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# Sexual and reproductive health communication between parents and adolescents: the case of Wa West District of the Upper West Region, Ghana

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**Abstract**

***Background:*** Sexual and reproductive health (SRH) communication is an important conversation challenge between parents and their adolescent children. Studies have established that parent-adolescent communication about sex can greatly reduce adolescents' risky sexual behaviour. Factors such as attitude, religious beliefs, perceived behavioural control, and behavioural intentions have been reported to affect parent-adolescent communication.

***Objective:*** This study assessed the communication practices between adolescents and their parents in the Wa West District in the Upper West Region of Ghana and factors that may be associated with this communication process.

***Methods:*** A community-based cross-sectional study design was employed using a four-stage sampling technique. A total of 420 parents with adolescents aged 10 to 19 years were recruited to answer structured questions using Somers and Canivez's sexual communication tool. The tool yielded sexual communication mean scores. The analysis of variance test was used to compare mean scores. Binary logistic regression was used to determine possible factors affecting SRH communications. All analyses were done using IBM SPSS Statistics (Version 25).

***Results:*** The study found that most of the respondents had good communication on sexual and reproductive health with their adolescents. There was a significant difference between Dagaabas and the other ethnic groups ($p$ = 0.025, 95% confidence interval (95% CI) = 0.05 - 1.25), between public sector employees and farmers ($p$ = 0.008, 95% CI = 0.07 - 0.90), and between Christians and Muslims ($p$ = 0.032, 95% CI = 0.01 - 0.38) on SRH communication.

***Conclusion:*** Though parents' communication with adolescents was good, health stakeholders need to empower parents with information on sexual and reproductive health to ensure effective counselling of their adolescents.

**Keywords:** Reproductive health, adolescent sexual health, communication, parents

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## INTRODUCTION

Many adolescents engage in sexual activities at early ages of their lives, making sexual and reproductive health (SRH) communication very critical for adolescents [1-3]. Parent-adolescent communication on SRH is effective at reducing risky adolescent sexual behaviours. It also has the potential for a delayed adolescent sexual debut, increased contraception use and abstinence [4-9], and the prevention of unwanted pregnancies and sexually transmitted infections [10,11]. Coincidently, young people prefer information on sexuality and reproductive health from their parents and family members [12-14]. Globally, there is inadequate communication between parents and their adolescents on SRH [11,15-17]. Parents find it difficult to discuss sexual and reproductive topics such as sex, childbirth, condom use, infertility, and STIs. This is often because of limited knowledge, cultural beliefs, and fear of being embarrassed or judged as unfaithful [16]. Whenever communication occurs, it tends to be limited in the number of topics or occurrences [11],

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Table 1: Sampling process

| Community | Population | Proportion | Households | Sample distribution | Sampling interval |
|---|---|---|---|---|---|
| Eggu | 1766 | 14 | 177 | 57 | 3 |
| Buli | 1,587 | 12 | 159 | 52 | 3 |
| Vieri | 2761 | 21 | 276 | 90 | 3 |
| Nyoli | 3,005 | 23 | 301 | 98 | 3 |
| Poyentanga | 3,798 | 29 | 380 | 123 | 3 |
| Total | 12917 | 100 | 1292 | 420 | 3 |

the developmental stage of the adolescent, sex and location [15,17]. In sub-Saharan Africa, more than half of adolescents experience early sexual encounters [1,18-20]. A little over one-third of adolescents communicate with their parents about their SRH [3,13,19,21]. Parents have been found to have negative self-efficacy and positive subjective norms toward sexual communication with their adolescents [22]. Also, gender, social conventions or practices and prohibitions affect SRH communication between parents and their adolescents, creating censorship, and making adolescents unable to discuss, ask questions and express themselves in critical matters related to SRH issues [4]. The Ghana Health Service updated its policy and strategy for adolescent reproductive services to ensure that 90% of adolescents have access to comprehensive information on sexual and reproductive issues by the end of 2020. Since then, no new target has been set. Manu and colleagues in 2015 [12] conducted a study in southern Ghana which found that 82.3% of parents communicate with their adolescents about SRH.

