Exploring Knowledge and Attitudes Towards HIV/AIDS among Deaf People in Ghana

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ABSTRACT

Purpose: *By exploring the level of knowledge about HIV/AIDS and attitudes towards persons with HIV/AIDS among deaf people in Ghana, this article aims to identify and correct possible gaps in awareness.*

Method: *A participatory sexual and reproductive health (SRH) needs assessment was conducted, targetting deaf people who were fluent in the Ghanaian Sign Language (GSL). The study design was a two-phase, sequential, mixed methods approach. Three focus groups assisted in the development of a survey, which was then implemented for needs assessment data collection. The 179 study participants consisted of 26 focus group participants, 152 survey respondents and 1 key informant. Of the focus group participants, 7 were executives of Ghana National Association of the Deaf (GNAD), 10 were adult males, and nine were adult females. Apart from the key informant, all the participants were deaf persons.*

Results: *The study indicated that many respondents still had misconceptions about HIV/AIDS and had difficulty identifying preventive methods, but their attitudes towards persons with HIV/AIDS was generally positive.*

Conclusion: *More attention needs to be paid to the requirements of the deaf community and to designing HIV/AIDS programmes and services that are deaf-friendly and accessible.*

Key words: *health, information, knowledge, misconceptions, reproductive, sexual*

INTRODUCTION

A recent Global Survey on HIV/AIDS and Disability by the World Bank indicated that though they are a high-risk population, people with disabilities have been neglected (Groce, 2004). They are often excluded from HIV/AIDS prevention and

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outreach programmes for reasons relating to misconceptions or misunderstanding about their sexuality and risk for HIV infection (Job 2004; Wilson & Monaghan, 2006). A number of studies have also documented the difficulties these people face in utilising information and services from mainstream sources (Wilson & Monaghan, 2006; Groce et al, 2007). Consequently, their chances of getting quality information and services about HIV/AIDS prevention or safer sex are minimal (Wilson & Monaghan, 2006; Groce et al, 2007).

Deaf people in particular, face greater access problems than other people with disabilities because mainstream sources of information are inaccessible to them (Fedorowicz, 2006; Heyederick, 2006; Wilson & Monaghan, 2006; Groce et al, 2007). They are less likely to obtain information from formal sources such as health professionals, discussions, books, brochures, and television broadcasts, than hearing people (Wilson & Monaghan, 2006). According to Roberts (2006), even the visual information that deaf people receive from television may not be accurate and may be incomplete, meaningless and misconstrued because most of it is not captioned or translated in sign language. It has therefore been estimated that deaf persons are up to 8 years behind the general population in their level of knowledge of disease prevention (Goldstein et al, 2008).

In view of the difficulties encountered when accessing information from formal sources such as health professionals and media, deaf people often turn to informal sources such as friends and family members for information (Heuttel & Ronstein, 2001; Mprah, 2011). However, this often has dire consequences when it comes to learning about SRH issues. For example, Heuttel and Ronstein (2001) observed differences in levels of knowledge pertaining to HIV/AIDS, between deaf American college students and their hearing counterparts. The authors noted that deaf students were less likely to have accurate knowledge because information from informal sources such as friends and family tended to have more factual errors, while hearing students obtained information from their teachers, TV, and reading materials.

Although data suggests that deaf people in Ghana have limited knowledge about sexual and reproductive health issues (Tsiboe-Darko, 2008; Poku, 2008), little is known about the extent and nature of the problem. This study attempts to fill the gap by providing some information on the level of knowledge about HIV/AIDS among deaf people who communicate in the Ghanaian Sign Language (GSL). This would add to the existing literature and make information available for policy-making and programme designing.

METHOD

Study Setting

Participants were recruited from two communities in Ghana: Tamale, a city in the Northern Zone, and Accra in the Southern Zone. These communities were deliberately selected in order to sample respondents with diverse characteristics and represent views from people with different perspectives. The Northern sector is generally characterised by poorly developed infrastructure and harsh climatic conditions as compared with the Southern sector (Berry, 1995; National Population Council, 2000). Participants were recruited from a deaf senior high school, deaf churches and deaf centres in the two cities.

