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Assessing Sexual Behavior Patterns among Student Athletes of Senior High Schools in the Upper East Region, Ghana

Mahama Mubarik ¹, John Elvis Hagan, Jr. ^{2,3,*} , Akaribo William Aduko ⁴, Kasenyi Sulley Abubakari ⁵, Oladokun Michael Yemisi ⁶ and Prosper Asabia ⁶

- ¹ Physical Education Unit, Department of Science, Gbewaa College of Education, Pusiga Box 157, Ghana; mahamamubarik4@gmail.com
- ² Department of Health, Physical Education and Recreation, University of Cape Coast, Cape Coast PMB TF0494, Ghana
- ³ Neurocognition and Action-Biomechanics-Research Group, Faculty of Psychology and Sports Science, Bielefeld University, 33501 Bielefeld, Germany
- ⁴ Counselling Unit, Department of Educational Studies, Gbewaa College of Education, Pusiga Box 157, Ghana; wakaribo23@gmail.com
- ⁵ Physical Education Unit, Department of Science, Gambaga College of Education, Gambaga Box 33, Ghana; skasenyi@gmail.com
- ⁶ Physical Education Unit, Department of Science, St. John Bosco's College of Education, Navrongo Box 11, Ghana; mihaelyemisi@gmail.com (O.M.Y.); asabiaprosp@gmail.com (P.A.)
- * Correspondence: elvis.hagan@ucc.edu.gh



Citation: Mubarik, M.; Hagan, J.E., Jr.; Aduko, A.W.; Abubakari, K.S.; Yemisi, O.M.; Asabia, P. Assessing Sexual Behavior Patterns among Student Athletes of Senior High Schools in the Upper East Region, Ghana. *Sexes* **2022**, *3*, 40–48. <https://doi.org/10.3390/sexes3010003>

Academic Editor: David L. Rowland

Received: 19 November 2021

Accepted: 4 January 2022

Published: 10 January 2022

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Abstract: The purpose of this study was to investigate the sexual behavior patterns of student athletes of senior high schools in the Upper East Region of Ghana and to assess the differences in sexual behavior patterns between male and females. A sample of 400 student athletes using a convenience sampling technique from public senior high schools was drawn to complete a self-designed research study. Descriptive statistics and the Chi-square test tool were used to analyze the collected data. The results showed that student athletes practiced various forms of sexual behaviors such as celibacy, foreplay, vaginal-penile sex, sexual fantasy, masturbation, oral sex, and anal sex. The Chi-square analysis showed significant gender differences in prevalence of masturbation ($\chi^2(1, n = 400) = 4.6962$, probability = 0.030) and sexual fantasy ($\chi^2(1, n = 400) = 6.8477$, probability = 0.009), but not vaginal-penile intercourse ($\chi^2(1, n = 400) = 1.3197$, probability = 0.251) and celibacy ($\chi^2(1, n = 400) = 0.0721$, probability = 0.788). The study concludes that student athletes of senior high schools might be vulnerable to unplanned parenthood and are at risk of STIs, including HIV. Regular health promotion campaigns on sexual risk-taking behaviors are required to help reduce the prevalence of student athletes' indulgence in risky sexual behavior patterns that can harm their health. It is essential to implement gender-specific interventions (e.g., decision-making skills) when addressing the problems of sexual behaviors among the student athletes in the region.

Keywords: anal sex; celibacy; foreplay; masturbation; oral sex; sexual fantasy; vaginal-penile sex

1. Introduction

Student athletes who engage in sports develop a higher social status than non-student athletes, thereby influencing their attitudes towards sexual relations [1]. It has also been established that there is a significant relationship between sports participation and higher indulgence in sexual behavior, with student athletes reporting more than non-student athletes [2]. However, it appears the nexus between sport participation and sexual behavior is mediated by gender. For instance, Faurie, Pontier, and Raymond [2] found that both male and female student athletes engaged in various forms of sexual behavior more than others. Miller et al. [3] observed that male athletes reported higher rates of sexual experience than their female counterparts. However, Zakaria, Adams, Ibrahim, and Iddrisu [4], in a study conducted among colleges of education students in Northern Ghana, examined

socio-cultural, physiological, cultural/customs, traditional doctrines, and gender constraint factors inhibiting female sports participation in colleges of education in the Northern Region. The study revealed that religion has an impact on sports participation in the Northern Region colleges of education.

