Common Mental Disorder among HIV Infected Individuals at Comprehensive HIV Care and Treatment Clinic of Debre Markos Referral Hospital, Ethiopia

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Abstract

Introduction: The presence of HIV/AIDS increases the risk of development of mental disorders and the presence of mental illness affects disease progression. The resulting co-morbidity complicates help-seeking, diagnosis, quality of care provided, treatment and its outcomes, and adherence. Despite the fact that developing countries carry huge burden of both HIV/AIDS and mental illness, no data about the co-occurrence/link and factors associated is available in local setting. The aim of this study was to assess the prevalence of common mental disorder and associated factors among PLHA at Comprehensive HIV Care and Treatment Clinic of Debre Markos referral Hospital in 2013/2014. An institution-based cross sectional study with the Amharic version of the SRQ was conducted. Ethical clearance was obtained from Institutional Review Board of Debre Markos University and Informed consent was obtained.

Result: Mean age was 37.9 years ± 10.05 years. Prevalence of CMD is found to be 24.3%. Significant associations were found between CMD and past psychiatric illness, ART regimen, marital status, HIV/AIDS disclosure and perceived stigma.

Conclusion and recommendation: There was a significant burden of mental illness among HIV-infected individuals in this setting. It is important to note that the link between HIV care and treatment services and psychiatric service should strengthen. Hospital administrators must give better attention to inpatient mental health service including substance abuse treatment. Clinicians also should always assess HIV-infected subjects for depression, anxiety and other common mental disorders to ensure early detection and treatment.

Keywords: AIDS; Common mental disorder; HIV

Introduction

Among the non-communicable diseases, psychiatric illnesses especially CMD are the most prevalent psychiatric illnesses and are the most important cause of disability in low income countries accounting for 12% of the global burden of disease—a figure that is expected to rise to 15% by the year 2020 [1,2].

In Ethiopia, mental illness is the leading non-communicable disorder in terms of burden. Indeed, in a predominantly rural area of Ethiopia, mental illness comprised 11% of the total burden of disease, with schizophrenia and depression included in the top ten most burdensome conditions, out-ranking HIV/AIDS [2]. These startling statistics show that mental illnesses have been overlooked as a major health priority in Ethiopia and other LMICs, and underscore the need for public health programs targeting mental illnesses [2].

People living with HIV are about twice more likely to experience mental health disorders especially CMDs like depression and anxiety than the general population which, in turn, impair their immune function, reduce their quality of life and adherence to treatment and contribute significantly to their premature death [2,3].

There seem to be several reasons for this: firstly, the difficulty of living with a chronic, life-threatening and highly stigmatized illness; secondly the direct effects of HIV and some opportunistic infections on the brain and central nervous system; and thirdly the side effects of antiretroviral therapy can have mental, behavioral or neurological side-effects [2,3,4]. In other hand Substance use can have a two-fold relationship with HIV risk. Use of substances like alcohol, opioids, cocaine etc., can lead to disinhibition and unprotected sex with multiple partners [5]. On the other hand, a common risk factor in form of a personality attribute may underlie both alcohol use and high risk sexual behavior [6].

Common mental disorder (CMD) is a term used to describe a group of mental disorders that frequently occur in primary care patients. It includes symptoms of depression, anxiety and somatization the latter often indicated by repeated visits to health care practitioners without resolution of the problem [7,8]. CMDs are not decreasing in the ART era, CMD prevalence is influenced by viral central nervous system pathology, concomitant psychosocial stressors and the nature of HIV as a life-threatening and stigmatized illness [3,9]. Many people with HIV experience a wide range of psychological and psychosocial issues throughout the experience of living with and adjusting to the disease. Difficulties may arise at every stage of infection including around the time of testing for HIV; when symptoms develop; receiving an AIDS diagnosis; beginning anti-HIV medication; and in terminal care [10].

