

Parenting Styles and Social Support on Adolescents' Sexual Behaviour Among Senior High Schools in Accra

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Abstract

Adolescent pregnancy in the junior and senior high schools in Ghana has become a source of concern in Ghana due to the detrimental effect. This study investigated the influence of parenting styles and social support on adolescent sexual behaviour in two senior high schools in the Ga-South Municipality of Ghana. This study employed a survey research design and data were collected from 220 adolescent students using a standard questionnaire. Pearson correlation analysis, One Way ANOVA and Pearson Correlation analysis (Process macro) were techniques employed to analyse the data. Results showed that authoritative parenting did not have a significant relationship with adolescent sexual behaviour, while authoritarian and permissive parenting styles were negatively related to sexual behaviour. Higher levels of authoritarian and permissive parenting were related with lower incidence of delayed sexual behaviour. Informational and instrumental support negatively related with sexual behaviour, while emotional support did not significantly impact adolescent sexual behaviour. The study also found a significant difference in sexual behaviour among different ethnic groups. Social support did not significantly moderate the relationship between parenting styles and sexual behaviour, except in authoritative parenting, where gender significantly moderated the relationship. Social Support: A network or system of care available to adolescent via their immediate and extended family friends, school or community. Parenting style: The process or style of raising children and providing them with protection and care in order to ensure their healthy development into adulthood. Sexual Behaviour: These are the actions that lead to reproduction and stimulation of sexual organs for satisfaction without conception among adolescent students According to the World Health Organization (WHO) in 2010, sexual behaviour involves a complex interplay of biological, psychological, social, and cultural factors that interact with and shape individuals' experiences and expression of sexuality.

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Sexual behaviour refers to the actions, attitudes, and beliefs that individuals have toward sexual activity orientation. It encompasses a broad range of behaviours, including sexual intercourse, oral sex, masturbation, and other sexual practices.

Keywords: Adolescence: A transition from dependent childhood to self-sufficient adulthood within the age span from 11 years to 20 years

1.Introduction

Sexual behaviour is influenced by a variety of factors, including biological, psychological, social, and cultural factors [1]. Biological factors such as hormones and genetics can affect sexual behaviour, while psychological factors such as attitudes, beliefs, and emotions can shape individuals' sexual experiences. Social and cultural factors has influence sexual behaviour. For example, social norms and expectations around sexual behaviour can affect individuals' attitudes and behaviours towards sex. Cultural values and beliefs regarding sexuality can also shape individuals' sexual experiences and expression [1]. Sexual behaviour can be impacted by broader societal and structural factors, such as poverty, access to healthcare, and discrimination [2].

Ghana has a population of 30.8 million [3] out of which 6.9 million are adolescents. Nearly two-thirds of the population are under the age 25 (GSS, 2021). Adolescent sexual behaviour is a growing concern in Ghana, with rates of teenage pregnancy and sexually transmitted infections (STIs) on the rise United Nation Population Fund [4]. About 769,733 girls between 12-17 years are in union (GSS, 2021). The [3] reported a total number of 109,888 teenage pregnancies in 2020. Before 1990, high moral standards, religiosity, and closely knit family systems accounted for the delay in the expression of sexual behaviours, especially the coital forms. It was almost unbelievable to assume that adolescents are sexually active, were involved in regular sexual activity, or had the tendency to openly display their sexuality without regard for the socio-cultural climate. The narrative may not be the same anymore. Now, more than ever before adolescents-both males and females are openly engaging in pre-marital sex. A cursory look at the Junior High Schools (JHS) in surrounding communities reveals this unpleasant truth may be a nationwide problem. [5].

When sexual behaviours lead to pregnancy, a lot of problems arise mainly involving sexual-reproductive, socio-economic, and mental health domains which likely lead to a ripple effect and have the tendency to create mental health challenges in the future. Pregnancy has been identified to truncate the education of many adolescents, limiting their educational or vocational opportunities, and making them poor economically in the end. Most adolescents who experienced sex early have reported disturbances in their mental health with depression, regret, and suicidal ideations being common expressions. When mental health disturbances occur in adolescents as a result of infections such as STIs, pregnancy or a break in relationships, the adolescents are unable to function socially and occupationally. Additionally, there is a cause- and effect link between poverty and mental illness [6].

This problem cannot be left unattended because the consequences will be too dire for the adolescents, their families, and the nation [7]. Adolescents form the building blocks of society. They are the future generation and

are the ones who will transmit the knowledge, skills, and values of the family to generations yet unborn hence the concern should be tackled. Research has shown that young people in Ghana may have limited knowledge about sexual health and contraception, and that social and cultural factors may hinder their ability to access and use these services effectively [8]. Parenting styles and social support play an important role in shaping sexual behaviour among students in Ghana but little is known about the specific factors that may moderate or mediate these relationships. Some scholars posit that cultural attitudes toward sexuality and gender roles may influence the effectiveness of different parenting styles and sources of social support in promoting safe sexual behaviour. Similarly, previous research has shown that parenting styles and social support can influence sexual behaviour among students. [9a]. However, there is a lack of understanding about the specific mechanisms through which these factors operate in the Ghanaian context. .

There is a gap in our understanding of how parenting styles and social support may continue to shape sexual behaviour among young adults [10]. Addressing these gaps in knowledge could inform the development of more effective counselling to promote safe sexual behaviour among students in Ghana. Thus, this study examines the relationship between parenting styles and social support on the sexual behaviour of adolescents.

Anecdotal evidence suggests that some adolescent girls, especially those reading some practical courses reported engaging in sexual relationships as a form of transaction where the male partners would provide money and other supplies for school. This has resulted in some girls getting pregnant before the completion of their courses of study. A lot more of these pregnancies could be unreported and terminated. Inappropriate form and timing of sexual behaviours have been implicated in subsequent health problems. The objectives were (1) to investigate the role of parenting style on sexual behaviour among adolescents, (2) to examine the role of social support on sexual behaviour among adolescents, (3) to investigate the impact of ethnicity on sexual behaviour among adolescents, (4) to investigate the role of gender on the relationship between parenting style, social support, and sexual behaviour and (5) to assess the relationship between parenting styles and social support as co-determinants of sexual behaviour. Understanding the factors that contribute to these negative outcomes is critical for developing effective interventions to improve sexual and reproductive health among young people in Ghana. The statement of hypothesis 1. a. There will be a significant positive relationship between authoritative parenting and sexual behaviour. b. There will be a significant negative relationship between authoritarian parenting and sexual behaviour c. There will be a significant negative relationship between permissive parenting and sexual behaviour 2. There will be a significant negative relationship between social support and sexual behaviour. 3. There will be a significant difference in sexual behaviour with respect to ethnicity. 4. Gender will moderate the relationship between authoritative parenting, authoritarian parenting, permissive parenting, emotional support, instrumental support, informational support and sexual behaviour.