Sport participation has been shown to be connected with lower levels of morality in sports research. For instance, previous research involving children, adolescents, and university athletes' participation in sports has been significantly related to self-reported predispositions toward lower levels of moral functioning (e.g., [5–8]). Therefore, one environment that often exposes young people to engage in sexual behavior is sports. Sport participation has consistently been linked to low morality [9]. Previous studies (e.g., [10]) show that, globally, young people, including athletes, gain a considerable level of experience in sexual activities at young ages [11]. For example, in research comprising young college or university athletes, engaging in sports has been positively connected with lower levels of moral functioning, including unsafe sexual behaviors such as choosing risky sex partners [12], engaging in casual sex [13], and inconsistent condom use [14]. Other studies have also shown that sports participation is associated with an increased number of sex partners, especially for older student athletes [1,15–17]. Thus, increasing one's likelihood of contracting sexually transmitted infections (STIs) and human immunodeficiency virus (HIV).

Given that risky sexual behaviors (e.g., having multiple partners, unprotected sex) can lead to potential negative consequences, such as academic failure and increased risk of contracting STIs and HIV [10,12,18,19], understanding sexual behavior patterns of student athletes across gender might unearth useful information for planned interventions to reduce the potential risks associated with these behaviors. Besides, sex role variations may also shape sexual behaviors in sport contexts. Already, Miller et al. [3] observed that male student athletes have had more sexual experiences than their female counterparts, with the males reporting multiple sexual partnerships and regular condom use. Faurie et al. [1] also found that both male and female adolescents in school had a higher number of sexual partners than their colleague students who were not into sports. These health-compromising behaviors by student athletes have the tendency to prematurely truncate their career as budding talents who could become professional athletes in future [20].

Although some studies have investigated sexual behavior patterns among the general adolescents' population in Northern Ghana [21,22], no study has explicitly examined gender differences in sexual behavior patterns of student athletes in the context of sports. The present study had two aims: first, it sought to investigate the prevalence of sexual behaviors, such as masturbation and anal and oral sex; second, it sought to examine gender differences in identified sexual behavior patterns among student athletes. Based on previous literature (e.g., [1,3]), it was hypothesized that males would engage more in identified sexual behaviors than females. This investigation warrants attention because adolescents who indulge in these sexual behaviors might experience sexual excitement and satisfaction. The intensely pleasurable sensations of arousal and orgasm, which are enough motivation for continuous indulgence in various patterns of sexual behaviors, need redress through evidence-based interventions [23].

2. Materials and Methods

2.1. Research Design and Participants

Using a cross-sectional descriptive survey design, a sample of 176 (44%) male and 224 (56%) female student athletes was recruited from second-cycle institutions competing at the 2019 Upper East Region inter-zonal sports championships held in Bolgatanga, Ghana through convenient sampling. At the time of data collection, the participants' age range was between 14 and 20 years (mean = 17 years; standard deviation, SD = 1.26). The selected participants were students who were officially enrolled in second-cycle institutions in their respective schools in the region at the time of the competition. These athletes represented their zonal schools in different sporting disciplines such as athletics ($N = 100$), basketball

($N = 43$), football ($N = 170$), handball ($N = 45$), and volleyball ($N = 42$). The athletes were recruited through the zonal physical education coordinators and team coaches at the games' venues.

2.2. Instrumentation

A self-structured questionnaire was the main instrument used to collect data. The items in the questionnaire were generated from some previous studies related to the current work [1,10,24,25]. A questionnaire is a method of data collection that is very effective for securing factual information about practices and conditions of which the respondents are presumed to have knowledge [26]. The questionnaire consisted of preliminary information on participants' demographics (class, age, gender, and boarding status). Other listed items on the questionnaire centered on the type(s) of sexual behavior patterns, which respondents were instructed to tick if they deemed appropriate. A specific example of items on the instrument is as follows: "Which of these sexual behaviors do you normally practice? Tick (\checkmark) as many as possible". Face, construct, and content validity were ensured by presenting the pre-test version of the questionnaire to three experienced professors in adolescent health education and promotion for their review and input to ensure that the individual item construction and whole content of the questionnaire mirrored the exact rationale of the study [27]. A pre-test was then conducted on the questionnaire using 40 student athletes from Tamale Senior High School in the Northern Region, Ghana. The instrument produced a reliability coefficient of 0.75 with the Kuder–Richardson formula 21 (KR-21), a figure that is considered satisfactory [28].

