

SHORT REPORT

The Other Side of Rapport: Data Collection Mode and Interviewer Gender Effects on Sexual Health Reporting in Ghana

Justina Agula¹, Jennifer B. Barrett*² and Hilde Tobi³

Project Fives Alive, National Catholic Health Service¹; Independent research consultant; Research Methodology Group, Wageningen University and Research Centre at time of research design and data collection²; Research Methodology Group, Wageningen University and Research Centre³

*For Correspondance: E-mail: jennifer.brooke.barrett@gmail.com

Abstract

Accurate data on young people's sexual behaviour and sexual health practice is essential to inform effective interventions and policy. However, little empirical evidence exists to support methodological design decisions in projects assessing young people's sexual health, especially in African contexts. This short report uses original empirical data collected in Ghana in 2012 to assess the effects of data collection mode and interviewer gender on young people's reporting of sexual health and access to supportive sexual health resources. The findings indicate that the effect of data collection mode may vary by gender, and there is no indication of an interviewer gender effect for males in this study. Preliminary results suggest that building strong rapport with research participants in this context may lead to reduced sexual health data quality. These findings merit further investigation and have direct implications for the design of projects measuring sexual health and related variables in Ghana. (*Afr J Reprod Health* 2015; 19[3]: 111-117).

Keywords: Ghana; young people; sexual health resources; data quality; interviewer effects; mode effects

Résumé

Des données précises sur le comportement sexuel des jeunes gens et la pratique de la santé sexuelle sont essentielles pour éclairer les interventions et les politiques efficaces. Cependant, peu de preuves empiriques existent pour soutenir les décisions sur la conception méthodologiques à l'égard des projets de santé sexuelle des jeunes gens, surtout dans les contextes africains. Ce court rapport utilise les données empiriques originales recueillies au Ghana en 2012 pour évaluer les effets du mode de recueillir les données et les sexes de l'interviewer sur le rapportage des jeunes gens de la santé sexuelle et l'accès aux ressources de santé sexuelle de soutien. Les résultats indiquent que l'effet du mode de recueillir des données peut varier selon les sexes, et il n'y a aucune indication d'un effet du sexe de l'enquêteur pour les hommes dans cette étude. Les résultats préliminaires suggèrent que l'établissement de relations solides avec les participants à la recherche dans ce contexte peut conduire à une baisse de la qualité des données de santé sexuelle. Ces résultats méritent une enquête plus approfondie et ont des implications directes pour la conception des projets pour mesurer la santé sexuelle et les variables connexes au Ghana. (*Afr J Reprod Health* 2015; 19[3]: 111-117).

Mots-clés: Ghana, jeune personne, ressources de santé sexuelle, qualité de données, effets d'intervieweur, effets de mode

Introduction

Collecting accurate data on sexual health and the use of sexual health resources is of vital importance across contexts, as data of poor quality result in flawed conclusions, which, in turn, influence decision making and policy. Previous research has identified the use of sexual health resources as particularly low among young people in Ghana, where two-thirds of young people aged 12–19 who had a history of sexually-transmitted

infections did not seek any care for their condition¹. This striking result highlights the need for intervention, but any action taken must be based on accurate data. Multiple aspects of the study design, including the mode of data collection and characteristics of the interviewer, can influence the quality of the data collected, especially when dealing with sensitive issues². The collection of unbiased and accurate data on sexual behaviour, an especially sensitive issue, presents particular challenges for researchers.

The effects of data collection mode on data quality are closely related to the extent to which a productive research relationship is developed and maintained between researchers and study participants³. The general wisdom is that the research relationship developed with study participants paves the way for researchers to access personal information. According to commonly accepted guidelines^{4,5}, researchers should take steps to develop and maintain strong rapport with interviewees prior to and during interviews. Rapport describes a relationship characterised by mutual trust, emotional affinity and cooperation. To develop strong rapport with participants, researchers are encouraged to communicate “a feeling of empathy for informants”, “penetrate people’s defenses” and have “people open up about their feelings”⁶. The components of trust, respect and frankness make rapport crucial in the data collection process, especially when data are being collected on intimate and embarrassing issues where potential interviewees may be hesitant to participate or reluctant to share information with interviewers⁷. However, despite the general wisdom on the importance of rapport, findings from methodological research have indicated that the participation of an interviewer in data collection may not always produce the highest data quality. Compared to interviews, self-administered forms of data collection lead to higher quality outcome data through more accurate reporting of socially undesirable behaviours^{8,9}. The logic is that respondents to self-administered questionnaires tend to feel more in control of the data collection, generating a greater sense of privacy and more willingness to disclose sensitive information than would be the case in interviews.