Study Design

The study was a participatory SRH needs assessment, targetting only deaf people who were fluent in the GSL. A two-phase, sequential, mixed methods design was employed, whereby three focus groups assisted in the development and implementation of a survey, for needs assessment data collection. Review of documents, discussions with a SRH worker, and observations helped to clarify gathered data. The use of the focus groups to help develop survey content was a unique feature of the study. It facilitated an in-depth exploration of themes to identify SRH issues that were important for the development of the quantitative (survey) instrument. The survey was conducted to document needs related to these themes within the deaf community.

The mixed methods approach facilitates triangulation of data collected on the same issue, which often helps researchers develop a deeper understanding of the issue being investigated (Creswell & Plano Clark, 2007). Triangulation allows researchers to complement the differing strengths of quantitative and qualitative methods (Creswell & Plano Clark, 2007). For example, Demarest et al (1984) used surveys, interviews, and records to assess the educational needs of hospital nursing staff. Participants were randomly assigned either to the survey or for interviews. A key finding from the study was that the three data collection techniques revealed different needs. According to the researchers, even though data collection from multiple sources was more expensive, they gained a fuller understanding and were better able to interpret the results than if they had relied on only one source. The complexity of SRH issues in Ghana presents similarly complex data collection and interpretation challenges.

Sampling Strategy

The purposive sampling procedure was used to select participants for both the focus groups and the survey. Those selected had adequate knowledge about SRH issues affecting the deaf community and their views were representative of the views of the community. The utility of the data was maximised in this way, which was preferable to obtaining inputs from respondents lacking any perspectives on the community's concerns.

While all the focus group participants were recruited from two deaf churches and a deaf centre (in Accra), recruitment of survey respondents was conducted in a deaf high school (in Accra), two deaf centres (one in Accra and one in Tamale), and three deaf churches (two in Accra and one in Tamale). These locations were selected in order to have a better chance of identifying deaf people with formal education and knowledge of the GSL. The Ghana National Association of the Deaf (GNAD) assisted in the selection of the two churches, which had a large deaf population. The deaf centres were the only ones in the two cities. All the deaf persons in the identified locations, who were willing to participate in the study, were recruited.

The key informant was recruited from one of the SRH centres. He was familiar with the deaf community as he had done a study on HIV/AIDS within the community.

Sample Size

Of the179 persons recruited for the study, 26 were focus group participants, 152 were survey respondents, and 1 person served as a key informant. Except for the key informant, all the others were members of the deaf community who were fluent in the GSL and were considered well-informed about issues within the community. Lack of formal education was an exclusion criterion since formal education is required to use the GSL. Communicating with the non-GSL group would have required learning the local language used within their communities, a serious logistical challenge since Ghana is a multilingual society. Moreover, users of GSL were more likely to have used or attempted to utilise SRH information from education programmes disseminated through magazines, posters, online materials, and brochures, and thus were likely to have the understanding and experience to explain the challenges deaf people encounter when accessing SRH information and services. In addition, only those above 18 years of age at the time of the study qualified for recruitment.

Of the 152 respondents who completed the survey, nearly two-thirds were from the deaf senior high school, 28% from the two deaf churches and the deaf centre in Accra, and 11% from the deaf church and the deaf centre in Tamale. More survey participants were chosen from the senior high school because it is the only public deaf senior high school in Ghana. The senior high school admits students from all over the country and has a diverse deaf population in terms of economic and socio-cultural characteristics. As such, their views were likely to be more representative of the adolescent deaf population in Ghana. The inclusion of adolescents was particularly important since this age group has been found to have more SRH problems than other segments of the population (National Population Council, 2000).

Since there was no data on deaf people who had formal education in Ghana, the strategy was to sample as many deaf persons as possible who were eligible and willing to participate in the study. Many of the deaf persons who had formal education had migrated to the Southern part of the country in search of jobs and higher education, as a result of which a smaller number of participants were recruited from Tamale in the North, in comparison to Accra which is the national capital. The North-South migration is a longstanding problem for Ghanaians; poor conditions in the North have triggered a general migration of people from the North to the South (Berry, 1995).

