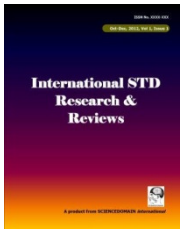

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# Risky Sexual Behaviours and Associated Factors among People with Disabilities in Dessie City

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***Authors' contributions***

*This work was carried out in collaboration between all authors. Author ZA Revised the research report and prepared the manuscript for publication. Author MT prepared the research proposal, involved in the data analysis and took part in the report writing and revised the manuscript. Author AA conceptualized the research problem, involved in preparation of the proposal, conducted field work, collected data, took part in data analysis and report writing. Author GA was involved in revision of the research proposal and the report. All authors read and approved the final manuscript.*

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## ABSTRACT

**Background:** Despite the assumptions that people with disabilities are considered sexually inactive, this group of people is likely to engage in sexual risk behaviours. People with disabilities are the neglected group of population; investigating their sexual behaviour helps to design interventions by the local government and concerned bodies. Therefore, the aim of this study was to study the prevalence and factors associated with risky sexual behaviours among people with disabilities.
**Methods:** Institutional based Cross-sectional study was conducted in 2013. All disabled

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individuals who were enrolled as a member of the disability associations in the city were included in the study. Data were collected by pre-tested structured interview questionnaires by trained data collectors. The data were coded, entered, cleaned and analyzed using univariate, bivariate and multivariate analysis with SPSS version 16 soft ware package.

**Results:** About 301(73.1%) of the respondents were sexually debuted, of which 153(50.8%) were sexually debuted before the age of 18 years and 166(55.1%) reported that they have had more than one sexual partner in the last twelve months. Besides, 32.5% of the study participants reported to have risky sexual behaviours. The age of respondents was a statistically significant predictors of sexual behavior with [(AOR=1.5, 95%CI:0.88-2.57), (AOR=1.54, 95%CI:0.68-3.52) and (AOR=3.1, 95%CI:1.64-5.87)]. Drinking alcohol was another predictors of sexual behaviour where [(AOR=1.72, 95%CI:1.10-2.70)]. Besides educational status and family size were other significant predictors of risky sexual behaviour on multivariable logistic regression with [(AOR= 3.14, 95%CI:1.02- 9.74), AOR=6.31, 95%CI:1.78-22.31), AOR=3.30, 95%CI:1.13- 9.68), and AOR=3.28, 95%CI:1.07-10.10)] and [AOR=1.73, 95%CI:1.10-2.70)] respectively.

**Conclusion:** People with disabilities were engaged in sexual risk behaviour. Age, alcohol use, educational status, and family size were significant predictors of risky sexual behaviours among people with disabilities on which interventions need to be done by concerned bodies on this vulnerable group of people, especially by labor and social affairs of Ethiopia.

*Keywords: People with disabilities; risky sexual behaviours; dessie city; Ethiopia.*

## 1. INTRODUCTION

According to World Health Organization 2011 report, around 785 million (15.6%) persons 15 years and older live with a disability, while the Global Burden of Disease estimates a figure of around 975 million (19.4%) persons [1]. Based on Ethiopian Ministry of Labor and Social Affairs Report in 2012, the total number people with disabilities in Ethiopia are estimated to be 7.5 million people. Besides, according to the evidence of labor and social affairs there are about 916 persons with disabilities in the study area (Dessie City) [2].

There are wrong assumptions that people with disabilities are not sexually active and as a result are not at risk of sexually transmitted disease including HIV/AIDS [3]. Besides, are incorrectly thought to be unlikely to use drugs, and at less risk for violence or rape than their counter parts people without disability; however, evidences indicated that people with physical disabilities are actually at increased risk for every known risk factor for HIV/AIDS [4].

A study in Nigeria declared that people with disabilities were less likely than non disabled people to have heard about HIV from most of the common sources of HIV information. In addition, when compared with non-disabled individuals, people with disabilities were significantly more likely to have reported inconsistent condom use with their constant and with casual sexual partners [5]

In many African societies, the general attitudes towards disability are likely to compound this impact on people with physical disabilities, who are also likely to be particularly involved in sexual risk behaviours which may finally end up with sexual transmitted diseases such as HIV/AIDS [6].