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A paper reviewed on the mental health of HIV infected adults in Africa between 1994 and 2008 reported that about half of HIV-infected adults had some form of psychiatric disorder, with depression the most common problem [11,12].

Prevalence of common mental disorders among HIV infected people in low income countries ranges from 82.6% in Mulago Hospital in Kampala, Uganda [13], 63% in Yaoundé, Cameroon [14], 57% pregnant and HIV infected women in Tanzania [15], 56.7% depression in North Central Nigeria [16], 46.4% hospitals in oromia region Ethiopia [17], 43.9% of depression in Mekele and Addigrat hospitals in Tigray region Ethiopia [18], 38.3% in Nigeria [19], 24% done in Southern Uganda [20], 19% in south Africa cape town [21] to 11.2% in Dilla Hospital in south region of Ethiopia [22].

Mental or psychological disorders often seems to be related the severity of HIV/AIDS, medications side effects, Younger age, higher viral load, the loss of health, a decrease in functioning, the deterioration of body integrity, anticipatory loss of life, Pain, poor family support and presence of AIDS in the spouse, cultural factors like stigma, relative lack of appropriate treatment facilities, poor access to the health care and low educational level could have significantly contributed [23,24].

Undetected mental health and co-occurring conditions such as substance-related disorders can have a profound effect on adherence, clinic attendance, and quality of life, and can influence the progression of disease and high-risk behaviors that increase risk of HIV transmission [5,25].

Addressing the mental health issues for people living with HIV (PLHIV) is central to a comprehensive approach to their care, support, and to design interventions and support services to address those needs [5,23,26].

Despite the fact that sub-Saharan countries carry more than 90% of the burden of HIV/AIDS and studies reported that there is high prevalence of mental health disorders related to HIV CMDs often go undiagnosed and untreated in this population [27]. Also there is lack of studies about the interaction between HIV/AIDS and mental health [23].

There is no study done on the prevalence and factors associated with mental illness among PLHA in Amhara region and Debre Markos setting. This study attempts to bridge the gap by adding to the limited body of knowledge about the prevalence rate of mental illnesses and factors associated among HIV/AIDS infected patients in local setting.

Methods

Study design, setting and period

Institution based cross-sectional study design was used. The study took place between November to December 2013 at Debre Markos Referral Hospital, East Gojjam, Amhara, Ethiopia. The sample required for this study was determined by using single population proportion formula containing 95% confidence interval (CI), proportion of the CMD to be 46.7% from Study done in three hospitals in Oromia, Ethiopia [17], absolute precision to be 5% and 10% non-respondents. The total sample required took place between November to December 2013 at Debre Markos Referral Hospital, East Gojjam, Amhara, Ethiopia. The sample required to design interven tions and support services to address those needs [5,25].

The coded Data was checked, cleaned by entering into EPI data and analyzed with SPSS version 16. To estimate the prevalence of common mental disorder, descriptive statistics, using frequencies, mean and standards deviation was used. Bivariate analysis was performed to determine each of these factors and how they are associated with a CMD. A p<0.05 was considered as statistically significant.

Result

Of 422 questionnaires 412 were returned back with full response, this yielded the response rate 97.6%. The age of the respondents ranged from 18 to 65 years; the mean age was 37.9 years (± 10.05 years). From participants 58.3% was females and 83% of them were from urban areas. Majority 95.1 % of the respondents follows orthodox Christian and 97.1% were Amhara by ethnicity. From 412 respondents 117(28.4 %) was living alone. Two hundred thirty (55.8%) of the participants earn less than 500 ETB (Table 1). 35% of respondents since confirmed their HIV positive result 3 to 5 years back and the other 33.3%, 23.5% and 8% confirmed their result 6 to 8, 1 to 2 and 9 to 11 years ago respectively. More than half of (68.4%) of the study participants were on WHO stage I HIV/AIDS stage followed by 19%, 10.9 %, and 1.2% had stage III, stage II and stage IV respectively. The CD4 cell count ranged from 5 to 999 mm³/dl with mean value 435.4 ± 2238.3 and 355 (86.2%) of respondents had a CD4 cell count greater than or equal to 200 mm³/dl. Out of 412 participants 383 (93%) were started ART (Table 2).