More females from the senior high school were recruited, to ensure that females were adequately represented. This is because females, especially young girls, have been found to be at greater risk for SRH problems than boys (National Population Council, 2000). Though the intention was to select equal numbers of females and males, only 44 of the 93 females in the population of 343 students, were willing to participate. There is no data on deaf people in Ghana; however, the low enrolment of girls in the school was not because deaf males outnumber females, but because fewer females qualify for entrance to the school, as well as the fact that the school had limited facilities for female students. In fact, the recent Population and Housing Census of Ghana indicated that there were more females (52.5%) than males (47.5%) who had some form of disability (Ghana Statistical Service, 2012), although there was no disaggregated data by type of disability.

In the study, respondents from deaf churches and deaf centres in Accra and Tamale (aged 22 years and above) are referred to as the "adult population", and those from the deaf senior high school (aged 18-22 years) as "students" or "adolescents" in the balance of reporting. Table 1 shows the distribution of study participants from each location,

Table 1: Distribution of survey participants by place of residence

Residence	Male		Females		**Total**	
	Students n=48	Adults n=39	Students N=44	Adults n=21	Students	Adults
Accra	48	28	44	16	92	44
Tamale	-	11	-	5		16
Total					**92**	**60**

Although gender, age, marital status, ethnicity, religion, place of residence, and educational background are relevant to the analysis of SRH behaviour, gender and age were chosen as the primary basis for comparing survey responses. There was very little variation in respondents' educational attainment and marital status, and there was significant under-representation in demographic groupings defined by religion, ethnicity, and place of residence. It is worthwhile to note that age and gender are often the most critical demographic considerations in policy and programme interventions in Ghana. For example, the adolescent reproductive health and the HIV/AIDS and STI policies used both age and gender as important variables for policy and programmatic interventions (National Population Council, 2000; Ghana AIDS Commission, 2004).

Data collection Procedures and Analyses

Focus groups

Three focus groups were organised: (1) the executives group consisting of 7 executive members of GNAD, all of whom were males, (2) the adult male group with 10 members, and (3) the adult female group with 9 members.

The focus group guide was organised around the research questions, and consisted of open-ended questions that elicited participants' views concerning access to SRH services and information. After pilot testing, a final guide consisting of the following issues was developed: (1) sources of information, (2) knowledge of SRH problems in the deaf community, (3) SRH experiences and needs of deaf people, (4) ways to address the problems deaf people encounter when accessing information and services on SRH issues, (5) key related issues in the deaf community, and (6) the role of GNAD in the provision of information and services on SRH issues. With participants' permission, proceedings from the focus groups were recorded on videotapes and audio recorders.

The transcribed data from the three focus groups were analysed separately in order to differentiate between the responses of the three categories of participants: leaders of the deaf community, and male and female participants. Focus group videotapes were converted to DVDs using Adobe premiere video software. Both the DVDs and the voice recordings were transcribed to text format. Transcription of the data from the DVDs was done in two steps: "partial" transcription and full transcription.

The first step ("partial" transcription) involved viewing the DVDs from all the focus groups, to identify and transcribe into word document the concerns that were raised by participants. This was an abridged version of the discussions, consisting of only the group discussion material needed for the development of the survey. Since a verbatim transcription of the DVDs would be time-consuming and delay the development of the survey, an abbreviated procedure was employed whereby the author viewed the videotapes with two research assistants and identified the major concerns raised during the focus groups. To ensure that material was not omitted, the author met 6 participants (2 from each focus group) to discuss and validate the concerns identified. Thereafter, a final list of concerns was generated and organised around the focus group questions. These questions and data from the other sources were the basis for the major subsections of the survey instrument.

The second step was a "full" transcription of the videotapes, representing the data from the focus groups that were used to complement survey results. To ensure accuracy, two deaf persons who were fluent in both English and GSL were identified, and then paired with each of the research assistants. Each pair viewed the tapes and glossed (a word- to-word translation) the GSL. The research assistants then translated the gloss into English. The transcripts were read through to identify broad themes from each focus group. Supporting quotes from the transcripts were identified and linked to their respective themes. These themes formed the subsections for the focus groups' data.

