Published in final edited form as:

Women Health. 2018 April ; 58(4): 434–450. doi:10.1080/03630242.2017.1306607.

Multiple levels of social influence on adolescent sexual and reproductive health decision-making and behaviors in Ghana

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Abstract

Little is known about the multilevel social determinants of adolescent sexual and reproductive health (SRH) that shape the use of family planning (FP) among young women in Africa. We conducted in-depth, semi-structured, qualitative interviews with 63 women aged 15–24 years in Accra and Kumasi, Ghana. We used purposive, stratified sampling to recruit women from community-based sites. Interviews were conducted in English or local languages, recorded, and transcribed verbatim. Grounded theory-guided thematic analysis identified salient themes. Three primary levels of influence emerged as shaping young women's SRH experiences, decision-making, and behaviors. Interpersonal influences (peers, partners, and parents) were both supportive and unsupportive influences on sexual debut, contraceptive (non) use, and pregnancy resolution. Community influences included perceived norms about acceptability/unacceptability of adolescent sexual activity and its consequences (pregnancy, childbearing, abortion). Macro-social influences involved religion and abstinence and teachings about premarital sex, lack of comprehensive sex education, and limited access to confidential, quality SRH care. The willingness and ability of young women in our study to use FP methods and services were affected, often negatively, by factors operating within and across each level. These findings have implications for research, programs, and policies to address social determinants of adolescent SRH.

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Disclosure of potential conflict of interest

Co-author Vanessa K. Dalton is compensated as an expert witness for Bayer Pharmaceuticals, a company that may be affected by the research reported in the article, in intrauterine device litigation.

Keywords

Adolescents; family planning; reproductive health; sexual health; social determinants of health; social ecological model

Background

Adolescence is a time of intense biological, psychological, and social development, during which healthy decision-making and behaviors can be particularly susceptible to outside influence (UNICEF 2002). Factors at the individual, interpersonal, community and system levels may operate across adolescents' social environments to contribute either positively or negatively to health and wellbeing across the life course (Adebayo, Ajuonu, and Betiku 2016; Ballard and Syme 2016; Ritterman Weintraub et al. 2015; Santelli et al. 2013; UNFPA 2007). In fact, life course theory suggests that social patterns in adolescence significantly affect actions, behavior, and development (Elder 1998). For adolescent sexual and reproductive health (SRH), specific social influences have been of interest in global research on adverse outcomes, such as unintended pregnancy and sexually transmitted infections (STIs) (Garwood et al. 2015; Hall et al. 2015; Nagarkar and Mhaskar 2015). For example, studies in the U.S., Europe, and Africa have reported similar findings regarding isolated factors, such as educational attainment, poverty level, and violence for their independent relations to early childbearing and HIV/AIDS acquisition (Cordova Pozo et al. 2015; Nyarko 2015; Sprague et al. 2016). Yet, a broader conceptualization of the multiple, diverse, and potentially interactive, social determinants of adolescent SRH has not been well described, especially in the contexts of developing nations.

In Sub-Saharan Africa, where issues of economic instability, violence, and political, legal, and economic barriers to comprehensive, quality health care and education exist (Lince-Deroche et al. 2015; Ot wombe et al. 2015), adolescent SRH may be particularly vulnerable to outside influences. Countries such as Ghana experience unmet needs for family planning (FP) resulting in high rates of adolescent childbearing, abortion, and maternal mortality, despite the considerable availability of FP methods and services compared to other developing country settings (Abdul-Rahman, Marrone, and Johansson 2011; Adjei et al. 2015; Apanga and Adam 2015). It is possible that restrictive sociocultural norms and attitudes toward adolescent SRH act in tandem with structural factors, as well as interpersonal ones, to influence adolescents' willingness and ability to engage SRH care; however, this has not been comprehensively studied (Levandowski et al. 2012; McGuire and Stephenson 2015). Gender norms that emphasize motherhood, religious norms regarding the immorality of sex outside of marriage, or cultural norms that devalue adolescence as a life stage, for instance, may shape systems-level approaches to adolescent SRH care and education (Harrington et al. 2016; Jesmin and Cready 2016; MacPherson et al. 2014).

These complex, potentially interactive, and even conflicting social factors are likely to affect young women's abilities to make informed decisions about sex, contraception, and childbearing, ultimately precluding healthy SRH behaviors and outcomes (Hoopes et al. 2016; Michaud et al. 2015). Yet, studies to date have largely focused on individual-level,

specific proximal determinants of FP behaviors (e.g., women's knowledge or attitudes), rather than on a diverse, interrelated set of social factors that influence SRH during adolescence (Dessie, Berhane, and Worku 2015; Marrone et al. 2014; Sileo et al. 2015; Wang et al. 2016). Research is thus needed to address comprehensively and formally the social environment of adolescent SRH for young women in Sub-Saharan Africa and across the globe.