2.3. Data Collection Procedure

The Ghana Education Service Regional Directorate, Upper East Region, Ghana gave institutional approval. An initial rapport was established between the Regional Physical Education Coordinator and Regional Zonal Chairperson of the Sport Federation through thorough briefing on the purpose of the study. The student performers were recruited through their PE teachers and/or coaches and zonal PE coordinators through further assistance from the team captains. Student athletes were also briefed on the standard instructions for the completion of the questionnaire. Study participants were assured that information gathered from the survey would be strictly confidential and their anonymity (i.e., no personal identifiers) was guaranteed throughout the data collection exercise. Hence, apart from the researchers and two research assistants, no one else would have access to their data.

Due to the complex nature of the research theme, the students' seating arrangements were spaced, they were not permitted to talk among themselves, and they were forbidden to look at the responses of their peers. The questionnaire was then administered to sampled students at the main assembly hall at the athletes' camping residential facility, lasting between 20 and 30 min.

2.4. Ethical Consideration

The survey procedure adhered to the ethical standards of the sixth revision of the Declaration of Helsinki. All study participants signed a written informed consent form before the commencement of the data collection. For minors, parental consent was granted by the head teachers of competing zonal schools by signing the parental consent form.

2.5. Data Analysis

The first step of data analysis in this study was to check for accuracy, consistency, and completeness. A template was developed and used to create a data analysis matrix on the computer, as well as code responses to the items on the instrument. After coding, the data were then entered into the computer analysis matrix developed with the computer software, Statistical Package for the Social Sciences (IBM SPSS Statistics) version 23 (IBM, Armonk, New York, NY, USA). The entered data were tested for the normality rule. Since

all the questions on the instrument were closed-ended questions, the numerical scale was used to measure the responses. The items meant to answer a particular research question were analyzed using a frequency table and Chi-square analysis.

3. Results

3.1. Descriptive Statistics on the Sexual Behavior Patterns of Student Athletes

The sexual behavior patterns among respondents in senior high schools in the Upper East Region were varied, with 43% ($n = 172$) of respondents reporting that they live a celibate lifestyle, as shown in Table 1. From Table 1, 143 (36%) of the respondents indicated foreplay as the sexual behavior that they practice, with 128 (32%) students responding that they practice vaginal-penile sex. However, 19% ($n = 76$) of the students for one reason or another resort to masturbation any time they have the edge to express their sexual feelings, while anal sex and oral sex were recorded by 39 and 46 respondents, respectively (see Table 1). Furthermore, a sizeable number of 110 (28%) of the respondents engage in sexual fantasy, as shown in Table 1.

Table 1. Sexual behavior patterns of students of senior high schools in the Upper East Region, Ghana.

Sexual Behavior Patterns	Response				Total	
	Yes	%	No	%	No	%
Masturbation	76	19	324	81	400	(100)
Vaginal-penile sex	128	32	272	68	400	(100)
Anal sex	39	10	361	90	400	(100)
Oral sex	46	12	354	88	400	(100)
Foreplay	143	36	257	64	400	(100)
Sexual fantasy	110	28	290	72	400	(100)
Celibacy	172	43	228	57	400	(100)

3.2. Pearson Chi-Square Analysis on the Sexual Behavior Patterns between Male and Female Student Athletes

Examination of associations between gender and the sexual behavior pattern of the student athletes revealed some significant relationships as depicted by Table 2. Regarding gender and masturbation, a Chi-square test of independence revealed that more females than males engaged in masturbation ($\chi^2(1, n = 400) = 4.6962, Pr = 0.030$). Likewise, a Chi-square test of independence between gender and foreplay showed that more females than males practiced foreplay ($\chi^2(1, n = 400) = 4.3468, Pr = 0.037$). However, for gender and sexual fantasy, a Chi-square test of independence revealed that more males than females reported the regular practice of sexual fantasy in senior high schools in the Upper East Region ($\chi^2(1, n = 400) = 6.8477, Pr = 0.009$).

Table 2. Cross-tabulation of sexual behavior patterns between male and female student athletes of the Upper East Region, Ghana.

Sexual Behavior Practices	Male		Female		χ^2 Value	Sig Value
	No.	%	No.	%		
Masturbation	25	33	51	67	4.6962	0.03 *
Vaginal-penile sex	51	40	77	60	1.3197	0.251
Anal sex	15	38	39	62	0.538	0.463
Oral sex	20	44	26	56	0.0057	0.94
Foreplay	53	37	90	63	4.3468	0.037 *
Sexual fantasy	60	55	50	45	6.8477	0.009 *
Celibacy	77	45	95	55	0.0721	0.788

* significant at $p < 0.05$ level showing gender differences.