Forty one percent of the clients were taking antiretroviral drug regimen Tenofovir, Lamuvidine and Neverapine, 23.3% was taking Zidovidine, Lamuvidine and Neverapine, 10% was taking Zidovidine, Lamuvidin and Efavirenz, 18.2% was taking Tenofovir, Lamuvidine and Efavirenz and the remaining 7% was not taking anti-retroviral drug. Eighty percent of the respondents disclosed their HIV /AIDS status for their relatives. From those who started 34.5 % of respondents were on ART for the past 3 to five years (Figure 1). 4.6% of the respondents had psychiatric diagnosis after knowing their HIV status confirmed by clinicians.

The Self-Reporting Questionnaire (SRQ)

SRQ is a Questionnaire contains 20 yes/no Questions developed by WHO and is a widely used instrument. It was designed for screening for the presence of symptoms of CMD in patients in primary health care settings [28]. It has been validated in sub-Saharan countries including Ethiopia the optimal cut-off for defining cases for CMD has also varied widely depending on the setting, community surveys or primary care. Even though varied cut-off points have been used cut-off point of 7/8 is widely used [28]. So in this study cut off point 8 was used to screen respondents’ symptom of common mental disorder. Crnbach’s alpha for this sample was 0.931.

Cage AID

Cut down, annoyance by criticism, guilty feeling and eye opener adapted to include drug use is a brief tool widely used to screen alcohol and drug abuse conjointly.

Scoring

Item responses on the CAGE questions are scored 0 for "no" and 1 for "yes" answers, with a higher score being an indication of problems. A total score of two or greater is considered clinically significant [29]. Medical data related to HIV/AIDS collected by reviewing Medical charts.

Data analysis and interpretation

A p<0.05 was considered as statistically significant.
Prevalence of common mental disorder

Widely accepted Cut off point ≥ 8 was used for detecting symptoms of CMD. From 412 HIV infected individuals 100 of them scores 8 and more on SRQ. Prevalence of CMD was found to be 24.3% (Figure 2). At different cut of points prevalence of CMD was different. If lower cut-off points were used, the prevalence of mental distress would increase (Figure 3).

The most frequent cognitive symptom were loss of interest in things reported by 23.5% (n=97) and the most frequent anxiety symptoms were “feel worried, nervousness or tense” and “easily frightened” reported by 30.6% (n=126) and 26.9% (n=111) of respondents (Figure 4).

Descriptive analysis indicated that 50 (12.1%) of respondents were substance abuser (Table 3), 22.1% had suicidal ideation in the previous month, 6.3% had life time suicidal attempt and 1.5% of respondents attempt suicide in the previous month. The main reason for attempting was 34.8% due family conflict, 26.1% because of poverty, 13% due to mental illness. Majority of the attempters, 82.6% used poison as method of suicide. Nineteen (73.1%) individuals attempt suicide once, 2 individuals (1.2%) attempt tow times and 19.2% (5 individuals) attempt

Table 1: Socio-Demographic Characteristics of HIV infected individuals at Debre Markos referral hospital, East Gojjam, Amhara, Ethiopia, December, 2013

Table 2: HIV/AIDS Related Characteristics of HIV infected individuals at Comprehensive HIV Care and treatment clinic of Debre Markos referral hospital, East Gojjam, Amhara, Ethiopia, 2013

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Factors associated with common mental disorder

Binary Logistic regression was used to test association between variables. On bivariate analysis the factors within p<0.3 were entered to multivariate logistic analysis to control for possible confounders and p<0.05 was taken as a level of significance. Factors significantly associated with CMD were marital status, ART regimen perceived, perceived stigma, past psychiatric illness and HIV disclosure (Table 5).