A psychological theory called self-determination theory (SDT) explains how people require relatedness, competence, and autonomy. According to SDT, individuals are more likely to engage in healthy behaviours when their basic psychological needs are met. In this case, we can use SDT to explain the relationship between parenting styles, social support, and sexual behaviour among students. Parenting styles can affect an individual's sense of autonomy, competence, and relatedness, which are the basic psychological needs of SDT.

Conceptual Framework:

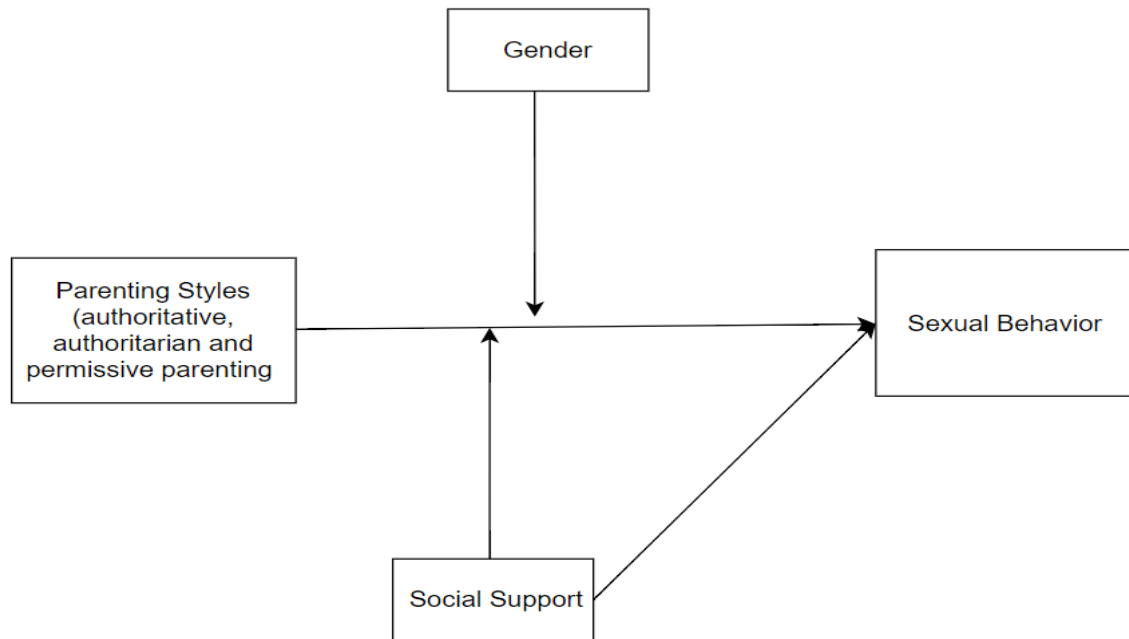


Figure 1: Hypothesized model of conceptual framework: Assumption that authoritative parenting, authoritarian parenting, permissive parenting, emotional support, instrumental support, and informational support would have a direct relationship with sexual behaviour. Additionally, assumption that demographic variables such as gender would moderate the relationship between authoritative parenting, authoritarian parenting, permissive parenting, emotional support, instrumental support, informational support, and sexual behaviour. Lastly, the study assumed that social support would moderate the relationship between authoritative parenting, authoritarian parenting, permissive parenting, and sexual behaviour.

2. Methods

Participants in the study comprised of adolescents enrolled in two second cycle institutions in Ga- South Municipality of the Greer Accra region of Ghana. The study employed a survey research design, because it draws conclusions or inferences about a population of interest at one point in time and examines a large number of variables (Wang & Cheng, 2020). This helped to determine the varying views of the participants regarding the issues under investigation concerning the relationship between parenting styles, social support, and sexual behaviour as well as accommodating different characteristics such as age, and gender. The target population was students in secondary schools. Simple random sampling was used to select participants from two schools who were pursuing various West African Senior Secondary School Certificate (WASSCE) courses from first (1st) year and third (3rd) year. The current year groups were selected because the schools run a double-track system determined by the Government of Ghana, and at the time of data collection and these particular year groups were present in school. Also, the legal age for consensual sex in Ghana is 18 years and most students are likely to be within the age bracket. The stratified random sampling technique was used to select 220

respondents. Participants were in groups (SHS 1 students and SHS 3 students) in their respective classrooms. Based on shared features or attributes amongst members, such as department or level of education, the strata are constructed. Thus, stratified sampling enables researchers to choose sample populations that accurately reflect the whole population under study. Simple random sampling was adopted used to select students when the researcher met the students in their various classrooms. In addition, the study was open to all persons irrespective of their religious and ethnic background. Two hundred and twenty (220) participants were sampled from the population to participate in the study. Minimum sample size determination ($N > 50 + 8m$ where m =number of variables) for regression-based analysis was used to determine the sample size selection. Therefore, the study with 9 variables will need a minimum sample of 122 participants. Hence, a sample size of 220 was adequate for this study. Written informed consent was sought from the participants themselves, assent from guardians where the participants were below 18 years, and consent from the participants themselves after the assent. Participants were assured of anonymity and voluntary participation. Additionally, they were informed of their right to withdraw from this study at any point during this study. Inclusion criteria for the study was students in SHS One and Three who have been admitted. The tools utilized for data gathering were four (4) standardized questionnaires namely: The Perceived Parenting Style Scale, MOS Social Support Survey, and The Adolescent Sexual Activity Index (ASAI). The Perceived Parenting Style Scale, created by [12] gauges how children perceive their parents' actions. It assesses the subject's perceived parenting style in terms of three categories, authoritarian, authoritative, and permissive. It included 30 items, each of which generated a response on a five-point Likert scale such as Strongly Agree (5), Agree (4), Neutral (3), Disagree (2) and Strongly Disagree (1). Cronbach Alpha coefficient was computed for each style and it was found that the authoritative style is having an Alpha coefficient of 0.79, authoritarian 0.81 and permissive 0.86. To score the items, each perceived parenting styles were scored separately by summing up the number of items under each parenting style. Higher scores for each parenting style indicate participants' use of such parenting style while lower scores indicate less use of such parenting style. Sample questions include; "Never find time for me to help during difficult situations", "No directions are given while doing things", "Blame me even for minor things/issues" and "I get love and care from parents. The Medical Outcomes Study Social Support Survey (MOS-SSS) is a 19-item measure of social support that was developed as part of a larger study to assess the health status of adults with chronic conditions. The MOS-SSS is designed to measure three dimensions of social support: Informational support: This dimension measures the availability of someone to listen, give advice, and provide information when needed. Example item: "Someone to give you information to help you understand a situation." Instrumental support: This dimension measures the availability of practical assistance or resources, such as help with daily chores, transportation, or financial support. Example item: "Someone to help with daily chores if you were sick." Emotional support: This dimension measures the availability of emotional expressions of caring and concern, such as hugs, kisses, or expressions of sympathy. Example item: "Someone to give you a hug or show physical affection when you were feeling down." Each item on the MOS-SSS is rated on a 5-point scale, ranging from "none of the time (1)" to "all of the time (5)." Higher scores on the MOS-SSS indicate higher levels of social support. Each dimension has Cronbach's alpha coefficients ranging from 0.88 to 0.92 for the three subscales (informational, instrumental and emotional support) (Tuttle and his colleagues 2001). The Adolescent Sexual Activity Index (ASAI) is a self-report questionnaire designed to assess sexual behaviours and attitudes among adolescents aged 14-19. The ASAI was developed by Richard Jessor and colleagues in the 1980s and is