Survey Development

Transcripts from the focus groups' video and audio recordings, two existing surveys (2003 GHDS and a survey on SRH status among persons with disabilities in Ghana), and two reports on adolescent reproductive health in Ghana were used to finalise the survey.

There were two parts to the survey. The first part included demographic questions and solicited general information concerning deaf people's level of knowledge about SRH issues (HIV/AIDS and pregnancy), factors influencing visits to SRH centres, sources of information on SRH issues, and use of contraceptives. Data for this paper are derived from the first part of the survey.

The second part of the survey focussed on assessment of the perceived importance of specific SRH issues. There were two items for each issue. One question was about the importance of the issue and the second questioned how satisfied the respondent was with the issue. Both questions were rated by the respondents on a 3-point Likert-type scale, where 1 represented "very important" or "very satisfied" and a 3 represented "not important" or "not satisfied". Thus, respondents assigned both an importance and satisfaction score for each issue. This part of the survey generated completely different data that are not relevant to this paper.

The final survey explored issues relating to factors that influenced visits to SRH centres, organisations providing SRH services, SRH problems among deaf people, sources of information on SRH issues, level of knowledge about STDs and pregnancy, contraception knowledge and use, and importance and satisfaction ratings of SRH issues and services.

During the pilot testing of the survey instrument it was found that interviewing participants in groups would be easier than conducting individual interviews. As result, each interview session involved gathering participants in a single room, distributing surveys, and providing instructions. The survey was conducted in the GSL by the researcher and the two research assistants. Some of the items were written on blackboards and flip charts to make explanation easy, and the research staff answered questions.

Basic descriptive statistics were used to analyse and summarise the survey data. Responses to the survey items were entered into an SPSS data file, and cross tabulations and chi-square statistics were computed to compare response differences across age and gender groups.

Ethical Issues

The study was approved by the University of Illinois at Chicago's (UIC) Institutional Review Board (IRB), but no approval was sought in Ghana where there are no Institutional Review Boards. Informed consent was obtained from all participants before recruitment, using the GSL. The informed consent process included giving information about the expected duration of the survey and focus groups, how much they would be paid, and confirming that participation was completely voluntary and the decision not to participate would not adversely affect their relationship with the investigator. In addition, they were assured that they were not obliged to answer all questions, had the right to withdraw from the study at any time, and that their names would not be identified in the data. Focus group volunteers were told that the discussions involved video and audio taping; while the male group agreed to be videotaped, they thought they would feel more comfortable if the deaf community were responsible for the recordings.

RESULTS

From Focus Groups

There was consensus regarding deaf people's level of knowledge on HIV/AIDS; participants claimed that deaf people have poor knowledge about HIV/AIDS issues. About 98% claimed that deaf people engaged in risky sexual behaviour because they were unaware of the consequences. The following quotes give their views about deaf people's knowledge of HIV/AIDS:

> *"Deaf people do not have knowledge on the use of condoms as a safe measure against STIs and STDs. They also do not know anything about how STDs such as HIV is spread. We do not know how to take measures against HIV/AIDS and other sexual and reproductive health issues, so we can easily get HIV/AIDS."* (A male participant)

> *"Gonorrhea, syphilis, miscarriage, rape, abortion, and HIV/ AIDS are high among deaf people because they are unaware of these diseases. Deaf people lack knowledge on many HIV/AIDS issues and that is causing more problems for them. Unlike the hearing counterparts, deaf people do not have access to the right information and do not know of HIV/AIDS very well like the hearing population. They therefore engage in risky behaviour."* (An executive participant)

The participants claimed that deaf people were unaware of HIV/AIDS related issues. This may be due to the difficulties they face in obtaining the correct information on sexual and reproductive health issues. These claims were verified in the general deaf community via the survey.

From Survey

The survey measured respondents' level of knowledge about HIV/AIDS by examining their ability to discern common misconceptions about HIV/AIDS, their knowledge of effective methods for preventing HIV/AIDS, and their attitudes toward people living with HIV/AIDS.

