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Article

The Prevalence and Timing of Sexual activities Among Adolescents in Dar es Salaam, Tanzania

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Abstract

Adolescents' sexual behaviors have attracted significant attention from developmental psychologists and researchers from related disciplines with the aim of understanding the factors associated with the behavior, its timing and outcomes. This study used a survey method to specifically estimate the prevalence of sexual activities, timing and the perception that adolescents in Dar es Salaam hold as to what would be the appropriate age to debut sexual activities. Data were collected using a pre-tested structured questionnaire from a sample of 389 adolescents who had a mean age of 17. ANOVA, Chi-square and regression analysis were used in the analysis. Results showed that 31.6% had debuted sexual activities by the age of 15.8. The appropriate age was reported to be 20.5. Demographic factors that were statistically associated with the dependent variables are presented. It is concluded that sexual activities are prevalent among adolescents in Dar es Salaam at early ages. This exposes them to the risk of acquiring sexually transmitted diseases such as HIV/AIDS because they are in no position to negotiate for safe sex. It is recommended that guidance and counselling on matters related to adolescents' sexuality be highly reinforced in secondary schools by the responsible ministries and organs.

Keywords

Sexual experience • sexual debut • adolescents' perceptions

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The world today is a home to 1.2 billion adolescents (16% of world population) more than 50% of which live in Asia (United Nations International Children's Emergency Fund [UNICEF], 2019). The adolescent population makes up a substantial proportion of the total population within the Sub-Saharan region; it is reported that 23% of the population in the region are youngsters aged between 10-19 (UNICEF, 2019). Psychologists have defined adolescence as a developmental or transitional stage from childhood to adulthood (Passer & Smith, 2009; Patterson, 2008). Key developmental processes according to Haffner (1998) include sexual maturation and definition of sexual self-concept; as such, it marks a stage of sexual exploitation as adolescents clarify their sexual values (Kelly, 2008). A universal agreement regarding the age at which adolescence begins and ends has not been reached due to variations from individual to individual and across cultures (Banati & Lansford, 2018). However, UNICEF defines adolescents as a population group of young people ranging from 10-19 years (UNICEF, 2011).

Adolescents' sexual behavior has attracted significant attention from researchers worldwide and studies have generated a wide array of findings with regard to the prevalence, and patterns of adolescents' sexual behavior which have to a large extent been reported to be risky (Melesse et al., 2020; Blignaut et al., 2015; Shek & Leung, 2015; Seguya, 2014; Laddunuri, 2013; Higgins et al., 2010). The changes in hormonal concentration and functioning to a large extent triggers inner sexual urges in this age group that ultimately renders them into seeking a way of satisfying themselves sexually and this usually causes them in the belief of psychoanalysts to direct their feelings towards members of the opposite sex (Kelly, 2008).

Factors Associated with Sexual Activities in Youth

Psychologists and other scholars in related disciplines have theorized broadly about adolescents' decisions to initiate sexual activities. For example, the social cognitive theory posits that learning process is influenced by cumulative observation of and identification with other people; it emphasizes the potential power of television and movies, as well as parents, friends, and others in modeling sexual behavior (Bandura, 1977). From the economics point of view, choice theory brings to light that, individuals engage in certain behaviors out of the need to attain particular goals. Therefore, sexual behavior may be explained by adolescents' need to experience sexual pleasure (Sprecher, 1998).

A review of empirical studies reveals that adolescents' engagement in sexual relations is attributable to several factors, for example, the lack of confidence to resist peer pressure and the perception that others of the same developmental stage are sexually active (Seguya, 2014; Laddunuri, 2013; Cherie & Berhane, 2012; Wong et al., 2009). It has also been reported that social economic status is associated with higher odds of sexual activity especially among females whereby those who receive little investments from their caretakers tend to report more sexual activity than those from economically stable families (Young et al., 2018; Bruce et al., 2013; Mutinta & Govender, 2012; Mathews et al., 2008; Brook et al., 2006). Abdullahi and Abdulquadir (2018) partly attribute adolescents' sexual activities to exposure to explicit media; a factor that Kisanga (2012) and Bleakley et al. (2011) once commented about. These authors equally believe that exposure to the social media is associated with increased odds of sexual activity among adolescents.

Engagement in health risk behaviors such as the abuse of alcohol and cannabis have also been reported to accelerate sexual activities among adolescents (Young et al., 2018; Gil-Lacruz & Gil-Lacruz, 2016; Seguya, 2014). The use of alcohol heightens risky sexual behaviors; it has been documented that alcohol impairs judgment which leads adolescents to practice unsafe sex and, in the end, become exposed to sexually transmitted infections and diseases (Lin et al., 2019; Fischer et al., 2007; Cooper & Gutherie, 2007).