## MATERIALS AND METHODS

### Study design and sites

This was a community-based cross-sectional study. Parents recruited were aged between 25 and 70 years old and caring for adolescents (10 to 19 years) at the time of the study. The parent was included if they were from the Wa West District, residing in selected communities, mentally sound, able to answer the questions on the questionnaire, stayed in the community with the adolescent child for the past year, and consented to the study. We excluded any parent who did not meet the above criteria.

### Research settings

We conducted the study in the Wa West District of the Upper West Region of Ghana. The district has a total population of 81,348, the majority (50.5%) of whom are females and adolescents (26.8%) [25]. A significant proportion of the population in the six healthcare sub-districts are peasant farmers (80%) and petty traders [26].

### Sampling process and procedure

A total of 420 respondents were selected randomly in four stages. The study team first chose six healthcare sub-districts, and then randomly selected three of them (Ponyentanga, Lassia, and Eggu) through a process of balloting. All communities in the three selected sub-districts were assessed for the prevalence of teenage pregnancy using the district data to select those with significant proportions. In all, five communities were seen to have significant prevalence. The study team listed the five communities and their populations to identify their effects on the sample size (Table 1). The study team identified the total number of households per community and used that to determine the sampling interval for each community. As an illustration, Eggu was found to have a population of 1,766 out of a total population of 12,917 in the selected sub-districts. This means that it represents 14% of the total population (n = 1766/12917), and therefore has a sample allocation of 57 individuals (14% of the total sample size of 420). But the community has an estimated household number of 177 [25]. The study team created a sampling frame by dividing the total number of households in the selected sub-districts by the sample allocation for each sub-district (177 households divided by a sample allocation of 57 individuals) to get an interval of three. The sampling details are provided in Table 1. Respondents were then selected using the sample interval in each community until the target proportion was achieved. The study team selected a starting point in each community, typically the chief palace, and then every third household was selected. If the selected household had a parent with an adolescent, they were interviewed if they provided their consent. In cases where a household had multiple parents, the study team used balloting to select only one parent for the interview.

### Data collection procedures

Data was collected using a structured questionnaire. The data collected included the demographic variables of the parents, such as age, sex, level of formal education, marital status, ethnic group, occupation, religious affiliation and level of income. The Somers and Canivez [27] parent-adolescent SRH communication tool was also used, which had a five-point scale from 1 to 5, "1" being the lowest and "5" being the highest. The respondents were interviewed at private locations by reading and translating questions into Dagaare, Briffor, or Waale languages based on whichever language the respondent was comfortable with for those who could not read and write English. For respondents who could read and write, the structured questionnaires were handed over to them after consenting to the study for self-reporting. A trained research assistant stood by for clarification on questions that respondents did not understand. The filled questionnaires were checked for consistency and completeness before letting the respondent leave.

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Table 2: socio-demographic data

| Variables | Frequency | Percentage |
|---|---|---|
| Age | | |
| 25-40 | 182 | 43.3 |
| 41-60 | 204 | 48.6 |
| ≥ 60 | 34 | 8.1 |
| Gender | | |
| Male | 165 | 39.3 |
| Female | 255 | 60.7 |
| Educational level | | |
| No formal education | 285 | 67.9 |
| Basic education | 75 | 17.9 |
| Secondary education | 35 | 8.3 |
| Tertiary | 24 | 5.7 |
| Higher education (post-graduate) | 1 | 0.2 |
| Marital status | | |
| Single/never married | 8 | 2 |
| Married | 370 | 88 |
| Divorce/separated/widow | 42 | 10 |
| Ethnic groups | | |
| Dagaaba | 228 | 54.3 |
| Waale | 119 | 28.3 |
| Breffo | 63 | 15.0 |
| Others | 10 | 2.4 |
| Occupation | | |
| Unemployed | 6 | 1.4 |
| Farmer | 304 | 72.4 |
| Trader | 71 | 16.9 |
| Artisan | 3 | 0.7 |
| Public sector | 29 | 6.9 |
| Private sector | 4 | 1.0 |
| Others | 3 | 0.7 |
| Religious affiliation | | |
| Christian | 216 | 51.4 |
| Muslim | 142 | 33.8 |
| Traditional | 61 | 14.5 |
| Others | 1 | 0.2 |
| Income level (Gh₵) | | |
| 1-500.0 | 372 | 88.6 |
| 501- 1000.0 | 39 | 9.3 |
| ≥ 1001 | 9 | 2.1 |