Despite the assumption that people with disabilities are considered sexually inactive and over looked for studies and prevention strategies to sexually transmitted diseases, young and women with disabilities in particular are likely to have more sexual partners than their without disability counter parts [7].

Therefore, people with physical disabilities are more likely engaged in sexual risk behaviour and the most vulnerable groups of population for sexually transmitted diseases than any other segments of the population [8]. Nevertheless, the area remain largely unexplored systematically. Therefore, the aim of this study was determining the prevalence and factors associated with risky sexual behaviours among people with disability in Dessie City.

## 2. MATERIALS AND METHOD

### 2.1 Place and Duration of the Study

A cross-sectional study was conducted among members of the disabled people in Dessie city administration from August 7 to 23, 2013. The city is one of the three metropolitan cities in Amhara National Regional State. It is located at about 410km north-east of Addis Ababa, capital city of Ethiopia.

### 2.2 Participants

The study participants were people with disabilities composing both male and female individuals who were a member of disabled associations in Dessie city in Amhara region with different disabilities including trauma, genetics or disease that may limit mobility, hearing or vision.

### 2.3 Eligibility Criteria

Disabled individuals who were enrolled as a member of disablity associations at the time of data collection were included in the study.

### 2.4 Sample Size Determination and Sampling Techniques

All people with disabilities in all disablity associations in the city were included in the study. Each member of people with disability was interviewed after getting informed consent and the interview performed alone since sexual behaviour is sensitive issue and there was nothing compensation given to the participants of the study. The total disabled people with disability in all associations and included in the study were 442.

### 2.5 Data Collection Instrument and Data Collections

Data were collected using face to face interview administered questionnaire and it was adopted from reviewed literatures [9- 11]. The tool was translated to local language Amharic in order to get the required information from the participants. Pre-test was done on similar populations that weren't included in the main survey and the necessary changes were done to the questionnaires.

## 2.6 Measurements

The out outcome measure was sexual risk behaviour. The questions asked in the study was: "Have you ever had sexual intercourse?", individuals responded "Yes" were asked further questions such as: "At what age did you started sex?", "Have you had sex in the last twelve months?", respondents answered "Yes" asked a next question "have you had sex with non regular sexual partner in the last twelve months?", with how many sexual partners did you had sex in the last twelve months?"," have you ever had sex without condom with non regular sexual partners?" and male respondents asked "ever had sex with commercial sex worker?".

Finally individuals reported had sex before 18 years of age, or had casual sex with non regular partner, or had sex with more than one sexual partner or ever had sex without condom with non regular partner, or ever had sex with commercial sex workers among males were regarded as had sexual risk behaviours.

## 2.7 Data Quality Assurance

To control the quality supervisors and data collectors were trained on the way they commence the data collection and how to collect the required information. Pre test was done among similar populations with disabilities didn't included in the main survey to insure the quality and to improve the validity of the questionnaire. Besides, supervisions were done by the supervisors and the principal investigators.

## 2.8 Data Processing and Analysis

Data were double-entered onto the EPI-data Version 3.1 software. The double-entered data were validated and exported to SPSS version 16 software package. Bivarate and multivariate analysis were computed to test whether there is association and significance difference between risky sexual behaviour and selected independent variables respectively. Factors associated with risky sexual practices at bivariate were identified and the variables with p-value of 0.20 and less were taken to multivariable logistic regression analysis and the model was built with backward elimination. Hosmer- lemenshow model fitness test was employed to check model fitness. Finally, the p-values less than 0.05 were considered statistically significant.

## 2.9 Ethical Considerations

Ethical clearance was obtained from ethical review committee of Bahir Dar University and communicated with Zonal health bureau of Dessie city before the time of data collection. Letter of permission was obtained from the Zonal health bureau and each disability associations. The confidentiality of information was maintained by excluding personal identifiers; data were collected after securing informed consent from every respondent. Besides, data collection among respondents was done with similar gender to reduce social desirability bias.