The effects of interviewer characteristics on data quality have also received significant attention, perhaps none more so than interviewer gender. Empirical work indicates that the effect of interviewer gender is complex and may vary by gender of research participant¹⁰. A tacit assumption long held by many researchers is that interviewees give the most accurate information on their sexual behaviour to interviewers of the same gender¹¹. Whether the assumption is accurate or not, interviewer gender tends to have a larger influence across a wider range of sexual topics for men than for women¹², and men have reported

having had fewer sexual partners to female interviewers than to male interviewers¹³.

This short report contributes to knowledge on the influence of study design on data quality in relation to sexual behaviour by examining the influence of 1) data collection mode (self-administered vs. face-to-face) and 2) gender of interviewer on responses to questions about personal sexual issues. The paper draws upon original empirical data collected from young, school-aged respondents in the Kassena-Nankana District in rural Ghana.

Methods

Setting and sampling

The study was carried out in the Kassena-Nankana District of the Upper East Region, one of the three regions in northern Ghana. This district, covering an area of 1,674 km², shares a border with neighbouring Burkina Faso. Navrongo is the capital of this predominantly poor rural district. It had a population of 180,611 as of June 2010¹⁴. The district has 197 public and private schools (134 primary schools, 50 junior high schools, 8 senior high schools and 5 tertiary institutions) serving the population¹⁵. The predominant language spoken is Kasem, but English is the language of instruction in schools.

Most children start their education at three or four years of age (crèche), followed by six years of primary school (average age for grade 1 is six years) and three years of junior high school (1st cycle). At present, education is free and compulsory at the basic level for all children (primary and junior high schools). Basic education is followed by senior education (ages 15–17) at a senior high school, vocational school or technical school. Senior education gives young people access to postsecondary education (university, polytechnic, teacher and nursing training colleges).

The study population consisted of students from four public senior high schools. From the list of senior high schools in the district obtained from the Ghana Education Service, four schools were purposively selected to yield a mix of school profiles: Selected schools comprised one day school, two full boarding schools and one mixed boarding/day school. Two were single-sex schools

and two were mixed-sex schools. Students aged 15–24 (youths) whose parental home was in the district were eligible for the study.

In each selected school, eligible students were assembled for a short presentation by the research team to introduce themselves and the study, which aimed to understand sexual behaviour and access to supportive sexual resources. Students were given the chance to ask questions after the introduction. During the introductory meeting, good rapport was built with the students, and attempts were made to dispel any potential misconception that participants in this study are “bad”. Potential participants were also assured of the confidentiality of their information. From those volunteering to participate, 5 students were randomly selected from each school, resulting in a total sample of 20 (10 male, 10 female). In single-sex schools, simple random sampling was used. In the two mixed-sex schools, student gender was used as a stratification variable in the sampling design to ensure approximately equal numbers of males and females in each school. Ethical approval was obtained from the Social Sciences Ethical Committee of Wageningen University and Research Centre and the Ghana Health Service Ethical Review Committee. Clearance was also given by the heads of the participating schools for the participation of their students, and informed consent procedures were followed (taking the form of obtaining assent from minors as well as parental consent when participants were under age 18).

Data collection

Data collection took place in two phases, with a three-week interval between the phases. In the first phase, a survey, part administered by face-to-face interview and part self-administered, was conducted. The face-to-face component of the survey explored engagement of supportive sexual health resources in the sexual decision making process. Following completion of the face-to-face section of the survey, interviewees received the self-administered section, which explored current and past boy/girlfriend relationships, sexual experience and condom use. The self-administered section of the survey was completed in the presence of the interviewer (available to give instructions and assistance), but the interviewer remained at a respectful distance to ensure

respondent privacy (as recommended by de Leeuw⁸). The questionnaires were in English and respondents’ local languages, mostly Kasem, were also used in explaining questions when needed. In this phase of data collection, interviewers administered questions to respondents of the same gender.

