

# Beyond love

Citation for published version (APA):

Krugu, J. K., Mevissen, F., & Ruiter, R. (2017). Beyond love: a qualitative analysis of factors associated with teenage pregnancy among young women with pregnancy experience in Bolgatanga, Ghana. *Culture Health & Sexuality*, 19(3), 293-307. <https://doi.org/10.1080/13691058.2016.1216167>

**Document status and date:**

Published: 01/01/2017

**DOI:**

[10.1080/13691058.2016.1216167](https://doi.org/10.1080/13691058.2016.1216167)

**Document Version:**

Publisher's PDF, also known as Version of record

**Please check the document version of this publication:**

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
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To cite this article: John Kingsley Krugu, Fraukje Mevissen, Meret Münkkel & Robert Ruiter (2017) Beyond love: a qualitative analysis of factors associated with teenage pregnancy among young women with pregnancy experience in Bolgatanga, Ghana, *Culture, Health & Sexuality*, 19:3, 293-307, DOI: [10.1080/13691058.2016.1216167](https://doi.org/10.1080/13691058.2016.1216167)

To link to this article: <http://dx.doi.org/10.1080/13691058.2016.1216167>



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Published online: 16 Aug 2016.



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# Beyond love: a qualitative analysis of factors associated with teenage pregnancy among young women with pregnancy experience in Bolgatanga, Ghana

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## ABSTRACT

Globally, an estimated 16 million young women aged 15 to 19 years give birth every year. Most teenage pregnancies are unintended and being pregnant or delivering a baby as a teenager can have serious adverse consequences. Knowledge of the environmental factors and social cognitive determinants influencing young women's failure to protect against unintended pregnancy is necessary to address the high rate of teenage pregnancies. We conducted semi-structured in-depth interviews with 21 young women, who had experience of pregnancy, in Bolgatanga, Ghana. The interview protocol included themes (relationships, sex, pregnancy, family planning) and determinants (knowledge, attitudes, self-efficacy, norms, risk perceptions) derived from empirical studies and theories related to sexuality behaviour. Findings show that young women's motivations for sexual relationships are mostly 'beyond love' and seem to focus on economic factors. The main means of sexual protection seems to be condom use. Other forms of contraception were believed to be linked to infertility. Sexuality remains a largely taboo topic for open discussion and sex education in schools seems limited to abstinence-only messages. The need for more open communication on matters of sexuality with young people and the provision of a more comprehensive sexuality education in school to address teenage pregnancies in Ghana, is discussed.

## ARTICLE HISTORY

Received 27 October 2015  
Accepted 19 July 2016

## KEYWORDS

Young people; teenage pregnancy; contraception; condom use; determinants; Ghana

## Introduction

Globally, and largely in low and middle-income countries, an estimated 16 million young women aged 15 to 19, and about a million girls under 15 years of age give birth every year (Dick and Ferguson 2015). Each year, about 14 million pregnancies occur across sub-Saharan Africa, with nearly half of them occurring among women aged 15–19 years (UNFPA (United Nations Population Fund) 2013). In Ghana, 14 percent of young women age 15–19 had begun childbearing in 2014 (GSS (Ghana Statistical Service), Accra, Ghana 2015).

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Adolescent childbearing (intended or not) has adverse effects at the individual, community, and societal level. Compared with their peers who delay childbearing, young women who have babies are less likely to finish high school, more likely to be poor as adults, and more liable to have kids who have poorer behavioural, educational, and health outcomes over the course of their lives than do children born to adult parents (Cook and Cameron 2015; Marcotte 2013). Babies born to teenage mothers also face a substantially higher risk of dying than those born to women aged 20 to 24 (WHO (World Health Organisation) 2014). Also, adolescent pregnancies are more likely to be aborted (UNFPA (United Nations Population Fund) 2013). In Africa, where pre-marital sex is not accepted, especially for young women, unintended pregnancies mostly happen outside marriage. This often implies secret, unsafe abortions under unhygienic conditions performed by people who lack the necessary skills and in places that do not meet minimal medical standards (WHO [World Health Organisation] 2011).

