

The Prevalence of Depressive Symptoms among Sensory and Physically Challenged Persons Living with HIV/AIDS Attending Clinics in Nyanza Province, Kenya

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Abstract

Background: Despite that over 10% of the world's population has a disability, globally the relationship between HIV and disability has not received due attention. Persons with disabilities are key populations with a high risk of exposure to HIV. In Kenya, 3.5% of the population experience some form of disability, majority of who reside in rural settings: Nyanza Province (5.6%) having the highest prevalence. Although depressive symptoms have been associated with disability, there are limited studies among persons with disabilities living with HIV/AIDS, (PWDLWA) particularly in rural Kenya.

Aim: Study aimed to determine the prevalence of depressive symptoms among people with disability living with HIV/AIDS in Nyanza Province, Kenya.

Methods: Descriptive cross-sectional study was carried out among PDLWA receiving HIV care at public health facilities and VCT centers in Nyanza Province. An interview guided questionnaire and the Beck's Depression Inventory (BDI) was used to collect Socio-demographic data and depressive symptoms among a purposively selected sample of participants. Data was entered and analyzed using the Statistical package for social sciences (SPSS) version 17.

Results: Out of the 236 PWDLWA participants with a mean age of 42.6 ± 11.6 years, more than a half (51.7%) had clinical depression (severe and moderate depressive symptoms). Majority of the participants were female (62.7%), had attained at least primary level of education (58.9%) lived in rural Kenya (66.9%) and were unemployed (58.5%). Clinical depression was associated with low educational level ($p=0.010$), auditory disability ($p=0.025$). HIV and disability interventions related factors were not associated with depression.

Conclusions and recommendations: More than half of PDLWA suffer from clinical depression. Education level and auditory impairment are risk factors for depression among PDLWA in Nyanza Province Kenya. There is need to intensify screening for depression among sensory and physically challenged persons living with HIV/AIDS.

Keywords: Depression; Sensory; Physically challenged persons; HIV/AIDS; Kenya

Introduction

Despite that more than 10% of the world's population has a disability and has been associated with risk of developing psychiatric illnesses [1], the link between depressive illness among PWDLWA in resource limited settings such as Kenya's is poorly understood. Over 70% of persons with disabilities (PWD) live in developing countries [2], with 3.5% of Kenya's population experiencing at least one form of disability. Majority of PWD in Kenya reside in rural settings [3], with Nyanza having the highest prevalence [3] of 5.6%. Poverty is a determinant of mental disorders, and without support sufferers, and their families, are likely to fall into the vicious circle of poverty and mental disorder [4,5]. HIV infection rate among deaf individuals is twice that of the surrounding hearing population [5]. In developed countries PWDLWA in developed countries often suffer from depression and anxiety disorders they adjust to the HIV diagnosis

[6-9]. In the United States over 36% and 16% of PWDLWA have depression and anxiety disorders respectively [10]. In most resource limited settings, PWD have received little attention as a key population at risk of exposure to HIV/AIDS [5,10-12] and related depressive illnesses [11]. There is a bidirectional relationship between the HIV/AIDS and clinical depression: with the PWDLWA being more likely to have depression than the general population [13,14]. The comorbidities have detrimental effects such as low self-esteem social exclusion, melancholy, on the quality of life for PWD [15]. PWD are vulnerable to HIV/AIDS because they are marginalized, discriminated, less educated and often illiterate and relatively poor hence have several partners for money and gifts. Women with disabilities are more likely to be sexually abused or raped [16] and find it very difficult to access information and services about HIV/AIDS in their respective communities [17]. PWD are subjected to humiliation in trying to access information about HIV/AIDS, this leads to disappointment and depression thus the logical resort is to stop trying to access it whilst continuing to be sexually active [10]. Disabled people in the

developing world are not aware of their reproductive health rights [12] a risk factor for HIV infection and sexual exploitation [18]. Also apparent is the dependency of PWD on careers to accompany them and tell them their HIV status [19]. There is a frequent lack of confidentiality of a person's status as a result the disabled persons may not trust any anybody and hence a blatant rejection of Article 17 of the International Covenant on Civil and Political Rights by the care givers. This article gives the disabled persons a right to privacy. Social issues lead to discrimination of people with disabilities and this leads to their vulnerability in terms of HIV/AIDS [20].