## 3. RESULT

### 3.1 Socio-demographic Characteristics of Respondents

This study indicated a total of 412 (149-males and 263-females) members of people with disability associations whose age is greater than 18 years of old participated in the study giving a response rate 93.2%. The median age of participants was 26, in a range between 18-76 years.

More than sixty percent (60.2%) were followers of Orthodox Christians, 37.6% were Muslims and 2.2% were Protestants by religion. Regarding educational status of the participants 24.8% completed grade five to eight, 24% completed grade nine to twelve and 22.8% were unable to read and write.

Concerning the occupation of the respondents, out of a total of 412 study participants 60% were unemployed whereas 40% were employed in different areas including in civil servant, self-employed and private sectors.

Regarding types of disability, out of the total respondents 35% were visually impaired, 34.7% were physically handicapped, 14.6% were leprosy affected persons,11.4% had hearing impairment. Besides, this study revealed that 60.2% of respondents have less than five, and about 39.6% of the respondents reported to have greater than five family sizes see Table 1.

### 3.2 Sexual Behaviors of People with Disabilities

As portrayed in Table 2 below, 301(73.1%) of the total 412 respondents reported that they had ever had sexual intercourse. Out of those had started sex 153(50.8%) were below the age of 18 years and the median age at first sexual commencement was 18 years. According to the findings of this study, the reasons for the initiation of the first sexual encounter among those who ever practiced sexual intercourse 174(57.8%) of them were saying in their personal interest, 68(22.6%) of them reported that it was through peer pressure and about 3.7% reported because of economical problem.

The findings of this study further explored that among sexually experienced members of people with disability associations, 34.9% have had their last sexual intercourse with an individual whose age was in the same level as them and 13.6% of them were had sex with individuals of greater than 5 to 10 years. Of those participants who reported have had a sexual intercourse experiences, 229(82.1%) were sexually active in the last twelve months before the data collection period.

Besides, the current finding showed that about 11.2% of the study participants reported that they coerced to have sex in their life time. Moreover, the findings of this study declared that, of the sexually experienced members of people with disability associations, 132(43.9%) reported that they have had two to five sexual partners in the last twelve months and 34(11.2%) had more than five sexual partners. Surprisingly 43(19.2%) of the study participants ever received or gave money or gift in exchange of sex in their life time. According to this study the prevalence of sexual risk behaviour was reported by 134(32.5%) of the study participants. The prevalence of risky sexual behaviour of people with disability at 95% confidence interval lies between 28.2% to 37.2% see Table 2.

**Table 1. Socio-demographic characteristics of members of people with disability associations in Dessie City, Administration, South Wollo Zone, 2013**

| Variables | Number(*n*=412) | Percent |
|---|---|---|
| **Type of disability** | | |
| Physical handicapped | 143 | 35 |
| Visually impaired | 144 | 35 |
| Leprosy affected persons | 60 | 15 |
| Hearing impaired | 47 | 11 |
| Mentally challenged | 18 | 4 |
| **Sex** | | |
| Male | 149 | 36 |
| Female | 263 | 64 |
| **Age** | | |
| 18-24 | 160 | 38.8 |
| 25-34 | 143 | 34.7 |
| 35-44 | 38 | 9.2 |
| 45+ | 71 | 17.2 |
| **Marital Status** | | |
| Unmarried | 172 | 42 |
| Married | 240 | 58 |
| **Ethnicity** | | |
| Amhara | 393 | 96 |
| Tigre | 10 | 2 |
| Oromo | 9 | 2 |
| **Religious status** | | |
| Orthodox | 248 | 60.2 |
| Muslims | 155 | 37.6 |
| Protestants | 9 | 2.2 |
| **Educational status** | | |
| Unable to read and write | 94 | 22.8 |
| Literate | 36 | 8.7 |
| 1-4 grade complete | 45 | 10.9 |
| 5-8 grade complete | 102 | 24.8 |
| 9-12 grade complete | 99 | 24.0 |
| 12+ | 36 | 8.7 |
| **Occupation** | | |
| Unemployed | 248 | 60 |
| Employed | 164 | 40 |
| **Income** | | |
| < 600 | 371 | 90.3 |
| 600-1200 | 25 | 6.1 |
| 1200+ | 15 | 3.6 |
| **family size** | | |
| ≤ 5 | 249 | 60.4 |
| >5 | 163 | 39.6 |