Teenage pregnancies could be avoided by using condoms or other contraceptives (the latter often referred to as 'family planning'). Most sexually active young people in Ghana, however, do not use contraceptives: among those who are sexually active, 31% of those aged 12–18 years were not using any contraceptive method at their last sexual encounter (Doku 2012). If the majority of the pregnancies among teenagers are unwanted, this raises the question about why young people are not protecting themselves. Findings from three reviews of studies conducted in sub-Saharan Africa (Macleod 1999a, 1999b; Macleod and Tracey 2010) indicate that young women's use of contraceptive methods is limited by several factors including violent and coercive sexual relationships, lack of knowledge, limited access to contraceptive methods, lack of control over contraception decisions, and concerns over the perceived side effects of family planning methods (Macleod and Tracey 2010; Wood and Jewkes 2006). In the particular case of condom use, ever received sex education in school, ever attended school, exposure to the radio, condom use self-efficacy, perceived social norms, attitude towards condom use, positive behavioural control beliefs and positive outlook on life have all been reported to predict the intention to use condoms among young people in different African settings (Boer and Tshilidzi Mashamba 2007; Macleod and Tracey 2010; Rijdsdijk et al. 2012).

In Ghana, knowledge of the existence of contraceptives and where to obtain them seems to be high among the youth population (Awusabo-Asare et al. 2006). For example, among those aged 15–19 years, 76% of young women and 88% of young men were aware of at least one method of contraception (Awusabo-Asare, Abane, and Kumi-Kyereme 2004). However, this knowledge seems superficial as evidence shows that 21% of young women and 46% of young men who knew the pill did not know that it has to be taken daily for it to be effective (Awusabo-Asare et al. 2006). Beyond this knowledge gap, studies show that contraceptive usage in Ghana is also influenced by young women feeling too inhibited and ashamed to seek contraception services or because contraceptives are not easily available (Adjei et al. 2014; Apanga and Adam 2015).

However, the situation in Ghana is still understudied. The specific factors and beliefs that lead to contraceptive non-use remain obscure and up to date, evidence-based data on personal (e.g., knowledge, attitudes, and skills) and environmental (i.e., social and structural influences such as social support, reinforcements and access to contraceptives) determinants of teenage pregnancy are lacking. This paper makes a contribution by exploring the factors underlying young people's decisions and beliefs relating to the use of protection for

pregnancy prevention in rural Ghana using qualitative interviews with young women who have experienced pregnancy.

The use of individual in-depth interviews is well matched to understanding the experiences of inconsistent contraceptive use among teenage mothers in a rural setting. Therefore, the results can support efforts to promote contraceptive use among young people in northern Ghana, and to decrease ultimately, teenage pregnancies in the country.

## Methods

The study used individual in-depth interviews guided by a semi-structured interview protocol. The Ethics Committee of the Ghana Health Services and the Institutional Review Board of the Faculty of Psychology and Neuroscience at Maastricht University in the Netherlands granted ethics approval.

### *Study setting*

The study was conducted in the Bolgatanga Municipality in the north of Ghana covering a total land area of 729 sq km<sup>2</sup>. It has an estimated population of 131,550 with 52.3% being female, 44% below 18 years of age, and a growth rate of 3.0% (GSS (Ghana Statistical Service), Accra, Ghana 2012). Bolgatanga is traditionally home to the Frafra people, although its current status as a regional capital has brought other tribal groups (~2%) to the municipality. They are organised along family and clan lines, and polygamy is widespread. The municipality is predominantly agricultural in nature and is among the poorest districts in the country with between 22–35% of its population living on less than the World Bank's threshold of \$1.25 per day (Amanor-Boadu, Zereyesus, and Asiedu-Dartey 2013). The health system in the municipality comprises one regional hospital, nine health centres, and several Community-based Health Planning and Services (CHPS) compounds.

