GALLAUDET UNIVERSITY

THE HONORS PROGRAM

Deaf Sex Education in India:
A Study of Deaf Indians in the U.S.

An Honors Capstone Submitted in Partial Fulfillment of the Requirements for Graduation with University Honors

By: Lisa Marijn van der Mark

Committee Chair: Caroline M. Kobek Pezzarossi, Ph.D.
Second Reader: Deborah Schooler, Ph.D.

Capstone Coordinator: Geoffrey Whitebread, M.A., M.S.
Honors Program Director: Shirley Shultz Myers, Ph.D.

May 15, 2014

Table of Contents

Abstract

Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) is a serious issue in India, as the United Nations AIDS (UNAIDS) in 2008 reported that approximately 2.5 million Indians are living with HIV (p.1). Because of this, some degree of sex education has been initiated in state schools in India. Since no research exists on whether deaf people in India are receiving this education, the research questions related to the focus of this study on factors of sex education for the deaf in India include: What is the level of awareness and knowledge about sexually transmitted infections (STIs), safe sex and contraceptives among Deaf Indians; what were the means for gaining any knowledge they do have and; was there communication, if any, about sexuality with their peers or family members. McManus & Dhar's (2008) survey was adapted to the sample that participated in the survey online. The participants are deaf and were born in India but are currently residing in the United States. Results show deaf Indians in the United States do have some knowledge and awareness of HIV/AIDs, STIs, and safer sex practices, but lack complete information and seem to be misinformed on some issues such as the impossibility to cure AIDS.

Literature review

In India's mainstream culture, sex is a taboo (Bhattacharjee, 2000, p. 2). Therefore, it is highly controversial to have sex education in schools, and debates concern how this should be executed and which information should be provided if sex education is actually initiated in schools (Bahuna, 2007). Children and adolescents may be able to catch sex-related information via the Internet, media, friends, books and magazines and become aware about sexuality; however, often they find themselves confused or misinformed (McManus & Dhar, 2008, p. 4). While research on the impact of withholding sex education in the general Indian population exists, no research has been done on the deaf community's awareness of sexuality and its possible consequences in India, and only few sources report studies among people with disabilities and sexuality. The "sexual needs" of people with disabilities are invisible, and their right for reproduction and sexuality is regarded as irrelevant (Addlakha, 2007, p. 2). This is not surprising since sexuality is not a frequent topic of conversation in Indian culture for able-bodied people.

Cultural taboos

Sexuality is not something Indian people talk about, and adolescent sexuality in particular "is a subject that most Indians prefer to keep under wraps" (Bhattacharjee, 2000, p.2). McManus and Dhar (2008) note that discussions of safer sex options and homosexuality have caused the most controversy and debate in the country (p.3). The community preferring to keep adolescent sexuality under wraps is controversial especially when considering the results from their study that was conducted among adolescent schoolgirls. The study finds 9% [N=39] of the participants have had sexual experience, and 85% believe that girls don't have to remain virgins until they marry; however, only 22% of the 54 participants agree that there is nothing wrong with unmarried sex if the couple loves

each other. Although the number of participants who find premarital sex acceptable is relatively low, the researchers also notice an increasing number of couples engaging in unmarried sex in India (McManus & Dhar, 2008, p.4).

Despite these revealing data, teachers are horrified by the pictures and detailed illustrations of naked bodies and genitalia and are angry at the inclusion of information about contraception and sexually transmitted infections (STIs). Teachers believe sex is instinctual and does not need to be taught to "children"; moreover, they believe they are only the "education department, not the health department" (Economist, 2007).

Just like teachers, parents find it difficult to have conversations about sex with their children. For example, in one case study, it was reported a young female had surgical help to initiate her menstruation at eighteen years old, and she mentioned her mother had vaguely talked about menstruation when she was twelve in preparation for menarche but her mother did not discuss the subject (Addlakha, 2007, p.5).

Not discussing menstruation in any direct way seems part of Indian social taboos. Another case study by Addlakha illustrates another taboo regarding masturbation. One young man admitted he was "guilty" of masturbation, "I had my first experience when I was in ninth or tenth standard. In Indian society, this is considered wrong. Ironically, it is the 'number one activity' among boys" (Addlakha, 2007, p.10). This boy later realized masturbation felt "compulsory" and guilt did not resolve the desire to masturbate. It is not clear whether he received education masturbation was wrong or had absorbed the taboo it was wrong and had not received any explicit education about it.

Homosexuality is another taboo in India. Not much is known and investigated about homosexuality (Rao & Jacob, 2012, p.2), but assumptions are made a vast majority of homosexual men are living with their wives – as is the cultural norm in South Asian

countries. Strong prejudice against homosexuality exists (Rao & Jacob, 2012. P.2), and there is a common misconception that blames homosexuality for the spread of HIV in India (Thappa, Singh & Kaimal, 2008, p.2). When Indians finds themselves to be too fond of the same sex, these individuals can consider conversion therapies, which aim to change or convert their sexual preference from the same sex to the opposite sex. There is no evidence of the effectiveness of such therapies; moreover, they are ethically controversial, and evidence exists that they can cause more harm than good by inducing depression and sexual dysfunction (Rao & Jacob, 2012, p.2; Pareh, 2003, p.15). According to Pareh (2003) there are some therapists who support their homosexual clients instead of pathologizing them, but they are rare, and as far as Pareh (2003) knows, there do not seem to be any gay or lesbian mental health workers (p.17).

Sex education

In contemporary India, sex education in schools is controversial with strong opposition on one side and strong support on the other (Gabler, 2011, p.1). The opponents of sex education say the national sex education program is not culturally appropriate because it contains equivocal contents and could inadvertently encourage students to experiment with sex, thereby defeating one of the purposes of the campaign to prevent the spread of HIV/AIDS (McManus & Dhar, 2008, p.4).