based on the Problem Behaviour Theory, which proposes that adolescent risk behaviours are interrelated and reflect a general propensity towards problem behaviour. The ASAI consists of 13 items that assess the frequency of sexual behaviours and attitudes, such as holding hands, cuddling and sexual intercourse. Sample of items includes "Being undressed with sex organs showing", "Putting one's hands under someone else's clothing". The reliability of the ASAI has been examined in several studies, and it has been found to have good internal consistency and test-retest reliability. For example, one study of 180 adolescents found that the ASAI had a Cronbach's alpha coefficient of 0.86, indicating good internal consistency (Bingham and his colleagues 2003). Scoring of the Perceived Parenting Style Scale. In scoring the items, each perceived parenting styles were scored separately by summing up the number of items under each parenting style. Higher scores for each parenting style indicate participants' use of such parenting style while lower scores indicate less use of such parenting style. MOS Social Support Survey; each item on the MOS-SSS is rated on a 5-point scale, ranging from "none of the time (1)" to "all of the time (5)." Higher scores on the MOS-SSS indicate higher levels of social support. Each dimension has Cronbach's alpha coefficients ranging from 0.88 to 0.92 for the three subscales (informational support, instrumental support, and emotional support) (Tuttle and his colleagues 2001). The Adolescent Sexual Activity Index (ASAI); a participant ticks yes or no to each item on the scale. ASAI scores range from 0.0 to 10.0. A participant with an ASAI score of 6.0 is considered to have an imminent risk of participating in sexual activity, whereas a participant with a score of 3.0 is estimated to have a reduced risk. Those who receive a score of 8.0, however, are considered to be sexually active. There was discussion with heads of selected school on objectives and procedures for data collection. All participant information were given and issues on confidentiality, voluntary participation and anonymity of participants were addressed as pre-requisites. Participants were given time to ask questions and seek clarifications. All concerns were addressed to the satisfaction of the participants. Structured questionnaires were used to collect data.

The questionnaires contained clear instructions on how to complete them without errors. These questionnaires were administered personally by the researcher so that a good response rate will be ensured.

3. Results

The statistical package for social sciences (SPSS version 23) was used to analyse the descriptive statistics and the data collected during the study. Hypothesis 1 (a, b & c) were analysed using correlations because it determines how much each independent variable (authoritative parenting, authoritarian parenting, permissive parenting, social support) explains the unique variance in the dependent variable (sexual behaviour). Hypothesis 2 was analysed using a One Way ANOVA because it tests the difference between two or more means (Akan, Guan, Ewe, Ga-Adangbe, Mole-Dagbani, Gurma).

Hypothesis 3 and 4 were measured on regression (Process Marco) because it was to test the relationship between several predictors (between authoritative parenting, authoritarian parenting, permissive parenting, emotional support, instrumental support, and informational support) and sexual behaviour through moderators' variables (Gender and social support). A consent form was given out to participants to sign indicating their willingness to take part in the study. Privacy and confidentiality measures were observed and the essence, benefits and likely risks of partaking in the study were explained to participants in a language they understood. Descriptive

4. Analysis

Information that describes the descriptive statistics for the study variables were presented in Table 1.

Table 1: Summary of descriptive statistics for study variables.

Variables	Mean	Std. Deviation	Skewness	Kurtosis
Authoritative parenting	30.30	5.51	0.29	0.60
Authoritarian parenting	29.18	5.59	-0.06	-0.23
Permissive parenting	29.18	6.25	0.17	-0.40
Informational Support	27.37	7.96	-0.46	-0.69
Instrumental Support	22.23	7.27	-0.31	-0.83
Emotional Support	9.63	3.55	-0.40	-0.91
Sexual behaviour	15.74	2.27	1.36	1.82

From Table 1, authoritative parenting had a mean score of 30.30, indicating a relatively high level of authoritative parenting practices among the participants. The standard deviation of 5.51 suggests some variability in the responses, indicating that there may be some differences in the extent to which individuals exhibit authoritative parenting behaviours. The skewness value of 0.29 suggests a slightly positively skewed distribution, indicating that there may be a slight tendency for more participants to score higher on authoritative parenting. The kurtosis value of 0.60 indicates a moderately peaked distribution, suggesting that the scores are relatively normally distributed with some degree of peakedness. Additionally, Table 1 showed authoritarian parenting had a mean score is 29.18, indicating a slightly lower level of authoritarian parenting practices compared to authoritative parenting. The standard deviation of 5.59 suggests some variability in the responses, similar to authoritative parenting. The skewness value of -0.06 suggests a nearly symmetrical distribution, indicating that the scores are relatively evenly distributed around the mean. The kurtosis value of -0.23 indicates a relatively flat distribution, suggesting that the scores are not excessively peaked or flat. The mean score for permissive parenting is 29.18, indicating a moderate level of permissive parenting practices among the participants. The standard deviation of 6.25 suggests some variability in the responses, indicating that there is a range of scores for permissive parenting. The skewness value of 0.17 suggests a slightly positively skewed distribution, indicating that the scores are slightly skewed to the right. This means that there may be a few participants who scored higher on permissive parenting compared to the majority of participants. The kurtosis value of -0.40 indicates a relatively flat distribution, suggesting that the scores are not excessively peaked or flat. This means that the distribution of scores for permissive parenting is relatively normal, without any extreme outliers or unusual patterns. For informational support, mean score is 27.37, indicating the average level of informational support reported by the participants. The standard deviation of 7.96 suggests that there is some variability in the responses, with scores ranging from approximately 19.41 to 35.33. Skewness value of -0.46 indicates a slightly negative skew, suggesting that the distribution of scores is slightly skewed to the left. Kurtosis value of -0.69 suggests that the distribution is slightly platykurtic, meaning that it has lighter tails and is less peaked compared to a normal distribution. Instrumental support reported a mean of 22.23, indicating the average level of instrumental support reported by the participants. The standard deviation of 7.27 suggests that there is some variability in the scores, with scores ranging from approximately 14.96 to 29.50. Skewness value of -0.31 indicates a slightly negative skew, suggesting that the distribution is slightly skewed to the left. Kurtosis value of -0.83 suggests that the distribution is slightly platykurtic, meaning it has lighter tails and is less peaked

