Knowledge on and attitude towards Sexually Transmitted Infections: A qualitative study of people with physical disabilities in a peri-urban district of Ghana

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Abstract: Persons with disabilities are at higher risk of sexually transmitted infections (STIs), however, they are often excluded from programmes targeting groups at high risk of STIs. This study explored the level of knowledge and attitude of persons with physical disabilities toward Sexually Transmitted Infections in the Jachie Community in Ashanti Region of Ghana. This was a descriptive study using a qualitative approach and conducting in-depth interview among 17 participants who were purposively selected. The data were transcribed, analysed, and presented in themes that emerged. Most of the participants mentioned that STIs are transmitted mainly through unprotected sex, kissing, blood transfusion and cuts from an infected blade or razor. The participants knew STIs such as HIV/AIDS, gonorrhoea, syphilis and candidiasis. Also, participants also resorted to using the internet as a source to get information about STIs. They intermittently visit the hospital for check-up when they see any abnormalities with their reproductive health. The use of condoms as a way of preventing STIs was low among the participants. This was as a result of the belief that one gets STI only if he/she has multiple sexual partners.
Its imperative to make information about STI more accessible to the disabled community. This will reduce the risk of STIs among persons with disability.

Subjects: Disability; HIV/AIDS; Sexual Health Education; Public Health Policy and Practice; Social Work and Social Policy

Keywords: Sexually Transmitted Infections; Knowledge; Attitude; Persons with Disabilities

1. Introduction

According to the World Health Organization (WHO, 2013), more than 1 million sexually transmitted infections (STIs) are acquired daily worldwide. Annually, it is estimated that 357 million new infections of STIs such as chlamydia, gonorrhoea, syphilis, and trichomonas occur (WHO, 2016). In low-income countries, the high rates of STI can be associated to poor health service delivery and healthcare behaviours among the youth (Aral & Wasserheit, 1999).

For instance, Job (2004) and Prilleltensky (2004) independently report that teachers, parents, and counsellors fear to discuss sexual and reproductive health with disabled people because they are perceived to be non-sexual as compared with their peers. Therefore, they miss out on basic vocabulary to describe changes in their bodies (N. E. Groce et al., 2007; WHO, 2009).

The Centers for Disease Control and Prevention (CDC) in 2002 estimated that 19 million STI infections occur annually worldwide (Mosher et al., 2005), almost half of them occur among youth aged 15 to 24 years. A research conducted in the USA showed that in the year 2000, an estimated 18.9 million new cases of STI were reported (Weinstock et al., 2004). In 2008, a study conducted in the same country showed that the estimated number has increased to 110 million with approximately 20% of infections occurring in young adults (Satterwhite et al., 2013). Also, a study conducted in some selected European Union countries like Sweden, Denmark, Norway, Finland, Wales, Ireland, England, and Northern Ireland indicated that STI is still on the rise, despite various diagnosis and treatment (K. A. Fenton & Lowndes, 2004) and 10.8% of men and 12.6% of women reported ever having an STI in Britain (K. A. Fenton et al., 2001).

In South Africa, where STI infections are high, the Medical Research Council estimates that STI death-related cases were 20% of all deaths in adults in the year 2000 (Dorrington et al., 2001). In Brazil, the rate of STIs among physically disabled persons was found to be 38% for women and 35% for men (Ministry of Health [MS], 2012). The implications of STIs are detrimental and an expanded danger aspect for the transmission of HIV/AIDS (Guanilo et al., 2014). Subsequently, efforts are required to reduce the prevalence of STIs not only through health practices but also actions that can influence the individual’s social, cultural, and economic status (A. Castro & Farmer, 2005).