### Data analysis

Data were cleaned, coded and entered into IBM SPSS Statistics for Windows, Version 25.0 for analysis. A descriptive summary was done and reported as frequencies and proportions in tables. An analysis of variance (ANOVA) test was used to compare means. Binary logistic regression analysis was used to determine the predictors of sexual health communication, setting a significant level at an alpha of 0.05. Mean scores were calculated and used to dichotomise communication levels into good and poor. A mean score below 2.50 was classified as poor communication, while scores above it were classified as good communication. The Cronbach's alpha coefficient of the tool in this study was 0.92.

## RESULTS

### Demographic characteristics of participants

The study respondents were between 25 and 70 years old, with a mean age ± standard deviation of 44.0 ± 10.7 years. A majority of the respondents were female (60.7%, n=255), and most had no formal education (67.9%, n=285) and were married (88%, n=370). More than half (54.3%, n = 228) of the respondents were from the 'Dagaaba' ethnicity. Participants were mainly farmers (72.4%, n = 304) and Christians (51.4%, n = 214). Regarding income level, the majority of respondents (88.6%, n = 372) reported earning between Gh₵ 1.0 - 500.0 per month. Table 2 shows the details of the sociodemographic features of the study respondents.

### Sexual and reproductive health communication

A total of 67.9% (n = 285) of parents had good communication with their adolescents on SRH, the majority (60%, n = 171) of whom were females. Results showed that respondents with tertiary education (79.2%) had good communication on adolescent SRH compared to others. Premarital sexual intercourse (40.2%), consequences of teenage pregnancy (38.2%), and HIV/AIDS (36.2%) were the topics discussed mainly with adolescents. However, the majority of the respondents never discussed masturbation (89%, n = 374), petting (88.1%, n = 370) and homosexuality (85.5%, n = 359) with their adolescents. Details of the individual topics discussed are in Table 3. The ANOVA test was conducted to determine significant demographic variables associated with parent-adolescent communication on SRH. Parents' education, ethnicity, occupation and religious affiliations were significantly associated with SRH communication. A post hoc comparison using the Bonferroni correction on the significant demographic variables found that parents with tertiary education had a statistically higher mean score on SRH communication compared to parents with no education ($p < 0.001$) or parents with basic education ($p = 0.007$) (Table 4). The Dagaaba ethnic group scored significantly higher in communication compared to the other tribes ($p = 0.025$). Compared to farmers, public sector employees had a significantly higher mean score on adolescent SRH communication. With regards to religious affiliation, Christians demonstrated a significantly high means score of communication for adolescent SRH compared to Muslims.

### Predictors of adolescent SRH communication

A logistic regression analysis was conducted to investigate whether respondents' sociodemographic characteristics (sex, level of formal education, marital status, occupation, religious affiliation and income level) could significantly predict parents' communication with their adolescents. The model containing all predictors was statistically significant ($p = 0.05$), indicating that the model was able to distinguish between parents with good communication and those with poor communication of SRH. The model explained between 8.9% (Cox and Snell R square) and 12.5% (Negekerke R square) of the variance in SRH communication and correctly classified 68.5% of cases. Only three of the independent variables made significant unique contributions to the model (Muslim, income level of Gh₵ 1 - 500.0, and income level above Gh₵ 1001.0). For

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instance, parents with an income level of above Gh₵ 1001.0 were 17.8 times more likely to have positive communication with the adolescent on SRH (Table 5). Muslims were 2.0 times more likely to have positive communication with their adolescents on SRH.