compared to a normal distribution. Emotional Support had a mean score of 9.63, indicating the average level of emotional support reported by the participants. Standard deviation of 3.55 suggests that there is some variability in the scores, with scores ranging from approximately 6.08 to 13.18. The skewness value of -0.40 indicates a slightly negative skew, suggesting that the distribution of scores is slightly skewed to the left. Kurtosis value of -0.91 suggests that the distribution is slightly platykurtic, meaning it has lighter tails and is less peaked compared to a normal distribution. Lastly, the mean score for sexual behaviour is 15.74, indicating the average level of sexual behaviour reported by the participants. The standard deviation of 2.27 suggests that the scores are relatively close to the mean, indicating a moderate level of variability in sexual behaviour among the participants. Skewness value of 1.36 indicates that the distribution is positively skewed, meaning that there is a tail on the right side of the distribution. This suggests that there may be a few participants with higher levels of sexual behaviour. Also, kurtosis value of 1.82 suggests that the distribution is leptokurtic, meaning it has heavier tails and is more peaked compared to a normal distribution. This indicates that there may be some extreme scores or outliers in the data.

5. Demographic Information

Table 2: Summary of demographics variables of the study.

Variable	Frequency	Percentage
Gender		
Male	108	49.1
Female	112	50.9
Age		
14	7	3.2
15	23	10.5
16	60	27.3
17	65	29.5
18	45	20.5
19	20	9.1
Form		
Form 1	132	60.0
Form 3	86	39.1
Religion		
Christian	177	80.5
Muslim	43	19.5
Ethnic group		
Akan	100	45.5
Guan	6	2.7
Ewe	38	17.3
Ga-Adangbe	43	19.5
Mole-Dagbani	27	12.3
Gurma	6	2.7
Living with		
Both parents	111	50.5
Father Only	14	6.4
Mother only	54	24.5
Others	41	18.6

Participants completed a brief demographic questionnaire in which they were asked to indicate their age, gender, form, religion, ethnic group, and who the adolescent is living with. Table 1 summarizes the characteristics of the study participants.

6. Hypotheses testing

Hypothesis 1a. There will be a significant positive relationship between authoritative parenting and sexual behaviour b. There will be a significant negative relationship between authoritarian parenting and sexual behaviour c. There will be a significant negative relationship between permissive parenting and sexual behaviour. The hypothesis was tested using Pearson correlation analysis, which quantified the proportion of the variance in the dependent variable of sexual behaviour that each independent variable (authoritative, authoritarian, and permissive) uniquely explained.

Table 3: Summary of the Pearson Correlation analysis between parenting styles and sexual behaviour.

	1	2	3	4
1. Sexual Behaviour	-			
2. Authoritative	.209	-		
3. Authoritarian	-.251**	.294*	-	
4. Permissive	-.317**	.390	.201**	-

The Pearson product-moment correlation coefficient was used to evaluate the relationship between sexual behaviour and parenting styles. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. No relationship was observed between sexual behaviour and authoritative parenting, $r = .21$, $n = 217$, $p > 0.5$. This means authoritative parenting was not associated with higher levels of sexual behaviour. Thus, hypothesis 1a was not supported by the study findings. There was a substantial negative relationship between sexual behaviour and authoritarian parenting, $r = -.25$, $n = 217$, $p < 0.01$, with high levels of authoritarian parenting associated with lower levels of sexual behaviour. There was a significant, negative relationship between sexual behaviour and permissive parenting, $r = -.32$, $n = 217$, $p < 0.01$, with high levels of permissive parenting associated with lower levels of sexual behaviour. Therefore, hypothesis 1b and 1c were supported by the study findings. Hypothesis 2 a. There will be a significant negative relationship between informational support and sexual behaviour. 2b. There will be a significant negative relationship between instrumental Support and sexual behaviour. 2c. There will be a significant negative relationship between emotional Support and sexual behaviour. Pearson Correlation analysis was used to test the hypothesis because it determines how much each independent variable (informational support, instrumental support and emotional support) explains the unique variance in the dependent variable's sexual behaviour.

Table 4: Summary of the Pearson Correlation analysis between social Support and sexual behaviour.

	1	2	3	4
Sexual Behaviour	-			
Informational Support	-.159*	-		
Instrumental Support	-.294**	.780**	-	
Emotional Support	.243	.803*	.821*	-

Pearson product-moment correlation coefficient was utilized in investigating the relationship between sexual behaviour and parenting styles. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. There was a significant negative relationship between sexual behaviour and informational support, $r = -.16$, $n = 217$, $p < 0.01$. High levels of informational support associated with lower levels of sexual behaviour. There was a strong, negative relationship between sexual behaviour and instrumental support, $r = -.29$, $n = 217$, $p < 0.01$, with high levels of instrumental support associated with lower levels of sexual behaviour. Therefore, hypothesis 2a and 2b were supported by the study findings. There was no relationship between sexual behaviour and emotional support, $r = .24$, $n = 217$, $p > 0.5$. This means that emotional support was not associated with sexual behaviour. Thus, hypothesis 2c was not supported by the study findings.

Hypothesis 3. There will be a significant difference in sexual behaviour with respect to ethnicity

One-way ANOVA (analysis of variance) is a statistical method for comparing the means of three or more groups to see whether there are any differences that are statistically significant. The t-test, which is used to compare means between two groups, is extended by this method. One Way ANOVA was used to test the hypothesis because it determines the differences between two or more groups.

Table 5: Analysis of Variance of Sexual Behaviour Categorized by Level of Ethnic Groups.