### *Participants*

Twenty-one (21) young women aged between 14 and 19 years ( $M = 17.5$ ,  $SD = 1.32$ ) with a pregnancy experience, living within the Bolgatanga Municipality, were interviewed. Pregnancy experience was defined as having been or being pregnant or having a child at the time of the study. One interview was excluded from the analysis due to poor recording sound quality. Most of the young women had left high school due to the pregnancy ( $N = 11$ ), a few returned ( $N=2$ ), or are planning to go back after delivery ( $N = 3$ ). Of the twenty young women included in the analysis, the average ages for sexual debut and first pregnancy were 15 and 16 years respectively. Seven were pregnant at the time of the interviews, two of them pregnant for the second time after experiencing stillbirths with their first pregnancies, and the other thirteen had already given birth with an average age of their babies at 17 months. For some young women, the pregnancy ended their last relationship because the father denied paternity and 'run away.' Seven (7) of the young women were married to the father of the child after they became pregnant, of which the majority ( $N=6$ ) were living with their husband's family, and the remaining 13 were single mothers. All the married young women were either 18 or 19 years old. The participants included eighteen Christians and two Muslims.

## ***Recruitment and procedure***

Participants were recruited through a purposeful homogeneous sampling technique (Palinkas et al. 2013). An A5-sized summary of the study was advertised on the walls of public buildings, including schools and health facilities where young women with pregnancy experience were likely to visit. The summary included stating the purpose of the study, the voluntary nature of participation, confidential handling of information, and how to register to participate. Also, participants were recruited by nurses through the local health centres. The study summary was provided to the nurses, who in turn, explained the study to attending teenage mothers and young pregnant women both in English (the official language in Ghana) and in the local language (Gurene).

In total, 26 young women signed up for the study (11 via the advertisements and 15 by the nurses) of which 21 met the criteria of being less than 19 years of age and having experienced a pregnancy. These 21 young women were then requested to sign a consent form. For participants under age 18 years ( $N = 8$ ), additional parental approval was obtained either by providing them with information and forms for their parents or by having research assistants visiting their homes to explain the study. All 21 young women provided their consent, with additional parental consent being given by those less than 18 years. No consent of husbands was required. Participants were not compensated for participation. Where necessary, transport costs were paid, and all participants received a soda drink.

Because of the sensitive nature of the topic of sexuality in northern Ghana, participants were repeatedly assured through the recruitment and interview process that all information would be treated confidentially and that their identities would not be disclosed in any future reference to the study. To secure anonymity, specific details that might reveal their identities were omitted in transcribing the interview recordings. At the beginning of each interview, participants were reminded that they had the right not to answer questions and to stop the interview at any point necessary. To avoid socially acceptability bias, research assistants stressed the non-judgmental nature of the interview and assured participants that the only interest was in their personal stories. The interviews were conducted in English or the local language.

The interviews were held at different locations in line with the convenience of each participant. After interviewing nineteen young women, saturation was achieved and after two more interviews, the data collection ended. The average length of an interview session was about an hour.

## ***Research instrument***

The interview protocol was a semi-structured interview guide based on the empirical literature on sexual health, contraceptive use, and teenage pregnancies in West Africa. In addition, it was guided by social cognitive theories of human behaviour, among which the theory of planned behaviour (TPB) and the health belief model (HBM). For an overview of these theories, see Glanz, Rimer, and Viswanath (2008).

Interviews were conducted by two young trained female research assistants; a local Ghanaian with prior experience in sex education and a German graduate student from Maastricht University. The graduate student had followed courses in health education and research methods and had gained some practice in the use of these as part of her master's

degree studies in Maastricht, while the Ghanaian received practical training from the first author on conducting in-depth interviews in sensitive topics such as sexuality, including practising in a pilot test of the research instrument. In addition to assisting with the interviews, the Ghanaian research assistant also translated the questions and responses between the German student and participants as necessary.

### ***Data analysis***

All 20 transcripts in MS Word documents were exported into NVivo 10.0 software for qualitative analysis. An inductive approach based on grounded theory techniques (Corbin and Strauss 1998) was used to identify emerging sub-themes from the central themes by delving deep into the contents and grouping similar statements made under the respective themes. We conducted a comparative form of analysis to allow themes to emerge in accordance with the procedure suggested by Cho and Lee (2014).