**Table 2. Sexual behaviors of members of people with disability associations in Dessie City Administration, South Wollo Zone, 2013**

| Variables | Male (%) | Female (%) | Total (%) |
|---|---|---|---|
| **Ever had sex (*n*=409)** | | | |
| Yes | 102(68.5) | 199(76.5) | 301(73.6) |
| No | 47(31.5) | 61(23.5) | 108(26.4) |
| **Age at first sex (*n*=301)** | | | |
| <18 | 81(80.2) | 72(36.0) | 153(50.8) |
| ≥18 | 20(19.8) | 128(64.0) | 148(49.2) |
| **Reasons for initiation of sex (n=301)** | | | |
| Personal interest | 45(44.6) | 129(64.5) | 174(57.8) |
| Peer pressure | 15(14.9) | 53(26.5) | 68(22.6) |
| Influence of alcohol | 24(23.8) | 3(1.5) | 27(9.0) |
| Influence of chat and drugs | 0(0.0) | 3(1.5) | 3(1.0) |
| Economic problem | 6(5.9) | 5(2.5) | 11(3.7) |
| Marital problem | 11(10.9) | 7(3.5) | 18(6.0) |
| **Age of sexual partner during first sex (*n*=301)** | | | |
| Similar age | 30(29.4) | 75(37.7) | 105(34.9) |
| 10 years older | 25(24.5) | 20(10.1) | 45(15.0) |
| 5-10 years older | 22(21.6) | 19(9.5) | 41(13.6) |
| 5 years younger | 18(17.6) | 37(18.6) | 55(18.3) |
| Younger than me | 2(2) | 38(19.1) | 40(13.3) |
| I don't remember/know | 5(4.9) | 10(5) | 15(5) |
| **Had sex in the last 12 months(*n*=279)** | | | |
| Yes | 64(71.9) | 165(86.8) | 229(82.1%) |
| No | 25(28.1) | 25(13.2) | 50(17.9%) |
| **Had sex with Commercial sex workers (n=270)** | | | |
| Yes | 4(4.8) | 0(0.0) | 4(1.5) |
| No | 79(95.2) | 187(100) | 266(98.5) |
| **Coerced sex (n=329)** | | | |
| Yes | 22(19.3) | 15(7) | 37(11.2) |
| No | 92(80.7) | 200(93) | 292(88.8) |
| **Are you with regular partner (n=292)** | | | |
| Yes | 56(62.2) | 140(69.3) | 196(67.1) |
| No | 34(37.8) | 62(30.7) | 96(32.9) |
| **Number of sexual partners in the last 12 months (301)** | | | |
| One | 53(51.9) | 82(41.2) | 135(44.9) |
| One to five | 44(43.1) | 88(44.2) | 132(43.9) |
| More than five | 5(4.9) | 29(14.6) | 34(11.2) |
| **Ever received or gave gift in exchange of sex (224)** | | | |
| Yes | 19(28.4) | 24(15.3) | 43(19.2) |
| No | 48(71.6) | 133(84.7) | 181(80.8) |
| **Risky sexual behaviours (412)** | | | |
| Yes | 52(34.9) | 82(31.2) | 134(32.5) |
| No | 97(65.1) | 181(68.8) | 278(67.5) |

### 3.3 Condom Utilization among People with Disability

The findings of this study indicated that about a quarter of the respondents utilized condom during their first sex episode. Out of individuals who commenced sex, quite a large proportion of them 90.2% used condoms inconsistently in the last 12 months during any sexual episodes and only 8.8 percent used condom consistently.