In Kenya persons with disabilities experience a double burden in relation to HIV/AIDS: increased risk of infection due to sexual exploitation and reduced access to prevention, care and support services [13,15,17,19]. In some cultures persons with disabilities are raped in the belief that this will "cure" an HIV-positive individual [17]. Unfortunately there is no national census or statistics on PWDLWA in Kenya [21], but estimates that 10% of the population constitutes persons with disabilities. In Kenya there is limited information on the incidences of depression among people with disability living with HIV/AIDS. Thus it is important to focus on HIV/AIDS among those with disabilities to help in formulating strategies for intervention.

Methodology

A cross-sectional descriptive study design was conducted among PWDLWA receiving HIV/AIDS care at VCT centers and public health facilities of Nyanza province in Kenya. Nyanza Province is one of Kenya's seven administrative provinces outside Nairobi; it is in the southwest corner of Kenya. The researcher chose Nyanza Province because 5.6% vs. the National rate of 3.5% disability is found in the Province [22]. The study centers were: All the hospitals and Sub District Hospitals in Nyanza Province., Sikri center for the deaf and the blind Oyugis, Nyagoma vocational centre for the blind/Bondo, Ahero /Nyando, Nyawir VCT mobile Clinic, Kibos Centre for the deaf, Kuja School for the deaf, Rongo and Maseno for the blind and other health centers. The centers also cater for other disabilities for example dumb and albino.

Only PWDLWA aged ≥ 18 years, disabled (deaf, blind and the physically challenged) living with HIV/AIDS and gave informed consent were included in the study. Patients with a language/communication problem or critically ill were excluded from the study.

Nyanza Province: A sample of 236 28 PWDLWA determined according to one sample size estimation [23] and was purposively recruited patients with hearing impairment, vision and mobility impaired individuals aged 18 years and above. The participants who met the criteria of the study were briefed on the nature of the study. Those who participated and gave consent completed the (SDQ and BDI) questionnaires. The researcher read the questions exactly the way they appeared to those respondents who were not in a position to fill out the questionnaires on their own but the deaf and the mute were assisted by the people who had been attending to them at CCC/VCTs. Their responses were recorded as answered. The respondents' queries were responded to appropriately. The researcher sorted for the services of a sign language translator for the deaf. Respondents were reached through their telephone contacts and a register to get their numbers. The participants were called at the CCC/VCTs for the exercise, this applied to all sensory and physically challenged persons living with HIV/AIDS attending those clinics.

Each questionnaire had the clinic code number of the participant (the purpose of having the code was to enable the researcher (only) to provide necessary intervention e.g. referral if need be and to ensure confidentiality. After data entry and analysis all those patients identified with depressive symptoms were recalled and referred for further interventions.

Data collection procedure

Two questionnaires: the Socio demographic questionnaire. (SDQ) and the Beck Depression Inventory (BDI) were used to collect data on Sociodemographic factors and the prevalence of depressive symptoms among the 236 study subjects. The Sociodemographic variables included gender, age, occupation, employment, residence, income, marital status, family size, religious affiliation; HIV and disability related factors including: the type of disability, WHO clinical stage of HIV, current ART treatment, co-morbidities, recent surgical interventions, use of visual, auditory, locomotor aids, attitude towards ARV therapy and specific needs. The BDI questionnaire for primary health care settings that is adapted from the fourth edition text revision of the diagnostic and statistical manual of mental Disorders (DSM-IV-TR) was used to identify depressive symptoms in a primary care setting. The sum of all BDI item scores indicates the severity of depression. PWDLWA were considered having clinical depression if they had a score of 21 or more. The severity of the depressive illness among patients with clinical depression was graded as minimal depressive symptoms for scores between 0 to 9; mild depression for 10 to 16, moderate depression for 17 to 29 and severe for 30 to 63. The BDI can distinguish between different subtypes of depressive disorders, such as major depression and dysthymia, a less severe form of depression. To ensure confidentiality, all the questionnaires were coded. Data was then entered and analyzed using statistical package for social sciences (SPSS) version 17 by applying descriptive and inferential statistics. Comparisons of categorical data were done using chi-square test and for continuous data using the student t-test. The study protocol was approved by the research and ethical committees of the the Department of Psychiatry, University of Nairobi, Kenyatta National Hospital and the Ministry of Science and Technology. Informed consent was obtained from the participants, heads of the facilities and clinicians at the health facilities prior to collecting of data. The study posed no direct risk to the patient's quality of life. The consent form included information on the procedure of the study, confidentiality, benefits, personal risks and the right not to participate or withdraw at any time (Figure 1).