At level one coding, we examined transcripts line-by-line to identify specific factors that seem to influence the participants' risky sexual behaviour that led to them becoming pregnant against their will; these factors were used as codes. At level two coding (axial coding), we examined open codes to understand the role each theme played in the young women's contraceptive decision-making processes. We then used selective coding (level three) to classify the codes into central thematic areas. During this process, multiple sub-themes emerged from the data, and these are described below under the respective central themes of the study.

The second author checked the reliability and validity of the coding, and in cases where disagreement existed, reasons for differences in coding were discussed with the first author to reach an agreement.

## **Findings**

The results are presented as individual factors (relationship experience, sexual history), environmental factors (sexual communication and education), and social cognitive influences on both contraceptive use and teenage pregnancy (knowledge, attitudes, self-efficacy and normative beliefs). It is worth noting that difficulties were encountered in getting the young women's real thoughts and feelings on the specific topics. They did comment on factual behaviours extensively, but to find out how they felt about it was difficult. If questioned, they remained silent, laughed, or only gave very brief responses. Also, it seemed they found it difficult to talk about sexual issues; either they were not used to it or not used to providing their opinion in general. However, different techniques such as asking informants one question at a time, verifying unclear responses, avoiding leading questions, and using follow-ups and probes were used in combinations to elicit in-depth responses from the participants.

### ***Individual factors***

#### ***Relationship experiences***

The young women seemed to have all had more than one boyfriend at different times but not all these relationships involved sexual intercourse. Reasons for no-sex were: not liking the boy, not being married, or fear for unwanted pregnancy.

The participants had difficulties commenting on the nature of their relationships. Most of them mentioned financial benefits or academic support as reasons for a relationship and did not seem to perceive a relationship as something that could be fun or enjoyable.

- I: and what is important for you in your relationship with him?  
 P: like when I need help, he helps me financially and in school when they give me work, and I don't understand he helps me.  
 I: and what kinds of feelings do you have for him?  
 P: ahh, feelings? No, I don't have feelings for him.  
 (19 years with three year old child)

One participant described a previous relationship as a bad and quarrelsome one. Another participant said that her relationship needs were 'beyond love,' explaining that being supported financially to cater for basic needs were her main reason for accepting to be in a relationship. Only one participant stated that love and trust are the most important in a relationship. Most of the single mothers were no longer interested in a relationship either because of the difficulty with the pregnancy/baby caring or because they wanted to pursue other life goals:

- I: and are you in a relationship with someone at the moment?  
 P: I do not want to be in a relationship again  
 I: why?  
 P: Why? Do you know how difficult taking care of this child is?  
 (16 years with one-year-old child)

### ***General sex experiences***

With few exceptions, young women had had previous multiple sexual experiences before the one that resulted in the pregnancy. They mentioned that physical pressure (beating, pushing) and verbal pressure (boys saying they would die or suffer if they cannot ejaculate, or saying they wanted proof of fertility) was used to force them into sex. Only one participant indicated having had sex only once and became pregnant as a result. Forced sex was reported as being common (11 young women, two within marriage context) and almost all of them were left sad, unhappy, and angry:

- I: How did you feel when he forced you?  
 P: I feel sad.  
 (18 years with one-year-old child)

Some young women did find ways to avoid forced sex by terminating the relationship or crying out for help, which attracted the attention of others.

### ***First-time sex experience***

Participants largely described their first-time sex experience as unplanned and painful. One girl had been beaten up by her boyfriend before she gave into sex but because her relationship with the boy was not known to her parents, she could not report the incident. Some said they had wanted to have sex, but only one person seemed to have had a pleasant experience. Those who mentioned their age at first-time sex mostly said they had been 15; one girl said she had been 13. Some of the young women expressed fear during sex because of the risk of getting pregnant or because the school had apparently told them that they should not have sex:

- I: How was your first-time sex experience?  
 P: It was painful. I was afraid because in school they advised us not to do it.  
 (18 years, nine months pregnant).