It also found out that 75.2% of sexually experienced members of people with disability associations did not use condom at first sex Table 3.

### 3.4 Substance Use of People with Disabilities among People in Dessie City

Regarding substance use, the findings of this study indicated that 39.1% of respondents drunk alcohol, 24.3% were khat chewers, 3.6% were cigarette smokers and about 1.6% of them were used hashish. The frequency of substance use was ranging from occasionally, 2 to 3 times a month to daily bases based on the report from study participants Table 4.

**Table 3. Condom utilization by members of people with disability associations in Dessie City Administration, South Wollo Zone, 2013**

| Variables | Male | Female | Total |
|---|---|---|---|
| **Condom utilization during first sex (n=302)** | | | |
| Yes | 19(18.6) | 56(28) | 75(25) |
| No | 83(81.4) | 144(72) | 227(75.2) |
| **Condom utilization in the last 12 months (n=236)** | | | |
| Never used | 50(73.5) | 101(59.4) | 151(63.4) |
| Sometimes | 6(8.8) | 34(20) | 40(16.8) |
| Most of the time | 8(11.8) | 16(9.4) | 24(10.1) |
| Always | 3(4.4) | 18(10.6) | 21(8.8) |
| **Ever used condom with regular partner(n=200)** | | | |
| Yes | 12(21.4) | 39(27.1) | 51(25.5) |
| No | 44(78.6) | 105(72.9) | 149(74.5) |

**Table 4. Substance use among members of people with disability associations in Dessie City Administration, South Wollo Zone, 2013**

| Variables | Male (%) | Female (%) | Total (%) |
|---|---|---|---|
| **Alcohol consumption** | | | |
| Ever drunk | 30(20.1) | 132(49.9) | 162(39.2) |
| Never drunk | 119(79.9) | 131(49.8) | 250(60.7) |
| **Chat chewing** | | | |
| Ever chewed | 32(21.5) | 68(25.9) | 100(24.3) |
| Never chewed | 117(78.5) | 195(74.1) | 312(75.7) |
| **Cigarette smoking** | | | |
| Ever smoked | 15(5.7) | 0(0.0%) | 15(3.6) |
| Never smoked | 149(100) | 248(94.4) | 397(96.4) |
| **Hashish** | | | |
| Ever used | 2(1.3) | 4(1.5) | 6(1.5) |
| Never used | 147(98.7) | 259(98.5) | 406(98.5) |

### 3.5 Multivariate Logistic Regression Analysis between Risky Sexual Behaviour and Selected Predictor Variables among Disabled People in Dessie City

The findings of this study declared that age, alcohol consumption, household size and educational level showed statistically significant association at p-value of .05 with risky sexual behavior.

Respondents whose age was 45 years and above were more likely to be engaged in sexual risk behaviour than those with age 18 to 24 years [AOR=3.10, 95%CI:(1.64-5.87]. This study indicated that alcohol consumption was a significant predictors of risky sexual behaviour among people with disability [AOR=1.72, 95%CI:1.10-2.70].

Besides, this study revealed that family size was statistically significant predictors of risky sexual behaviour among people with disability [AOR=1.73, 95%CI:1.09-2.70].

Moreover, educational status of the respondents was statistically significant predictors of risky sexual behaviour, showing that respondents who were unable to read and write, able to read and write but no formal education, completed grade 1 to 8, and completed grade 9 to 12 were more likely to be engaged in risky sexual behaviours compared to respondents whose educational status was more than grade 12, [AOR=3.14,95%CI:1.01-9.74, 6.31,95%CI:1.79-22.31, 3.30,95%CI:1.13-9.68 and 3.28, 95%CI:1.07-10.10] respectively see Table 5.