Ethnic groups (n=217)						
Ethnic group	M	SD	df	F	Sig	Eta²
Akan	15.38	1.80				
Guan	17.33	1.51				
Ewe	15.62	1.50				
Ga-Adangbe	15.16	2.74				
Mole-Dagbani	17.55	2.98				
Gurma	17.00	1.79				
Total Sexual Behaviour	15.75	2.27	5, 211	6.13	.000	0.1

A one-way between-group analysis of variance was conducted to explore the impact of ethnic groups on sexual behaviour. Respondents were divided into six groups according to their ethnic groups (Group 1: Akan, Group 2: Guan, Group 3: Ewe, Group 4: Ga-Adangbe, Group 5: Mole-Dagbani, Group 6: Gurma). Results indicated a statistically significant difference at the $p < .05$ level in sexual behaviour scores for the six ethnic groups: $F(5, 216) = 6.13$, $p = .000$. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. The effect size, calculated using eta squared, was 0.1. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 5 ($M = 17.56$, $SD = 2.98$) was significantly different from Group 1 ($M = 15.38$, $SD = 1.81$), Group 3 ($M = 15.63$, $SD = 1.49$) and Group 4 ($M = 15.26$, $SD = 2.72$). Therefore, hypothesis 4 was supported by the study findings.

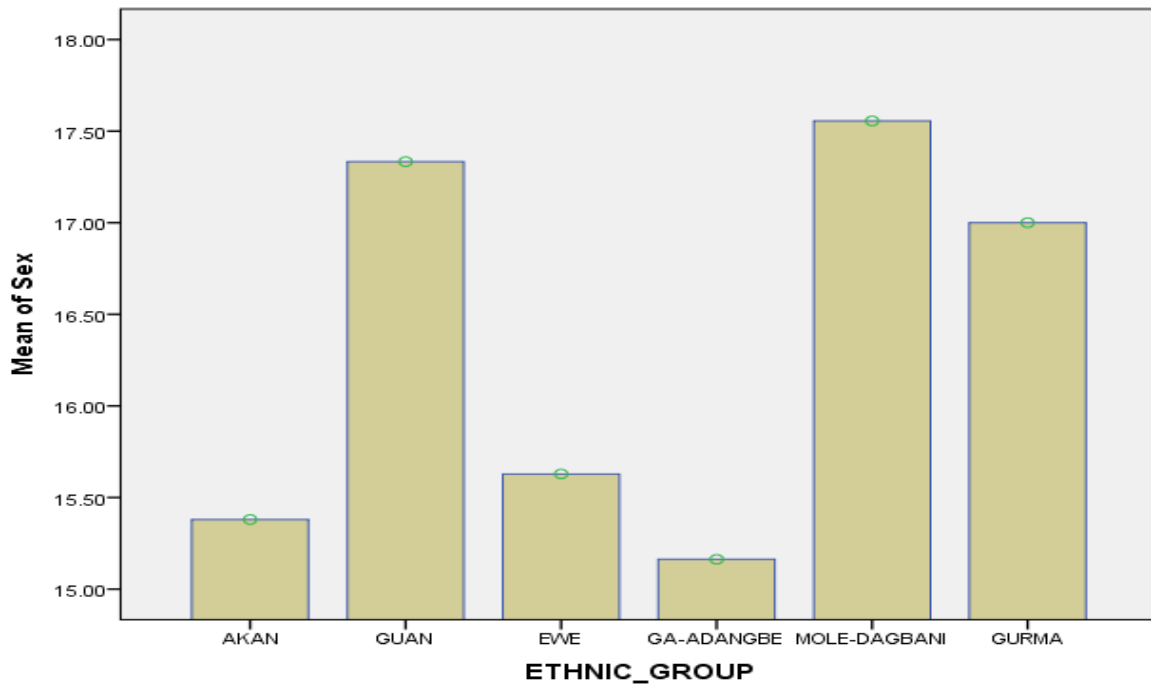


Figure 1: Ethnic differences in scores of the sexual behaviour.

Hypothesis 4: Gender will moderate the relationship between parenting styles and sexual behaviour. Moderation regression analysis (*PROCESS macro*) was used to test the hypothesis because it tests the relationship between three predictors (authoritative, authoritarian and permissive parenting style) and sexual behaviour through a moderator variable (Gender).

Table 6: Summary of moderation results on the relationship between parenting styles, gender and sexual behaviour.

Variable	B(SE B)	t	P	LLCI	ULCI
authoritative parenting	.30(.11)	2.79	.01	.09	.50
Gender	4.86(1.79)	2.71	.01	1.33	8.38
authoritative parenting * Gender	-.14(.06)	-2.25	.03	-.25	-.01
Model summary	$F(3, 217) = 7.60, p = .00, R^2 = .10$				
Authoritarian parenting	.23(.09)	2.69	.01	.06	.40
Gender	3.61(1.58)	2.28	.02	.48	6.72
Authoritarian parenting * Gender	-.09(.05)	-1.68	.09	-.20	.02
Model Summary	$F(3, 217) = 9.25, p = .00, R^2 = .12$				
Permissive parenting	-.02(.08)	-.37	.71	-.18	.13
Gender	-1.60(1.40)	-1.14	.26	-4.37	1.17
Permissive parenting * Gender	.08(.04)	1.72	.09	-.01	.18
Model Summary	$F(3, 217) = 10.97, p = .00, R^2 = .13$				

B=unstandardized coefficient; SE. B=standard error; t=t-test score; p=p value; LLCI=lower-level confidence interval; ULCI=upper-level confidence interval; F=F-test

The *PROCESS* macro moderation analysis yields findings that are comparable to those of multiple regression models. According to the results on Table 6, authoritative parenting was significantly related with sexual behaviour ($B=.30, p=.01$). A further predictor of sexual behaviour was gender ($B= 4.86, p=.01$). Interacting gender and authoritarian parenting combined to generate the moderator variable. Gender was observed to significantly moderate the relationship between authoritative parenting and sexual behaviour, according to a moderation analysis ($B= -.14, p=.03, R^2= 0.10$). The diversity in sexual behaviour increased by 0.2% as a result of this observed gender moderation. The interaction impact was not significant for females, according to a simple slope analysis of the interaction effect (Fig. 3). Males with high levels of authoritative parental experience tended to report higher incidences of sexual behaviour.

($B= 0.16, p=0.002, 95\% \text{ CI: } 0.61, 0.26$).