Misconceptions about HIV/AIDS

The survey data (Table 2) indicated that erroneous beliefs about HIV/AIDS were common among respondents; they could not identify many of the items describing misconceptions. A majority (62.8%) of the students and about a third (34%) of the adults thought mosquitoes could transmit the virus that causes HIV/AIDS. Moreover, 56.8% of the respondents thought that one could get HIV/AIDS by being around people who had it, which is somewhat inconsistent with their more progressive attitudes towards such people (described under 'Attitudes towards people living with HIV/AIDS' below).

Table 2: Percent Correctly Identifying Misconceptions about HIV/AIDS by Gender and Age

Statement	Males (n=87)				Females(n=65)			
	Students (n=48)		Adults (n=39)		Students (n=44)		Adults (n=21)	
	N	%	N	%	N	%	n	%
A deaf person can't get AIDS because it is a disease for hearing people [a]	24	54.5	31	86.1	19	45.2	16	80.0
Junior High School pupils can't get AIDS because they are too young [a]	23	52.3	26	72.2	12	28.6	15	75.0
A person can get AIDS from mosquito bites [a]	17	37.2	27	75.0	14	37.8	12	60.0

It is possible to cure/heal persons with AIDS [a]	21	48.8	33	91.7	13	31.7	17	85.0
A person with HIV/AIDS always looks unhealthy	13	31.0	16	44.4	12	30.0	11	55.0
A person can get AIDS virus by sharing food with a person who has AIDS [a]	20	45.5	28	77.8	12	28.6	15	75.0
The virus that causes AIDS can be transmitted to a child during pregnancy	29	65.9	24	66.7	26	61.9	15	75.0
The virus that causes AIDS can be transmitted to a child during delivery	20	48.8	15	41.7	22	53.7	12	63.2
The virus that causes AIDS can be transmitted to a child during breast feeding	30	71.4	18	50.0	26	61.9	11	55.0
I can get AIDS by being around people who are HIV positive [a, b]	16	36.4	20	57.1	10	24.4	11	55.0
I only have oral sex with my boyfriend/girlfriend because you cannot get HIV that way	23	53.5	18	51.4	12	30.0	11	64.7
I can get AIDS through witchcraft or other supernatural means [a]	17	40.5	20	55.5	14	35.9	12	70.6

[a] Categories that are significant by t-test across age p<.05
[b] Categories that are significant by t-test across gender p<.05

Both age and gender influenced perceptions about HIV/AIDS. Gender was significant on one item, transmission of HIV by interacting with people who are HIV positive, with males more likely to have this misconception than females (males 42.8% versus female 36.6%; X^2= 16.253, df=2, p=003). However, the significant difference appears to be attributable to variation in the proportion of males and females who said they did not know; males were far less likely to say “don’t know” than females (18.4% males versus 39.0% females). There were significant differences across age groups on misconceptions related to who is vulnerable to AIDS, transmission through mosquitoes, cure for persons with HIV/AIDS, transmission through sharing food, interacting with people who are HIV positive, transmission through witchcraft, and cure by having sex with a virgin. Students appeared less likely to identify a misconception; for example, only 50% identified as false the statement, "a deaf person can't get AIDS because it is a disease for hearing people" versus 83.9% for adults (X^2= 17.253, df=2, p=001). Again, this could be attributed to students being more likely to indicate that they "don't know" as compared to adults (24.4% versus 5.4%), suggesting that the age effect might even be stronger.

Knowledge about HIV/AIDS prevention methods

Knowledge about prevention was not very high. Many participants could not distinguish between the effective and ineffective methods of HIV/AIDS prevention. 25.7% did not know that sharing needles and blades with others could transmit HIV, while over one-third believed that having sexual intercourse with homosexuals (35.5%) and bites from mosquitoes (16.4%) were HIV transmission risks (Table 3).