Disabled persons are prone to adverse situation that can lead them to increased vulnerability of contracting Sexually Transmitted Disease (WHO, 2018). This misrepresentation about the sexuality of Physically impaired people, besides contributing to the discrimination process, increases their vulnerability to situations related to STIs (Pagliuca et al., 2010). Regarding the sexuality of physically disabled people, they usually face social prejudices and discrimination based on the wrong notion that they are asexual, cannot produce healthy offspring and do not have and cannot enjoy sexual rights. (Ferreira, 2008). This falsification about the sexuality of physically disabled people not only makes them susceptible to discrimination but also heighten their vulnerability in relation to situations related to STIs (Aragão et al., 2016).
While all individuals with disability are at risk for HIV infection, sub-groups within the disabled population are at increased risk. Most notably includes women, members of ethnic and minority communities, adolescents, and those living in rehabilitation institutions such as blind schools, and schools for the deaf (Centers for Disease Control and Prevention [CDC], 2001). PWDs like any other individuals are likely to suffer from sexually transmitted diseases. As a significant part of the country's population, they contribute to the morbidity and mortality indices and health indicators (Kinne et al., 2004).

Various studies have indicated that physically disabled individuals are susceptible to having difficulties in accessing healthcare services because of architectural issues, accessibility of public transport services and inadequate equipment and facilities to help in full mainstreaming of disability-oriented programmes (S.S. Castro et al., 2011; Ferreira, 2008).

In Ghana, studies conducted on knowledge and attitude of sexual-transmitted infections usually do not include the perceptions of physically impaired (Adanu et al., 2012; Adih & Alexander, 1999; Ohene & Akoto, 2008). In an article on Ghana News Agency, the Ministry of Health, Ghana, reiterated the need to include disabled people in their planning of sexual reproductive health programmes but still no avail (Ghana News Agency, 2017). Also, there has not been any extensive study on Sexually reproductive health needs targeting physically impaired. Studies by Mprah (2013) targeted the deaf community and Abdul Karimu (2017) also targeted the visually impaired. Therefore, the need to undertake this study to add to limited literature on STIs among PWDs particularly the physically impaired.

2. Methods and data

2.1. Study design and context

The study was conducted at the Jachie Training Centre for the Disabled, located in the Bosomtwe District of Ashanti Region. The Centre which was built by some Norwegians in the year 1986 at Jachie Pramso, is one of the few establishments set up to train persons with disability in crafts. The center has the various department, namely, the carpentry department, tailoring department, weaving center, and shoemaking factory. The center has a population of 48 individuals at the time of the study. The centre is the only vocational institution in Kumasi for the disabled where there are different age groups available mostly, adolescent.

A descriptive design with a qualitative approach was adopted for the study. The qualitative method helped in exploring the level of knowledge, attitudes, and practices towards Sexually Transmitted Infections among persons with physical disabilities. In descriptive studies, investigators describe an intervention or phenomenon and the real-life context in which it occurred (Yin, 2017). The designed helped investigators to get the responses as they occurred at real-life time.

2.2. Sample selection

The study population was physically impaired individuals at the vocational training who were over 18 years and were willing to give information on the topic. A purposive sampling technique was used to select the participants for this study. A sample of 17 participants comprising 7 males and 10 females, was used for the study. This number was arrived when a saturation point was achieved and all responses coming were similar with no new information.

2.3. Study instruments and data collection procedure

Data were collected through semi-structured interview guide. Face-to-face in-depth interview was conducted. The language used in the data collection was the English language and was recorded using an audio recorder. Each interview lasted approximately 45 minutes and data collection was done within a month with the help of two research assistants who were trained by the researchers on how to collect qualitative data using interviews.
2.4. Data management and analysis
The data were analysed thematically after investigators read through the transcripts severally to identify themes that were common to the research objectives. Focusing on the study objectives, a coding system using colours was developed. Three colours, white, pink, and gold were used for categorizing responses that were similar and conveyed same ideas. Based on this, major themes were developed for the major findings of the study. Sub-themes were further developed from the major themes and have been presented in the study as findings. Quotations from participants have been added to support the findings.

2.5. Ethical issues
We also sought the consent of the participants before they participated in the study. The researchers clarified the objectives of the study and the possible risks and benefits to the participants. The participants were guaranteed that any information or details obtained would be confidential. Participants were not forced to answer all questions and names of participants were not revealed in this study. Finally, participants were informed that they could withdraw from the study as they wish, and participation was voluntary. Participants consented orally or signed a consent form before participating in the study.