Study limitations

- Only sensory and physically challenged persons treated at the CCC, NGOs (Liverpool/ mobile VCT clinics) and Health centers in Nyanza Province participated in the study.
- DSM IV-TR was not used in diagnosing nor was it used in selecting the exclusion and inclusion criteria.
- The time frame and budget constraints in carrying out the study (luck of finances).
- The current studies found sensory and physically challenged persons to be very suspicious, a lot of defense mechanisms and hence were mean with information.
- Only Depressive symptoms as per BDI were assessed.
- The population in study were scattered in different CCC/Liverpool Mobile/Health Centers and NGO Offices across the Province.

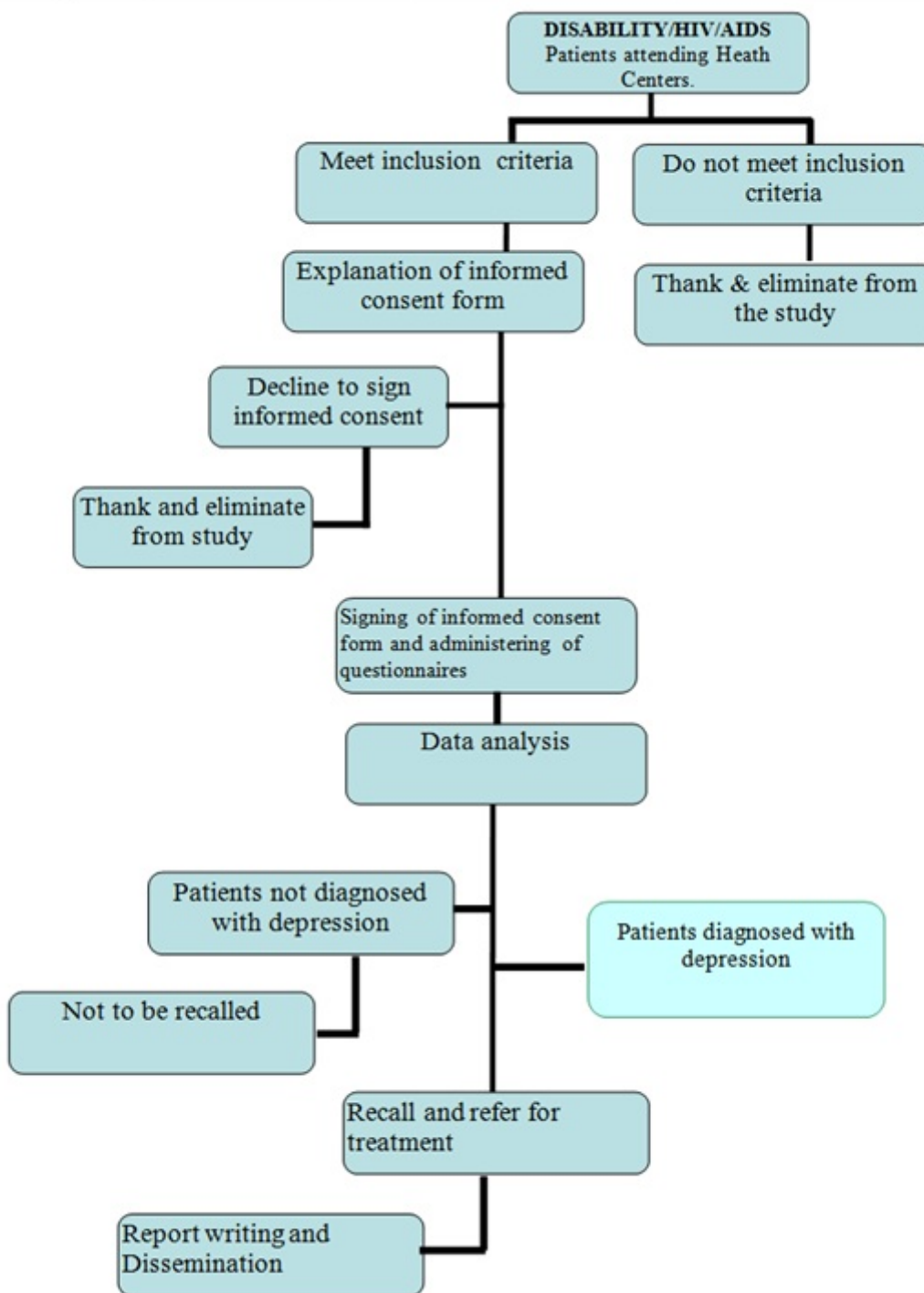


Figure 1: Flow chart for the data collection process.

Results

According to Table 1, Socio-demographic characteristics below the females were 148 (62.7%), and males 88 (37.3%). On the same table,

primary level of education was (58.9%), secondary (31.4%) and tertiary (9.5%).

Table 2 Showed that most of the participants had partial disabilities while others had total disabilities.

	Overall N=236	Male n=88	Female n=148	P value
Age, mean (SD)	42.3 (11.6)	44.0 (11.9)	41.4 (11.3)	0.094
Range	18-74	19-74	18-67	
Marital status, n (%)				
Married	107 (45.3)	48 (54.5%)	59 (39.9%)	<0.001
Single	34 (14.4)	17 (19.3%)	17 (11.5%)	
Divorced	22 (9.3)	13 (14.8%)	9 (6.1%)	
Widowed	69 (29.2)	9 (10.2%)	60 (40.5%)	
Separated	4 (1.7)	1 (1.1%)	3 (2.0%)	
Level of Education, n (%)				