As part of a larger mixed methods study focused on the role of stigma in adolescent access to and use of FP, the current study qualitatively explored the broader social ecological context of adolescent SRH in Ghana and the various social influences on young women's SRH decision-making and behaviors.

Methods

Study population

Using a community-based cluster sampling technique, we selected school- and clinic-based sites through the Ghana Educational Service and the Ghana Health Service (GHS) in Accra and Kumasi, Ghana. Five public sector senior high schools and five GHS facilities were selected to maximize diversity in school type (female only, co-education, public) and clinic type (family planning, adolescent, antenatal, postnatal, abortion, and child welfare) and the populations they serve (i.e., a range of women's sociodemographic and reproductive background characteristics). The overall number of schools and clinics is not available from the Ghanaian Educational System and the Ghana Health Service. Thus, we are unable to report what proportion the selected schools and clinics were of all schools and clinics in the studied areas. Purposive sampling enhanced recruitment of a heterogeneous sample of women and enhanced the likelihood that sufficient numbers of women were enrolled from the recruitment sites in both cities to achieve data saturation. Only public sector schools were sampled as they served the largest populations of young women in each city and were diverse in distributions by ethnicity, socioeconomic status, religious background, and reproductive experiences.

Eligible women were aged 15–24 years and spoke English or one of two local languages (Twi or Ga). Research Assistants (RAs) or contact nurses at the sites initially screened potential participants, and those deemed eligible were provided additional information about the study and invited to participate. Recruitment and enrollment concluded when data saturation was reached. In total, 72 young women were approached. Four were excluded due to the language criteria, and another five declined to participate. The final sample included 63 women. Participants were offered a small token (e.g., \$2 cedis telephone cards) as compensation for their time.

Given the sensitive nature of this work, researcher team members obtained parental consent waivers from all Ghanaian Institutional Review Boards to ensure confidentiality for the participants. Verbal consent was obtained from all participants after they were read information about the study and their rights. Additionally, all institutions provided participation agreements. Approval of the study protocol was obtained from The University of Ghana, the University of Michigan, and the Ghanaian Health Services.

Data collection

Trained RAs, who were bachelor's or master's degree candidates, prepared and conducted semi-structured, in-depth, individual interviews that ranged from 30 to 90 minutes in length. RAs underwent extensive interviewer training with our Principal Investigators to ensure fidelity and internal consistency of interviews. With consent from participants, each interview was recorded digitally and then transcribed verbatim. Interviews took place in private offices and used semi-structured guides, which were organized by topic, in order of increasing sensitivity, to enhance rapport with participants and data validity. Interview guides were informed by a literature review on the factors associated with adolescent SRH (including social causes and consequences) and on stigma and health (a focus of our larger study). Interview guides with open-ended questions were designed to elicit information regarding reproductive and contraceptive histories, knowledge of/attitudes toward SRH, and perceived community norms with respect to adolescent sexual activity, pregnancy, abortion, childbearing, contraception, STIs, and use of FP services.

For participants who were sexually active, pregnant, or previously pregnant, the interview guides elicited information on: (1) decision-making processes and circumstances surrounding sexual initiation and/or pregnancy; (2) subsequent social, interpersonal, health-care, and violence experiences; (3) changes in life goals (e.g., childbearing, marriage, employment, education); and (4) perceived barriers to and experiences with use of FP, antenatal, and/or postpartum services. Sexually inexperienced or never-pregnant participants were asked about their perceptions of community norms and the experiences of women in their communities (e.g., peers, social networks). RAs also collected routine sociodemographic, health, and reproductive history information.

Data analysis

The thematic analysis was guided by principles of grounded theory and narrative inquiry, using both inductive and deductive approaches. Thus, it was informed by preexisting themes from the literature, as well as codes that arose from the data and which reflected participants' language and discourse. Initially, multiple study team members independently reviewed the transcripts. Weekly meetings enabled team members to review transcripts together, discuss data, make coding decisions, refine coding definitions, resolve any discrepancies in coding strategy, discuss reflexivity and bias, and modify our coding scheme as negative cases (young women whose experiences did not fit the pattern or were an exception to the findings of others being studied) emerged, all of which helped to reduce bias and selectivity. Regular conversations between U.S. and Ghanaian team members provided opportunities to address reflexivity, share preconceptions, and consider competing conclusions (Glaser and Strauss 1967). Using an iterative process, we created and refined a formal codebook. Two U.S.-based team members, different from the RAs that conducted the interviews, then coded all transcripts independently and met to reconcile discrepancies in coding. We used Dedoose software to manage and analyze the data.

Results

The final sample included 63 participants (Table 1) who shared information about factors that influenced their SRH experiences, including sexual activity, contraception, STIs, pregnancy, abortion, childbearing, and FP service use, of young women in their community. Factors described were largely social influences that occupied and cut across different levels of their environments (Table 2). These findings, which we have organized by a social ecological framework (Figure 1), are presented below.