3. Results
The demographic characteristics of respondents used for the study are presented in Table 1. The female participants were more than the males. In terms of age, most of the respondents were between the ages of 18–29 and tailoring department had the most students.

3.1. Demographic characteristic of respondents
3.2. Knowledge on STIs among persons with disabilities
The knowledge of persons with disabilities on STIs for this study was ascertained along the lines of; means of transmission, types of STIs, signs and symptoms, methods of treatment, and prevention.

3.2.1. Modes of transmission
Several modes of transmission were identified by the participants of the study. According to them, STIs are transmitted mainly through unprotected sex, kissing, blood transfusion, and cuts from an infected blade or razor. The difficulty in their understanding was their inability to indicate specific STI with its own specific mode of transmission.

| Table 1. Demographic characteristics of respondent |
|---------------------------------------------------|
| Demographic Variables                          | Frequency |
| Gender                                      |           |
| Female                                      | 10        |
| Male                                        | 7         |
| Age                                         |           |
| 18–28                                       | 13        |
| 29–39                                       | 4         |
| Religion                                    |           |
| Christianity                                | 15        |
| Muslim                                      | 2         |
| Specialties                                 |           |
| Carpentry                                   | 7         |
| Tailoring                                   | 5         |
| Weaving                                     | 3         |
| Shoemaking                                   | 2         |
| Years of study                              |           |
| 1–5 Years                                   | 13        |
| 6–10 Years                                  | 4         |
| Years lived with disability                 |           |
| 1–5                                         | 0         |
| 6–10                                        | 2         |
| Always                                      | 15        |
“… STIs are contracted as a result of unprotected sexual affair between a man and a woman of which one is already infected. Gonorrhoea and syphilis are mainly transmitted through sexual intercourse. But as for HIV/AIDS, you can contract it through kissing, using the same tool used by an infected person, through blood transfusion and through eating with an infected person” (Participant 1).

“I think STIs are infections that we get when we have an unprotected sex with an infected person. For instance, when I have HIV/AIDS and I have an unprotected sex with someone who does not have she can be infected by it” (Participant 2).

“ISTIs are diseases that we get because of having sex, using the same blades and tools with an infected person. STIs are normally contracted through sex that is why we call them STIs, but you can get through other means” (Participant 5).

3.2.2. Types of STIs
The participants knew different kinds of STIs such as HIV/AIDS, gonorrhoea, syphilis, and candidiasis. They gathered information on these STIs through personal experience or through the mass media.

“I am aware of HIV/AIDS and gonorrhoea, but I don’t know of the other ones. I know these because I mostly hear about them and moreover, I have contracted gonorrhoea before, so I know much about it more than I know of HIV/AIDS. I know both are contracted because of having sex indiscriminately” (Participant 2).

“I know of HIV/AIDS, gonorrhoea and syphilis. Gonorrhoea and syphilis are mainly transmitted through sexual intercourse. But as for HIV/AIDS, you can contract it through kissing, using the same tool used by an infected person, through blood transfusion and also through eating with an infected person” (Participant 1).

“I know of almighty HIV/AIDS. At first, I thought HIV/AIDS was the only STI but now I know of syphilis, candidiasis, and gonorrhoea. We get HIV/AIDS, gonorrhoea and syphilis when we have sex with someone” (Participant 4).

3.2.3. Signs and symptoms
The participants were aware of the different signs and symptoms of STIs. They were aware through mass media and personal experiences.

“I know for gonorrhoea who will feel pains in your penis and for HIV you will be lean and cannot eat” (Participant 7)

“For HIV mostly, you cannot move out and be very weak and lean and for syphilis your private parts will be sores” (Participant 8)

“for gonorrhoea your private parts smells and you be itching your private part all day and also you can give it to someone” (Participant 4)

3.2.4. Mode of treatment
The participants revealed their knowledge regarding the treatment of STI. They mentioned two main treatment methods which were drugs and herbs. However, they were not able to mention example of drugs for the treatment of STIs.