### ***Condom use experience***

Young women said using condoms was the responsibility of the boys. Some had used use condoms before, but such usage was irregular. Reasons mentioned for not using or inconsistently using condoms included the non-availability of condoms at the point of need, being confused at the point of sexual intercourse, being unaware that the boy was not using condoms, being unable to negotiate condom use, the boy promising to marry them or the girl wanting to marry the boy, or 'it just happened'. Some of the young women cited the boy complaining about not getting enough feeling with condoms, needing to prove fertility after an STI infection, the 'need to have a child for her father', or trust in the partner as reasons for not using condoms resulting in pregnancies. None of them had been using other family planning methods. They believed that they could use their menstrual cycle to prevent pregnancy and, therefore, did not need to use condoms. However, they had very limited knowledge about their menstrual cycle and its use in pregnancy prevention.

- I: When do you decide to use it and not to use it?  
 P: When I am in my dangerous period I normally use a condom.  
 I: And what is the dangerous period?  
 P: I do not know.  
 (18 years with one-year-old baby).

### ***Reactions to the pregnancy***

Except for a few young women who were happy with the pregnancy because either they had wanted a baby or the pregnancy offered proof of their fertility, all others were shocked, saddened or unhappy to hear the news:

- P: I was sad because I would not attend school again that is why I was sad.  
 (18 years, nine months pregnant).

Moreover, their parents reacted in similar manner of despair:

- I: So what did your parents say?  
 P: My mother was crying that I was pregnant.  
 (18 years, with three-year-old daughter)

However, a few parents had been happy to learn of their daughters' pregnancy because they needed a baby from her before they could arrange a marriage - participants explained that expecting a daughter to give birth before marrying is a cultural practice among the Frafra tribes, made necessary when the parents do not have a male child to inherit the family heritage. For some young women, when young men denied being the father of the pregnancy, they contemplated abortion but did not do it because others had cautioned against it.

### ***Environmental factors***

#### ***Sexual communication at home***

Young women indicated that they did not talk about sex at home - not with their mothers nor with anybody else. They were afraid to talk to their parents for fear of becoming an object of scorn, or being beaten, or because it was embarrassing:

- P: I don't talk this in my house because my father would think I am a bad girl.  
(18 years, 8-month pregnant.)

Only one person indicated having talked to her mother about sex and another girl said she talked to her friends about sex. Two young women reported 'talking about pregnancy' with their partner but this did not seem to be in-depth.

### ***Experiences of sex education at school***

Young women's experiences of sex education in school were largely limited to moral and religious admonitions to abstain from sex, or a focus on how to use the menstrual cycle to prevent pregnancy. Some had not received any form of sex education. Others had received some semblance of sex education (at least with the inclusion of condom use), but either this had taken place after they had become pregnant or they had had no access to condoms. One girl received some sex education from a nurse through a virgins club<sup>1</sup> but admitted to having been unable to use that knowledge to prevent pregnancy:

- P: That nurse was there, and we had a virgin club [...] and we asked questions on whether and when you get your menstruation at what point you can get pregnant.  
I: And you apply what you learned with your boyfriend to not get pregnant?  
P: No.  
(19 years, second time pregnant)

With respect to sex education from health services, some of the young women said they did not attend a health clinic to talk about sexuality-related things, although they did express the need. No clear reasons were given for not using the health facilities in this way, but one young woman said she did not know how to explain herself to the nurses. Those who had visited a health centre indicated that they were more comfortable and confident talking to the nurses about their family planning needs.

### ***Social cognitive determinants***

#### ***Knowledge of contraceptives***

Mostly, the young women indicated that they had heard about condoms before their pregnancies. Most mentioned that condoms could protect against pregnancy and diseases. However, whether they knew how to use condoms was much less clear – while one young woman clearly claimed she knew how to use condoms, others seemed to have no idea. Some of the young women seemed only to have heard about condoms without any clear picture of what they looked like, and one girl did not even know that one can get pregnant without using condoms. Even though some young women stated that they knew about family planning, it seemed they had either only heard of 'family planning' or knew about it in a very general way. Most of the young women's knowledge of family planning methods was limited to injectable methods.