Interpersonal level

Interpersonal influences on young women's SRH decision-making and behaviors were described by most participants through stories of interactions with peers, partners, and parents. Female peers were frequently trusted as confidantes, consultants and the first source of information on sex, reproduction, contraception and FP/STI services, guidance on pregnancy resolution and abortion decisions, or assistance with childbearing responsibilities. Peers also shared financial and physical resources and emotional support. However, peer exchanges were not always supportive or positive, and by disclosing SRH activity or outcomes (e.g., pregnancy), young women were vulnerable to criticism about their decisions or to unwelcome advice. A 15-year-old student in Accra described this:

When she has a close friend who also engages in (sex), and she tells the friend she wants to use family planning, the friend will be like, 'Why does she want to? She should just do it and not use any family planning.' Since she doesn't want her friend to be mad at her, she will go in for it (sex) without using any family planning methods.

Peers were also described as a source of pressure, especially to initiate sex. A 17-year-old student from Kumasi commented:

I think some don't listen (to religious leaders) due to peer pressure because we listen to our friends more than what pastors always preach.

Perceived parental support was also a significant determinant of most participants' SRH decision-making and behavior. Mothers were a primary source of financial and logistical support during pregnancy, childbearing, and child rearing for some women. Mothers were also reported to serve as trustworthy sources of SRH information and guidance for some participants. However, keeping sex, pregnancy, or abortion a secret was a strategy frequently employed to avoid being disowned, abused (verbally or physically), or ejected from the home by family. A 20-year-old pregnant antenatal clinic patient from Accra said:

Most parents, most families, when their ward gets pregnant, they sack her from home. They don't care what she eats, where she sleeps. They don't care because she got herself into it, so she can take care of herself.

On the other hand, for some young women in households facing financial hardship, parents promoted sex as a means of providing family income. A 17-year-old Kumasi student stated,

Sometimes parents encourage their wards to (have sex) for money when there is financial difficulty at home and also pressure from peers.

For most participants, intimate partners were described as a predominant interpersonal influence. Sexual coercion, violence, and forced alcohol and substance use from a partner or casual acquaintance were the most consistently cited determinants of initiating sexual activity and/or engaging in ongoing unwanted and unprotected sex. A 15-year-old student from Kumasi described a friend's experience:

She was given alcohol after a party, then the guy bought condoms and told her he wanted to have sex with her. She refused because she is not ready, but later the guy got angry and because she loves the guy, she gave in.

Partner coercion was also a tactic used against some participants to perpetuate nonuse, misuse, or discontinuation of contraceptive methods. Although not explicitly cited (or perhaps even recognized) by participants, some told stories that hinted at imbalances in power dynamics and procreative gender norms around motherhood and childbearing as underpinnings of women's intimate relationships and FP experiences. While pregnancy intentions were not always directly described, discordant intentions between young women and their partners appeared to be a frequent theme. A 17-year-old pregnant antenatal clinic patient said of her own experience:

I didn't stop it (using a condom). My boyfriend decided to stop using it. When he did that, I told him that I was also going to stop seeing him, and so he came to reveal himself to my parents. He said that he wanted me to get pregnant and give birth for him...that he has already told his parents about it. He also said that after I give birth, he will help me get a job.

Partners also influenced pregnancy decision-making and resolution for many participants, which were described as complex processes in which young women balanced their own and their partners' feelings with social norms around premarital sex, childbearing, and abortion. A 21-year-old woman from an Accra clinic who had previously been pregnant described this:

When I realized that I was pregnant, I told the man I was with. He told me to give birth. However, I said, 'I cannot because you have not yet married me. People will say, 'why didn't I humble myself for the man to marry me before I got pregnant?' I discussed it with him, and I said I would abort the pregnancy. I went to the hospital and had the abortion there. I paid for it.

Community level

The majority of participants described community level influences as perceived norms and lay attitudes, sometimes positive but mostly negative, regarding the sociocultural acceptance of adolescent sexual activity and its consequences (i.e., pregnancy, childbearing, abortion, STIs). Mostly, young women faced significant pressure from their communities to be obedient and behave "modestly" and "appropriately" for their age, as they were believed to be unprepared and not developmentally, financially, socially, or emotionally ready to manage sex and its consequences. Marriage was considered a prerequisite for sexual activity. For sexually active adolescents, secret-keeping and nondisclosure allowed them to meet community expectations, or at least allowed others to believe they had. A high school student from Kumasi discussed this:

At our age, I don't think it (sex) is appropriate because they don't consider us qualified for doing such things in our community. We don't want the people in the community to realize (that we are having sex) because they may think we are not faithful. It's not good to do when we are in school.

Negative community norms did not always directly affect adolescents' SRH decision-making and behaviors in the intended ways. While elders, teachers, and religious and other community leaders regularly counseled adolescents against sex, typically emphasizing its consequences and moral repercussions, most participants balanced these negative sentiments with their own desire for independence, autonomy, and "freedom," as well as with outside influence from peers and partners. Across interviews, some participants described the perceived rewards or positive feelings that becoming sexually active could provide. A 17-year-old high school student from Kumasi commented:

It changes their attitudes because the moment they enter into sexual intercourse, they think they're on top of the world. They have reached a certain level where they cannot be controlled anymore. They can do things on their own, behave anyhow, and do things at any time they like.