**Table 5. Multivariate logistic regression analysis between risky sexual behaviour and selected predictor variables among disabled people in Dessie City Administration, South Wollo Zone, 2013**

| Variables | Risky sexual behavior | | OR(95%CI for OR) | | P-value |
|---|---|---|---|---|---|
| | Yes (%) | No (%) | Crude | Adjusted | |
| **Age** | | | | | |
| 18-24 | 38(28.4) | 122(43.9) | 1.00 | 1.00 | |
| 25-34 | 48(35.8) | 95(34.2) | 1.622(0.98-2.68) | 1.50(0.88-2.57) | 0.007 |
| 35-44 | 12(9) | 26(9.4) | 1.48(0.28-3.21) | 1.54(0.68-3.52) | |
| 45 and above | 36(26.9) | 35(12.6) | 3.30(1.83-5.96) | 3.10(1.64-5.87) | |
| **Educational status** | | | | | |
| Unable to read and write | 39(29.1) | 55(19.8) | 4.396(1.570-12.312) | 3.14(1.01-9.74) | |
| Literate | 16(11.9) | 20(7.2) | 4.960(1.569-15.677) | 6.31(1.78-22.31) | 0.002 |
| 1-8 grade complete | 47(35.1) | 100(36%) | 2.914(1.065-7.970) | 3.30(1.13-9.68) | |
| 9-12 grade complete | 27(20.1) | 72(25.9) | 2.325(0.819-6.598) | 3.28(1.07-10.10) | |
| 12+ | 5(3.7) | 31(11.2) | | 1.00 | |
| **family size** | | | | | |
| ≤5 | 69(51.5) | 179(64.4) | 1.00 | 1.00 | 0.018 |
| >5 | 65(48.5) | 99(35.6) | 1.70(1.12-2.59) | 1.73(1.09-2.70) | |
| **Alcohol** | | | | | |
| Ever drunk | 65(48.5) | 185(66.5) | 1.00 | 1.00 | 0.02 |
| Never drunk | 69(51.5) | 93(33.5) | 2.11((1.39-3.22) | 1.72(1.10-2.70) | |
| **Chat** | | | | | |
| Ever chewed | 93(69.4) | 219(78.8) | 1.00 | 1.00 | |
| Never chewed | 41(30.6) | 59(21.2) | 1.64(1.03-2.61) | 1.23(0.13-5.21) | |
| **Cigarette** | | | | | |
| Ever smoked | 271(97.5) | 126(94) | 1.00 | 1.00 | |
| Never smoked | 7(2.5) | 8(6) | 2.46(0.85-6.93) | 1.89(0.33-10.11) | |

## 4. DISCUSSION

This study revealed that 73 percent of the study participants were found to be sexually active and about half of them (50.8%) had initiated sex before 18 years of age. The finding of this study was similar with study done in Addis Ababa where 57% of people with disability were initiated sexual activities [12].

The findings of this study was in line with a study conducted in Tanzania where nearly half of people with disabilities were sexually active; half of them have had sex by the age of nineteen [13]. However, our study was different from a study done in Kenya, where 89% of people with disability were to be sexually active and 29 % of them commenced first sexual practice below the age of 16 [14].

The findings of this study indicated that 11.2% of people with disabilities were encountered coerced sex in their life time. This figure is lower than prevalence of coerced sex among people with disabilities according to the report of national institute of statistics of Rwanda where 22.3% of people with disabilities have ever experienced sexual violence [15]. The difference could be attributed to socio cultural difference and time gap. This finding evidences that people with disabilities in the study area were more vulnerable for HIV/AIDS.

Regarding condom use and casual sex, this study showed that 8.8 percent of those sexually active members of people with disability associations used condoms properly and consistently and only 6.2 percent of them have had non-regular sexual partner. Whereas, a study done in Addis Ababa indicated that among people with disabilities 20.7% had sex with a casual sexual partner and 58.3% of them used condoms consistently [16]. This might be happened due to socio-demographic differences of the study participants in the two settings.

Regarding multiple sexual partnerships among people with disabilities, this study declared that 43.9% of those sexually active people with disabilities reported that they have had more than two sexual partners in the last twelve months. This study was not in accordance with a study in Addis Ababa where multiple sexual partnerships was reported by 32.2% of the sexually active members of people with disability [16].