Experts who support the sex education program explain the gap between the age adolescents enter puberty and the age they marry is widening; thus, it is necessary to introduce sex education (Anand, 1993). The most important argument the supporters have, however, is the fact incidences of HIV and AIDS among the youth is high; in 2008, the incidence rate of reported HIV cases in the 15-29 age group was 32% from the total rate of HIV infections (McManus & Dhar, 2008, p.1). In India, 0.36% of its total population,

approximately 2.5 million people, were living with HIV in 2006 (UNAIDS Joint UN Programs, 2008). To date, they cannot point to evidence that education reduces cases in India specifically, but certainly such statistics of success exist elsewhere (Kirby, Laris & Rollen, 2007; Kirby, Short, Collins, Rugg, Kolbe, Howard, Miller, Sonenstein & Zabin, 1994).

In India, when sex education courses with the focus on AIDS and other sexually transmitted diseases are being taught without public ire, without attention from the media and awareness of the public, they go forward: the Catholic church in Mumbai has been doing so quietly since 1995 (the Economist, 2007). It is unknown if this unpublicized sex education is being done for deaf people as well; for certain we know there is a clear lack of documented information on sex education for deaf people. However, the issues around education for deaf people and sexuality issues among people with disabilities in general raise the suspicion that there exists no such education.

Although HIV/AIDS is a serious issue in India, the dearth of sexually transmitted infection (STI) education, particularly in schools, is a major concern. It is an important issue for young people (from developing countries) who are vulnerable to acquire HIV (UNAIDS, 2006, p.1; p.15) because adolescence is a period of "experimentation and risk" while these people go through physical and psychosocial development. They experience many factors that increase their vulnerability to HIV: marrying at a young age, experiencing an early sexual debut, lacking awareness about HIV/AIDS, poor education, life skills and access to health services and commodities, sexual coercion and violence, human trafficking and growing up without anyone protecting them from exploitation or abuse (UNAIDS, 2006, p.2).

McManus & Dhar's (2008) study among adolescent schoolgirls reveals how little their knowledge about Sexually Transmitted Infections and safe sex was (abstract). For example, a majority (71%) of girls did not know what the effects of genital herpes were; 43% did not know the consequences of syphilis; 28% were unaware of the fact that gonorrhea was an STI; and instead of recognizing ulcers in the genital area and painful urinating (which only 67% and 69% did) as symptoms of STIs, they thought chest pain (24%) was a symptom. Forty-one percent of the girls also were unsure or did not believe that condoms would prevent against STIs. The study furthermore found 30% of the girls considered AIDS curable (McManus & Dhar, 2008, p.3).

Without education, treatment becomes less likely as well. For example, despite the higher rate of HIV/AIDS among those who have an STI, individuals younger than 20 are less likely to seek treatment, even when they suspect they have an STI. They avoid seeking medical care because they feel too embarrassed or guilty, or are afraid that their confidentiality will not be respected (UNAIDS, 2006, p. 30-31). Furthermore, services may be too far away, have limited or inconvenient hours, may be reluctant to serve adolescents, or are located in maternal and child centers where young men are not likely to go (UNAIDS, 2006, p.30-31).

Effects of sex education

Studies on the effects of sex education in countries on the Asian continent have found that interventions from schools, mass media, health services and community programs, result in an increase of awareness, decrease of sexual behaviors, increased delay of the onset of sex (UNAIDS, 2006, p.103), decreased prevalence of HIV/AIDS, decreased vulnerability and increased access to information, skills and services in general (UNAIDS, 2006, p.4).

These young people are the center in both the spread (of new infections) and opportunities to stop the transmissions of HIV/AIDS. In this way they are also the "greatest force for change"; increasing evidence shows that those who are reversing the trends in countries where HIV prevalence is decreasing are youth (UNAIDS, 2006, p.35). This is because they are more likely to adopt and maintain safe behaviors than other age groups (UNAIDS, 2006, p.35). It should be noted that women of ages comprise another group of change makers. As some Non Governmental Organizations (NGOs) focus on empowerment of women, their intervention programs are also "challenging gender inequalities in regard to sexuality" (Gabler, 2012, p.3). Nonetheless, youth continue to provide a significant force for change.

Young people have access to HIV/AIDS information and life-skills education in different ways – through peer education or counseling community activities that include parents, and through the mass media and school-based education programs – but the effects are hard to measure and evaluate consistently because these interventions are often dispersed across many organizations and community groups. The UNAIDS organization asserts schools to be the "key setting" to educate and expose adolescents to life skills needed to prevent HIV/AIDS (UNAIDS, 2006, p.25).

Along with other studies, UNAIDS researched schools of developing countries. The researchers found, among other positive data, out of 55 sexual behaviors, 21 improved through 21 intervention programs which also led to a significant delay in sex, a decreased number of sexual partners and an increase in the condom use in 16 of the 21 interventions. Only one peer-led, non-curriculum intervention program measured an increase in sexual behaviors (UNAIDS, 2006, p.103). Since Indians value chastity, such improvements in sexual behaviors would cause Indians to deem such programs successful (Bhattacharjee, 2000. p.2).

As the UNAIDS (2006) committee has set up a methodology to review evidence of the effectiveness of intervention programs that aim to contribute to reduce HIV/AIDS prevalence (UNAIDS 98), the Indian government could benefit and gain much information from the UNAIDS report (UNAIDS, 2006, p.276-9).

Gaining information from the UNAIDS report (2006), NGOs provide a huge support in India's society as they promote sexuality and information as a human right. Many NGOs have human rights as their major component in their mission goals or use it as an approach to promoting sexual health. The human rights issue has been used to overcome reluctant college authorities in some cases; other NGOs emphasize the right of choice, respect, dignity and diversity; thus, for example, homosexuality as a choice becomes a part of the agenda. Gabler (2012) found the approach, in which issues linked to sex are addressed as an alternate introduction to sexual actions and attitudes, is gaining in popularity (p.13) compared to social taboos or other negative and informal instruction.