4. Discussion

The study investigated the prevalence of sexual behaviors such as masturbation, anal sex, and oral sex, and also examined gender differences in identified sexual behavior patterns among senior high school student athletes in the Upper East Region of Ghana. The overall results show a varied prevalence of sexual behaviors among these student athletes. Specifically, approximately 19% of the student athletes in the present study experienced masturbation, and 32% had indulged in vaginal-penile sex. Further, with low prevalence, 12% and 10% of the student athletes had practiced oral and anal sex, respectively. These findings are consistent with previous studies on a range of varied sexual experiences (e.g., masturbation, vaginal sex, multiple sexual partnership) among student athletes [17,23,29,30]. For example, Meece [30] reiterated that risky sexual behaviors, such as unprotected mouth to genital contact, early sexual activity among adolescents, having anal sex, or having a partner who practices the interchange of sex for drugs or money, expose young people or put them at risk of health compromising conditions such as sexually transmitted infection (STIs or HIV) and unsafe abortions, including unplanned pregnancies [31]. Other scholars (e.g., [23,32]) have also reported masturbation among high school and/or college students elsewhere as part of sensation seeking and a common source of orgasm. Darteh and Nnorom [33] also established evidence of the practice of vaginal-penile sex among young people aged 10–24 years in Ghana. The established practice of oral and anal sex, although low in prevalence, is consistent with other research findings (e.g., [32,34]). Doubova, Infante-Castaneda, and Perez-Cuevas [35] also observed that adolescents in Mexico reported practicing various forms of sexual behavior patterns with protection.

The conduct of these sexual behaviors could be attributed to sexual arousal interests that characterize the adolescent developmental stage, where young people often search for sexual pleasures through diverse strategies to find or attract partners (e.g., courtship and displayed behavior) and/or personal sexual interactions between individuals (e.g., foreplay and penetrative sex—anal or vaginal) [30,36,37]. A number of other characteristics could help explain the student athletes' varied prevalence in the type of sexual behaviors observed in the current study. Perhaps the constant presentation of opportunities (e.g., athletes' popularity, traveling opportunities) through engagement in a school sport may create an enabling environment or entice their peers as well as exacerbate the risk for sexual activities [38,39]. Some researchers have explained that sporting activities may play a pivotal role in offering opportunities for engaging in risk behaviors among athletes [39,40]. For instance, Jones-Palm and Palm [40] emphasized that sport engagement, notably among males through societal elevation as cult heroes, could trigger or aggravate young athletes' involvement in harmful behaviors, including risky sexual encounters [38,41,42]. Research has already proven that gay people mostly practice anal sex even though some heterosexuals also engage in it. Most adolescents practice anal sex because they derive more excitement and pleasure than vaginal-penile while others do it because of the fear of pregnancy [25]. There are also some other adolescents who practice anal sex as a substitute for vaginal-penile sex during menstruation [25]. However, the practice of anal sex, just like sexual intercourse, can lead to diseases such as HIV, human papillomavirus (HPV), anal cancer, and chlamydia if the adolescents do not use condoms [43]. These sexual experiences of young student athletes should be a matter of concern to all stakeholders in the educational sector of Ghana. This is because most adolescents who enter into sexual relations for the first time do not use protection, which leaves them vulnerable to unplanned parenthood and STIs [44,45].

It is also worth noting that 43% of the respondents live a celibate lifestyle. Similar to this observation, Awusabo-Asare, Biddlecom, Kumi-Kyereme, and Patterson [46] noted that the main reasons adolescents gave for not having sex were fear of getting pregnant, wanting to wait until marriage, fear of contracting STIs, and being too young (16%). Other research also revealed that adolescents who uphold the tenets of their religion prefer to abstain from sexual relationship until marriage because their religion was against fornication [23,47]. Given that adolescents have been universally identified as a high-risk group for being

infected with STIs [48], there is the need to educate adolescents on human sexuality in order to help them make informed choices about their sexuality.

Other findings showed that gender play a role in the engagement of student athletes' sexual behaviors (i.e., masturbation, foreplay, sexual fantasy), an observation that is consistent with previous research (e.g., [32,49]). Specifically, the study revealed that more females in senior high schools in the Upper East Region, Ghana practice masturbation and experience foreplay than their male counterparts. However, more males also experience sexual fantasy than their female colleagues. For example, Moore and Rosenthal [32] found that young girls begin to masturbate at an earlier age than boys, but fewer girls than boys admit to this practice. Unlike other sexual behaviors, the gender differences with respect to masturbation remain substantial [50]. Various explanations have been put forward for this pattern, including differences in anatomy and in sexual development [51]. Besides, boys may be more socialized to masturbate with their peers than girls [52]. Variations between the sexual behavior patterns between male and females in terms of foreplay, sexual fantasy, and erotic dreams have also been established in previous studies (e.g., [32]). The difference between boys and girls in terms of their indulgence in foreplay and erotic dreams could be that unlike girls, most boys derive much excitement and pleasure only from vaginal-penile sex [53]. Early and continuous participation in sports and physical activity may act as a proxy for increased health compromising risks, including sexual behaviors among males than females [9]. Sargent [54] noted that boys who initiate their sporting careers early and continue being physically active take more risk than the female athletes.