## DISCUSSION

The study investigated the communication between parents and their adolescents on SRH in the Wa West District using the sexual communication scale in the domain of domestic communication [28]. The study found two-thirds of parents discussed SRH topics with their adolescents. This level of communication at home is deemed satisfactory, as evidenced by several studies (12,29,30). However, it contradicts the findings of some other studies (31, 32). The favourable factors contributing to the high level of parental involvement in adolescent SRH education may be attributed to the increasing public awareness of the importance of parental involvement and the rising number

Table 3: Sexual and Reproductive Health Communication

| Sexual and reproductive communication items (n = 420) | Number (%) | | |
|---|---|---|---|
| | Never | A few times | A lot of the time |
| Sexual reproductive system (“where babies come from”) | 230(54.7) | 132(31.4) | 58(13.8) |
| The father’s part in conception (“getting pregnant”) | 219(52.2) | 144(34.3) | 57(13.5) |
| Menstruation (“periods”) | 164 (39) | 131(31.2) | 125(29.7) |
| Nocturnal emissions (“wet dreams”) | 326(76.9) | 66(15.7) | 31(7.4) |
| Masturbation | 374(89) | 36(8.6) | 10(2.4) |
| Dating relationships | 223(53.1) | 147(35) | 50(11.9) |
| Petting (“feeling up” or caressing) | 370(88.1) | 31(7.4) | 19(4.6) |
| Sexual intercourse | 226(53.8) | 151(36) | 43(10.2) |
| Birth control in general | 231(55.5) | 81(19.3) | 106(25.2) |
| Whether you are using birth control | 255(60.7) | 67(16) | 98(23.3) |
| Consequences of teen pregnancy (other than AIDS) | 106(24) | 157(37.4) | 162(38.2) |
| Sexually transmitted infections | 131(31.2) | 145(34.5) | 144(34.3) |
| Love and/or marriage | 197(46.9) | 143(34) | 80(19.1) |
| Whether pre-marital sex is right or wrong | 123(29.3) | 128(30.5) | 169(40.2) |
| Abortion and related legal issues | 176(41.9) | 117(27.9) | 127(30.2) |
| Prostitution | 205(48.8) | 80(19) | 135(32.2) |
| Homosexuality | 359(85.5) | 45(10.7) | 16(3.8) |
| HIV/AIDS | 122(29) | 146(34.8) | 152(36.2) |
| Sexual abuse | 186(44.3) | 178(42.4) | 56(13.3) |
| Rape | 196(46.7) | 139(33.1) | 85(20.2) |

Table 4: Significant demographic factors associated with adolescent sexual reproductive health communication with post hoc analysis

| Factor | (I) | (J) | Mean diff (I-J) | SE | *p* value | 95% CI | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower | Upper |
| Level of education | Tertiary education | No formal education | 0.576* | 0.145 | 0.001 | 0.19 | 0.96 |
| | Tertiary education | Basic education | 0.527* | 0.161 | 0.007 | 0.10 | 0.95 |
| | Tertiary education | Secondary education | 0.341 | 0.182 | 0.373 | -0.14 | 0.82 |
| Ethnicity | Dagaaba | Other tribes | 0.650* | 0.226 | 0.025 | 0.05 | 1.25 |
| | Dagaaba | Waale | 0.192 | 0.079 | 0.094 | -0.02 | 0.40 |
| | Dagaaba | Briffor | 0.226 | 0.100 | 0.142 | -0.04 | 0.49 |
| Occupation | Public sector employees | Unemployed | 0.241 | 0.313 | 1.000 | -0.72 | 1.20 |
| | Public sector employees | Farmers | 0.485* | 0.136 | 0.008 | 0.07 | 0.90 |
| | Public sector employees | Trader | 0.452 | 0.154 | 0. 074 | -0.02 | 0.92 |
| | Public sector employees | Artisan | 1.208 | 0.424 | 0.096 | -0.09 | 2.50 |
| | Public sector employees | Private sector employees | 0.166 | 0.373 | 1.000 | -0.97 | 1.31 |
| | Public sector employees | Other occupations | 0.042 | 0.424 | 1.000 | -1.34 | 1.25 |
| Religious affiliation | Christians | Muslims | 0.197* | 0.076 | 0.032 | 0.01 | 0.38 |
| | Christian | Traditional | 0.195 | 0.102 | 0.175 | -0.05 | 0.44 |