The second phase of data collection consisted of semi-structured in-depth interviews. One section of the interview guide repeated verbatim several of the questions asked in the survey (in both the self-administered section and the face-to-face administered section). As in the survey, closed-ended responses were recorded. The time gap between the survey and the in-depth interview was minimised (three weeks between the data collection points) to limit recall biases^{16,17}. The interviews were conducted in English and were audio-recorded with consent from the interviewees. Notes were taken by the interviewer on the setting and on gestures that provided context to the responses. All of the in-depth interviews, regardless of respondent gender, were conducted by the first author (a woman). This crossing over of male survey respondents to a female interviewer enabled a direct comparison of what males said to a male interviewer (in the face-to-face administered survey) to what they said to a female interviewer (in the in-depth interviews) on the subset of questions on supportive sexual resources:

1. Do you have any experience with the use of the things you said promote sexual health?
2. Which of these things do you use for making decisions about your sexual health?
3. How often do you make use of any of these things? (Daily/Weekly/Monthly/Yearly/Less than yearly—specify).

To explore the effects of data collection mode, several sensitive questions that were initially asked in the self-administered component of the survey were repeated in the face-to-face in-depth interviews. These questions were:

1. Do you have a boy/girl friend? (Yes/No)
2. Have you ever had a boy/girl friend? (Yes/No)
3. Have you ever had sex? (Yes/No)
4. When you have had sex, did you use a condom? (Always/Sometimes/Never).

Throughout both phases of data collection, the research team made a concentrated effort to develop strong rapport with respondents, a goal that was stressed in interviewer training for the

project. At the start of each interview, the interviewers urged respondents to give honest responses. Interviewers made a consistent effort to project a friendly and open attitude whenever they came into contact with respondents.

Data analysis

Data were analysed comparing responses to the two subsets of questions listed above. First, focusing on the questions about relationship status and sexual activity, responses collected via self-administered survey are compared to responses to the same questions administered face-to-face. Second, focusing on the questions about the use of supportive sexual health resources, responses collected by a male interviewer are compared to those collected by a female interviewer (consistently face-to-face administered) from the same group of male students.

Data for all 20 interviewees were coded for consistency of responses across the two phases of data collection for each repeated question (0 = inconsistent response and 1 = consistent response). Stata version 11 was used to conduct the descriptive analysis presented in this paper¹⁸.

Results

Characteristics of respondents

Table 1 shows the percentage distribution of the study sample of 20 students by demographic characteristics. The sample was half female, all single, and the majority of respondents were aged 15–19. Catholic religious affiliation was the most common in the sample (65%), and most respondents were of Kassena ethnicity (85%). Respondents were spread across all four academic class levels, with 40% in form four, 15% in form three, 25% in form two and 20% in form one at the time of the survey.

Effect of data collection mode

All 10 males were consistent in their answers to the repeated questions addressing relationship status and sexual activity in the two phases of data collection (self-administered questionnaire and face-to-face interview), whereas some female respondents were inconsistent on three of the four questions. The two females inconsistent in their

Table 1: Percentage Distribution of In-School Respondents aged 15–24 by Demographic Characteristics, 2012 (n = 20)

	Frequency	Percentage
Sex		
Male	10	50
Female	10	50
Age		
15–19 years	14	70
20–24 years	6	30
Marital status		
Single	20	100
Religion		
Catholic	13	65
Pentecostal	3	15
Muslim	2	10
Other	2	10
Ethnicity		
Kassena	17	85
Nankani	1	5
Bulsa Frafra ethnic groups	2	10
Highest level attained at school		
Form 1	4	20
Form 2	5	25
Form 3	3	15
Form 4	8	40

*Source: January–February, 2012 Field survey among senior high school students in the Kassena-Nankana District.

answers to the question on current relationship status first reported having a boyfriend in the self-administered survey, but then reported not having a boyfriend when the question was administered face-to-face. Although inconsistent, a change in relationship status is possible given the study timeline. On the questions on sexual intercourse and condom use, 7 females were consistent in their responses. The 3 females with inconsistent responses initially reported in the self-administered questionnaire having had sex and using a condom, but then, in the face-to-face interviews, they reported never having had sex. Given the contradictory nature of these statements, it is not possible that both statements were accurate. At least in this sample, females were more likely to report that they currently had a boyfriend and had ever had sex when completing a self-administered questionnaire than when responding directly to an interviewer in a face-to-face setting.