For a few adolescents, childbearing and motherhood were viewed positively and believed to bring responsibility, respect and an elevated social status, similar to older mothers in the community. A 19-year-old family planning clinic patient stated of her own experience:

Yes, my (community members) treatment has changed since they saw that now I'm also a mother and matured, I can't be dictated to. If I have pushed myself into teenage pregnancy and I am also called 'mother'—'mother' as they are also called—they don't scold me anymore.

Overwhelmingly, however, sex, contraceptive use, pregnancy, childbearing, abortion and FP service use were believed to be negative, unacceptable, and the behavior of "bad girls." Stories of "bad girls" were told by nearly all participants, as a 16-year-old Kumasi student described:

Things will change because no one wants to walk with a bad girl. If you are pregnant at that age, and you are walking with your pregnant friend, birds of the same feathers they say flock together. People will then say you will be the next to get pregnant, so no one will want to walk with her again.

Macro-social level

At the macro-social level, most participants described structural and institutional factors including education, health systems and religion, as influencing adolescent SRH decision-making and behaviors. Generally, educational attainment was considered a prerequisite to engaging in sex and becoming pregnant and thus a "protective" factor. However, while high-quality sex education was widely understood as necessary to promote *positive* SRH outcomes, limited access to comprehensive and unbiased information perpetuated risky behaviors resulting in negative outcomes, including unintended pregnancy, STI acquisition, and less often maternal mortality from unsafe abortion. While a few participants referenced supportive, trustworthy teachers who were considered secure and reliable sources of

information regarding safe sex, contraception and FP services, the majority of participants described teachers as being a major source of biased information, judgmental attitudes, discrimination, and mistreatment. A 16-year-old Kumasi student said:

No one would like to ask teachers, but it depends on the relationship you have with them. If you are close to the teacher, you can approach him/her. If it's part of the syllabus, they will tell you the truth, but I think they will say you are a bad girl if you ask them.

Health systems were another macro-social influence discussed in most participants' interviews, as young women described experiences seeking and receiving SRH and FP services and interactions with facilities, providers, and specific types of care. A common theme was concern about the availability and accessibility of quality SRH services—particularly those that were adolescent friendly and confidential or that were financially and logistically feasible to obtain. Moreover, some participants discussed prior experiences with and the resulting fear of judgment and mistreatment from health-care workers as a major barrier to health service utilization. Stigma and discrimination from providers, especially nurses, prevented adolescents from seeking SRH care, as they were frequently turned away. A 21-year-old Accra antenatal clinic patient described her experience when she became pregnant:

One day, when I went to the hospital, a nurse stared at me and said, "You are pregnant at this age, when we advise you, you don't listen." The nurses were not willing to take my card. I felt ashamed and vowed never to go there again.

Most participants faced conflicting attitudes within the health-care setting regarding contraception and FP. In most cases, the need for or interest in contraceptive use was perceived to be an admittance of premarital sex, and contraceptive use was considered acceptable only in the context of marriage. Not all health systems encounters were negative though. With considerable effort, diligence, and resources on part of the adolescent, unbiased, high-quality, and comprehensive sources of care could be found. Occasionally providers would welcome adolescents into their clinics because they believed that it was responsible to seek information, especially before sexual initiation. A young student from Kumasi commented:

The health worker will not treat her in a bad manner because she has come to know more about it (sexual and reproductive health) before going to do those things (sex).

Similarly, a 16-year-old student from Accra said:

(Health-care workers) will see that a person wants to prevent unwanted pregnancy, so they won't say anything (bad) because it is a good thing to keep from getting pregnant.

Finally, religion was the most salient and perhaps most frequently described social influence on participants' SRH. Religious teachings, across all denominations represented in these women's communities, emphasized the immorality of sex among young and unmarried women. Most participants feared being shunned or rejected by their religious communities for sex and its consequences. For some young women, particularly those still in school, this meant remaining steadfast in their decisions be obedient, faithful, and abstinent. For sexually

active adolescents, guilt, shame, and worries about immoral behavior and “sin” were a common sentiment:

(Religious leaders) think sex is meant for adults ... so people “paint black” young ones who involve themselves in those things, label them as bad girls.

Religion was described by most participants as a primary cause of internal conflict between moral values (theirs or their communities) and personal desires, actions, and needs. Some poor young women struggled to reconcile religion with survival. A 22-year-old previously pregnant family planning clinic patient described her own experience:

When they preach at church about it (premarital sex), it makes you feel that you should stop. But when you come home to examine your condition, you will ask yourself what you will eat if you stop.