To make their impact greater, the NGOs collaborate with other NGOs as well as with international alliances and commit in partnerships with private companies. Furthermore, these NGOs are invited to hold presentations in private schools, colleges and other institutions (e.g. Ministry of Education). However, these presentations are sometimes difficult to arrange as the NGOs' agendas differ from an institution's goals. For example, some institutions promote abstinence and ask the NGOs to only educate about AIDS/HIV and not discuss the actual sexual act (Gabler, 2012, p.14).

Despite the invitations and collaborations, the NGOs still have limited possibilities and capacity to address all sections of society. To share their experiences and expertise successfully, NGOs need greater institutional support, such as schools (Gabler, 2012, p.15).

The country is not completely dependent on the efforts of NGOs and the United Nations AIDS program: the national government is also putting effort into sex education, mainly to prevent further increasing of the HIV/AIDS incidence among its population. Since 2006, the National Adolescent Education Program (AEP) was implemented as mandatory in the national curriculum in Indian schools as a battle against the effects of ignorance, which caused the spread of HIV/AIDS and STIs in India. Despite the AEP's heavy focus on other topics, such as peer pressure and substance abuse prevention, its publication in 2007 caused a lot of strong disagreement from right-wing politicians and civilians because its imagery was too detailed (Gabler, 2012, p.2-3). Conservatives were not the only ones to resist. The controversy caused the states Maharasthra, Gujarat, Rajahasthan, Madhya Pradesh, Chattisgarh, and Karnataka to ban the AEP in their state schools, even though they are known as progressive states and areas with a high number of HIV/AIDS cases (Federal Information News Dispatch, 2007).

Fortunately there are positive messages of initiatives in sex education: the West Bengal's state board has proposed to "impart" sex education in Bengal schools from 2015 and onwards, and received appreciation from a large section of the society in that state. However, apprehension exists since the officials are unsure about the "spontaneity" (seemingly indicating motivation) of teachers in co-ed schools, and because an earlier attempt at sex education failed: this "lifestyle education" in schools had been transformed into physical training or sports classes (Indian Express, 2012).

Education for the deaf

In 1998, there were only a few schools in India that devote themselves to make sure deaf students are not "going dumb as well" (Raj, 1998). However, Addlakha (2007, p.2), who did research on education for people with disabilities in India, recognizes the need of

enhancing education and work opportunities for people with disabilities. The National Association of the Deaf in India agrees, as one of its position papers states, the education for the deaf is severely lacking and needs serious improvement: Randhawa (2003) cites a deaf leader that deaf individuals may have passed 10th grade but cannot string 3 sentences together. She has conducted a study of the quality of schools for the deaf, and she recognizes a lack of meaningful communication between the students and teachers is a major problem. These teachers are not fluent in Indian Sign Language (ISL), and the students cannot understand their teacher (if the teacher uses speech or incompetent signing). Furthermore, teachers who are either untrained (50 out of 211) or trained inadequately teach in classes they are not qualified for, including any subject at random, and have to deal with a poor teacher-student ratio. There are no deaf teachers, except some deaf staff in vocational, art or sports courses. Exacerbating poor conditions is that some students remain in the same grade for several years (Randhawa, 2003). While there is some documentation on the inadequacy of the Indian deaf education system generally, there is no research known to this author on the impact of the lack of sex education classes for deaf students. The literature documents general problems with education in India; a question of interest for this paper that follows from the literature is how can students be expected to learn in crowded classes with teachers who cannot communicate with their students? This poor situation particularly undermines the sensitive subject of sex education.

Apparently, sex education has paramount importance; even in a developed country like the United States, research on deaf sexuality has pointed out that deaf people have inadequate information on sexuality issues, in part because of an ineffective distribution of information (Job, 2004, p.1-2). More than just distribution problems, multiple factors in the ill-informed deaf individual regarding sex education include insufficient access to

information, inadequate communication between parents and their deaf children, an historically nonexistent schooling to increase sexual knowledge, misinformation about sexuality from peers, and insufficient language skills for some deaf people (Job, 2004, p. 1-2). These data have been observed in the United States alone, but at least the problem and factors involved have been identified.

This absence of research is confirmed by Addlakha (2007, p. 2), who finds the sexual needs of people with disabilities invisible and their sexual and reproductive rights irrelevant. The fertility, sexual behavior and reproduction of people with disabilities are critical areas that are not discussed in the "public discourse" in India. The rights to have a family, children, or a relationship are completely sidelined as policymakers, special educators and rehabilitation professionals prioritize basic health, education and employment (Addlakha, 2007, p.2).

There can be little doubt effective education must exist for effective sex education. However, considering the issues in the education for the deaf and the confusion and misinformation among Indian youth, the question arises as to whether sex education for the deaf within schools would be beneficial for them. In other words, since communication between the teacher and student is the key for education to all children, yet it is precisely poor communication, which plays a major role in problems in deaf education (Randhawa, 2003).

Indians in the United States

When Indians come to the United States as students, they experience differences in culture and may also encounter culture shock (Ramisetty-Mikler, 1993) . Although studies have not included observations of Indians who experience conflicts of Indian and American attitudes towards sexuality or sex education, it becomes clear that there are significant

general differences in both cultures in the literature to date that might also account for differences in sex education or sexual values (Ramisetty-Mikler, 1993; Choi & Thomas, 2009, p.1). Ramisetty-Mikler (1993) explains the problems and concerns Indian individuals might face during their acculturation process are mainly due to the different values and life styles in the host country such as the United States.