Studies indicate further that gender has a remarkable effect on sexual behavior. Kelly (2008) noted that in most scientific studies, males tend to exaggerate their sexual experiences while females under-report

it. This is due to the fact that males believe that having sex is a way of proving that they are ¨real men¨ (Fischer et al., 2007). This has to a greater extent been an outcome of what Kreager et al. (2016) referred to as a double standard after observing that, females who initiate sex earlier tend to have less peer acceptance than males who engage in the same behavior.

The age at which adolescents initiate sexual activities is affected by various factors including gender, peer pressure, drug abuse, self-esteem, early puberty, and parent-child ties (Kabiru & Orpinas, 2008; Seguya, 2014). Research on the impact of gender on age at sexual debut has so far generated similar results whereby, males have been reported to initiate sexual activities a lot earlier than females (Kabiru & Orpinas; Kelly, 2008; Musiime & Mugisha, 2015; Patterson, 2008), but as adolescence progresses, girls become more involved and better acquainted with their sexual responsiveness (Kelly, 2008). Girls who associate with older boyfriends tend to initiate sex earlier than their age mates (Kelly, 2008).

Though sexual activities are reported to be more frequent among males than females, the negative outcomes are more evident among females than males, for example dropping out of school due to unintended pregnancy and worse still the burden of HIV/AIDS is skewed more to the female gender than the male. Recent UNICEF global data on HIV and AIDS among adolescents reveals that 57.5% of the 1,740,000 infected adolescents are females (UNICEF, 2020). According to UNICEF (2019), Tanzania has a population of 12 million adolescents; national wide and small-scale empirical studies have reported that adolescents (10-19) and young people (15-24) experience sexual activities at early ages (Tanzania Commission for AIDS [TACAIDS] & Zanzibar AIDS Commission [ZAC], 2018; Seguya, 2014 Laddunuri, 2013; National Bureau of Statistics [NBS], 2011). The HIV/AIDS prevalence rate in the country is 1.4% among 15–24-year-olds and the prevalence rate among adolescents is estimated to be around 0.7% and still, the number of females. One percent is more than double of that of males, which is 0.4% (TACAIDS & ZAC, 2018).

The present study aimed at exploring first the prevalence of sexual activities among school attending adolescents in Dar es Salaam region; secondly, to determine the age at which adolescents debuted sexual activities and lastly, to explore the age that adolescents perceive to be appropriate for initiating sexual activities. The National HIV and AIDS policy points out that school children, adolescents and young people are highly vulnerable to the HIV/AIDS pandemic and the major mode of transmission is through unprotected heterosexual relations (United Republic of Tanzania [URT], 2001). Other international agencies cement this fact as they argue that heterosexual relations account for 90 percent of HIV infections globally (UNAIDS, 2020; World Health Organization [WHO], 2020). To this end, it is essential to study the prevalence of sexual relations among adolescents, their age at sexual debut because the age at sexual debut favors the HIV/AIDS pandemic mainly through girls' age at first sexual act because they are more likely to be exposed to tearing (UNAIDS, 2020). It is also important to understand their attitude as far as the age appropriate for initiating sexual relations is concerned since attitudes influence behavior (Ajzen & Fishbein, 2005).

Methods

Participants

The study engaged a purely quantitative approach utilizing the survey method. The target population for this study was adolescent students in Kinondoni District, Dar es Salaam region. Six secondary schools were randomly selected. The six schools had a total of 1,218 form three students from which a total of 416 students were selected at a marginal error of 3.9% and 95% confidence level using two sampling techniques: first, stratified sampling was used to categorize students gender-wise and from each of the stratum, 407 students were selected on the overall.

The study adopted the UNICEF (UNICEF, 2019) definition of adolescence (10-19 years). Therefore 27 questionnaires which had been completed by respondents who were above 19 years were excluded during the analysis thus remaining with a total sample of 389 participants in which 193 were males with a mean age of 17.3 (*SD* = .98) and 196 females 16.7 (*SD* = .95) who were in form three (which is the 11th grade according to the Tanzania education system).