No significant difference was observed between boy and girl athletes in senior high schools on other sexual behaviors (e.g., vagina-penile sex, celibacy), suggesting that factors that may predispose male and female athletes to sexual intercourse are not entirely different [33].

4.1. Limitations

The present study had several limitations related to the generalization of the findings. Using a sample size of 400 respondents conveniently drawn from a target population of 4000 may have an effect on the validity of the results. However, the sample size was adequate enough for the statistical analysis. The sample used also comprised only SHS students who had diverse values, cultural experiences, and traditions that were not addressed. Open communication about sexual-related matters in the Ghana context is considered weird; hence, study participants may have either under-reported or over-reported on their sexual issues during the data collection. Therefore, the tendency of providing bias responses could be high [55].

4.2. Practical Implications

The present study investigated the sexual behavior patterns among student athletes in senior high schools, a scholarly attempt to provide useful information for the design or realignment of sexuality education and promotion programs for athletes in the schools. Observed findings suggest that sexual risk-reduction programs ought to be designed for SHS student athletes to minimize sexual risks among this cohort. The planned interventions could target sexual risk communication strategies (e.g., abstinence advocacy, persuasive communication), social support through mentor–mentee networking, and the use of peer influencers as role models. Senior high school authorities (e.g., head teachers, health promotion officers, and school health education program coordinators) and governing educational bodies such as the Ghana Education Service in the region should initiate sustainable wellbeing programs that will motivate student athletes to desist from sexual behaviors that may ruin their careers.

5. Conclusions

The findings of the study revealed that SHS student athletes in the Upper East Region practiced various forms of sexual behaviors such as celibacy, foreplay, vaginal-penile

sex, sexual fantasy, masturbation, oral sex, and anal sex. The study reported significant differences between gender and masturbation, foreplay, and sexual fantasy. Taken together, the findings suggest that some student athletes in senior high schools in the Upper East Region of Ghana who engage in unsafe sexual behavior patterns are vulnerable to unplanned parenthood through unintended pregnancy and at risk to STIs, including HIV. These findings have implications for the understanding of student athletes' interpersonal sexual behavior in the SHS and sporting contexts. Based on these findings, there is the need for Health Promotion Officers and School Health Education Program Coordinators to intensify their health promotion campaigns on sexual risk-taking behaviors to help reduce the prevalence of their indulgence in risky sexual behavior patterns that can harm their health. It is also important that institutional authorities like head teachers, coaches, and health coordinators should implement gender-specific interventions when addressing the problems of sexual behaviors among SHS student athletes in the Upper East Region of the country. Beyond regular abstinence advocacy campaigns, the Ghana Health Service and other non-governmental organizations could periodically make condoms available for free distribution to the students during sporting activities. Future studies should target other socio-cultural factors that may predispose student athletes across other geographical boundaries in the country using robust statistical methods (e.g., multilevel or multivariable regression models).

Author Contributions: M.M., O.M.Y. and K.S.A. developed the study's concept. P.A. and A.W.A. drafted the preliminary version of the manuscript. M.M. and J.E.H.J. supervised and revised the manuscript of its intellectual content. All authors proofread the manuscript and contributed intellectually to the overall development and approved the manuscript's final version for submission. All authors have read and agreed to the published version of the manuscript.

Funding: The authors received no specific financial support for the research. However, the authors sincerely thank Bielefeld University, Germany for providing financial support through the Open Access Publication Fund for the article processing charge.

Institutional Review Board Statement: The study was approved by the Ghana Education Service Regional Directorate, Upper East Region, Ghana and strictly followed the ethical guidelines of the sixth revision of the Declaration of Helsinki.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: According to the ethical guidelines of the sixth revision of the Declaration of Helsinki, public data sharing, even anonymous sharing on sensitive issues, is sometimes restricted by participants' written informed consent.

Conflicts of Interest: The authors declared no potential conflict of interest.

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