#### ***Perceived behavioural control towards buying, carrying and negotiating condom use***

The young women indicated that they were ashamed to buy condoms and believed it was the responsibility of boys to buy and have condoms available at the point of need:

- I: So who is responsible for carrying condoms?  
P: Only my boyfriend. He is responsible.  
(18 years, with one-year-old child)

Having safe sex seemed to depend partly on the male partner having condoms available. The young women did not indicate having any control over condom use. When asked for reasons for not using condoms, or not talking about sex with their partners, they mostly remained quiet, laughed or expressed fear.

- P: I wanted him to use a condom, but I do not know why he didn't use.  
 I: But did you insist?  
 P: No I didn't force him  
 I: Why you didn't force him?  
 P: I was afraid to force him.  
 (18 years with one-year-old child)

### ***Attitudes towards contraceptive use, teenage pregnancy, sex and abortion***

Most young women did not comment on their attitudes towards condom use. For those who did speak, some indicated that condoms offered good protection against unintended pregnancies but either preferred injectable contraception to condoms (because 'it is safer') or because their partners felt condoms reduce sexual feelings. Some young women also had a perception that family planning would lead to infertility and therefore were not positive about it. Some said they would never use family planning methods for fear of their partners' disapproval.

Young women did not consider abortion as a good option for their pregnancy. Various reasons for this were given, including the fear of destruction of the womb or death:

- P: He insisted that I should go for abortion, and I also didn't agree. So he asks me why? I said I can go for abortion, and lose my life or my womb forever, so I can't go for it.  
 (18 years seven months pregnant)

Some believed that abortion was a kind of 'killing' and thus against the will of God. For others, their boyfriends had put pressure on them to abort the baby, and their refusal to accede to the pressure resulted in the boy denying the pregnancy.

After going through pregnancy and childbearing, some young women did not want to get pregnant again, except those who were married. Unmarried girls indicate preferring to get pregnant again only after they had grown up, finished school, or after vocational training:

- I: Do you want to get pregnant again?  
 P: No, I want to finish my job before [complete vocational training].  
 (18 years, with one-year-old child).

Some indicated that sex was no longer important to them because of the painful first-time sex experience, pregnancy having led to their dropping out of school, and embarrassing negative beliefs associated with sex:

- I: ...and now is sex important for you?  
 P: No. I: and why is it not important?  
 P: because I learn the lesson now because all my friends in school and I am now here, so sex is not important for me.  
 (17 years with one-year-old baby).

Others said they still did have sex as an obligation in marriage or towards their boyfriend but only two young women mentioned sex in relation to love.

***Risk perceptions towards pregnancy and the intention to use contraception***

It was mostly unclear what the girls' risk perceptions towards getting pregnant were. Some indicated having been 'afraid of getting pregnant', which might be interpreted as perceiving a risk. Many seemed to have faith in using a 'time-of-the-month' calculation to determine the risk of having unsafe sex, which could be interpreted as having a low-risk perception for becoming pregnant. Several thought 'it won't happen to me.'

- I: You said the boys sometimes used condoms and sometimes not and you didn't ask why?  
 P: I didn't ask them why they do not use condoms.  
 I: And were you not afraid of getting pregnant?  
 P: It will not happen to me.  
 (16 years with one-year-old child.)

***Social norms towards teenage sex, pregnancy and child-bearing***

A few of the young women reported having become pregnant intentionally so as to have a baby boy for their parents to assist with family inheritance. Other young women indicated that their parents and other relations were not happy to hear that they were pregnant because they had brought disgrace to the family. For this reason, some had had to hide their pregnancy for fear of becoming objects of social scorn or the fear of being forced to marry the boy.

My parents were sad with me when I got my pregnancy because I was still a small girl and got my pregnancy. My (elder) sisters are still there and are not married, and they were also sad too.  
 (17 years, pregnant)

Concerning normative beliefs towards teenage sex in general, several young women shared their perception of how important others in their lives expected them to behave sexually; for example, mothers or teachers expecting them to abstain from sex.

**Discussion**

In this study, we explored some of the individual, environmental and social cognitive factors that put young women at risk of pregnancy in Ghana. Findings suggest that a poor environment full of sexual taboos and abstinence-only sex education, together with limited negotiation skills shape the sexual decisions and behaviours of the young women. Overall, study participants had limited knowledge of contraception, low self-efficacy in obtaining contraceptive methods such as condoms, and they lacked the skills to negotiate condom use. The latter seemed to be partly driven by economic reasons (e.g., pay for school supplies). Also, young women appeared to have low awareness of the likelihood of becoming pregnant when having sex without contraception. Their experiences were often limited to coercive, painful early sexual debut, and those who were sexually active frequently practised unsafe sex, including inconsistent contraceptive use.