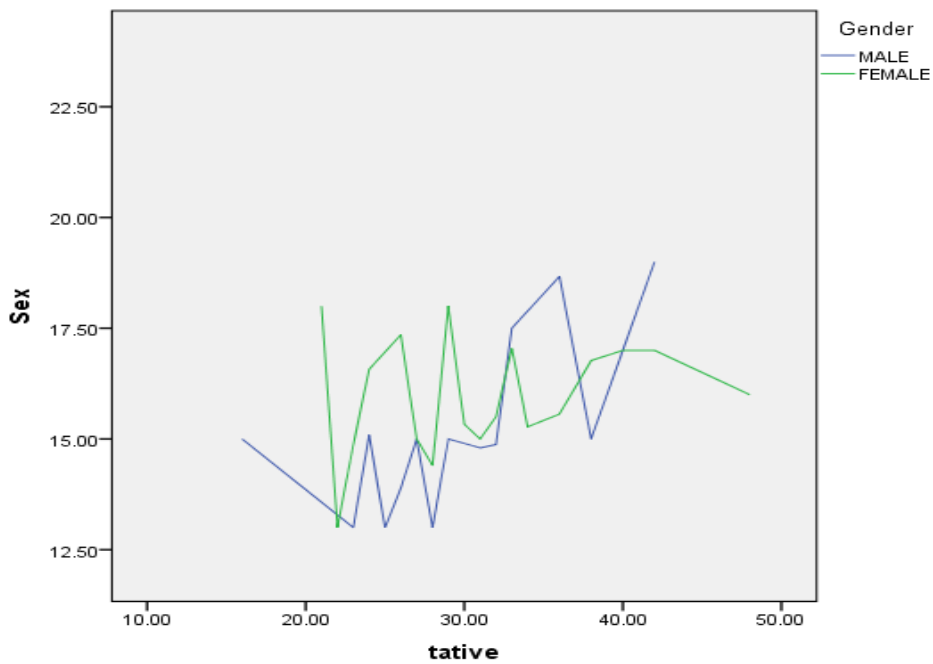


Figure 2: Simple slope depicting the effect of gender on the relationship between authoritative parenting and sexual behaviour.

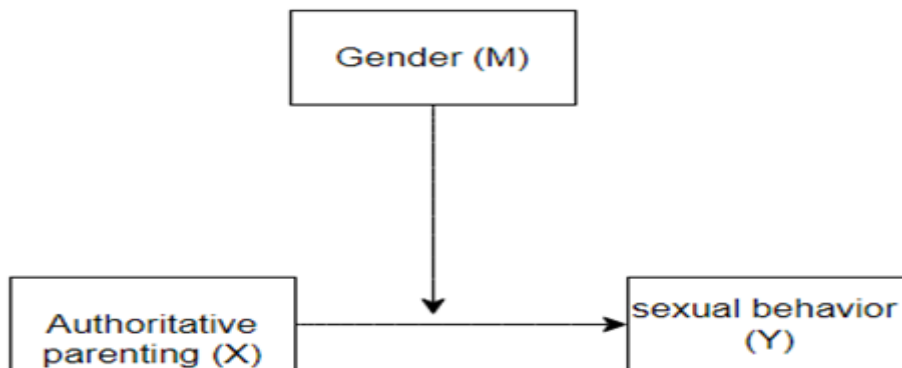


Figure 3: A Model showing the moderation of gender between authoritative parenting and sexual behaviour.

Results from the PROCESS macro moderation analysis resemble those from multiple regression models. According to the findings in Table 6 (B=.23, p=.01), authoritarian parenting was a significant predictor of sexual behaviour. Gender was also a factor in the prediction of sexual behaviour (B= 3.61, p=.02). The interaction between gender and authoritarian parenting produced the moderator variable. Gender was not observed significantly moderate the relationship between authoritarian parenting and sexual behaviour, according to a moderation study (B= -.09, p=.09, R2=0.12). There was no further variation in sexual behaviour as a result of this gender moderation.

Results from the PROCESS macro moderation analysis are shown in multiple regression fashion. According to the findings in Table 6 (B= -.02, p=.71), permissive parenting was not a reliable indicator of sexual behaviour. Additionally, sexual behaviour was not predicted by gender (B= -1.60, p=.26). The interaction between gender and permissive parenting produced the moderator variable. Gender was not observed to be a significant moderator of the relationship between permissive parenting and sexual behaviour, according to a moderation study (B=.08, p=.09, R2= 0.13). There was no further variation in sexual behaviour as a result of this gender moderation.

Hypothesis 5 Social support will moderate the relationship between parenting styles and sexual behaviour.

Moderation regression analysis (PROCESS Macro) was used to test the hypothesis because it tests the relationship between three predictors (authoritative, authoritarian and permissive parenting styles) and sexual behaviour through a moderator variable (social support).

Table 7: Summary of moderation result of relationship between parenting styles, social support and sexual behaviour.

Variable	B(SE B)	T	P	LLCI	ULCI
authoritative parenting	.03(.10)	.32	.75	-.17	.24
Social Support	.01(.05)	.27	.79	-.07	.10
authoritative parenting * Social support	.00(.00)	.32	.75	-.00	.00
Model summary	<i>F (3, 217) = 6.88, p = .00, R² = .09</i>				
Authoritarian parenting	-.06(.09)	-.57	.57	-.25	.14
Social Support	-.04(.04)	-.99	.32	-.13	.04
Authoritarian parenting * Social support	.00(.00)	1.89	.06	-.00	.00
Model Summary	<i>F (3, 217) = 14.49, p = .00, R² = .17</i>				
Permissive parenting	-.02(.08)	-.27	.79	-.18	.13
Social Support	-.03(.00)	-.93	.35	-.11	.04
Permissive parenting * Social Support	.00(.00)	1.54	.12	-.00	.00
Model Summary	<i>F (3, 217) = 11.11, p = .00, R² = .14</i>				

B=unstandardized coefficient; SE. B=standard error; t=t-test score; p=p value; LLCI=lower-level confidence interval; ULCI=upper-level confidence interval; F=F-test

Results from the PROCESS macro moderation analysis resemble those from multiple regression models.

According to findings on Table 7, ($B=.03$, $p=.75$), authoritative parenting was not a reliable indicator of sexual behaviour. Additionally, sexual behaviour was not predicted by social support ($B=.01$, $p=.79$). Interacting social support and strict parenting produced the moderator variable. The connection between authoritative parenting and sexual behaviour was not observed to be significantly moderated by social support, according to a moderation study ($B=.00$, $p=.74$, $R^2= 0.09$). No further variation in sexual behaviour was added by this strong moderation of social support.

Results from the PROCESS macro moderation analysis resemble those from multiple regression models. According to Table 7's findings ($B= -.06$, $p=.57$), authoritarian parenting was not a reliable indicator of sexual behaviour. Furthermore, sexual behaviour was not predicted by social support ($B= -.04$, $p=.32$). Social support and authoritarian parenting interacted to form the moderator variable. The connection between authoritarian parenting and sexual behaviour was not found to be significantly moderated by social support, according to a moderation study ($B=.00$, $p=.06$, $R^2= 0.17$). No further variation in sexual behaviour was added by this strong moderation of social support.