Discussion

To date, multiple levels of adolescents’ social environments have not been comprehensively or collectively considered for their potential to shape a broad range of SRH outcomes for young women, especially in Sub-Saharan Africa. In our study, consistent with a social ecological framework, factors operating across interpersonal, community, and macro-social levels had unique and interactive impacts on participants’ experiences with sexual activity, pregnancy, abortion, childbirth, STIs, and contraception and use of FP services (Figure 1). The social determinants of adolescent SRH described by our participants can be organized as a hierarchical ecological structure, with each successive level (and factors within it) independently influencing SRH decision-making and behaviors but also informing other levels. For instance, community norms regarding the unacceptability of adolescent sex, founded in broader religious sanctions, shaped participants’ interpersonal relationships, often resulting in secret-keeping, violence, and adverse outcomes. This in turn contributed not only to unmet needs for SRH information but perceptions that sex and contraceptive use are “bad girl” behaviors. Moreover, influences operating at each level sometimes conflicted with one another—participants in our study struggled to balance and manage negative social forces with potentially positive ones, and in many cases were forced to make critical health and life decisions without sufficient or consistent information, guidance, or support.

At the innermost level of influence, intimate partners were critical players in most participants’ SRH stories. Like other emerging research on partner violence, our work found that coercion was a salient determinant of some participants’ experiences with unwanted sexual debut and activity, contraceptive nonuse and discontinuation, pregnancy, and childbearing. These findings are consistent with an increasing body of literature that has highlighted that imbalances in relationship decision-making power, reduced reproductive autonomy, contraceptive sabotage, and even verbal, psychological and physical abuse serve as barriers to FP and causes of unintended pregnancy and its sequelae (Falb et al. 2014; Mboane and Bhatta 2015; Miller and Silverman 2010). While additional research is needed to provide a more multidimensional understanding of our participants’ interpersonal relationships and especially potential mechanisms of support and positive dynamics (which our study did not adequately address), future interventions should at the very least involve a

broader range of adolescents' inner-circle influences to encourage positive discourse about and social support for adolescent SRH.

At the outermost level, health systems factors, and specifically issues with access to and delivery of FP care (e.g., cost, logistical barriers, capacity), have often been the emphasis of adolescent SRH research in both developing and developed settings (Colarossi et al. 2014; Hokororo et al. 2015; Mathews et al. 2015). Our study builds upon this work to suggest that *quality* of care (or lack thereof) and qualitative interactions within the health system are also important, understudied determinants of adolescent SRH in Sub-Saharan Africa. Health provider attitudes, knowledge, and practices regarding adolescent sex, contraception, pregnancy, childbearing, and abortion, driven by larger negative community norms and religious ideologies, were prohibitive for young Ghanaian women participating in this study who needed FP information and care. Fear of judgment and mistreatment often prevented participants from seeking SRH services, while enacted stigma and discrimination perpetuated unmet care needs and subsequent poor outcomes. A few other studies have demonstrated women's experiences with and the adverse effects of mistreatment in reproductive care settings, particularly antenatal and abortion services (Abedian and Shahhosseini 2014; Bohren et al. 2015; Cook and Dickens 2014). Our study expands on this work to focus on a broader set of SRH experiences and offers insight into the mechanism by which health systems and providers form their practices around adolescent SRH. Health services and policy efforts are urgently needed to identify effective strategies to improve adolescents' access to and use of comprehensive, adolescent friendly, quality SRH health care (Hokororo et al. 2015; Mathews et al. 2015; Mchome et al. 2015). Such efforts are also needed to improve sex education programs across the globe (Bailey et al. 2015; Ketting and Winkelmann 2013).

Finally, from a broad sociocultural standpoint, our findings warrant attention, given the overwhelming, persistent, and unsupportive positions on adolescent SRH taken by key stakeholders within each social ecological level (Schalet 2011). The continued non-acceptance of adolescent sexuality has been hypothesized to contribute to persistent higher rates of negative outcomes like unintended pregnancies and STIs in settings with restrictive beliefs compared to those like Northern Europe, with positive SRH paradigms (Cook and Dickens 2014; Ketting and Winkelmann 2013). Moving forward, adolescent SRH research, programs, and policies can harness *health promotion* strategies at each social level to reframe adolescent SRH and restructure systems and institutions to accept adolescent SRH as an intrinsic component of health and well-being and recognize its vulnerability to outside influences and its implications for health and wellbeing across the life course.

Several limitations of our study are noteworthy. First, although our standard qualitative approach used semi-structured interview guides, interviewers may have influenced the data collection and analysis processes and contributed to bias. Second, participants in this study were not a representative sample of all young women in Ghana or elsewhere and thus, results are not generalizable to all populations and settings. Response and social desirability bias on part of participants may have also been a concern, given the sensitive nature of our SRH study. Health literacy was likely an issue, given our young and largely socially disadvantaged sample. To address these potential biases, we rigorously trained and had

regular debriefings with research assistants and study investigators on appropriate interview procedures, including ensuring comprehension and clarity of questions, establishing rapport, and probing for sensitive information. Nonetheless, these limitations likely affected our results, and thus, findings should be interpreted accordingly.