Effect of interviewer gender

Both for male and for female respondents, the proportion of consistent responses was the same for all three questions addressing the use of sexual health resources. Nine out of 10 male respondents were consistent in their responses to this subset of questions, compared to 8 out of 10 females, indicating no major effect of gender of interviewer in this sample. Male respondents were very likely to give the same responses to the female interviewer as they gave to the male interviewer. Although females were also likely to give consistent responses to these questions at both contact moments (consistently with a female interviewer), in this sample, 2 of the 10 female respondents gave inconsistent responses.

Unanticipated findings

Consistent with the conventional wisdom encouraging strong rapport with research participants, it was observed in the present study that, as the female interviewer developed a stronger research relationship with interviewees in the face-to-face in-depth interviews, signs of boldness, freeness and interest increased among male interviewees in discussing topics related to sexuality. As rapport developed, males expressed the intent to be honest in the responses, given the relationship and trust between them and the female researcher:

“I would not lie to you. I have a girlfriend and we have been having sex, sometimes we use [a] condom but when the condom is finished we don’t use it. Once in a while we seek advice from the health professional”.
[Male respondent, 20 years old]

“I will not be telling you what I am telling you if not for the way you talk to us whenever you are here and the way you carry yourself around”.
[Male respondent, 22 years old]

Female respondents, in contrast, were visibly uncomfortable engaging in open discussion on sensitive topics about their sexuality during the in-depth interviews. Interviewer observations noted visual signs of discomfort, including avoiding eye contact, bowing the head when questions were raised, laughing nervously and sighing:

“[Sigh followed by a long pause] I have ever had a boy friend.....we had sex once but now I am not in a relationship”. [Female respondent, 20 years old]

Discussion

The study findings suggest an effect of the mode of data collection, but only for female respondents. In this study, female respondents appear to have been less honest when reporting on their sexual history and possibly also relationship status when face-to-face with an interviewer than when completing a self-administered questionnaire. This study provides a preliminary indication that female respondents may tend to underreport their sexual behaviour in face-to-face interviews, consistent with the findings of Mensch and colleagues¹⁹. In the research presented here, there is no indication of a systematic effect of interviewer gender on male respondents’ responses to questions about sexual health. Only one male respondent gave inconsistent answers to these questions, and this sequence of answers was plausible given the time gap between data collection phases.

This study suggests that mode of data collection was associated with data quality among female respondents. However, female inconsistency in responses over time was not influenced only by the data collection mode. Even when females were repeatedly asked the questions on use of sexual health resources, with the same mode of administration (face-to-face interview) and consistently with a female interviewer, more females than males were inconsistent in responses. Drawing on broader observations recorded in interviewer notes during the in-depth interviews provides a possible explanation: It is possible that the rapport that was built over time between the interviewer and the interviewees had a very different effect on females and males in this study context.

The unanticipated findings presented here indicate that building good research relationships with male interviewees may boost young men’s trust and confidence, encouraging honest reporting. However, for young women, building strong rapport with the researcher may make them uncomfortable and shy when interacting with the interviewer, potentially resulting in adverse effects

on the honest reporting of sexual behaviour. The researcher must therefore be aware that, though building good rapport with interviewees is generally recognised as a technique that can facilitate frank reporting, this beneficial outcome may not be universal; depending on the topic of interest, strong rapport may introduce bias in reporting among certain respondents. When a stronger relationship is established between the researcher and the interviewee, interviewees may become increasingly uncomfortable with disclosing certain types of information and may attempt to provide responses they think the interviewer will find pleasing. This bias in reporting has clear effects on the quality of data obtained and subsequently on policy making that draws upon these data.

Although the present study makes an empirically-based contribution to knowledge about data quality in research on sensitive issues related to sexual health practice, it has several limitations that should be addressed by future work on the topic. The first limitation of the study involves the small sample size and reliance on volunteer participants, which make it impossible to generalise results to a larger population. A related limitation is the fact that the conclusions drawn from this study cannot be generalised because we could not conduct inferential statistical analyses. The simple descriptive data analysis possible with these data is informative, but it is insufficient for a comparative study. Additionally, we are unable to assess the effect of gender of interviewer among female respondents with the present data. Despite these limitations, this study should serve to stimulate future research on an under-examined topic, and should be taken as a cautionary note for researchers looking to build strong rapport with respondents in order to enhance the quality of data on sensitive issues, especially in Ghana and similar contexts.