Results from the PROCESS macro moderation analysis resemble those from multiple regression models. According to the findings in Table 6 ($B= -.02$, $p=.79$), permissive parenting was not a reliable indicator of sexual behaviour. Furthermore, sexual behaviour was not predicted by social support ($B= -.03$, $p=.35$). Social support and permissive parenting interacted to form the moderator variable. The connection between permissive parenting and sexual behaviour was not found to be significantly moderated by social support, according to a moderation study ($B=.00$, $p=.12$, $R^2= 0.14$). No further variation in sexual behaviour was added by this strong moderation of social support.

7. Discussion

Parenting style and sexual behaviour; The is positive influence of authoritative parenting on sexual behaviour among the adolescents were investigated. The hypothesis was not confirmed. This means that the use or experience of authoritative parenting do not relate with incidence of sexual behaviour among adolescent. This findings disagree with study of [18] that authoritative parenting had a positive influence on promoting safer sexual practices among students. The findings were not consistent with literature that posited that the use of or experience of authoritative parenting led to a successful curbing of early sexual behaviour among adolescents [9]. Additionally, the present findings could possibly be because the adolescent behaviours are not influenced by the attitudes, and subjective norms of their parents but rather other variables best known to the adolescent. Such factors could be developmental factors, societal influence and peer influence. For the developmental factors, because adolescent may be in their period of exploration, self-discovery and hormonal changes. These factors more likely to curious and experimental which may override parental influence. Additionally, internet access, the media and cultural norms could be the one shaping adolescent behaviour than parenting styles. Also, peer relationship is becoming increasingly important for peers and this may play a significant role in shaping adolescent behaviours to that of parenting style. It was further hypothesized that authoritarian parenting would negatively influence sexual behaviour among adolescent. The hypothesis was supported by the study. This means that high experience or use of authoritarian parenting led to early sexual incidence among adolescents.

This finding was consistent with a study by [13] who indicated that authoritarian parenting was negatively associated with daughters' sexual risk communication. Again, study by [13] (2019), [19] demonstrated that authoritarian parenting is associated with sexual risk-taking behaviour among Chinese adolescent. This was so because authoritarian parenting led to lower levels of sexual self-concept [13]. Thus, an individual is more likely to explore his or her sexual self-concept by engaging in early sexual behaviours as adolescents. The study findings were supported by the self-determination theory. For self-determination theory, Adolescents with authoritarian parents may feel a strong desire to rebel against their restrictive rules and seek autonomy. This rebellion can manifest in secretive or impulsive sexual behaviours as a way to assert independence or defy parental authority. The negative influence of permissive parenting on sexual behaviour was also investigated. The study hypothesis was confirmed. This means that when an adolescent experienced a high level of permissive parenting it leads to a lower incidence of delayed sexual behaviour. The findings of [2] have been supported that during public health crisis of COVID-19 adolescent were still involved in high risk sexual behaviours This is where adolescent who experienced permissive parenting are more likely to engage in early sexual behaviour. The present study findings were consistent with studies by [15] who highlighted that permissive parenting led to higher incidence of early sexual behaviour among adolescent. The self-determination was also consistent with the negative impact that permissive parenting does have on sexual behaviour. According to the theory, the lack of clear rules and boundaries can undermine the development of autonomy and competence, leaving adolescents ill-equipped to make responsible decisions regarding their sexual behaviour. The present study aimed to investigate the negative relationship between informational support and sexual behaviour. This hypothesis was confirmed by the study. This means that when an adolescent received informational support from parents, they are more likely to experience high incidence of delayed sexual behaviour. This support the findings of [5] that sexual behaviour is an important aspect of adolescent development with implications for well-being. On the other hand, when an adolescent did not experience informational support, they are more likely to experience lower incidence of delayed sexual behaviour. This finding is consistent with studies by [9a] who demonstrated that social support had a negative influence on sexual behaviour. It was also further hypothesized that there will be a negative relationship between instrumental support and sexual behaviour. This study hypothesis was confirmed. The study result means that experiencing an instrumental support would lead to higher incidence of delayed sexual behaviours. This was consistent with studies by [16] who demonstrated that social support including instrumental support was negatively associated with sexual behaviours. Instrumental support can lead to a delayed sexual behaviour by fostering supportive relationships and connections. Again, the present study demonstrated that there was a significant difference of ethnic groups on sexual behaviour. This means that individuals in various ethnic groups showed differences in their means of scores. In addition to sexual behaviours, ethnicity has also been found to influence attitudes toward sex. The possible reason why ethnic groups showed differences on sexual behaviour could be because sexual behaviour outcomes may be influenced by structural factors, such as cultural upbringings, social norms, attitudes and beliefs, socioeconomic status, stigma and discrimination [17]. The study was to reveal if gender will moderate the relationship between authoritative parenting, authoritarian parenting, permissive parenting and sexual behaviour. The Theory of Planned Behaviour suggests that gender may moderate the relationship between authoritative parenting and sexual behaviour through its influence on subjective norms. The expectations and norms regarding sexual behaviour may differ for males and females

based on cultural and societal factors. Authoritative parenting, characterized by warmth, support, and open communication, may shape subjective norms differently for boys and girls. For instance, gender-specific expectations or societal messages about sexual behaviour may impact how authoritative parenting influences the subjective norms surrounding sexual behaviour.

Additionally, social support may not necessarily moderate the relationship between permissive parenting and sexual behaviour. Relatedness in sexual behaviour is influenced by the various factors, including the quality of parent-child relationships, trust, open communication and understanding within the authoritative parenting style. The impact of authoritative parenting on relatedness in sexual behaviour may depend more on these parent-child relationship dynamics rather than the direct moderating effect of social support. The lack of structure and guidance provided by permissive parenting may have a more dominant influence on an individual's autonomy, competence, and relatedness in sexual behaviour. While social support is valuable for overall well-being, it may face challenges in directly moderating the impact of permissive parenting on these factors. It is important to consider the specific dynamics of permissive parenting, the quality of parent-child relationships, and the broader sociocultural context when examining the influence on sexual behaviour. The study has implications for the roles of guidance and counsellors in secondary school.