Reported lack of sex communication, either with parents or with other family members or friends, is not surprising. Studies elsewhere in sub-Saharan Africa have found significant barriers to communication about sex (Bastien, Kajula, and Muhwezi 2011). Parents are reluctant to discuss more than the adverse consequences of sexual activity, and maternal communications about sex are frequently restrictive and moralistic in tone (Bastien, Kajula, and Muhwezi 2011; Macleod and Tracey 2010; Manu et al. 2015). In some Western societies, a more open communication and pragmatic view of youth sexuality prevails (Weaver, Smith,

and Kippax 2005). The socio-cultural landscape of Ghana may not yet permit an open communication on sexuality. However, parents may be more open to talking to their children about sexuality if given appropriate support, including the necessary knowledge and skills to do so (Bastien, Kajula, and Muhwezi 2011).

The finding that some participants became pregnant to prove their fertility highlights the way culture is shaping the dynamics of teenage pregnancy in northern Ghana. Even within a context where premarital childbearing is highly stigmatised, parents and their teenage daughters may still decide to have children outside marriage. This highlights two conflicting moral standards: while patriarchal beliefs in African traditional religion can accept sex outside marriage when it is to provide the family with a baby boy, Christian or Islamic faith beliefs are often against pre-marital sex of any kind (Adongo et al. 1997; Macleod and Tracey 2010). Our findings confirm this and suggest that success in preventing teenage pregnancy could be challenging in contexts where the socio-cultural beliefs surrounding fertility remain high.

Another significant finding is the young women's (perceived) inability to obtain condoms and negotiate its use to prevent unwanted pregnancies. In Ghana, Opoku (2010) and Hindin, McGough, and Adanu (2014) have reported similar barriers to condom use, including shyness in buying contraceptives, the cost of contraceptives, and non-youth friendly health services being barriers to access. Two recent reviews show the critical importance of changing self-efficacy and behavioural control beliefs in increasing young people's condom use (Gottschalk and Ortayli 2014; Napierala Mavedzenge, Doyle, and Ross 2011). Our results suggest that changing efficacy beliefs towards buying and negotiating condom use among young women could be a useful focus of future interventions aiming at preventing teenage pregnancies in Ghana. However, evidence also shows that young women's condom use self-efficacy is related to the broader culture of communication about sexuality (Sayles et al. 2006). Indeed, placing emphasis on communication with friends and partners regarding the risks of pregnancy and the use of condoms may be an important additional component of interventions aimed at improving self-efficacy and skills on condom use among young women in Ghana.

The finding on the young women reporting negative attitudes towards family planning and ceding condom use responsibility to their male partners makes young women highly depended on their partners when it comes to pregnancy prevention. While condom use requires negotiating with possibly unwilling partners, family planning methods like the oral pill (if access can be guaranteed) may provide young women with more control over pregnancy prevention. Since however there seems to be much misunderstanding about these methods, there is a need to explain fully to young people how these methods work. Such discussions should include the unreliability of 'safe period of the month', the fact that severe health consequences and significant side effects when using family planning are rare, and the risks associated with carrying a pregnancy to term compared with the use of family planning (Grossman et al. 2010).

Participants expressed fear of potential health problems following abortion or believed that it was morally wrong to do so. Ghana's abortion law is relatively liberal; safe abortion on medico-social grounds is permitted (Morhee and Morhee 2006), yet abortion-related deaths are responsible for an estimated 11% of all maternal deaths and over 17% for those aged 15–19 years of age (GSS (Ghana Statistical Service), Accra, Ghana 2012). Sundaram et al. (2012) reported that health care providers' biases and negative attitudes can serve as a major barrier to young people seeking abortion services. Future research that explores the attitudes

of health care providers and its impact on young women's attitudes towards abortion in Northern Ghana is warranted.