*diif, difference, CI, confidence interval

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Table 1: Table 5: Results of logistics regression

| Variables in the equation | Exp (B) OR | 95% CI Lower | Upper | *p* value |
|---|---|---|---|---|
| Gender | | | | |
| Male (ref) | | | | |
| Female | 1.103 | 0.678 | 1.794 | 0.694 |
| Education | | | | |
| No formal Education (ref) | | | | 0.713 |
| Basic education | 1.423 | 0.190 | 10.680 | 0.731 |
| Secondary education | 1.167 | 0.152 | 8.963 | 0.882 |
| Tertiary education | 2.046 | 0.271 | 15.420 | 0.487 |
| Marital ststus | | | | |
| Single (never married) (ref) | | | | 0.391 |
| Married | 0.906 | 0.161 | 5.094 | 0.911 |
| Divorced/separated/widow | 1.546 | 0.770 | 3.106 | 0.221 |
| Ethnic group | | | | |
| Dagaabas (ref) | | | | 0.083 |
| Waales | 4.091 | 0.987 | 16.961 | 0.052 |
| Briffors | 2.257 | 0.577 | 8.831 | 0.242 |
| Other ethnic groups | 2.491 | 0.548 | 11.324 | 0.237 |
| Employment | | | | |
| unemployed (ref) | | | | 0.543 |
| Farmer | 0.764 | 0.025 | 23.242 | 0.877 |
| Trader | 0.633 | 0.031 | 12.716 | 0.765 |
| Artisan | 0.459 | 0.022 | 9.371 | 0.613 |
| Public sector employees | 0.084 | 0.002 | 4.168 | 0.214 |
| Private sector employees | 1.936 | 0.084 | 44.766 | 0.680 |
| Other employees | 3338.9 | 0.000 | . | 0.999 |
| Religion | | | | |
| Christian | | | | 0.063 |
| Muslim (ref) | 2.019 | 1.029 | 3.962 | 0.041 |
| Traditional | 1.233 | 0.529 | 2.877 | 0.627 |
| Income | | | | |
| 1-500 (ref) | | | | 0.008 |
| 501-1000 | 6.231 | 0.957 | 40.579 | 0.056 |
| ≥1001 | 17.757 | 2.592 | 121.64 | 0.003 |

Dependent variable: communication on sexual and reproductive health; Exp (B), exponential value of Beta coeeficient; OR, odds ratio; CI, confidence interval

of teenage pregnancies in the district. However, this positive trend is now facing a potential threat. According to a previous study conducted by Manu and colleagues in 2015, the proportion of parents discussing SRH topics with their adolescents was as high as 82.3%, which is significantly higher than the current study's findings of just over 60%. This declining trend is also supported by the findings of Seif et al. and Shin et al. (31, 32) in their study, which reported that the majority (59.3%) of parents or caregivers did not engage in discussions about sexual and reproductive issues with their adolescents. This current study specifically found that communication between parents and their adolescents centred on the consequences of teenage pregnancy, HIV/AIDS and premarital sexual intercourse. About three-quarters (75.6%) of the parents discussed the consequences of teenage pregnancy with their adolescents. This could be seen as a direct intervention to the surge in teenage pregnancies in the study area, ranging from 15% in 2015 to 17.5% in 2019 [24]. This is consistent with the findings of many other studies, which found some communication between parents and their adolescents [33]. The high rate of parental communication in the current study could be due to the problem of teenage pregnancy. Whereas this current study interviewed only parents, many of the earlier studies used either the adolescents or both parents and their adolescents. On HIV/AIDS, our study found communication in about 71% of study participants. This finding corroborates the findings of other previous studies where over 60% of adolescents and parents communicated about HIV/AIDS [19,33,34]. The evidence of unprotected sexual intercourse leading to pregnancy could be an important reason. Again, on premarital sexual intercourse, this study found over a quarter of the respondents discussed it with their wards.

