual practice.
- A love affair was the most prominent factor that precipitated the first sexual intercourse.
- Parents education, parent-adolescents discussion about sex and peer influence were found to be significantly associated with adolescents sexuality. Discussion on sex related issue between adolescents the main objective of the study was to assess premarital sexual practice among preparatory school adolescents and to identify the major socio-cultural, demographic and parental educational status influencing premarital sexual practice in Jimma preparatory school, Jimma town Jimma zone. Accordingly and parents help the adolescents to develop a clear personal position regarding their sexuality.
- Adolescents in the age group of 18-19 years were more likely to have sexual intercourse as compared to those age group 15-17 years.
- Use of alcohol is possibly associated with adolescents' premarital sex.

Recommendations

Based on the finding this study, an integrated effort need to be initiated to address adolescents' sexual and reproductive health problems through Establishing and strengthening school anti AIDS clubs, youth reproductive unit/ club in different facilities and empowering women, Discouraging the use of substances /drug among adolescents and sensitizing parents, community members and the public focusing on parent child communication and discussion about sex related issue.

Acknowledgments

Authors would like to acknowledge Jimma University Department of nursing and Midwifery for the support it rendered for conducting this study.

Authors contributions

AT and IA designed the study, analyzed the data drafted the manuscript and critically reviewed the article. All authors read and approved the final manuscript and do not have conflict of interest.

References

1. UNDO/UNFP/WHO (2003) Special Program of Research Development and Research Training in Human Reproductive Health (HRP): Progress in Reproductive Health Research.
2. (2000) Strengthening the Provision of Adolescent-Friendly Health Service to meet the health and development Needs of adolescent in Africa: A consensus. Harare, Zimbabwe.
3. UNFPA (2005) HIV/AIDS and Adolescent: State of World Population
4. UNFAP (2006) The State of World Population. Geneva.
5. Rweng M (2000) Sexual risky behavior among Young People in Bamenda, Cameroon: International Family Planning Perspectives 26: 118-121.
6. National HIV/AIDS Prevention and Control Office (2000) AIDS in Ethiopia: Federal Ministry of Health, Addis Ababa, Ethiopia.
7. Kelly H (2004) Socio economic Disadvantage and Unsafe Sexula Behavior among Young Women in South Africa: Policy Research Division counsel.
8. WHO (2004) Risk and Protective Factors Affecting Adolescent's Reproductive Health in Developing countries: Analysis of Adolescent Sexual and Reproductive Health Literature around the World. Geneva.
9. Chala F (2009) Creating a Better Future for Ethiopian Youth: A conference on Adolescents Reproductive health. The David and Lucile Packard Foundation, Ethiopia.
10. UNAIDS (2008) Preventing HIV/AIDS in Young People: A Systemic Review of the Evidence Global HIV/AIDS Epidemic.
11. Department of Family Health (2001) Five Year Action Plan document for adolescent Reproductive Health in Ethiopia: Federal Ministry of Health, Addis Ababa.
12. Sederowitz J (1999) Making Reproductive Health Service Youth Friendly: Research Program and Policy series.
13. Bongaarts J, Cohen B (1998) Adolescent reproductive behavior in the developing world. Introduction and review. *Stud Fam Plann* 29: 99-105.
14. Gorge R, Yansane ML, Marks M, Millomounou D (1998) Sexual behavior and attitude among unmarried urban youths in Guinea. *International Family Planning Perspectives* 24: 65-71
15. Temin Miriam FE, Okonofau FO, Morodion O, Renne EP, Coplan P, et al. (1997) Perception of sexual behavior and knowledge about STDs among Adolescent in Bennei City, Nigeri: *Family Planning Perspectives* 54: 186-187.
16. Teshager S (2005) Determinants of Risky Sexual Behavior in Bahir Dar among adolescents: Unpublished Msc thesis, Addis Ababa University.
17. Adeye (2012) Prevalence of Premarital sex and factor influencing it among in private atterritory institution in Nigeria, *International Journal of Psychology And Counseling* 4: 6-9.
18. Karim AM, Magnani RJ, Morgan GT, Bond KC (2003) Reproductive health risk and protective factors among unmarried youth in Ghana. *Int Fam Plan Perspect* 29: 14-24.
19. Bonnel C, Allen E, Stran (2005) Influence of Family type and Printing behavior on teenage sexual behaviors and conceptions: *Journal of Epidemiology Community Health* pp: 502-506.
20. Seme A, Wirtu D (2008) Prevalence of Premarital sexual practice among school adolescents of Nekemte Town: *Ethiop J Health Dev* 22: 167-173.
21. Upchurch D, Anshensel C, Sucoff C, Storems L (1999) Neighborhood and Family Context of Adolescent sexual activity: *Journal of Marriage and Family* 21: 151-172.