Conclusion

Overall, the diverse, multilevel, interactive social influences described here worked together to shape the SRH experiences of our participants, often resulting in uninformed SRH decision-making and precluding healthy FP behaviors. Our work can inform future theory-guided research to better understand the specific pathways, including cognitive, behavioral, and even biological mechanisms, through which complex social factors operate to independently and collectively impact the full spectrum of SRH experiences during adolescence and young adulthood. The findings have implications for multilevel research, program, and policy strategies to address the social determinants of adolescent SRH. Public health efforts are needed to engage stakeholders at all levels to shift paradigms and increase the acceptability of adolescent SRH to promote healthy decision-making and behaviors and improve FP outcomes for young women worldwide.

References

- Abdul-Rahman L, Marrone G, Johansson A. Trends in contraceptive use among female adolescents in Ghana. *African Journal of Reproductive Health*. 2011; 15(2):45–55. [PubMed: 22590892]
- Abedian K, Shahhosseini Z. University students' point of views to facilitators and barriers to sexual and reproductive health services. *International Journal of Adolescent Medicine and Health*. 2014; 26(3):387–92. DOI: 10.1515/ijamh-2013-0316 [PubMed: 24243747]
- Adebayo AM, Ajuonu EJ, Betiku BO. Family functionality and parental characteristics as determinants of sexual decision-making of in-school youths in a semi-urban area of Southwest Nigeria. *International Journal of Adolescent Medicine and Health*. 2016; 28(4):413–418. DOI: 10.1515/ijamh-2015-0029 [PubMed: 26368044]
- Adjei KK, Laar AK, Narh CT, Abdulai MA, Newton S, Owusu-Agyei S, Adjei S. A comparative study on the availability of modern contraceptives in public and private health facilities in a peri-urban community in Ghana. *Reproductive Health*. 2015; 12:68.doi: 10.1186/s12978-015-0058-z [PubMed: 26253112]
- Apanga PA, Adam MA. Factors influencing the uptake of family planning services in the Talensi District, Ghana. *The Pan African Medical Journal*. 2015; 20:10.doi: 10.11604/pamj.2015.20.10.5301 [PubMed: 25995807]
- Bailey J, Mann S, Wayal S, Hunter R, Free C, Abraham C, Murray E. Sexual health promotion for young people delivered via digital media: A scoping review. *Public Health Research*. 2015; 3:13.doi: 10.3310/phr03130
- Ballard PJ, Syme SL. Engaging youth in communities: A framework for promoting adolescent and community health. *Journal of Epidemiology & Community Health*. 2016; 70(2):202–206. DOI: 10.1136/jech-2015-206110 [PubMed: 26443541]
- Bohren MA, Vogel JP, Hunter EC, Lutsiv O, Makh SK, Souva JP, Aguiar C, Saraiva Coneglian F, Ciniz AL, Tuncalp O, Javadi D, Oladapo OT, Khosla R, Hindin MJ, Gulmezoglu AM. The mistreatment of women during childbirth in health facilities globally: Mixed-methods systematic review. *PLOS Medicine*. 2015; 12(6):e1001847.doi: 10.1371/journal.pmed.1001847 [PubMed: 26126110]
- Colarossi L, Betancourt GS, Perez A, Weidl M, Morales H. An organizational capacity-building program to enhance adolescent sexual and reproductive health. *Health Promotion Practice*. 2014; 15(4):538–47. DOI: 10.1177/1524839913478420 [PubMed: 23460672]