Ramisetty-Mikler (1993) mentions Indians may come to belong to large groups of Indians or to Indian associations, which provide financial and social support and organize religious and cultural events, but these also prevent the Indian individual from fully assimilating and adjusting to the American culture. However, despite many immigrants persist to maintain their home country's traditional habits, their attitudes will be influenced by the American culture, especially when they stay here for a longer period of time. Ramisetty-Mikler (1993) explains the experience and process of the influences and isolation from the American culture as a challenging experience, to meet the dominant American culture's expectations and find a new identity as a foreign non-white immigrant. These individuals seek support in their community, which creates a social separation between the individuals from the dominant culture and their own. The immigrants feel inferior, insecure and defensive, experience a strong group solidarity or internal unity, and develop prejudices against the White majority.

Considering this observation, it is possible this phenomenon may be stronger around topics of sexuality and sex education. This intensified difference can either further separate Indian and American individuals or cause a change in attitudes towards, and knowledge about, sexuality among Indians.

Another study on Korean, Indian and Fillipino immigrants in the U.S. finds in Asian families, most parents do not feel comfortable when their children start dating early, or do

not want them to date at all (Choi & Thomas, 2009, p.7). Although some individuals come to the United States alone, this phenomenon of inhibition may still occur and impact the experiences and knowledge of Indian students living in the United States. The research further points out fluency in the English language and social support from friendships were significant predictor variables of positive acculturation to the American culture (Choi & Thomas, 2009, p.8). These results may lead back to Ramisetty-Mikler's (1993) argument on social distance between Americans and Indians; better socialization leads to better acculturation, and perhaps also to increased exposure to sex education.

While the phenomena such as isolation, prejudices against non-Asians, group solidarity and support, differences among immigrant generations, and others were found in previous studies apply to Korean, Filipino and Indian immigrants or in particular Indian adolescents, families and individuals, these do provide inferential information on whether issues that Indian deaf students may face when coming to the US are the same or differ by degree from hearing Indians and other Asians.

Methodology

The focus of this project is to collect more information from deaf Indians in the U.S. on the following issues: awareness and knowledge about sexually transmitted diseases, safe sex and contraceptives; means of gaining any knowledge they do have; and communication, if any, about sexuality with their peers or family members.

Participants

Participants were deaf individuals from all parts of India who are living in the USA. They are between 18 and 30 years of age. The investigator contacted Gallaudet's office for services for foreign students, the Office for International Programs and Services (CIPS); a student organization for international students, the English Language Institute Student

Organization (ELISO) at Gallaudet University; and a local Deaf South Asian Association, Metro South Asian Deaf Association (MSADA). The investigator requested these offices and organizations to send out a recruitment email to their Indian clients and members. The content was in English text (See Appendix A) and contained an embedded video with the message signed in American Sign Language (ASL) for bilingual access. The investigator furthermore allowed the participants to spread the survey to their friends via email or Facebook. This effort resulted in 28 participants starting the survey; however, seven of them did not go further than the first section.

Materials

The survey by McManus and Dhar (2008), who did a study on the attitudes, knowledge and behaviors of adolescent school girls regarding sexuality in Delhi, India, was adapted to fit the purpose and sample of this study. The adapted survey (See Appendix B) used most of the topics and questions included in McManus & Dhar (2008) as follows: knowledge of or awareness about STIs, symptoms and preventions; opinions about virginity, dating, and whether they can talk with their parents about such issues; and information about where the participants receive their information from: magazines/books, friends, media, or the internet.

As for changes to the original in this adaptation, irrelevant questions were removed and new questions were added (in section A); this was to receive information on the topics researched in this study and to avoid withdrawal of participants because of questions that are too private, or because the survey was too long. Added questions were aiming at the participants' background as a deaf person growing up in India and moving to the US. The McManus & Dhar study asked demographic questions related to age and religion. Religion was irrelevant to this study; however, age and other information addressing the differences

among participants (those Indians living in the U.S.) from the original study (Indians in India), included the following questions: age of arrival to the US; how long they have been in the United States; the intensity of their socialization with Indian or American//International friends; whether they grew up in a dormitory or with their family; whether their family is traditional or westernized; and whether they believe their understanding and attitude on sexuality has changed.

In this study, the investigator considered the possibility students experience language barriers in written English; thus the English in the survey was not too advanced. A Flesh-Kincaid analysis resulted in the language of the survey to be a Grade 5.5, similar to the reading of *USA Today* and the appropriate level of general English for this population of second language users of English.

In addition to the English version of the survey, a video with a signed translation of the questions – signed by the investigator – was placed above each section page, and the answers were as simple as possible; mostly only a 'Yes' or 'No' response was needed.

The survey was given online to ensure all aspects needed for this study, such as privacy, time and location choice, forms of questioning, and sections.

Procedure

The participants were recruited by a bilingual email (ASL video and English versions) which also contained the link to the online survey; their privacy was ensured by not asking any identifying information or release from the website. The website provided a copy of all answers in Excel, which were then pasted in SPSS. The data analyzed in SPSS concerned: the frequency of correct answers (knowledge and awareness); chi square calculations to compare the results of the current study with those in McManus and Dhar; and correlations of correct answers, answers on opinion questions, and answers about the

resources which were used to gain information on such issues with demographic information (such as age, the age of arrival in the US, or how long the participant has been here with their knowledge and opinion about issues related to AIDS/HIV, STIs and safer sex practices)

Results

The central hypothesis that informed this project was deaf people in India may suffer more ignorance and risks related to sexuality than the general Indian population. The following research questions were posed: what is the level of awareness and knowledge about sexually transmitted infections, safe sex and contraceptives among Deaf Indians; what were the means for gaining any knowledge they do have; and was there communication, if any, about sexuality with their peers or family members

This survey resulted in 28 participants starting the survey. However, not all completed the survey.

Level of knowledge and awareness

Figure 1 shows participants' answers on the first question: descriptive data found knowledge and awareness among participants depend on particular topics, since many were aware of some facts but responded incorrectly on other phenomena. For example, 59% of the participants did know correctly that HIV is not carried by mosquitoes; 64% were correct on the effectiveness of condoms against HIV; and 77% agreed that a person with multiple sex partners has an increased risk to obtain the virus. Furthermore, 64% participants knew that a test to diagnose HIV/AIDs exists, and 55% answered the virus is incurable.

