

***Communicating with siblings about sexual and reproductive health:
Likelihood, gendered patterns, and learning mechanisms among adolescents***

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Background: Siblings can play a significant role in the lives of children and adolescents, serving as agents of socialization and comparative references (e.g. Bandura, 1977; Konreich et al., 2003). The majority of existing studies, however, have used European and European-American samples, neglecting sibling relationships and communication in non-Western and/or African contexts. This study fills research gaps by focusing on adolescents in Ghana (where survey data indicate a mean number of 3.3 siblings and 1.1 older siblings) and demonstrates that adolescents generally receive similar health information from their siblings as they do from other sources (e.g. parents, school, friends, and the media). The study also reveals two main points: (1) older siblings advocate sexual abstinence and early pregnancy prevention and (2) siblings' personal experiences can offer adolescents unique perspectives and learning opportunities. Overall, the findings of this study call for considering siblings an important target group in health-related interventions.

Theoretical framework: Using social learning theory and differentiation theory as frameworks, the study hones in on the contributions of siblings. The learning processes implied in social learning theory are often cited as reasons why siblings are likely to share similar attitudes, interests, and behaviors (see Bandura 1969, 1977). Sibling differentiation, on the other hand, submits that siblings establish differences in behavior and personality and occupy different niches to reduce competition for parental investments (see Dunn 1990, 1991; Brody, 1994; Whiteman 2007, 2010).

Hypotheses: I hypothesized that older (15-19 years), female, out-of-school, and rural adolescents would be more likely to communicate with siblings about sex-related matters and more likely to discuss their interactions with siblings. Hypotheses are detailed in the paper.

Data and methods: Data for this study come from three complementary sources collected in Ghana as part of a four-country project assessing the sexual and reproductive health of 12-19 year olds in sub-Saharan Africa. The mixed methods approach used in this study characterizes communication between adolescents and their siblings from multiple angles: a survey question regarding general communication about sex-related matters to determine the likelihood and patterns of sibling communication among a nationally representative sample of 4430 adolescents; 16 focus group discussions (FGDs) and 102 in-depth interviews (IDIs) – in which adolescents describe their sources of information about puberty, pregnancy and HIV/AIDS prevention, their role models, as well as their experiences with romantic/sexual relationships – to decipher the content of communication as well as learning mechanisms. FGDs and IDIs were analyzed using Atlas.ti 6.0, from which themes and sub-themes were identified. Bivariate and multivariate regression analyses were conducted using SPSS 19.0 and STATA 11.0, respectively.

Key findings:

- I. In line with my hypothesis, multivariate analyses showed that when accounting for adolescents' residence, schooling status, and age, older (15-19 years) males were significantly more likely to communicate with an older sibling about sex-related matters (OR=3.22, $p<.001$) than younger (10-14 years) males. Data from the IDIs complement this finding in that older male adolescents sought to communicate with an older sibling, whereas younger males and females' discussions emphasized older siblings' role as agents of socialization:

Respondent: Yes, my friend and my brother [knew]. Before I talked to the girl, I discussed it with my brother and he said she was a good girl and that I can take her as my friend but not to have sex with her, but rather I should study hard and help her in her studies.

Respondent: We had a study group and often we study together in the class.

Interviewer: What about anything sexual?

Respondent: No.

Interviewer: For how long did this relationship last?

Respondent: Two years.

Male, 17 years, in-school, rural

Respondent: She [sister] said that I should not go to any boy's house else someone might ask me to have sex with him.

Female, 14 years, out-of-school, urban

Respondent: My brothers said I shouldn't have a girlfriend now. [...] They said I shouldn't rush in life.

Interviewer: When do you expect to have your first girlfriend?

Respondent: When I am 17 years.

Interviewer: Why 17?

Respondent: That is what my brother said to me.

Interviewer: When do you hope to have sex for the first time?

Respondent: When I am 17 years old.

Interviewer: Why then?

Respondent: I would be old enough.

Male, 14 year-old, out-of-school, urban

- II. Contrary to my hypothesis, out-of-school males were 62% less likely to communicate with an older sibling about sex ($p<.01$) compared to males in school. Also contrary to my hypothesis, female adolescents from rural areas were 34% less likely ($p<.01$) to communicate with an older sibling about sex-related matters.
- III. Findings from the all three sources also revealed a preponderance of communication and interactions between same-gender sibling dyads. In the survey, twice as many males reported talking with a brother about sex-related matters versus a sister. Among females, the proportion who talked to a sister about sex-related matters was three times higher than those who talked to a brother. Some adolescents even cited siblings as their preferred source of information:

Interviewer: Who do young people prefer to talk to about these reproductive health issues?
Scolio: Our older siblings of the same sex.

Focus Group F6; female, 17-19 year olds, in-school, urban

Cross-sex sibling communication occurred for reasons clarified by one male:

Opepeni: My sister because she is also a girl and will understand the issues.