When compared to patients taking AZT-3TC-NVP (1c) ART drugs, those who was taking ART regimen TDF-3TC- EFV (1f) reduced risk of getting CMD by 0.05 with adjusted ratio of (0.05 95%CI (0.01, 0.24)). Those Individuals who perceived stigma due to their HIV/AIDS status were 4.5 times more likely to suffer from common mental disorder than who did not perceived (AOR=10.1, 95% CI (5.91, 17.5)). PLHA who disclosed there HIV status reduced risk of CMD by 0.16 times than who did not perceived stigma (AOR=0.16, 95 % CI (0.03, 0.73)). Patients who was taking ART regimen TDF-3TC- EFV (1f) reduced risk of getting CMD by 0.05 with adjusted ratio of (0.05 95%CI (0.01, 0.24)).

Discussion

Prevalence of CMD was found to be 24.3% which was lower than a study from three hospitals in Oromia region, Ethiopia which was 46.7% (18) the reason for this inconsistency may be due to different tools they used (Kessler 10) with lower cut of point (6/7) to measure CMD. It is also lower than studies from Uganda 82.6 % [13] and Nigerian studies which explored 56.7% [16] and 38.3% [19] prevalence of CMD disorder among PLHA. This may be due to those researchers tried to detect many psychiatric co-morbidities beyond depression and anxiety but in this study SRQ screened CMD signs and symptoms mainly anxiety, depression and psychosomatic symptoms. Also socio-cultural differences may result the difference.

It is also lower than studies from Albanian study that explored depression and anxiety prevalence as 82.3% and 62.3% [30], North Central Nigeria in 2013 56.7% [16], Yaoundé, Cameroon which revealed 63% of individuals had moderate depression [28]. A study from three hospitals in Tigray region which rev

Table 4: Social Support and Substance Related Characteristics of the Respondents at ART clinic of Debre Markos referral hospital, East Gojjam, Amhara, Ethiopia, 2013.

more than twice. Ten patients (2.4%) had family history of attempted suicide and 1.5% (6 individuals) had a family member died by suicide (Table 4).

Table 3: Family History and stressful life event at ART clinic of Debre Markos referral hospital, East Gojjam, Amhara, Ethiopia, 2013.

Table 2: Prevalence of symptoms of CMD on SRQ -20.

| Variables | Frequency n=412 | % |
|-----------|-----------------|---|
| Living condition | Family 295 | 71.6 |
| | Alone 117 | 28.4 |
| Perceived Social support | Excellent 108 | 26.2 |
| | Very good 143 | 34.7 |
| | Good 100 | 24.3 |
| | Fair 25 | 6.1 |
| | Low 36 | 8.7 |
| Perceived religiosity | Excellent 83 | 20.1 |
| | Very good 209 | 50.7 |
| | Good 97 | 23.5 |
| | Fair 9 | 2.2 |
| | Low 14 | 3.4 |
| Perceived stigma and discrimination | Yes 82 | 19.9 |
| | No 330 | 80.1 |
| Member of HIV association | Yes 120 | 29.1 |
| | No 292 | 70.9 |
| Current Substance use | Yes 40 | 9.7 |
| | No 372 | 90.3 |
| Type of substance | Alcohol 33 | 8.0 |
| | Chat 4 | 1.0 |
| | Hashish 1 | 0.2 |
| | Combine use 2 | 0.5 |
| | Non user 372 | 90.3 |

- **Variables**
  - Psychiatric illness before HIV status confirmed
  - Psychiatric illness after HIV status confirmed
  - Family history of mental illness
  - Family member death due to HIV
  - Spouse death due to HIV
  - No of children
  - Child HIV status
  - Partner HIV status
  - Current Bereavement