However, of 21 participants, 59% incorrectly thought that HIV was contagious through coughing; 55% were unaware that sex between a man and woman may present the risk of HIV; 59% incorrectly agreed that the pill will prevent HIV, and as many as 57% agreed that

someone who looks healthy cannot be infected with HIV. Regarding awareness of STIs, the results have shown that at least 55% of the participants knew which phenomena are symptoms for STIs, but only 18% answered that symptoms are not always present when someone has a Sexually Transmitted Infections, and only 14% responded that not all STIs could be cured.

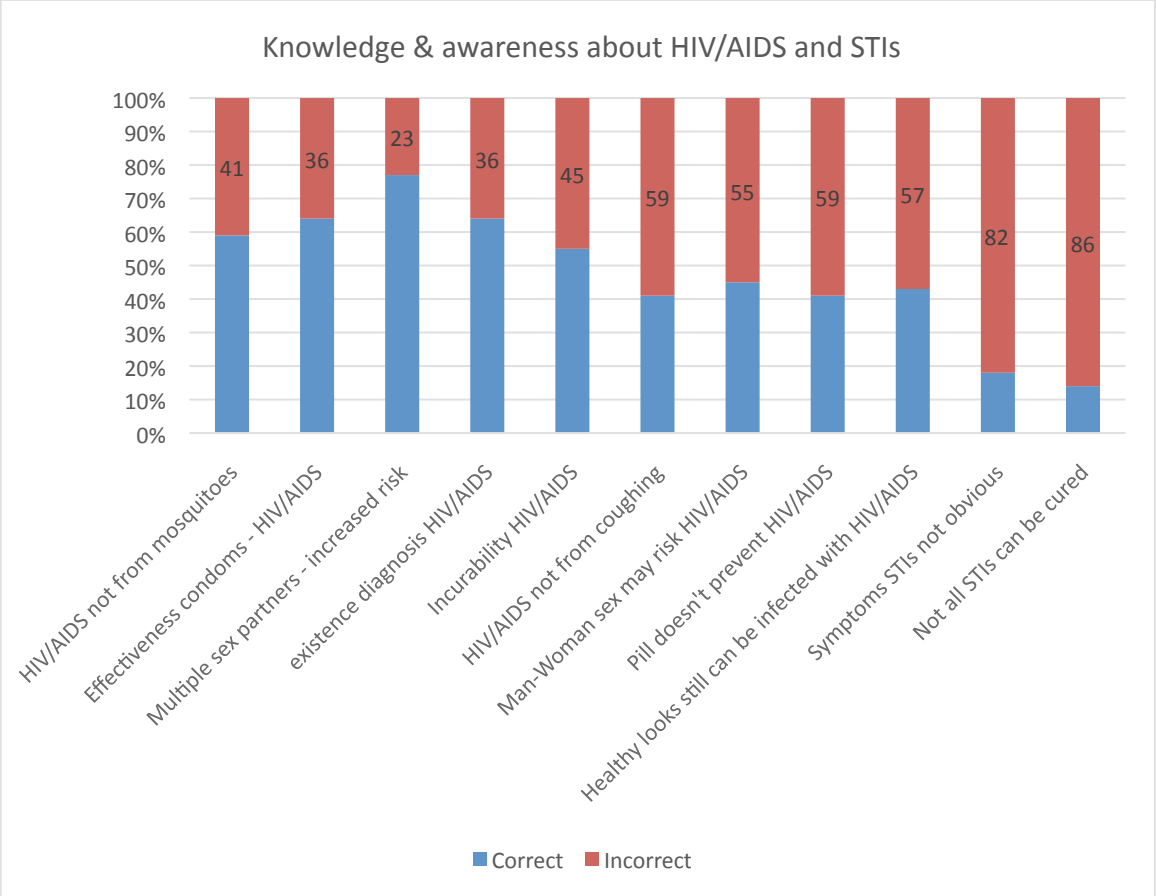

Figure 1

Information sources and communication

Figure 2 shows the results of the second question regarding products as information sources and the third question regarding communication from individuals both also concerned the information content. The results displayed that popular sources are flyers (70%), media (75%), films (75%), and books or magazines (70%, n = 20). As many as 85%

of the participants tended to have acquired their knowledge from friends (85%), but less likely from other individuals including their parents (father: 45%; mother: 50%), doctor (40%), school teacher (45%) or relatives (25%). Concerning the particular information they learned about, only 5 participants reported they had received information on STIs; mostly the sources discussed HIV/AIDS or safer sex practices.

Comparing awareness

Participants in the current sample did not differ from participants in the McManus & Dhar study in their knowledge of herpes (χ^2 (1) = .097, p = .76), of syphilis (χ^2 (1) = .97, p = .32), of gonorrhea (χ^2 (1) = .01, p =.92), ulcers in genital area as a symptom of STIs (χ^2 (1) =.13, p = .91), pain during urination as a symptom for STIs (χ^2 (1) = .005, p = .94), chest pain as symptoms of STIs (χ^2 (1) = .61, p = .43), that condoms always prevent HIV (χ^2 (1) =