- Cook RJ, Dickens BM. Reducing stigma in reproductive health. *International Journal of Gynecology and Obstetrics*. 2014; 125(1):89–92. DOI: 10.1016/j.ijgo.2014.01.002 [PubMed: 24513258]
- Cordova, Pozo K., Chandra-Mouli, V., Decat, P., Nelson, E., De Meyer, S., Jaruseviciene, L., Vega, B., Secura, Z., Auquilla, N., Hagens, A., Van Braeckel, D., Michielsens, K. Improving adolescent sexual and reproductive health in Latin America: Reflections from an International Congress. *Reproductive Health*. 2015; 12:11.doi: 10.1186/1742-4755-12-11 [PubMed: 25616439]
- Dessie Y, Berhane Y, Worku A. Parent-adolescent sexual and reproductive health communication is very limited and associated with adolescent poor behavior beliefs and subjective norms: Evidence from a community based cross-sectional study in Eastern Ethiopia. *Plos One*. 2015; 10(7):e0129941.doi: 10.1371/journal.pone.0129941 [PubMed: 26167860]
- Elder GH. The life course as development theory. *Child Development*. 1998; 29(1):1–12. DOI: 10.1111/j.1467-8624.1998.tb06128.x
- Falb KL, Annan J, Kpebo D, Gupta J. Reproductive coercion and intimate partner violence among rural women in Cote d'Ivoire: A cross-sectional study. *African Journal of Reproductive Health*. 2014; 18(4):61–69.
- Garwood SK, Gerassi L, Jonson-Reid M, Plax L, Drake B. More than poverty: The effect of child abuse and neglect on teen pregnancy risk. *Journal of Adolescent Health*. 2015; 57(2):164–68. DOI: 10.1016/j.jadohealth.2015.05.004 [PubMed: 26206437]
- Glaser, BG., Strauss, AL. The discovery of grounded theory: Strategies for qualitative research. Chicago: Aldine; 1967.
- Hall KS, Kusunoki Y, Gatny H, Barber J. Social discrimination, stress, and risk of unintended pregnancy among young women. *Journal of Adolescent Health*. 2015; 56(3):330–37. DOI: 10.1016/j.jadohealth.2014.11.008 [PubMed: 25586228]
- Harrington EK, Dworkin S, Withers M, Onono M, Kwena Z, Newmann SJ. Gendered power dynamics and women's negotiation of family planning in a high HIV prevalence setting: A qualitative study of couples in Western Kenya. *Culture, Health & Sexuality*. 2016; 18(4):453–469. DOI: 10.1080/13691058.2015.1091507
- Hokororo A, Kihunrwa AF, Kalluvya S, Changalucha J, Fitzgerald DW, Downs JA. Barriers to access reproductive health care for pregnant adolescent girls: A qualitative study in Tanzania. *Acta Paediatrica*. 2015; 104(12):1291–1297. DOI: 10.1111/apa.12886 [PubMed: 25473729]
- Hoopes AJ, Gilmore K, Cady J, Akers A, Ahrens KR. A qualitative study of factors influencing contraceptive choice among adolescent school-based health center patients. *Journal of Pediatric & Adolescent Gynecology*. 2016; 29(3):259–264. DOI: 10.1016/j.jpog.2015.09.011 [PubMed: 26477942]
- Jesmin SS, Cready CM. Community influences on married women's safer sex negotiation attitudes in Bangladesh: A multilevel analysis. *Archives of Sexual Behavior*. 2016; 45(2):383–393. DOI: 10.1007/s10508-015-0572-7 [PubMed: 26162431]
- Ketting E, Winkelmann C. New approaches to sexuality education and underlying paradigms. *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz*. 2013; 56(2):250–55. DOI: 10.1007/s00103-012-1599-8 [PubMed: 23361210]
- Levandowski BA, Kalilani-Phiri L, Kachale F, Awah P, Kangaude G, Mhango C. Investigating social consequences of unwanted pregnancy and unsafe abortion in Malawi: The role of stigma. *International Journal of Gynecology and Obstetrics*. 2012; 118(Suppl 2):S167–S171. DOI: 10.1016/S0020-7292(12)60017-4 [PubMed: 22920622]
- Lince-Deroche N, Hargey A, Holt K, Shochet T. Accessing sexual and reproductive health information and services: A mixed methods study of young women's needs and experiences in Soweto, South Africa. *African Journal of Reproductive Health*. 2015; 19(1):73–81. [PubMed: 26103697]
- MacPherson EE, Richards E, Namakhoma I, Theobald S. Gender equity and sexual and reproductive health in Eastern and Southern Africa: A critical overview of the literature. *Global Health Action*. 2014; 7:23717.doi: 10.3402/gha.v7.23717 [PubMed: 24972916]
- Marrone G, Abdul-Rahman L, De Coninck Z, Johansson A. Predictors of contraceptive use among female adolescents in Ghana. *African Journal of Reproductive Health*. 2014; 18(1):102–09.
- Mathews C, Eggers SM, De Vries PJ, Mason-Jones AJ, Townsend L, Aaro LE, De Vries H. Reaching the hard to reach: Longitudinal investigation of adolescents' attendance at an after-school sexual