Conclusion

In terms of young people's sexual health reporting in Ghana, the effect of data collection mode may vary by gender. This study found no interviewer gender effect for males. Preliminary findings from the present study that building strong rapport with research participants in this context may lead to reduced sexual health data quality warrant further examination.

Contribution of Authors

JA conceived and designed the study, collected and analysed the data. JB and HT contributed to the study's design and analysis. All authors contributed to the writing and revising of the manuscript, and all authors approved the final version of the article.

References

- Biddlecom AE, Munthali A, Singh S and Woog V. Adolescents' views of and preferences for sexual and reproductive health services in Burkina Faso, Ghana, Malawi and Uganda. *Afr J Reprod Health* 2007; 11(3): 99–110.
- Groves RM, Fowler FJ Jr, Couper MP, Lepkowski JM, Singer E and Tourangeau R. *Survey Methodology*. Hoboken, New Jersey: Wiley, 2004.
- Devers KJ and Frankel RM. Study design in qualitative research-2: sampling and data collection strategies. *Educ Health* 2000; 13(2): 263–271.
- Goodwin D, Pope C, Mort M and Smith A. Ethics and ethnography: an experiential account. *Qual Health Res* 2003; 13(4): 567–577.
- Dickson-Swift V, James EL, Kippen S and Liamputtong P. Doing sensitive research: what challenges do qualitative researchers face? *Qual Res* 2007; 7(3): 327–353.
- Taylor SJ and Bogdan R. *Introduction to Qualitative Research Methods: A Guidebook and Resource*, 3rd ed. New York: Wiley, 1998, p. 48.
- Dickson-Swift V, James EL, Kippen S and Liamputtong P. Blurring boundaries in qualitative health research on sensitive topics. *Qual Health Res* 2006; 16(6): 853–871.
- de Leeuw DE. *Data Quality in Mail, Telephone and Face to Face Surveys*. Amsterdam: TT-Publicaties, 1992.
- de Leeuw DE. To mix or not to mix data collection modes in surveys. *J Off Stat* 2005; 21(2): 233–255.
- Davis RE, Couper MP, Janz NK, Caldwell CH and Resnicow K. Interviewer effects in public health surveys. *Health Educ Res* 2010; 25(1): 14–26.
- McCombie SC and Anarfi JK. The influence of sex of interviewer on the results of an AIDS survey in Ghana. *Hum Organ* 2002; 61(1): 51–57.
- Catania JA, Binson D, Canchola J, Pollack LM, Hauck W and Coates TJ. Effects of interviewer gender, interviewer choice, and item wording on responses to questions concerning sexual behaviour. *Pub Opin Q* 1996; 60(3): 345–375.
- Wilson SR, Brown NL, Mejia C and Lavori PW. Effects of interviewer characteristics on reported sexual behavior of California Latino couples. *Hisp J Behav Sci* 2002; 24(1): 38–62.
- Ghana Statistical Service. *Population by Region, District, Age Group and Sex, 2010* [cited 2014 Jan 10. Available from: http://www.statsghana.gov.gh/docfiles/pop_by_region_district_age_groups_and_sex_2010.pdf.
- Ndiath MM. Socio-Economic Determinants of

- Childhood Mortality in Navrongo DSS. [Unpublished thesis submitted to University of the Witwatersrand], 2010.
16. Brewer NT, Hallman WK, Fiedler N and Kipen HM. Why do people report better health by phone than by mail? *Med Care* 2004; 42(9): 875–883.
 17. Harris LR and Brown GTL. Mixing interview and questionnaire methods: Practical problems in aligning data. *Practical Assessment Res Eval* 2010; 15(1):1–19.
 18. StataCorp. *Stata Statistical Software: Release 11*. College Station, Texas: StataCorp LP, 2009.
 19. Mensch BS, Hewett PC and Erulkar AS. The reporting of sensitive behavior by adolescents: A methodological experiment in Kenya. *Demography* 2003; 40(2): 247–268.