Table 3: Percent Correct Identification of HIV/AIDS Prevention Methods by Gender and Age

How to Avoid HIV/AIDS	Males (n=87)				Females(n=65)			
	Students (n=48)		Adults (n=39)		Students (n=44)		Adults (n=21)	
	N	%	N	%	N	%	n	%
Avoid sex (abstinence)	24	50.0	25	64.1	16	36.4	13	61.9
Use condoms	27	56.3	33	84.6	26	59.1	16	76.2
Be faithful to partner	18	37.5	31	79.5	11	25.0	15	71.4
Avoid sex with many partners	14	29.2	25	64.1	12	27.3	14	71.4
Avoid sex with homosexuals	12	25.0	21	53.8	10	22.7	11	52.4
Avoid blood transfusions	12	25.0	21	53.8	11	25.0	10	47.6
Share needles with others	6	12.5	17	43.6	7	15.9	9	42.9
Share blades with others	5	10.4	15	38.5	10	22.7	8	38.1
Avoid kissing	8	16.7	15	38.5	9	20.5	8	38.1
Avoid mosquito bites	2	4.2	9	23.1	8	18.2	6	28.6
Seek spiritual protection	3	6.3	4	10.3	4	9.1	4	19.0
Avoid injections	6	10.4	8	16.7	9	20.5	6	28.6

There were no significant age and gender differences. The inability of respondents to discern between the effective and ineffective methods suggests general lack of knowledge on modes of HIV/AIDS transmission among all respondents, regardless of age or gender. Notable were the low response rates for many items, possibly due to uncertainty about the right responses.

Attitude towards people living with HIV/AIDS

Attitudes towards HIV/AIDS were assessed via questions about a hypothetical family member with the condition. As shown in Table 4, the survey data indicated that stigma associated with HIV/AIDS appeared to be influenced by age and gender. Students were more likely to stigmatise a person living with HIV/AIDS than adults, a finding consistent with the study of adolescents' reproductive health in Ghana (Awusabo-Asare et al, 2006).

Table 4: Percent holding Stigmatising Attitudes towards Person with HIV/AIDS by Gender and Age: Percentage who said Yes

Statement	Yes				Yes			
	Males (n=87)				Females(n=65)			
	Students (n=48)		Adults (n=39)		Students (n=44)		Adults (n=21)	
	N	%	N	%	N	%	n	%
Keep person away from other people [a]	19	42.2	11	33.3	25	62.5	15	71.4
Leave person to die [a]	22	50.0	7	21.2	16	43.2	2	10.0
Would not speak to person in public [b]	9	21.4	8	24.2	5	13.2	5	25.0
Would not visit person's room	4	11.4	2	6.1	4	10.0	2	10.0
Would not shake person's hands [a]	8	18.6	4	11.8	3	8.1	1	5.0
Would not use same plate as person	13	31.0	5	15.6	10	26.3	5	25.0
Would not let my children play with person	7	17.5	8	26.7	10	25.0	3	15.8

[a] Categories that are significant by t-test across age p<.05

[b] Categories that are significant by t-test across gender p<.05

Respondents were more likely to respond negatively to items that involved social stigma; for example, they were less likely to speak to the family member with HIV/AIDS in public (41.8%) or keep him/her out of public eye (56.9%) than to visit his/her room (69.7%) or shake hands with him/her (64.9%). Respondents were more likely to share the same plate with the person than to speak to him or her in public. This finding is somewhat surprising, because the survey results on misconceptions about HIV/AIDS (described above) indicated that respondents thought one could be infected by being around people with HIV/AIDS.

Gender influence appeared to be very minimal, with only 'speaking to a person in public' having significant group differences (males 50.7% and females 30.0%, X^2=10.058, df=3, p=018). In terms of age, there were significant differences between students and adults on three items, with students being more likely to stigmatise than adults: 'keep the person away from other people' (51.8% students and 22.6% adults, X^2 =13.759, df=3, p=003); 'leave the person to die' (46.9% students and 17.0% adults; X^2 =23.966, df=3, p=001); and, 'would not shake hands with person' (13.7% students and 9.3% adults, X^2 = 8.689, df=3 p=034). Adults were more likely to express uncertainty (that is, say "maybe" and "don't know") about whether to 'keep the person away from other people' (27.1% students and 32.0% adults) and 'leave the person to die' (34.5% students and 37.7% adults).