- and reproductive health programme in Western Cape, South Africa. *BMC Public Health*. 2015; 15:608.doi: 10.1186/s12889-015-1963-3 [PubMed: 26141155]
- Mboane R, Bhatta MP. Influence of a husband's healthcare decision making role on a woman's intention to use contraceptives among Mozambican women. *Reproductive Health*. 2015; 12:36.doi: 10.1186/s12978-015-0010-2 [PubMed: 25902830]
- McGuire C, Stephenson R. Community factors influencing birth spacing among married women in Uganda and Zimbabwe. *African Journal of Reproductive Health*. 2015; 19(1):14–24.
- Mchome Z, Richards E, Nnko S, Dusabe J, Mapella E, Obasi A. A 'mystery client evaluation of adolescent sexual and reproductive health services in health facilities from two regions in Tanzania. *Plos One*. 2015; 10(3):e0120822.doi: 10.1371/journal.pone.0120822 [PubMed: 25803689]
- Michaud PA, Blum RW, Benaroyo L, Zermatten J, Baltag V. Assessing an adolescent's capacity for autonomous decision-making in clinical care. *Journal of Adolescent Health*. 2015; 57(4):361–66. DOI: 10.1016/j.jadohealth.2015.06.012 [PubMed: 26281798]
- Miller E, Silverman JG. Reproductive coercion and partner violence: Implications for clinical assessment of unintended pregnancy. *Expert Review of Obstetrics & Gynecology*. 2010; 5(5):511–15. DOI: 10.1586/eog.10.44 [PubMed: 22355296]
- Nagarkar A, Mhaskar P. A systematic review on the prevalence and utilization of health care services for reproductive tract infections/sexually transmitted infections: Evidence from India. *Indian Journal of Sexually Transmitted Diseases*. 2015; 36(1):18–25. DOI: 10.4103/0253-7184.156690 [PubMed: 26392649]
- Nyarko SH. Prevalence and correlates of contraceptive use among female adolescents in Ghana. *BMC Womens Health*. 2015; 15:60.doi: 10.1186/s12905-015-0221-2 [PubMed: 26286609]
- Otwombe KN, Dietrich J, Sikkema KJ, Coetzee J, Hopkins KL, Laher F, Gray GE. Exposure to and experiences of violence among adolescents in lower socio-economic groups in Johannesburg, South Africa. *BMC Public Health*. 2015; 15:450.doi: 10.1186/s12889-015-1780-8 [PubMed: 25930034]
- Ritterman, Weintraub ML., Fernald, LC., Adler, N., Bertozzi, S., Syme, SL. Perceptions of social mobility: Development of a new psychosocial indicator associated with adolescent risk behaviors. *Frontiers in Public Health*. 2015; 3:62.doi: 10.3389/fpubh.2015.00062 [PubMed: 25932460]
- Santelli JS, Sivaramakrishnana K, Edelstein ZR, Fried LP. Adolescent risk-taking, cancer risk, and life course approaches to prevention. *Journal of Adolescent Health*. 2013; 52(5 Suppl): S41–4. DOI: 10.1016/j.jadohealth.2013.02.017 [PubMed: 23601610]
- Schalet A. Beyond abstinence and risk: A new paradigm for adolescent sexual health. *Women's Health Issues*. 2011; 21(3 Suppl):S5–S7. DOI: 10.1016/j.whi.2011.01.007 [PubMed: 21530841]
- Sileo KM, Wanyenze RH, Lule H, Kiene SM. Determinants of family planning service uptake and use of contraceptives among postpartum women in rural Uganda. *International Journal of Public Health*. 2015; 60(8):987–97. DOI: 10.1007/s00038-015-0683-x [PubMed: 25967466]
- Sprague C, Hatcher AM, Woollett N, Sommers T, Black V. 'They can't report abuse, they can't move out. They are at the mercy of these men': Exploring connections between intimate partner violence, gender and HIV in South African clinical settings. *Culture, Health & Sexuality*. 2016; 18(5):567–581. DOI: 10.1080/13691058.2015.1096420
- UNFPA. Giving girls today and tomorrow: Breaking the cycle of adolescent pregnancy. New York: Author; 2007.
- UNICEF. Adolescence: A time that matters. New York: Author; 2002.
- Wang LF, Puri M, Rocca CH, Blum M, Henderson JT. Service provider perspectives on post-abortion contraception in Nepal. *Culture, Health & Sexuality*. 2016; 18(2):223–235. DOI: 10.1080/13691058.2015.1073358

Figure 1.
A multilevel model of the social influences on adolescent SRH decision-making and behavior.

Table 1

Sample characteristics.

(N = 63)	n	Percent
Sociodemographics		
Age in years		
Mean: 17.871		
Median: 18		
Adolescents (15–19)	42	67
Young women (20–24)	20	32
Highest level of education attained		
Primary/none	7	11
Middle/junior high school	21	33
Secondary/high school	28	44
Employment status		
Employed	13	20
Unemployed	22	35
Student	28	44
Marital status		
Married	7	11
Not married	51	81
Preferred language		
English	30	48
Twi	31	49
Religious affiliation		
Catholic	3	5
Muslim	7	11
Protestant	13	21
Pentecostal/charismatics	34	54
Other	4	7
Recruitment site		
Accra, Ghana	31	49
Senior high school	12	20
Antenatal/postnatal clinic	12	20
Family planning/adolescent clinic	7	9
Kumasi, Ghana	32	51
Senior high school	16	26
Antenatal/postnatal clinic	10	16
Family planning/adolescent clinic	6	9
Reproductive history		
Number of prior pregnancies		
0	28	44
1	16	25

(N = 63)	n	Percent
2	12	19
3	6	10
Age at first pregnancy		
15	1	2
16	5	8
17	5	8
18	6	10
19	1	2
20	3	5
21	4	6
n/a	28	44
Number of live births		
0	12	19
1	17	27
2	4	6
3	1	2
N/a	28	44

Numbers may not add up to 100% given <5% missing responses for some sociodemographic items.

Table 2

Main identified themes and sub-categories.

Levels of influence	Codes
Interpersonal	Peers
	Partners
	Parents
Community	Perceived norms
Macro-social	Health systems
	Education
	Religion