8. Conclusion

The study revealed that parenting styles, specifically authoritarian and permissive parenting, were associated with different patterns of sexual behaviour among adolescents. Authoritarian parenting was found to be negatively associated with sexual behaviour, suggesting that stricter parental control and discipline may contribute to delayed sexual initiation. On the other hand, permissive parenting showed a positive association with sexual behaviour, indicating that a lack of parental rules and guidance may increase the likelihood of early sexual activity. Additionally social support may not necessarily moderate the relationship between permissive parenting and sexual behaviour [20] The lack of structure and guidance provided by permissive parenting may have a more dominant influence on an individual's autonomy, competence and relatedness in sexual behaviour. While social support is valuable for overall well-being, it may face challenges in directly moderating the impact of permissive parenting on these factors. It is important to consider the specific dynamics of permissive parenting, the quality of parent-child relationship and the broader socio-cultural context when examining the influence on sexual behaviour. Overall social support did not have a significant impact, specific types of support, such as informational and instrumental support, were found to be influential. Higher levels of informational support were associated with lower incidence of sexual behaviour, emphasizing the importance of providing adolescents with accurate and comprehensive sexual education. Similarly, higher levels of instrumental support were linked to lower sexual behaviour, underscoring the significance of practical assistance and guidance from parents and other supportive figures.

It is recommended that counsellors, practitioners and policymakers can work towards developing effective strategies to promote healthy sexual behaviours among adolescents enrolled in senior high schools. Further research can expand the scope to all regions in Ghana for generalizability.

9. Limitations

The study was limited to selected secondary school in one Ga South municipality in Ghana. The generalizability cannot be extended to the national level. In the study only questionnaire were used making data analysis quantitative. Further studies should focused in mixed method. Another limitation was that detailed and depth experiences of the relationship between parenting styles, social support and sexual behaviour would have be more captured using qualitative approach by probing further participant responses.

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References

- [1]. Tolman, D. L., & Diamond, L. M. (2013). Sexuality theory: A review, a revision and a recommendation. *APA Handbook of Sexuality and Psychology, Vol. 1: Person-Based Approaches.*, 3–27. <https://doi.org/10.1037/14193-001>.
- [2]. Lindberg, L. D., Bell, D. L., & Kantor, L. M. (2020). The Sexual and Reproductive Health of Adolescents and Young Adults During the COVID-19 Pandemic. *Perspectives on Sexual and Reproductive Health*, 52(2), 75–79. <https://doi.org/10.1363/PSRH.12151>
- [3]. Ghana Statistical Service GSS(2021).Population projections. Retrieved from <https://www.statsghana.gov.gh/statistics/population-projections/>
- [4]. UNFPA. (2013). Adolescent sexual and reproductive health in Ghana: A synthesis of research evidence. Accra: UNFPA.
- [5]. Ghana Health Service. (2019). National HIV and AIDS, STI and Reproductive Health Service Delivery Guidelines for Adolescents and Young People. Retrieved from https://www.ghanhealthservice.org/downloads/National_HIV_AIDS_STI_and_Reproductive_Health_Service_Delivery_Guidelines_for_Adolescents_and_Young_People.pdf.
- [6]._Kotoh, A. M., Amekudzie, B., Opoku-Mensah, K., Baku, E. A., & Glozah, F. N. (2022). Pregnant adolescents' lived experiences and coping strategies in peri-urban district in Southern Ghana. *BMC Public Health*, 22(1), 1-10.
- [7]. Aziato, L., Hindin, M. J., Maya, E. T., Manu, A., Amuasi, S. A., Lawerh, R. M., & Ankomah, A. (2016). Adolescents' Responses to an Unintended Pregnancy in Ghana: A Qualitative Study. *Journal of Pediatric and Adolescent Gynecology*, 29(6), 653–658. <https://doi.org/10.1016/j.jpag.2016.06.005>.
- [8]. Adjei, G. O., Dake, F. A., & Abubakari, A. (2019). Contraceptive use among female university students in Ghana. *BMC Women's Health*, 19(1), 1-7.

- [9a]. Agyemang, S. A., & Maticka-Tyndale, E. (2019). Social support and sexual behaviours of Young people in Ghana. *Sexual & Reproductive Healthcare*, 19, 79-87.
- [9b]. Agyemang, S., & Maticka-Tyndale, E. (2019). "We don't use condoms because we don't want our friends to laugh at us": Exploring the influence of peers on condom use among Ghanaian female university students. *Culture, Health & Sexuality*, 21(4), 395-409.
- [10]. Adeokun, L. A., & Adebayo, S. O. (2019). Perceived parenting styles as predictors of sexual behaviour among college students in Nigeria. *Psychology, Health & Medicine*, 24(6), 743-751.
- [11]. Wang, X. & Cheng, Z. (2020) Cross-sectional studies: Strength, weakness and recommendations. *Chest Journal*, 158, S65-S71.
- [12]. Divya, T. V, & Manikandan, K. (2013). Perceived Parenting Style Scale. *Department of Psychology, University of Calicut, Kerala, India.*
https://www.researchgate.net/publication/339712217_Parenting_Style_Scale
- [13] Zhang, N., Shen, S. L., Zhou, A. N., & Chen, J. (2019). A brief report on the March 21, 2019 explosions at a chemical factory in Xiangshui, China. *Process Safety Progress*, 38(2).
<https://doi.org/10.1002/PRS.12060>.
- [14]. Baumrind, D. (2012). Authoritative parenting revisited: History and current status. *Authoritative Parenting: Synthesizing Nurture and Discipline for Optimal Child Development.*, 11–34.
<https://doi.org/10.1037/13948-002>
- [15]. Tarkang, E. E., & Zotor, F. B. (2017). Access to sexual and reproductive health services: Young people's health concerns and needs in the rural communities of the South West Region, Cameroon. *BMC Health Services Research*, 17(1), 1-10.
- [16]. Mollaei, B., Ahmadi, K., & Yousefi, E. (2023). Risk and Protective Factors of High-risk Sexual Behaviours in Young People: A Systematic Review. In *International Journal of High Risk Behaviours and Addiction* (Vol. 12, Issue 1). Brieflands. <https://doi.org/10.5812/ijhrba-131119>
- [17]. Fosu, R., & Amponsah, J. E. (2021). Beliefs and attitudes of Ghanaian young adults about male sexual entitlement and its effects on sexual behaviour. *African Journal of Reproductive Health*, 25(1), 1-12.,
- [18]. Cherie, A. & Berhanie, Y. (2015). Assessment of parenting practices and styles and adolescent Behaviour among high school adolescents in Addis Ababa, Ethiopia. *J AIDS Clinical Research* 6 (2)
Doi:10.4172/2155-6113.1000424.
- [19]. Baumrind, D. (2013), Authoritative parenting revisited: History and current status In R. E. Larzelere, A S. Morris, & Harrist, A. W. (Eds.) *Authoritative parenting: Synthesizing Nurturing and*

discipline for optional child development (11 – 34) American Psychological Association.
<https://doi.org/101037/13948-002>.

- [20]. Yeko, J. (2020). Social support, parenting styles and risky sexual behaviours among Adolescents. (Dissertation, Makerere University) <https://hdl.handle.net/20.500.12281/9167>