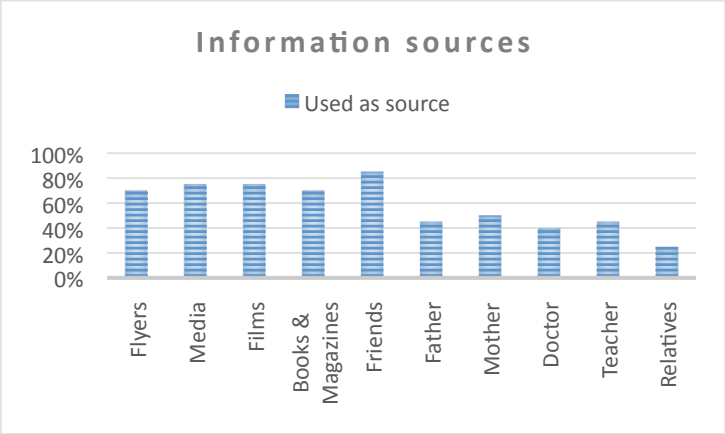

Figure 2

.13, p = .72), that multiple sex partners increases risk of STIs (χ^2 (1) =.002, p = .96), that AIDS can be cured (χ^2 (1) = 2.29, p = .13). They further do not differ in their sources of 43information through friends (χ^2 (1) = .82, p = .36), media (χ^2 (1) = .55, p = .24), books/magazines (χ^2 (1) = .15, p = .70), teachers (χ^2 (1) = 1.4, p = .24), and their belief that it's impossible to talk with parents about such issues (χ^2 (1) = 2.77, p = .10). The

participants of both studies also do not differ in their opinions that condoms should not be available for youth (χ^2 (1) =2.83, p = .09); and both samples did not show differences on the fact if they ever had courses on STIs, AIDS or safer sex (χ^2 (1) = .04, p = .83).

However, the participants in the current sample indicated fewer participants than those in the McManus & Dhar study knew vaginal discharge as a symptom of STIs (χ^2 (1) = 4.29, p = .04) and pain in throat as a symptom of STIs (χ^2 (1) = 25.07, p = 5.5e-7). Fewer also knew that not all STIs can be cured (χ^2 (1) = 13.04, p = .0003), that some STIs lead to sterility (χ^2 (1) = 6.50, p = .01), and that condoms are an effective way to prevent from HIV/AIDS (χ^2 (1) = 5.65, p = .03). In short, in all these, the rate of wrong responses was higher in the sample of the current study than in the McManus & Dhar study. While knowledge was less, opinions about sexual practice seemed more positive: More in the current sample than the high school girls in Mumbai believed that it is impossible for girls to remain virgins until they marry (χ^2 (1) = 8.15, p = .004) and that young people should have sex education course(s) in class (χ^2 (1) = 4.66, p = .03).

Correlations

The responses of the participants in the current study did not show correlations between demographic information and their knowledge and awareness; nor did correlations exist among opinions and demographics such as age, length of residency in the United States, or the degree to which their family was traditional or westernized. However, some correlations did exist when the investigator focused on participants who responded that they interacted with American or international friends; the greater the interaction, the greater their change of attitude and understanding towards sexuality (r(28) = .599, p = 0.001).

Despite the fact only half of the 20 participants had received some sort of sex education in the past, all but one agreed sex education should be given in class and young people

should be exposed to or receive education about STIs; all agreed young people should be exposed to/receive education about HIV/AIDS and safer sex practices (n = 20).

Discussion

Initially the hypothesis for this study was that deaf Indians in the United States have less knowledge and awareness compared to the general Indian population. However, since there is no research known to this investigator that studied the knowledge and awareness or experiences on sex education with the general population in India. The comparison sample from the McManus and Dhar (2008) study differed from the current sample in gender, age, and immigration status: this way, observed differences may not be purely a result of hearing status. This way, if the original hypothesis was used, the results and discussion would not be fully built on the hypothesis. Thus the hypothesis was changed slightly to satisfy the aims of this study.

The review of the results show that deaf Indians in the United States do have some knowledge and awareness of HIV/AIDs, STIs and safer sex practices, but many lack complete information and seem to be misinformed on some issues (e.g., all STIs can be cured).

In comparing the current sample with the McManus and Dhar study, it appears there are not many differences between the samples, with the most notable difference being the fact whenever the samples have significant different answers on particular issues, the deaf sample is more likely to be wrong; however, the deaf sample's opinion shows a positive response when talking about supporting sex education in class, which may be due to the exposure of the dominant culture in the US.

Both samples did not differ very much on their information sources: both the hearing girls and the deaf Indians in America have friends as their primary source for discussion and

sharing information; this peer orientation also explains why the relationship with American or International friends has a strong impact on the attitude and perspective on sexuality. This indicates friendships with particular groups of people will determine what information the participant receives, which then impacts their awareness and opinion. However, correlation in terms of opinions does not indicate about the different levels of knowledge and awareness of those who remain with Indian friends or those who often socialize with International or American friends.

Other information sources, such as the media, flyers, and magazines, used among the deaf and hearing girls alike. The investigator suggests that the inability of the deaf to receive information from auditory channels impacts their way of taking in information.

At a first glance, the deaf Indian participants residing in the United States are equally or slightly less knowledgeable and aware of HIV/AIDS, STIs and safer sex practices. However, the responses among the participants of the current study were varied; nine participants had about half of the right/wrong answers correct while the rest was split in half for the <10 or >15 right answers group; this may indicate the influence of their background and experiences. Some factors may have influenced the participants' knowledge and awareness in these topics, such as the part of India they derived from, their age upon arrival in the United States and the length of time they have remained in the US, and their education experiences and interaction with friends.

Furthermore, it was expected that including demographic information could determine some of the factors that impact knowledge and awareness of deaf Indians in the US about AIDS, STIs and safer sex. However, the results did not show correlations between right/wrong answers and demographic data; the only correlations were found among the demographic data (international friends – attitude towards sexuality) and among the

right/wrong questions. However, there might have been correlations if the sample had been bigger.

Limitations

The survey lacked a large number of participants, which causes a low generalizability, validity and reliability. Furthermore, this small sample– which even further decreased towards the end of the survey (28 started; 21 completed) – resulted in low statistical power, which caused difficulties in finding correlations, although a few were possible, as noted. Furthermore, the investigator found out questions in section D should have been questions with multiple answers rather than to questions requiring participants to choose one. The questions inquired whether information sources such as doctors, relatives, teachers, flyers, videos and such had informed them on HIV/AIDS, STIs, safer sex practices or not at all. The participants could have received information about all issues from one source but were not able to indicate this

Future Research

This study had three research questions, but for a different study, the investigator would suggest to emphasize demographic data, opinion and experiences with topics related to sexuality and sex education. The investigator would furthermore recommend a qualitative research to support and compare with the current study. Another question might be what differences, if any, exist between deaf Indians who do not leave India versus deaf Indians in the U.S.