DISCUSSION

Even though the sample size appears to be limited, which is often the case in many studies with deaf people, there are nevertheless a number of important findings about deaf people's knowledge base regarding HIV/AIDS. The study also has important implications for policy-making and programme designing, as well as the provision of deaf-friendly SRH information, and services in general for deaf people in Ghana.

The study provides a perspective on the need to target specific subgroups, which many policies and programmes tend to ignore. There are indications that substantial differences exist across adults and adolescents, females and males, in terms of knowledge about HIV/AIDS issues. This finding underscores the importance of knowing and understanding the unique needs of different groups in designing policies and programmes. Solutions for providing services to one group do not necessarily apply to other subgroups. Policy makers and health workers must seek to understand these nuances and the diversity of the deaf community, and ensure that options, especially in the area of communication, exist for all subgroups in the community.

The finding that deaf people have a fairly positive attitude towards people living with HIV/AIDS appears to be inconsistent with findings from other studies on HIV/AIDS stigma. For example, Tsiboe-Darko (2008) observed that although deaf participants thought people with HIV/AIDS should be given equal treatment like everyone else, few would buy food from an HIV positive food vendor. A possible reason for the seeming inconsistency between the findings in the two studies could be that whereas the current study used the example of a family member with HIV/AIDS to determine attitude, the earlier study used the example of a non-family member. Awusabo-Asare et al (2006) discovered that hearing adolescents would care for a family member infected with HIV/AIDS, but they would stigmatise a non-family member. Similarly, respondents in the Ghana Demographic and Health Survey (GHDS) showed a more positive attitude towards a family member with AIDS, than a non-family member (Ghana Statistical Service et al, 2009). These findings suggest that participants in the current study would also be likely to stigmatise a non-family member. This has some implications for the support of persons living with HIV/AIDS. In Ghana, families are the primary caregivers when one falls ill. Thus, the positive attitude exhibited towards family members with HIV/AIDS is welcome.

At the same time, the findings portray a lack of in-depth understanding and awareness about critical issues on HIV/AIDS among deaf people in Ghana. This seems to have arisen from misinformation about HIV transmission among the deaf population, leading to irrational perceptions and misperceptions, and even uncertainty and confusion about personal risk. Misconceptions and confusion are possibly reasons for the somewhat contradictory responses given by some respondents; some thought one could get HIV/AIDS by physically interacting with people who have the condition, but they would willingly shake hands with such persons, enter their rooms, and even share their plates with them.

In general, deaf people had low levels of knowledge about HIV/AIDs, and this was likely to be lower in comparison to the knowledge level of the general population in Ghana. According to the GDHS, HIV/AIDS awareness among Ghanaians was widespread (Ghana Statistical Service et al, 2009). However, it is impossible to determine deaf people's level of knowledge from the GDHS because there is no disaggregated data on people with disabilities, including deaf people. Findings from other studies with deaf people in Ghana (Tsiboe-Darko, 2008) and other countries (Heuttel & Ronstein, 2001; Roberts 2006; Wilson & Monaghan, 2006) corroborate the fact that deaf people's level of knowledge about HIV/AIDS is lower than that of the general population. Lack of accessible deaf-friendly information is a possible reason for this. Studies have shown that deaf people's access to quality information is significantly limited as the major sources of information on HIV/AIDS for the general population are largely inaccessible to them (Groce, 2004; Roberts, 2006).

CONCLUSION

The study provides insights and understanding into the HIV/AIDS knowledge base of deaf people in Ghana, and is consistent with previous evaluations on the subject. The findings highlight key issues relevant to the provision of accessible SRH information and services for the deaf community in Ghana, as well as possible challenges that lie ahead in addressing their needs. There is an urgent need to include disability issues in SRH policies in Ghana. Currently, there are no clear and effective policies to guide the provision of SRH information and services for people with disabilities in general and deaf people in particular. Those involved in HIV/AIDS policy- making, programme designing, and service delivery may not see the need to design separate policies and programmes for deaf people or even include them. Since this study points to a need to target deaf people in HIV/AIDS policies and programmes, the findings are presented with a view to help in policy development. However, many questions remained unanswered and more data is needed to guide policy-making, programme designing, and service provision for the deaf.

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