Primary	139 (58.9)	48 (54.5%)	91 (61.5%)	0.441
Secondary	74 (31.4)	32 (36.4%)	42 (28.4%)	
Tertiary	23 (9.7)	8 (9.1%)	15 (10.1%)	
Occupation, n (%)				
None	56 (23.7)	18 (20.5%)	38 (25.7%)	0.045
Professional	27 (11.4)	12 (13.6%)	15 (10.1%)	
Casual Laborer	27 (11.4)	16 (18.2%)	11 (7.4%)	
Small scale business	68 (28.8)	19 (21.6%)	49 (33.1%)	
Small scale farming	34 (14.4)	11 (12.5%)	23 (15.5%)	
Other	24 (10.2)	12 (13.6%)	12 (8.1%)	
Residence, n (%)				
Rural	158 (66.9)	57 (64.8%)	101 (68.2%)	0.856
Urban	72 (30.5)	29 (33.0%)	43 (29.1%)	
Peri-urban	6 (2.5)	2 (2.3%)	4 (2.7%)	
Employment status, n (%)				
Unemployed	138 (58.5)	44 (50.0%)	94 (63.5%)	0.111
Employed	45 (19.1)	19 (21.6%)	26 (17.6%)	
Other	53 (22.5)	25 (28.4%)	28 (18.9%)	
Financial support, n (%)				
Self employed	54 (22.9)	20 (22.7%)	34 (23.0%)	0.343
Spouse	36 (15.3)	12 (13.6%)	24 (16.2%)	
Family	78 (33.1)	29 (33.0%)	49 (33.1%)	
Neighbor	6 (2.5)	0 (0.0%)	6 (4.1%)	
Friends	17 (7.2)	9 (10.2%)	8 (5.4%)	
Other	45 (19.1)	18 (20.5%)	27 (18.2%)	
Living status				

Own house (Alone)	42 (17.8)	13 (14.8%)	29 (19.6%)	0.809
Parents	22 (9.3)	10 (11.4%)	12 (8.1%)	
Spouse	34 (14.4)	13 (14.8%)	21 (14.2%)	
Family house	99 (41.9)	38 (43.2%)	61 (41.2%)	
Rental house	32 (13.6)	12 (13.6%)	20 (13.5%)	
Others	7 (2.9)	2 (2.3%)	5 (3.4%)	
Income				
No income(Family support)	116 (49.1)	43 (48.9%)	72 (48.6%)	0.086
<3000	65 (27.5)	18 (20.5%)	48 (32.4%)	
≥3000-6000	35 (14.8)	18 (20.5%)	17 (11.5%)	
≥6000-12000	12 (5.1)	4 (4.5%)	8 (5.4%)	
>12000	8 (3.4)	5 (5.7%)	3 (2.0%)	

Table 1: Socio-demographic characteristics.