Focus Group M5; male, 17-19 year olds, out-of-school, urban

- IV. When discussing their diverse sources of sexual and reproductive health information, adolescents' dialogue and narratives revealed that, in general, they received similar sexual information from their siblings as they did from other sources. For example, Figure 1's grey boxes illustrate how the content of information about puberty and body changes received from multiple sources was similar across the board. However, when discussing the reasons given by various sources to abstain from sexual intercourse, adolescents' dialogue and narratives revealed that parents and other adults focused more on completing one's schooling and preserving one's worth, while religious bodies stressed avoiding sin. Both siblings and other sources highlighted the importance of avoiding sex before marriage and preventing pregnancy and STIs. Of note is that some siblings used the consequences of their personal experiences (e.g. premarital pregnancy) to drive home the message of sexual abstinence and others discussed abstinence in terms of delayed gratification. Even though adolescents described social learning experiences with other sources of information, such perspectives were unique to what siblings contributed to their attitudes and behaviors about sexual and reproductive health.
- V. Additionally, adolescents' dialogue and narratives demonstrated how learning can occur by observation, as posited by theories of social learning and sibling differentiation:

(a) learning through opportunity/exposure:

Interviewer: Has anyone talked with you about preventing pregnancy?

Respondent: Not directly. But it was one of the things that my sister and her friends used to discuss and I overheard some of the things that they were discussing.[...] They said it is when you sleep with a man that you become pregnant. If you do not sleep with a man you do not get pregnant.

Female, 14 years, out-of-school, urban

J.K.: Some of us got some information when we accompanied our brothers and sisters to seek for health services from doctors.

Eugene: I once accompanied my sister to hospital. There, the doctor talked to her about the things that she should do if she does not want to become pregnant.

Focus Group M1; male, 14-16 year olds, in-school, rural

(b) learning from differentiation:

Respondent: He came to my place and said that he had not seen me for a long time and that was why he came to visit me to see how I was faring. It was then that I told him that I was pregnant. When I told him he said I should go and abort it; but when I was young, one of my sisters did that and she died so I told him that could not

abort it. When I said that he told me that then he was not going to accept responsibility for the pregnancy. We quarreled and he left the place and since then I have not gone to his place.

Female, 16 years, out-of-school, urban, street child

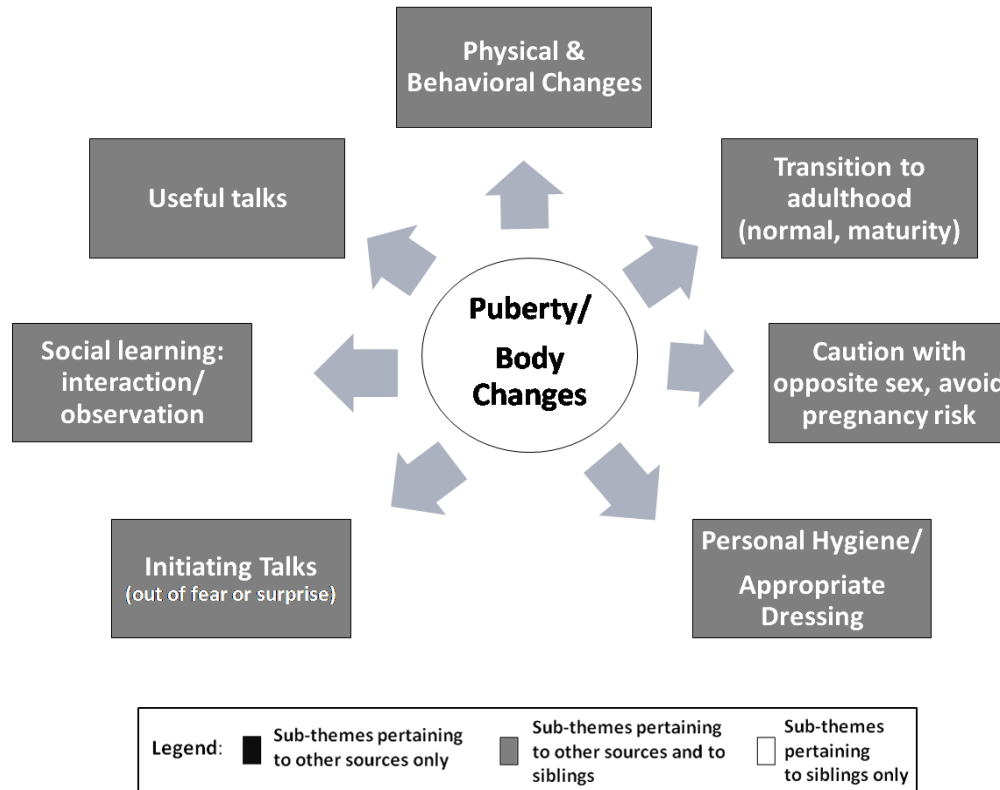
(3) learning by modeling behavior:

Interviewer: Why do you want to be most like your sister?

Respondent: Her way of life is good and she has been able to keep herself away from risky behaviors that other girls engage in.

Female, 14 years, out-of-school, rural

Figure 1. Sub-themes regarding puberty & body changes information



Conclusions: This study draws attention to relationships between siblings, a subsystem of family structure that has received less attention in research, particularly in non-Western contexts. Besides establishing the need to consider siblings as an important target group in adolescent, health, and family-centered policy and programmatic interventions in Ghana, results from this study demonstrate that siblings can shape adolescents’ sexual and reproductive health knowledge, attitudes, and behaviors and can potentially impact the transition to adulthood.