Besides, the present study revealed that out of sexually active members of people with disability, 1.5% of them were reported that they ever had sex with commercial sex workers. This was lower than a study conducted in Adama among people with disabilities and reported that the proportion of sex with commercial sex worker to be 4.8% [17].

Regarding condom use, this study indicated that out of sexually debuted members of the disabled people, 90.3% of people with disabilities were used condom inconsistently in the last 12 months. However, our finding was not in accordance with a study done in Addis Ababa, where 48% of sexually active people with disability used condom consistently [12].

The overall prevalence of risky sexual behaviours among disable people in this study was 32.5% of the study participants reported to have risky sexual behaviours. Based on this evidence people with disabilities were engaged in sexual behaviour, implying that the study participants were at higher risk of sexually transmitted diseases including HIV/AIDS.

Regarding factors affecting risky sexual behaviour among people with disability in Dessie city, this study declared that age of the respondents of the study was a significantly affects

risky sexual behaviour (P=.007). This finding is in line with similar studies where age predicts risky sexual behaviour [18,19].

The findings of this study revealed that alcohol consumption significantly affects sexual behavior among people with disabilities (P=.02). This is in accordance with other studies where alcohol use significantly affects sexual behaviour [20-24].

Besides, our study revealed that family size a significant predictors of risky sexual behaviour among people with disability (P=.018). This finding was supported by similar study where family size affects sexual risk behaviour [23].

Moreover, educational status of the respondents was statistically significant predictors of risky sexual behaviour among people with disabilities (P=.002). This finding shows that as educational status advances the chance that people engaged in sexual risk behaviour decreases see Table 5. This might be due to the fact that education raises one's own awareness and increases perceived treat.

## 5. CONCLUSION

According to the finding of this study, the prevalence of risky sexual behaviours among disable people was found to be 32.5%.

About two-third of respondents of members of people with disability associations are found to be sexually active. Early age of sexual initiation of the respondents and not to use condom consistently were evidences that members of people with disability associations are at elevated risk of sexual practice to expose them to HIV.

Besides, age, alcohol use, family size and educational status were statistically significant predictors of risky sexual behaviours. Therefore, AIDS actors (government line ministries, CBOs, and NGOs working on HIV/AIDS) at all level should support members of people with disability associations on developing their life skills so that they don´t become vulnerable to HIV/AIDS.

AIDS actors should also arrange education for people with disabilities to the specific population in order to address their specific needs according to the type of impairment.

Information, Education and Communication (IEC) on HIV/AIDS for members of people with disability associations also needs to be developed with specific focus not only on the messages but also specifically focus on the various forms of disability.

## 6. LIMITATION OF THE STUDY

There is paucity of local information on sexual risk behaviours and factors correlated with among disability populations in the country for discussion.