Partial disability of locomotor was the most common disability among 41.9%. Other partial disabilities were visual (19.9%), auditory (16.9%). Participants with total disabilities were auditory (16.9%), visual (4.2%) and locomotor (4.2%).

Education level

More than a half (58.9%) had primary level of education and others had secondary (31.4%) and tertiary (9.5%) levels of education. There was no difference between genders in relation to education with most in both groups having a higher number with primary level of education.

Variable	Frequency (%)	Type.
BDI rating	46 (19.5)	Non clinical
Minimal (0-9 scores)	68 (28.8) -ve	
Mild (10-16 scores)	87 (36.9)	
Moderate (17-29 scores)		
Severe (30-63 scores)	35 (14.8)] +ve.	Clinical

Table 2: Prevalence of BDI depression.

Type of disabilities

Most of the participants had partial disabilities while others had total disabilities. Partial disability of locomotors was the most common disability among 41.9%. The other partial disabilities were visual (19.9%), auditory (16.9%) and speech (0.5%).

The participants with total disabilities were auditory (16.9%), visual (4.2%) and locomotors (4.2%) (Figure 2).

BDI Clinical cut of f= 30 scores (15%)

Severe depressive symptoms were identified among 15% of the participants. The other participants had moderate (36.9%), mild (28.8%) and minimal (19.5%) depressive symptoms (Figure 3). Most of

the participants were females, 148 (62.7%) while 88 (37.3%) were males.

Discussion

Most PWDLWA were females, a statistic that is comparable the HIV gender statistics of Kenya where t 3 out of 5 HIV infected people are women [24]. The mean age of PWDLWA was 42.3 (±11.6) years and with the male patients older than the females. The finding is similar to the statistics on HIV/AIDS in Kenya that show that 80-90% of infections are in the age group 15-49 (MOH, 2001). Most of the participants were married, or widowed. Previous studies have found that married women and men are more likely to have higher prevalence of HIV and the widowed have increased significantly over years [24]. The PWDLWA of the male gender were employed in the formal sector compared to the female who were mainly in small scale business or unemployed. Majority of the PWDLWA had attained at least primary level of education for both genders. A survey in Kenya reported that higher educational levels were significantly associated with lower HIV prevalence. Those with primary education had a prevalence of 10 percent compared to 7 percent with secondary education and 4 percent with tertiary education [24]. Therefore, the fact that most of the participants in this study had lower education is consistent with the high prevalence of HIV among those with lower education. A similar study in Uganda revealed that education level was a factor associated with depression.

Higher level of education among the disabled people living with HIV is likely to reduce the risk of depression. This is because they have access to information and hence awareness about HIV/AIDS and other illnesses. They have money and can afford to do most of the things their counterparts with low education cannot do. Those with primary and secondary level of education had a prevalence of more than 50%, the prevalence reduced by more 30% among the participants with tertiary education [2]. A study found that PWD are not being reached because lack of education inhibits ability to obtain and process information [2].