Instruments

A structured questionnaire was used to collect data. Before actual data collection, the questionnaire that had been prepared initially in English was translated to Swahili which is the most widely spoken language in Tanzania for an easier understanding of the questions and pre-tested on a sample of 30 students who shared similar characteristics with those who participated in the study. Items required the respondent to provide information on their gender (whether male or female), respondents' age, sexual experience, age at sexual debut and finally the age that the respondents perceived to be appropriate for debuting sexual activities. Some items, especially those which inquired on sexual experiences, were rephrased to attract more honest responses; an example was that which initially required respondents to state whether they had ever had sex or not. In a sample of 30 students whose mean age was 16.7 (*SD* = 1.82), only one male respondent reported to have been sexually experienced. The researcher suspected that this item was too interrogative, even more in a culture where sexual issues are hardly discussed openly. Thus, the researcher rephrased the item after piloting to: *How old were you when you first had your first sexual encounter?* If a respondent pointed out the age, then it was evident that he/she had already debuted sexual activities.

Procedure

Permission to collect data from the schools was sought from the District Educational Officer of Kinondoni. A letter of permission was presented to the heads of the selected schools who permitted the researcher to meet the students. Students were informed about the objectives of the study and were ensured of their privacy; those who agreed to participate still had the right to skip any question that they considered embarrassing or opt-out of the study at any given point.

Data analysis

The Statistical Package for Social Sciences (SPSS V.20) was used to process the data. Gender and sexual experience were analyzed using frequencies and percentages; mean and standard deviations were used to estimate the age at sexual debut. To explore the potential differences in means, Analysis of Variance (ANOVA) was as well as linear regression analysis which was used to determine the effect of age at puberty on the timing of first sexual encounter. Associations between demographic variables and sexual activities were explored using Pearson's Chi-square statistical test. Statistical significance in all procedures was declared whenever a *p*-value equal to or less than .05 was obtained as suggested by Skipper et al. (1967).

Results

Patterns of Adolescents' Sexual Experience

In order to capture sexual experience of the respondents, an indirect question was posed; at what age did you have your first sexual encounter? Descriptive analysis showed that, 31.6 % (*n* = 123) were sexually experienced at an overall mean age of 15.8 (*SD* = 1.21). More males, 55.3% (*n* = 68) than females 44.7% (*n* = 55), reported to have been sexually experienced. However, this difference had no statistical

significance ($X^2_{(1, N = 389)} = 2.31$, $p = .13$). The analysis showed that 64.2% ($n = 79$) of the sexually active students were in a relationship. Thus, the majority of the relationships involved sexual contacts.

The reported age of the first sexual partners was 17.8 ($SD = 2.16$). Female students had partners who were significantly older ($M = 18.4$, $SD = 2.52$) than those of the males ($M = 15$, $SD = 1.99$); ($F_{(121)} = 68.8$, $p = .00$) with a moderate size effect ($\eta^2 = 0.36$). In addition to having significantly older partners, the female gender was further associated with significantly lower ages at first sexual encounter, ($M = 15.4$, $SD = 1.27$) as compared to ($M = 16.1$, $SD = 1.10$) for males ($F_{(1, 121)} = 8.42$, $p = .004$) with a small size effect ($\eta^2 = .06$).

With the significant effect of gender on the age at sexual debut, another variable; the age at puberty was determined both for males ($M = 14.3$, $SD = 1.08$) and females ($M = 13.8$, $SD = 1.33$) and regressed against the average age at sexual debut ($M = 15.8$, $SD = 1.21$). Results from the regression model showed that there was a moderate correlation of .57. The age at puberty significantly predicted the age at sexual debut ($B = .06$, $t = 6.44$, $p = .000$) and accounted for a significant amount of variance in the dependent variable ($F_{(1)} = 59.2$, $p = .000$) inferring that age at puberty accounted for 32.3% of the variance in the age of sexual debut (Adjusted $R^2 = .32$). The results from the regression model are summarized in Table 1.

Table 1. *Model summary for effect of age at puberty on age at sexual debut*

Model	*B*	*SE*	β	*t*	*p*	*R*	R^2	*Adjusted* R^2	*SE*
Age at puberty	0.61	0.08	0.57	7.69^{***}	.000	.57	.33	.32	1.003

The coefficient of determination in the regression model above could probably explain the reason why females in this study reported to have initiated sexual relation a lot earlier than the males because biologically and evidenced in this study, females attain puberty earlier than males. The abuse of alcohol was associated with both higher odds of sexual activity ($X^2_{(1, N = 389)} = 61.4$, $p = .000$) with a big size effect ($\varphi = .398$) as well as the age at sexual debut in the sense that adolescents who reported to have ever abused alcohol at one point in their leisure time also reported significantly lower ages for sexual debut ($M = 15.3$, $SD = 1.18$) as compared to those who reported to have never abused alcohol ($M = 16.1$, $SD = 1.15$; $F_{(1,121)} = 18.1$, $p = .00$; $\eta^2 = .1$).