One said;
“I don’t know of any drugs for treating STIs. Mostly, I hear herbalist claiming that they have concoctions for treating all kinds of STIs. I don’t believe them because if it were true the government would support them so that it could be produced on a large scale. Sometimes, I ask my friends who buy them, and they tell me it works at times but sometimes too it does not work” (Participant 16).

Some of the participants recounted;

“Once I was infected by gonorrhoea and I went to the pharmacy for help. I just described the symptoms to them and they gave me a drug to treat it. As I have told you already I am not educated so I could not read the name of the drug. All I can say is I have seen one of the drugs before, but I can’t tell you the name of the drug” (Participant 6).

3.3. STIs Prevention
These are the diverse ways to reduce the risk of getting or contracting STI. The participants were aware of how to protect themselves from being infected by STIs. They mentioned abstinence, faithful and the use of condoms as the ways by which STIs can be prevented. Some said that they can abstain while others were of the view that they cannot abstain from sex so they either use a condom or remain faithful:

“… As for me, I can’t stay without sex so I use a condom and also stick to one partner. I think by adopting these lifestyles one can avoid being infected by an STI” (Participant 1)

“… I believe you can have sex after marriage when you have done all the necessary check-ups. Being faithful to your partner is one way to prevent STIs. Because before you marry, you will visit the hospital to check your HIV status as a result, you get to know if your partner has it or not before you proceed with the marriage. Also, I believe using a condom goes a long way to prevent STIs” (Participant 2).

3.4. Attitude towards STIs
3.4.1. Regular check-ups
It was revealed that as part of knowing their health status regarding STIs, most of the participants have developed a positive attitude of regularly visiting the hospital for check-ups to ascertain their status for prompt treatment.

Some participants narrated;

“Occasionally, I pay a visit to the hospital for a check-up if I have any infection. Personally, I have never been infected by an STI before but I go to the hospital to treat other kinds of infections” (Participant 12)

Another said;

“Once a friend of mine saw symptoms of gonorrhoea and I advise him to visit the hospital for a check-up. Initially, he was reluctant to listen to me but on a second thought he decided to go for a check-up and it turned out he was having gonorrhoea. He was treated and now he has no STI” (Participant 14)

3.4.2. Reduced interest in public education on STIs
Participants indicated that they have lost interest in paying attention to public education programmes on STIs. The reason for this is because the public education programmes have not been regular and when they are organized, the needs of disabled people are not factored into the programmes. This has reduced their interest in public education programmes on STIs.
Some participant recounted:

“Nowadays, we don’t hear news about STIs like we used to. At first, there were lots of adverts on the radio and television informing us on ways to protect ourselves from STIs and the effects and symptoms of contracting STIs, so now I go on my phone, to Facebook and search or google to know anything” (Participant 10).

Another said;

“The use of condom as a way of preventing STI was low among the participants. The major reason for the low level of condom usage is the believe that one gets STI only if he/she has multiple sexual partners and they had only one sexual partner so there was no need to use condoms.

This was expressed by a participant:

“… As for me, I see STIs be normal because if I don't have sex with many people won't be infected so I don't see why I should be so much concerned about it. Normally, my wife is the one who worries me to use a condom but as for me I don't see why I should be using it whiles I am with only my wife”. (Participant 5)

“For me, I don’t really care about safe sex. All that I do is to stick to one partner. As a man I know I can’t live without sex so I have a girlfriend that I live with. I know I will marry her one day when I am well to do. I know her and she knows me so I don’t need to bother myself with safe sex because I know she has no STIs” (Participant 10).

4. Discussion
This study explored the level of knowledge and attitude of persons with physical disabilities toward STIs in the Jachie Community in the Ashanti Region of Ghana. Concerning the mode of transmission for various STIs, they mentioned sexual intercourse and sometimes using infected person instrument. This statement was in accordance with a study in Brazil by Miranda et al. (2013), revealing that education reduced the risk of being vulnerable to certain STIs.

Regarding the knowledge on the various types of STIs, participants were clear on the types but only a few of the types were known to them, this affirm the assertion made by Mprah (2013) that disabled people have limited access to sexual reproductive health information.