- **Frequency**
  - No of children
  - Child status
  - Partner status

- **%**
  - Living condition
  - Perceived Social support
  - Perceived religiosity
  - Perceived stigma and discrimination
  - Member of HIV association
  - Current Substance use
  - Type of substance

- **Table 3: Family History and stressful life event at ART clinic of Debre Markos referral hospital, East Gojjam, Amhara, Ethiopia, 2013.**

- **Table 4: Social Support and Substance Related Characteristics of the Respondents at ART clinic of Debre Markos referral hospital, East Gojjam, Amhara, Ethiopia, 2013.**
Since it is a cross-sectional study, we couldn’t determine causal

Factors like HIV/AIDS stage CD4 count, partner and child

Even though prevalence of CMD in this setting found to be

Social support, stigma and religiosity were assessed by single

AIDS status, gender, age, perceived religiosity and grief

However the result is higher than another study in Dilla hospital in Ethiopia [22] which were 11.2% and South Africans study which found 19% psychiatric morbidity among PLHA [21]. This difference may be due to different tool that Hospital Anxiety and Depression Scale in Ethiopian and South African researchers used diagnostic tool MINI but this study used screening tool.

Prevalence of CMD also higher than community studies among working adults in Addis Ababa, Ethiopia which was 17.7% [31] and rural Butaira with 17% prevalence [32]. The difference might be due to co morbid physical illness (HIV/AIDS).

But this result was in line with south Ugandans [20] study which found as 24% of CMD/depression and study from Ethiopia which found 24.5% of CMD among samples with malaria in primary health care [33].

The most frequent cognitive symptom reported by participants was loss of interest in things (23.5%). This result was similar to study done among PHC patients in Ethiopia [33].

In this study factors associated with CMD were divorced Martial status, Tenofovir-lamivudine-Efavirenz ART Regimen, HIV disclosure, past psychiatric history and Perceived stigma.

Individuals reported perceived stigma was 4.5 times more likely to suffer by CMD; this finding was supported by study done in Oromia region, Ethiopia [17,23,24].

When compared to patients Zidovudine-lamivudine - nevirapine ART drugs, those who was taking ART regimen Tenofovir-lamivudine - Efavirenz reduced risk of getting CMD by 0.05, this finding was inconsistent with literatures which reported that Efavirenz containing regimens are commonly cause psychiatric symptoms [11]. This needs further research.

PLHA who were disclosed their HIV status reduced risk of CMD by 0.16 times than who didn't disclosed. This is may be due to emotional and material support the patient gain from their relatives as a result of their disclosure. This result is in line with many research findings [11,16,34].

Those who had divorced marital status were seven times more likely to get CMDs than married one this may be due to the lack of emotional support from partner and this finding is supported by findings from South Africa [21]. Patients who had past psychiatric history been 5 times more likely to had CMD this is in line with findings from many studies [27].

Limitation of study

Since it is a cross-sectional study, we couldn’t determine causal links between CMD and some important variables.

Social support, stigma and religiosity were assessed by single questions but it was good if standard questionnaire were used.

Conclusion

Even though prevalence of CMD in this setting found to be lower than many literatures searched, this result indicated that there was a significant burden of mental illness and still under diagnosed among HIV-infected individuals.

Factors associated to CMD were divorced Martial status, TDF-3TC- EFV ART Regimen, HIV disclosure, Past psychiatric history and Perceived Stigma.

Factors like HIV/AIDS stage CD4 count, partner and child HIV/AIDS status, gender, age, perceived religiosity and grief were not associated with CMD in multivariate analysis.

Recommendations

Hospital administration

Should strengthen the link between HIV care and treatment services and psychiatric service.

Must give better attention to inpatient mental health service including substance abuse treatment.

Clinicians

Even though Clinicians already screening HIV-infected patients for mental illness, they should do it always especially for CMDs like depression and anxiety to ensure early detection and treatment.

Researchers

The link between, ART regimen and other factors should study independently by different designs other than cross sectional study.
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