Family structure had no significant association with sexual behavior ($X^2_{(5, N = 389)} = 7.37$, $p = .20$). However, parents' or guardians level of education was significantly associated with the prevalence of sexual activities in the sense that those adolescents who lived with either guardians or parents who had a college degree were less likely to have ever experienced sexual relations than those whose caretakers had no such level of education ($X^2_{(4, N = 389)} = 13.9$, $p = .008$). Similarly, school ownership (private or public) had a significant association with adolescents´ sexual experience in the sense that 56.9% of the sexually experienced adolescents were from private schools ($X^2_{(1, N = 389)} = 8.18$, $p = .004$). Furthermore, a larger proportion of adolescents who reported to have friends who are sexually active and have on some occasion pressured them to seek sexual satisfaction was found to be sexually active as well ($X^2_{(1, N = 389)} = 51.4$, $p = .000$).

Though such variables, peer influence, as well as school ownership and the level of education of parents and/or guardians had a significant effect on the pattern of sexual experience, the same variables elicited no differences in the age at sexual debut as Table 2 shows.

Table 2: *Effect of demographic variables on age at sexual debut*

Variable	*Level*	*M*	*SD*	*Statistic*	*p value*
Family structure	Both parents	15.8	1.13	0.58	.718
	Mother	15.7	1.40		
	Father	16.0	0.00		
	Others	15.6	0.89		
Gender	Males	16.1	1.11	8.42	.001
	Females	15.4	1.27		
Alcohol	Drinkers	15.3	1.18	18.1	.000
	Non - drinkers	16.1	1.15		
Peer influence	Influenced	15.8	1.29	0.03	.840
	No influence	15.8	1.00		
School ownership	Private	15.8	1.29	1.21	.273
	Public	15.6	1.15		
Parents' educational level	University	15.6	1.41	0.74	.564
	Secondary	15.9	1.06		
	Others	15.4	0.55		
Relationship status	Single	15.9	1.17	0.32	.574
	In relationship	15.7	1.25		

Lastly, the age perceived to be appropriate for sexual debut by adolescents in this study was determined. It was revealed that overall, adolescents perceived that the appropriate age for sexual debut should be 20.5 (*SD* = 2.92) years. Overall, only four variables were associated with statistically significant differences in means: alcohol abuse; whereby drinkers (*M* = 19.5, *SD* = 2.59) and non-drinkers (*M* = 20.8, *SD* = 2.94). Secondly, relationship status whereby those in relationship proposed lower ages (*M* = 20, *SD* = 2.81) than those who were single (*M* = 20.2, *SD* = 2.96). Furthermore, the influence of sexually active peers was associated with lower means (*M* = 20.2, *SD* = 2.8) than those who reported no peer influence (*M* = 20.8, *SD* = 3.0) and lastly, having ever had sex was significantly associated with lower means (*M* = 19.5, *SD* = 2.89) as compared to the abstainers (*M* = 21.1, *SD* = 2.89). Table 3 summarizes the results obtained from the ANOVA tests.

Table 3. *The influence of demographic variables on perception of ideal age for sexual debut*

Variables		*M*	*SD*	*Statistic*	*p value*
Alcohol abuse	Drinkers	19.5	2.59	13.0	.000
	Non - drinkers	20.8	2.94		
Gender	Males	20.4	2.92	1.44	.231
	Females	20.7	2.92		
Family structure	Both parents	20.5	2.98	1.05	.387
	Mother	21.6	3.04		
	Father	19.8	2.80		
	Others	20.5	2.93		
School ownership	Private	20.8	2.93	2.32	.129
	Public	20.4	2.92		
Parents' educational level	University	20.9	3.16	2.20	.068
	Secondary	20.2	2.71		
	Others	20.5	2.77		
Relationship status	Single	20.2	2.80	7.96	.005
	In relationship	20	2.81		
Peer influence	Influenced	20.2	2.80	4.91	.027
	No influence	20.8	3.00		
Sexual experience	Had sex	19.5	2.89	24.8	.000
	Abstainers	21.1	2.89		