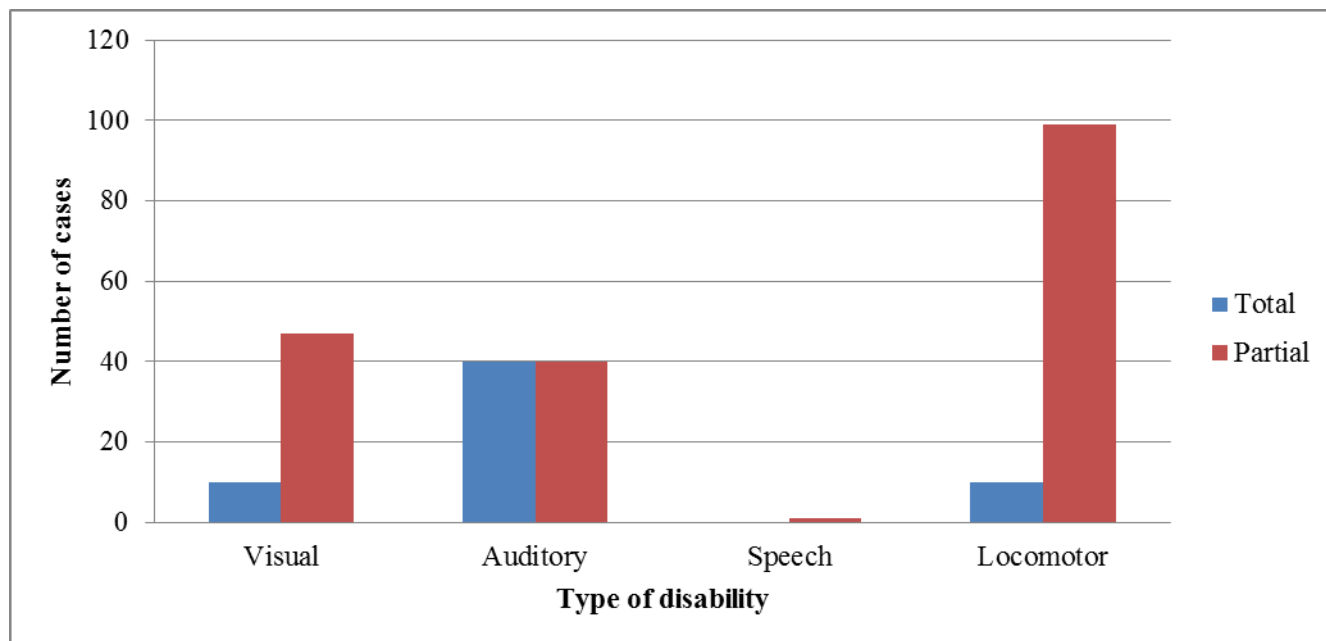


Figure 2: Type of disabilities.

Majority in both genders lived in rural areas with similar findings reported in a survey among the people with disability in Kenya showing that more disabled persons reside in rural than in urban areas [22]. The socio-economic status of the population was not different between the males and the females. Most of the participants were unemployed, got support from family, lived with the other family members and had low or no income.

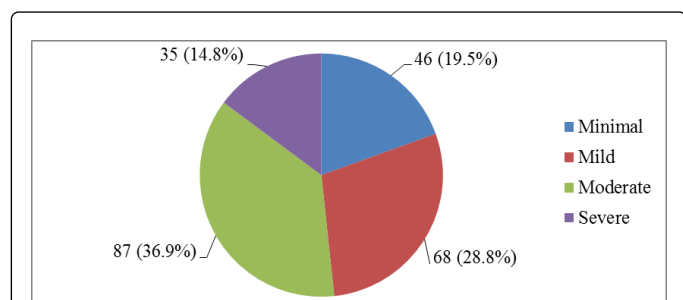


Figure 3: BDI depression.

PWDLWA suffer depression; the current study identified the prevalence of clinical depressive symptoms to be 15%. This prevalence is comparable to 13% that reported in Western Kenya [14]. Among the PWDLWA with clinical depression, 36.9% had moderate depressive symptoms (BDI=17-29 Scale). This concurs with the findings that PWDLWA are more likely to have depression than the general population [14]. In the developed world like United States, about 30% of those living with HIV/AIDS experience depression [14]. Studies in North American and European among PWDLWA suffer from depression and anxiety disorders as they adjust to the diagnosis [6].

United Nations reports a prevalence rate of depression 36% among a large national sample of HIV-positive men and women in the United

States [25]. This means about a half of all disabled people living with HIV have a high level of depression. A study in Uganda using STDs as a proxy for potential HIV exposure, found that 38% of women and 35% of men with disability reported having had an STD at one time [26].

This prevalence of depression among PWDLWA was similar among the male (46.6%) and female (49.3%) participants than men. Similar studies have shown that women with disabilities are more likely to be sexually abused or raped and find it very difficult to access information and services about HIV/AIDS in their respective communities [26]. Increased age and lower educational levels have been identified in previous studies as associated with depression [25].

This study did not show any difference between those with clinical depression (moderate/severe, BDI \geq 17 score) than those with non-clinical (mild/minimal, BDI<17 score) depression in terms of age.