A revealing feature of the young women's narratives is that love as an aspect of relationships, and/or sex was hardly ever mentioned. It appeared that the young women's motivations to start relationships with boys or to agree to have sex were 'beyond love'. Studies in South Africa (Bhana and Pattman 2011; Harrison, Cleland, and Frohlich 2008) and in Malawi (Poulin 2007) have pointed to a long tradition in poorer societies whereby young people's sexual partnerships are more about economic gain than love. Our findings also support the conclusion of Brook et al. (2006) that family poverty is directly related to risky sexual behaviours. So long as young women do not have the means to live their lives independent of men, they will always engage in unwanted/forced relationships. Interventions to prevent teenage pregnancies need to incorporate elements of economic empowerment to support young women earn income and be able to make independent decisions about their sexual choices.

Our results suggest that sex education in schools is largely limited to moral admonitions to abstain from sex. Abstinence-only messages are not only morally problematic by withholding information and promoting inaccurate ideas (Kohler, Manhart, and Lafferty 2008), but are also a threat to fundamental human rights to health, information, and life. Evidence shows no positive association between teaching about contraception and increased risk of teenage sexual activity; rather, those who receive comprehensive sex education have a lower risk of pregnancy compared to those who receive abstinence-only or no sex education (Kohler, Manhart, and Lafferty 2008). Interventions that go beyond moral education to provide comprehensive sexuality education both at home and in school could help young women better handle their sexuality and consequently reduce the incidence of teenage pregnancy. However, despite overwhelming evidence in support of more comprehensive forms of sex education, implementing such an approach in the Ghanaian context requires major change by important stakeholders such as teachers, community leaders and religious leaders). Efforts to introduce comprehensive sex education in Ghana may also benefit from lessons learned through recent nation-wide scale-up in Senegal and Nigeria (Chau et al. 2016; Huaynoca et al. 2014).

We acknowledge the following limitations. First, our procedure required participants below the age of 18 to seek parental consent. The sample may be slightly biased if only parents who found it acceptable for their daughters to talk about their private lives agreed. Second, as our sample was small and unrepresentative, the results are therefore not generalisable to all young people in Ghana. Third, we interviewed young women who were not used to discussing sexuality openly and who exhibited shyness and reluctance during the interviews. Follow-up probing to clarify details was mostly not fruitful which resulted in some of the data lacking depth. Perhaps also, in consequence, it is possible that participants provided socially acceptable comments in parts of the interviews.

## Conclusion

This study highlights important individual, environmental and social cognitive factors negatively influencing young women's ability to use in rural Ghana. Although most young women prefer a later pregnancy, the economic and cultural situation, including taboos surrounding sex communication and limited sex education in school leave young women

vulnerable in many ways. For mostly economic reasons, they engage in sexual relationships in ways that make it difficult to prevent unwanted pregnancy.

Given the controversial nature of sex education in Ghana, intervention planners may find it challenging to implement and sustain effective programmes unless these fit with local needs, values, and can include discussion of socio-cultural beliefs surrounding sex communication. Strengthening community involvement in assessment, planning, and implementation may enhance the likelihood of community buy-in and programme effectiveness (Bartholomew Eldredge et al. 2016).

An ecological orientation that addresses gender and poverty issues, and some understanding of evidence-based methods to impact the views of decision-makers such as politicians and education authorities as well as the determinants of young women's sexual behaviours, may boost programme planners' capacity to engage community-level involvement and to enhance programme success towards the future prevention of teenage pregnancy in Ghana.

### Competing interests

The first author is the director of Youth Harvest Foundation, Ghana, and the current study is part of a doctoral study. All other authors declare no competing interests.

### Note

1. A group of girls that meets regularly to discuss ways of remaining a virgin until they are ready for sex.

### Acknowledgements

We acknowledge the young women who participated in this study, and also our research assistant, Martha Atule for her dedication.

### Funding

This work was supported by Netherlands Organisation for International Cooperation in Higher Education (NUFFIC) [grant number NFP-PhD.11/ 806], with additional support from Maastricht University and the Youth Harvest Foundation, Ghana.

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