Discussion

Findings in this study have established that a significant proportion of adolescents are sexually active at tender ages with people who are significantly older them. It explains the reason as to why the HIV/AIDS pandemic is highly prevalent especially among females as observed by (UNAIDS, 2020; TACAIDS & ZAC, 2018) since younger girls can rarely negotiate safe sex. The mean age perceived to be ideal for initiating sexual activities differed substantially from the age that adolescents initiated sex. Respondents' opinion significantly surpassed the age of sexual consent highlighted in the United Republic of Tanzania's sexual offenses act which provides that a man commits the offense of rape if he has sexual intercourse with a girl or a woman with or without her consent when she is under eighteen years of age, unless the woman is his wife who is fifteen or more years of age and is not lawfully separated from the man (URT, 1998). The implication here is that the attitude that adolescents have as far as the age for sexual debut is concerned is socially desirable, but it is not consistent with their actual behavior and this is partly attributable cognitive susceptibility; a state of mind that suggests readiness for initiating sex (Kelly, 2008). This inconsistency between attitude and behavior brings about a psychological discomfort referred to as cognitive dissonance (Festinger, 1957). In fact, an example of sex-related dissonance and regrets can be seen in various studies in which it has been established that young people tend to regret their decision to engage into sex at earlier ages later in their lives citing such reasons as having been under the influence of alcohol, premarital sex being against their religious beliefs, having engaged into sex just for the sake of pleasing the partner (Oswalt et al., 2005; Thomas, 2010; Wellings et al., 2001). Another factor that may entice adolescents to initiate sexual activities earlier than the age they perceive to be appropriate is the consumption of alcohol as argues by Gil-Lacruz and Gil-Lacruz (2016) observed that alcohol consumption was positively correlated with unsafe sexual activity especially among young men than women in Spain. The effect of alcohol is much felt among females than males, for example. A study conducted in Taiwan revealed that more females than males were more likely to engage in sexual activity under the influence of alcohol (Lin et al., 2019). Furthermore, some adolescents' tendency to give in to peer pressure has been associated with earlier sexual debut (Wong et al., 2009), and adolescents' perception that their age mates are sexually experienced was also likely to foster them into the same behavior (Cherie & Berhane, 2012; Wong et al., 2009).

The ideal age for sexual debut was affected significantly by the two independent variables. As highlighted earlier, many studies have satisfactorily addressed the impact of gender on sexual behavior (Agius et al., 2013; Kelly, 2008; Odgers et al., 2008). Results from this study suggest that gender and sexual experience do not only affect one's sexual behavior but each of the two goes further to induce attitudes towards sexual behavior; particularly the age perceived to be ideal for sexual debut. Males believe that sexual activities should begin at a much earlier age than girls do; this opinion could be explained by Kelly (2008) who observed that early maturing adolescent boys tend to report early strong sex drive and acceptance of casual sex; it is no wonder that many studies have associated the male gender with higher odds of engaging into sexual risk behaviors at earlier ages (Asamoah & Agardh, 2018; Cueto & Leon, 2016; Lin et al., 2019).

Sexual experience exerted a significant impact on adolescents' perception of the ideal age for sexual debut in the manner that adolescents who had initiated sexual activities were more likely than their counterparts to propose a younger age as being appropriate for sexual debut. This is attributable to the fact that attitudes are to some extent induced by direct experience with the attitude object (Ajzen & Fishbein, 2005). The feedback or consequences one gets from the practice of a particular behavior is likely to influence future intentions and beliefs (Ajzen & Fishbeing, 2005). Therefore, it is deducible from these arguments

that sexually experienced adolescents' attitudes on the age for sexual debut were induced by the pleasure that they get from the behavior. On the other hand, sexually experienced adolescents' perceptions that sexual activities should be initiated at lower ages could be a dissonance reduction strategy, trying not to diverge too much from the age at which they debuted sex. When such dissonance is not settled, it results in unhappiness, disappointment, depression or remorse feelings (Thomas, 2010; Vasilenko & Lefkowitz, 2014).

To conclude, adolescents in Dar es Salaam region are highly exposed to sexually transmitted infections and diseases due to the fact that they engage in sexual practices at tender ages. This study did not investigate whether the sexual practices are done responsibly or not but a careful look at the age at sexual debut and partner age differences suggests that young girls are more at risk of finding themselves at the receiving end of the negative outcomes such dropping out of school due to unwanted pregnancies. The other end result of such relationships among youngsters in this age group is the lack of concentration on studies since their minds get preoccupied with adult roles and sometimes, they have to deal with relationship related stresses. It is recommended that parents should establish close ties with children, communicate with them and encourage them to behave in ways that are consistent with their attitudes and perceptions. The ministry of education in collaboration with the ministry of health should work in harmony towards empowering adolescents in acquiring and practicing health promotion behaviors that will enable them to be safe and achieve the best that there is in education.

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