Though the sex of data collectors was same to the sex of respondents to minimize the bias, social desirability bias may not be eliminated.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Health Organization: world report on disability 2013. Accessed on December 18, 2013; Available at: http://www.who.int/disabilities/world report/2011/en/index.html.
2. United nations expert group on Disability-sensitive policy and programme monitoring and evaluation UNHQ, New York,3-5December 2001. Accessed on: 24, December 2013. Available at: www.un.org/esa/socdev/enable/disid2001h.htm.
3. Milligan M, Neufeldt A. The myth of Asexuality: A survey of Social and Empirical evidence. Sexuality and Disability. 2001;19(2):91-109.
4. World Bank. Capturing Hidden Voices: HIV/AIDS and Disability. Washington: The World Bank Group; 2004.
5. Toyin J. Aderemi, Basil J. Pillay, Tonya M Esterhuizen. Differences in HIV knowledge and sexual practices of learners with intellectual disabilities and Non-disabled learners in Nigeria. Journal of the International AIDS SOCIETY. 2013;16.
6. Maart S, Jelsma J. The sexual behaviour of physically disabled adolescents. Disabil Rehabil. 2010;32(6):438-43.
7. Rohleder P, Eide AH, Swartz L, et al. Gender differences in HIV knowledge and unsafe sexual behaviours among disabled people in South Africa. Disabil Rehabil. 2012;34(7):605-10.
8. Jill Hanass-Hancock, Ilaria Regondi, Kerisha Naidoo. Disability and HIV: What drives this relationship in Eastern and Southern Africa? Journal of disability. 2013;2(1). Doi: 10.1007/s11195-013-9307-7.
9. Anemaw. Assessment of sexual risk behaviours of in-school youth: Effect of living arrangement of students; West Gojam zone, Amhara regional state, (thesis). School of public health, Faculty of Medicine Addis Ababa University, Ethiopia; 2009.
10. Centers for Disease Control and Prevention: Sexual identity, sex of sexual contacts, and Health-risk behaviors among students risk behavior surveillance. MMWR Early Release. 2011;60:1-135.
11. Abdulhakim. Factors promoting risky sexual behaviour of high school adolescents in Dessie town, Amhara regional state [Ph.D. thesis], Institute of Population Studies, College of Development Studies, School of Graduate Studies Addis Ababa University; 2008.
12. Hana k, Ababi Z. Risky sexual practice and accessibility and utilization of HIV service among people with disabilities in Addis Ababa; 2011(thesis).
13. Margaret M, Raphael K, Herman L. Tanzania commission for aids assessment of disability and HIV & AIDS in Tanzania December 2008- March; 2009.

14. Handicapped International, HIV/AIDS, Knowledge, Attitude, Practice and accessibility study in Kenya; 2007. Available at: www.handicapinternational.fr/.../summary disability Hivkenya.pdf.
15. Elie Mugabowishema. Handicap Iinternational Rwanda, sexual and gender based violence, disability and link to hiv and aids: Analysis of the study. Accessed date 23 December, 2013. Available at: https://www.google.com.et/?gws_rd=cr&ei=JgC4UtXHBcSZtAa8yIDADA#q=Sexual+and+Gender+Based+Violence%2C+Disability+and+link+to+HIV+and+AIDS%3A+Analysis+of+the+study.
16. Tigist A. Assessment of sexual and reproductive health status and related problems of young people with disabilities in selected associations of PwDs in Addis Ababa; 2008.
17. Gashaw K. Assessment of sexual behavior and factors influencing risk perception on HIV/AIDS among preparatory students in Adama town, East Shoa Zone, Oromia Region, Ethiopia; 2011.
18. Amfar. The foundation of AIDS research for AIDS. Youth and HIV/AIDS in the United States: Challenges and Opportunities for Prevention; 2010.
19. Danice K, Laura K, Steve K, et al. Youth risk behaviour surveillance United States; 2011.
20. Blanchet WJ. Sexual risk behaviors of young adults with LD and the need for HIV/AIDS education. Remedial and special education. 2000;21(6):336-345.
21. Alcohol and sexual behaviour. [Accessed date 10 December 2013]. Available at: http://www.internetandpsychiatry.com/joomla/topics/alcohol-and-drug-abuse/50-alcohol-and-sexual-behavior.html.
22. Megan E. Patrick, Jennifer L. Maggs. Does drinking leads to sex? Daily alcohol sex behaviour and experiences among college students. Psychol Addict Behav. 2009;23(3):472–481. Doi: 10.1037/a0016097.
23. Nazarius M. Tumwesigye, Lynn Atuyambe, Rhoda K. Wanyenze, et al. Alcohol consumption and risky sexual behaviour in the fishing communities: evidence from two fish landing sites on Lake Victoria in Uganda. BMC Public Health. 2012;12:1069. Doi:10.1186/1471-2458-12-1069.
24. Vagenas P, Lama JR, Ludford KT, Gonzales P, Sanchez J, Altice FL. A systematic review of alcohol use and sexual risk-taking in Latin America. Rev Panam Salud Publica. 2013;34(4):267–74.



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