The current study aligns with the results of previous studies conducted by Tefera and Niguss [19], Neme and Dereje [35], and Yohannes [13], which found that 23%, 29%, and 44.7% of the study participants, respectively, engaged in discussions about premarital sexual intercourse. The lower proportions in the earlier studies may be explained by the study population disparities. In contrast to previous studies that investigated how adolescents communicate with their parents, the focus of the current study was on how parents communicate with their adolescents about premarital sexual intercourse. It is reasonable to assume that parents would feel more comfortable initiating such conversations if previous studies found that these discussions were more common. Whereas more than half of the respondents in the current study had no discussions with their adolescents on the menstrual cycle, contraception and birth control, sexual harassment, sexual violence or rape, and abortion and related legal issues, the reverse is true in the case of some earlier studies [3,21,32,34]. The factors that seem to influence SRH communication in our study population and earlier ones include the experiences of the respondents, access to information and the level of connectedness of parents. For instance, in the current study, respondents stayed with their adolescents for at least a year, but that was not the case in earlier studies. The current study, however, affirms the findings of Neme and Dereje [35], Shin et al. [32], and Yowhanes et al. [34] that parents and adolescents discussed less dating relationships, sexual intercourse, the reproductive system, and contraceptive or birth control topics.

The major factors that influenced SRH communications in this study were ethnicity, which was negatively correlated, but parents' level of education was a positive predictor. The level of education of parents was found to be a significant predictor of communication with adolescents on SRH topics in the current study. This finding aligns with the results of a previous study conducted by Shiferaw et al. [36], which found that a higher literacy level of parents led to better communication with their adolescents on SRH. In

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contrast to previous studies, the majority of the participants in the current study (67.9%) reported having no formal education and belonged to the low-income group. It could be explained that these groups of parents have more time to engage their wards in SRH communication. Religious affiliation of parents showed that Muslims were less likely (odds ratio = 0.061, 95% confidence interval = 0.159 – 0.077, $p = 0.036$) to communicate with their adolescents on SRH. This finding is consistent with Dessie, Berhane [21], which showed that some religious affiliation of respondents was associated with poor communication. It could be that religious parents tend to shy away from SRH communication or associate SRH with profanity. There was a significant reduction in the likelihood of religious people effectively communicating with their adolescents on sexual health issues since they believe the introduction would rather expose them to their sexuality, thereby attempting to experiment with it. Most religious people advocate for abstinence until marriage. This finding is consistent with Dessie, Berhane [21] that respondents' religious affiliation was associated with poor sexual communication. It could be that religious parents tend to shy away from SRH communication or associate SRH with perversion.

### Conclusion

This study found a high communication relationship between parents and their adolescents on SRH issues in the Wa West District of the Upper West Region. These parents were mainly middle-aged (41 to 60 years old), females, married, farmers, and Christians from the Dagaaba ethnic group earning low or no income. The educational level, ethnicity, and religion of parents were important predictors of sexual health communication with their adolescents. The high level of teenage pregnancy in the communities might have alarmed the parents to engage more with teenagers on sexual health issues. A further ethnographic qualitative study among low-income Dagaabas would add more insights to this field of study. Whereas the data on SRH communication in Ghana came mostly from the southern part of the country, this study focused on the northern section of Ghana and provided data on other parts of the country.

## DECLARATIONS

### Ethical considerations

Ethical clearance was obtained from the Noguchi Memorial Institute for Medical Research institutional review board (NMIMR-IRB) CPN 018/19-20, University of Ghana. We also obtained permission at the field from the District Chief Executives (DCE) and the community chiefs. The study objectives and procedures were explained to all study respondents, after which written consent was obtained.

### Consent to publish.

All authors agreed to the content of the final paper.

### Funding

This research was conducted with personal funds, with no external sponsorship or financial support.

### Competing Interests

No potential conflict of interest was reported by the authors.

### Author contributions

RA contributed to the study design, analyses of data, and drafting/revision of the manuscript. All authors contributed to the analyses of data, drafting and revision of the manuscript.

### Acknowledgements

None

### Availability of data

Data is available upon request to the corresponding author.

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