References

Addlakha, R. (2007). How the young people with disabilities conceptualize the body, sex and marriage in urban India: Four case studies. *Sexuality & Disability 25* (3), 111-123.

Anand, A. (1993). India: introduction of sex education. *Lancet 341* (8854), 1207.

Author unknown (2007). Asia: The birds, the bees and the taboos; Sex education in the land of the Kama Sutra. *The Economist 384* (8546), 75

Author unknown (2007, Aug 1). School sex education programs provokes emotional dispute in India. *Voice of America News/FIND*. Lanham, US: Federal Information & News Dispatch, Inc.

Author unknown (2012, Aug 8). Sex education, a lesson in Bengal schools from 2015. *Indian Express*. Mumbai, India.

Bhattacharjee, S. (2000). Sexuality under wraps. *No paradise yet: The world's women face the new century*, 1-18.

Choi, J., Thomas, M. (2009). Predictive factors of acculturation attitude and social support among Asian immigrants in the USA. *International journal on social welfare 18*. p.76-84. DOI: 10.1111/j.1468-2397.2008.00567.x

Gabler, M. (2012). Searching for sexual revolutions in India: Non-governmental organisation-designed sex education programmes as a means towards gender equality and sexual empowerment in New Delhi, India. *Sex education 12* (3), 283-297.

Job, J. (2004). Factors involved in the ineffective dissemination of sexuality information to individuals who are deaf or hard of hearing. *American Annals of the Deaf 149* (3), 264-73.

Kirby, D. B., Laris, B. A. and Rollen, L. A. (2007). Sex and HIV education programs: Their impact on sexual behaviors of young people throughout the world. *Journal of Adolescent Health 40* (3), p.206-217.

Kirby, D., Short, J., Collins, J., Rugg, D., Kolbe, L., Howard, M., Miller, B., Sonenstein, F., Zabin, L. (1994). School-based programs to reduce sexual risk behaviors: A review of effectiveness. *Public Health Rep 109* (3), p. 339-360.

McManus, A., Dhar, L. (2008). Study of knowledge, perception, and attitude of adolescent girls toward STIs/HIV, safer sex and sex education: (A cross sectional survey of urban adolescent school girls in South Delhi, India). *BMC Women's Health 8*, 1-6.

National Association of the Deaf (2011). *NAD deaf education*. India: Randhawa, S.P.K.

Paresh, S. (2003). Homosexuality in India: The light at the end of the tunnel. *Journal of lesbian & gay psychotherapy 7* (1-2)*,* 145-163.

Raj, R.D. (1998), Responding to deaf children. Inter press service. New York, NY.

Ramsetty-Mikler, S. (1993), Asian Indian immigrants in America and sociocultural issues in counseling. *Journal of multicultural counseling & development 21* (1).

Rao, T.S.S. & Jacob, K.S. (2012). Homosexuality and India. *Indian journal of psychiatry 54* (1), 1-3.

Thappa, D., Singh, N., Kaimal, S. (2008). Homosexuality in India. *Indian journal of sexually transmitted disease 29* (2), 59-62.

UNAIDS Inter-agency Task Force on Young People (2006). *Preventing HIV/AIDS in young people: A systematic review of the evidence from developing countries*. WHO technical report series 938. Geneva, Switzerland: Ross, D.A., Dick, B. & Ferguson, J. (eds.).

UNAIDS Joint United Nations Programs on HIV/AIDs (2008). *HIV epidemic in India*.

Appendix A

Recruitment letter

ASL VERSION:

http://youtu.be.com

Hello all,

My name is Lisa van der Mark, I am currently a senior Psychology student in Gallaudet University. For my honors capstone project, I have chosen to focus on sex education for deaf people in India. However, there is no previous research on this topic. To begin building such research, I will be conducting a survey among Deaf Indians in Gallaudet and the Washington DC area as well as other Indians near to or affiliated with CSUN and NTID/RIT who have grown up in India and are between 18 and 30 years of age.

I hope you are willing to participate: you will remain anonymous, your responses are confidential, and no personal questions will be asked. I only want to measure your knowledge about Sexually Transmitted Diseases, HIV/AIDS, and other issues on sexuality.

Please go to the link below to participate in the survey: http://freeonlinesurveys.com/. To ensure you understand the questions, there will be an option to see a signed version.

Thank you in advance, I appreciate your time

Appendix B

Questionnaire

Section A

This section asks about yourself and your family

A.1 What is your age range?
- 18-21
- 22-25
- 26-30

A.2 How old were you when you came to the US?
- 0-10
- 11-15
- 16-20
- 21-25
- 26-30

A.3 How long have you been in the US?
- less than 1 year
- 1-2 years
- Less than 5 years
- More than 5 years

A.4 Do you think your family is traditional or Westernized?
- Traditional
- Westernized
- Both

A.5 Have you grown up in a dormitory or with your family?
- Dormitory
- Family
- Other

A.6 Has your attitude or understanding about sexuality changed since you are in the US?
- My attitude/understanding did not change
- My attitude/understanding has changed

A.7 Do you have many Indian friends here, and do you often socialize with them?
- I have many Indian friends here, and I often socialize with them
- I have many Indian friends here, but I do not often socialize with them
- I don't have many Indian friends here

A.8 Do you have many American or International friends here, and do you often socialize with them?
- I have many American/International friends, and I often socialize with them

- I have many American/International friends, but I do not often socialize with them
- I do not have many American/International friends