Also, with the responses obtained from their knowledge on the signs and symptoms, we could see they have average knowledge and affirm the assertion made by Mprah (2013), disabled people have limited access to sexual reproductive health information.

On the issues pertaining to STI prevention, the negative misconceptions society has about the disabled community was deluded as some said they had sex but used condoms similar to a study conducted in Ethiopia by Kassa et al. (2014), where most respondents demonstrated a high level of sexual activity engagement.

From the participant’s knowledge on STI infections, it can be deduced that access to STI information may not be a problem, contrary to what has been reported earlier (N. Groce, 2004).
The participants had a positive attitude towards going for regular STI check-up or when they see any abnormalities with the sexual reproductive features, it partly contradicts study by Mprah (2013) and Rugoho and Maphosa (2017), concluding that disability people do not visit health facilities due to infrastructure.

Concerning attitude about public education on STI participant said, they said awareness creation has reduced as compared to earlier times, so they resorted to using social media as a platform to educate themselves, this assertion was in accordance with a study in Zimbabwe by Rugoho and Maphosa (2017).

In general, WHO (2013, 2009) recommended that person with disabilities need greater access to sexual and reproductive health services than their able-bodied counterparts.

To the best of my knowledge, no study has provided vital information regarding the knowledge of physically impaired about Sexually Transmitted Disease. The study was done in a single institute, Jachie Pramso Vocational School for Physically Disabled, therefore, findings cannot be generalized to all physically impaired institutions in Southern Ghana. Also, the study is limited by the exclusion of the views of other disabled groups.

5. Conclusion
This paper assessed the knowledge of Sexually Transmitted Infections among physically impaired individuals in a peri-urban setting. Most of the participants mentioned that STIs are transmitted mainly through unprotected sex, kissing, blood transfusion and cuts from an infected blade or razor. The participants knew STIs such as HIV/AIDS, gonorrhoea, syphilis and candidiasis. Also, participants resorted to using the internet as a source to get information about STIs. They intermittently visit the hospital for check-up when they see any abnormalities with their reproductive health. The use of condoms as a way of preventing STIs was low among the participants. This was as a result of the belief that one gets STI only if he/she has multiple sexual partners. Again, since there was a reduced education campaign on Sexually transmitted infections in the media and outreach programmes, participants resort to using the internet to get information about STI and its associated risk. It is therefore recommended that more advocacy groups (both governmental and non-governmental organizations or not-for-profit) include persons with disabilities in education and preventive programmes on STI.

Abbreviation

| Abbreviation | Description |
|--------------|-------------|
| STI          | Sexually Transmitted Infections; |
| HIV/AIDS     | Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome; |
| PWD's        | Person with Disabilities |

Authors Contribution
The secondary data compilation, data analysis and collection, and interpretation were done by the first author. The second, third, fourth, fifth, sixth, seventh, and eighth authors revised the manuscript thoroughly with their individual expertise. In the analysis of data, all authors played a significant part as well as in designing and preparing the manuscript. Proofreading and the final approval process were also shared accordingly among all authors and all authors have agreed to its submission for publication.

Acknowledgements
Our gratitude goes out to the management and staff of the Jachie Pramso Vocational Institute for the Physically Impaired. Further thanks to all whose works on STI helped in putting this work together.

Funding
No funding was received for this study. All cost related to this research was covered by the researchers themselves.

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Akwasi et al., Cogent Medicine (2020), 7: 1736249
https://doi.org/10.1080/2331205X.2020.1736249

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Availability of Data and Materials
A complete document of this study and its results can be found at the Library of the School of Public Health, KNUST, Kumasi.

Competing Interest
The authors declare that there is no competing interest.

Citation information
Cite this article as: Knowledge on and attitude towards Sexually Transmitted Infections: A qualitative study of people with physical disabilities in a peri-urban district of Ghana, Adji Gyamah Akwasi, Gyaml Naomi, Anokye Reindolf, Peprah Prince, Acheampong Enoch, Acheampong Emmanuel, Mphar Wisdom, Essien Kajo John & Ariel Kwegyir Tsiboe, Cogent Medicine (2020), 7: 1736249.

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