Auditory disability had statistically significant association with clinical depression among those having total disability of hearing having a higher chance of clinical depression. Others such as visual and locomotor disabilities did not significantly influence the level of depression among the participants. A study among the PWDLWA revealed that the Deaf had a challenge on basic knowledge in HIV/AIDS [27]. Condom use among this population was still not considered a safe option compared with the sweetness of sex without a condom. Many sign languages are missing signs for sexual or HIV related issues [28]. Therefore, could be missing out on the information necessary to improve the health of the HIV infected individual hence the likelihood of increased depression.

A study done in South Africa revealed that there was increasing evidence that major depression impacts the course of HIV infection [29].

Results showed no association between the WHO clinical stage of HIV/AIDS of the severity of depression. However, clinical assessments have shown that patients with advanced HIV/AIDS were more likely to be depressed than those at subclinical level. Depressive symptoms are more common among the newly diagnosed HIV positive patients or initiated on ART that develop stigma towards the disease and adverse effects related to the treatment [30-35]. It is even worse for People with Disability living with HIV/AIDS as they may be unable to access centers where they can get ARVs and experience high levels of depression, multiple symptoms and reduced ability to perform everyday tasks and reduced social participation [35-39]. Previously studies have associated HIV/AIDS, stroke, cancer, post-viral syndrome, heart attacks and diabetes to occurrence of depression [29]. This study involved the disabled people living with HIV and therefore the disabilities are likely to increase the likelihood of depression. Also, the moderately or severely depressed participants had been sick for a slightly longer duration of time than the minimally or mildly depressed group.

Conclusions

PWDLWA suffer clinical depression. The prevalence of severe depressive symptoms is slightly higher (15%) than the prevalence among the PLWHA who are not disabled (13%) as reported in a study done in Western Kenya. The low level of education is associated with the risk of developing depressive symptoms among PWDLWA. This is because those participants who had higher education had access to information on HIV/AIDS and they also had the means to live a better life. PWDLWA having an auditory disability are at a higher risk for developing clinical depression and there is similar evidence from a study in Kenya among the Deaf PWDLWA [27]. Many sign languages are missing signs for sexual or HIV related issues [33]. Therefore, could be missing out on the information necessary to improve the health of the HIV infected individual hence the likelihood of increased depression. A study done in South Africa revealed that there was increasing evidence that major depression impacts the course of HIV infection [29]. People with disabilities face tremendous challenges and in circumstances where HIV infection is involved, the challenges are aggravated by HIV-related stigma, lack of social support, and mental. There were many cases that were advised to buy hearing Aids and locomotor Aids but most of them could not afford to buy because they were very expensive.

Recommendations

This study recommends that: There is need to focus on psychiatric attention PWDLWA especially the female partners in order to design and implement programmes, policies and devise specific management strategies in a more coherent and comprehensive manner. Women with disabilities experience serious health and social problems for which they have no adequate skills or resources to cope. As a consequence, these women experience dependency, poverty, poor quality of life, discrimination and exclusion.

Build community centers for raising awareness, millennium Centers for income generating services to set the stage for intervention at a larger scale for the population. Guidelines should be developed in consultation with organizations of disabled persons to encourage the media to give a sensitive and accurate portrayal of, a well, fair representation of and reporting on, disabilities and disabled persons in radio, television, film, photography and print. HIV/AIDS education and services in learning institutions, the Work place and the

community needs to be expanded to ensure that persons with disabilities have access to these services and information. Build a database in consultation with the relevant NGOs, on and for persons with disability, in order to assist the disability to lobby for funds and programmes. Ensure that public education programmes reflect in all their aspects the principle of full participation and equality. This should be part of the education of all children and should be a component of teacher-training courses and training of all professionals. Ensure that sensory and physically challenged persons are included and information made available for them. Public transport service should accommodate persons with disabilities with tricycle to pay bus fare for themselves from one point to another and not pay for the tricycle at the same time. The Police be trained to handle people with disabilities, especially those in crisis due to abandonment or abuse Awareness should be created among the police force to know that these people are reacting to a situation and that the disruptive behavior is used as defense mechanisms. Integrated education and community-based programmes be made complementary to provide cost-effective education and training for persons with disabilities. Sports organizations and recreation facilities should be encouraged to develop opportunities for participation by persons with disabilities in sports activities. Learning institutions: Integrated School systems with disabled/non-disabled learners. The government to reduce the cost of hearing Aids so that deaf people who cannot afford the same can buy them at a subsidized prices.

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