Section B

This section asks you what you know about HIV/AIDS

		Yes	No	Not sure
B.1	Have you ever heard of HIV/AIDS?	1	2	3
B.2	Have you ever heard of HIV/AIDS **before** you arrived in the U.S.?	1	2	3
B.3	If someone with HIV coughs or sneezes near other people could they get the virus?	1	2	3
B.4	Could a person get HIV (the AIDS virus) from mosquitoes?	1	2	3
B.5	If a woman with HIV is pregnant, could her baby become infected with HIV?	1	2	3
B.6	Could a woman get HIV through having sex with a man?	1	2	3
B.7	Does the pill (birth control) protect women from HIV infection?	1	2	3
B.8	If condoms are used during sex does that help to protect people from getting HIV?	1	2	3
B.9	Could a man get HIV through having sex with a man?	1	2	3
B.10	Does having multiple sexual partners increase the risk of getting HIV infections?	1	2	3
B.11	Could a person get HIV by sharing a needle or syringe with someone when injecting drugs?	1	2	3
B.12	Could someone who looks very healthy pass on HIV infection?	1	2	3
B.13	Is there any test people can take to find out whether they have HIV/AIDS?	1	2	3
B.14	Is it possible to cure HIV/AIDS?	1	2	3
B.15	Do you know someone who has AIDS? Or has died of AIDS?	1	2	3

The following part is about what you know of STIs: Sexually Transmitted Infections. Apart from HIV/AIDS, there are many infections that men and women can catch by having sexual intercourse. Some of them are very rare, while others are common.

B.16	Have you heard of any of the following infections?		Yes	No
		Leucorrhea	1	2
		Gonorrhoea	1	2
		Syphilis	1	2
		Genital Herpes	1	2
		Cold sores	1	2
B.17	Which of the following are the signs and symptoms of a sexually transmitted disease in a man?			
			Yes	No
		Discharge from penis	1	2
		Pain in back	1	2
		Ulcers/sores in genital area	1	2
		Headache	1	2

		Pain during urination	1	2	

B.18	Which of the following are signs or symptoms of a sexually transmitted disease in a woman?		Yes	No
		Vaginal discharge	1	2
		Pain during urination	1	2
		Pain in chest	1	2
		Pain in throat	1	2
		Ulcers/sores in genital area	1	2

(Please circle one number for each statement to show whether you think the statement is true or false)

		True	false	don't know
B.19	A woman and man can have a sexually transmissible infection (STIs) without any obvious symptoms.	1	2	3
B.20	Apart from HIV/AIDS, all STIs can be cured.	1	2	3
B.21	People who always use condoms are safe from all STIs	1	2	3
B.22	Some STIs can lead to sterility (women cannot get pregnant in their lifetime) among women.	1	2	3

Section C

Young people have various views about social and sexual relationships and safe sex practice. Here are some statements. For each one, please tell me whether you agree or disagree?

		` `agree	disagree	don't know/not sure
C.1	It is not possible to talk to my parents about sex and sexually transmissible infections (STIs)	1	2	3
C.2	I believe it's all right for unmarried boys and girls to go out together.	1	2	3
C.3	Nowadays it is not possible for girls to remain a virgin (who have not had sex) until marriage.	1	2	3
C.4	Most girls who have sex before marriage regret it afterwards.	1	2	3
C.5	I believe there is nothing wrong with unmarried boys and girls having a sexual relationship if they love each other.	1	2	3
C.6	I believe that girls should remain virgins until they marry.	1	2	3
C.7	I believe that boys should remain virgins until they marry.	1	2	3
C.8	It's all right for boys and girls to have sex with each other provided that they use methods to stop pregnancy	1	2	3
C.9	Condoms are an effective method of preventing pregnancy	1	2	3
C.10	Condoms are an effective way of protecting against HIV/AIDS	1	2	3
C.11	Condoms are an effective way of protecting against STIs	1	2	3
C.12	Condom should not be available to youth because it encourages them to have sex	1	2	3
C.13	Girls should not take the contraceptive pill, it is only for married women.	1	2	3

Please choose one.
C. 14 Do you think people of the same age as you mostly use condoms?

1. I don't think they have sex
2. None use condoms
3. A few do
4. About half
5. Most of them
6. All of them

Section D

Sources of information on HIV/AIDS, other STIs and safer sex.

D.1 Which of the following sources have you ever used for advice about HIV/AIDS, other STIs and safer sex.

(Please circle all sources of information you have used for each health issue)

Sources	***Health Issue***			
	HIV/ AIDS	*Other STIs*	*Safer sex practice*	Have not used
Doctor	*1*	*2*	*3*	*4*
School teacher	*1*	*2*	*3*	*4*
Mother	*1*	*2*	*3*	*4*
Father	*1*	*2*	*3*	*4*
Other relatives	*1*	*2*	*3*	*4*
Friends	*1*	*2*	*3*	*4*
Media	*1*	*2*	*3*	*4*
Pamphlets	*1*	*2*	*3*	*4*
Books/magazines	*1*	*2*	*3*	*4*
Films/videos	*1*	*2*	*3*	*4*
Internet	*1*	*2*	*3*	*4*
Other	*1* ----------	*2*	*3*	*4*

D.2 How often do you use the internet as a source of information on HIV/AIDS, other STIs or safer sex

1. Often
2. Very often
3. Rarely, but did use it before
4. Never

Section E

Attitude for sex education in school and perceptions of health services for STIs

		(Please circle one number for each question)	
		Yes	*No*
E.1	Have you ever attended school classes on HIV/AIDS, STIs and safe sex?	1	2
E.2	Do you think that there should be classes on these topics in school?	1	2
E.3	Do you think young people should be exposed to/receive education about HIV/AIDS?	1	2
E.4	Do you think young people should be exposed to/receive education about other STIs?	1	2
E.5	Do you think young people should be exposed to/receive education about safer sex practices?	1	2