

Psychiatric Co-morbidity in HIV/AIDS: A Neglected Issue

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Abstract

HIV/AIDS epidemic remains among the most significant challenges to public healthcare systems worldwide. There are approximately 50,200 people living with HIV/AIDS (PLHA) in Nepal among the total 33 million PLHAs. Human Immunodeficiency Virus (HIV) infection/Acquired Immunodeficiency Syndrome (AIDS) is a significant cause of death and disability, especially in developing countries. Studies have shown that there is a bidirectional link between Mental illness and HIV/AIDS. However, mental illnesses are under detected in HIV/AIDS care settings. In spite of a good financial support from international partners, PLHA in Nepal do not receive necessary psychiatric services. Psychiatric illness in patients with HIV/AIDS has been associated with negative health behaviors and poorer clinical outcomes. This article, therefore, aims to highlight this issue among the stakeholders by reviewing the research on the topic in Nepal and making them aware of the need to identify the gaps in overall care of PLHA and promote research in the topic that aids in national policy development.

Keywords: Psychiatric Co-morbidity, HIV/AIDS, Nepal

INTRODUCTION

The HIV/AIDS epidemic remains among the most significant challenges to public healthcare systems worldwide. UNAIDS estimates that in 2007, 33 million people are living with HIV/AIDS (PLHA).¹ Among them approximately 50,200 are from Nepal.² Considerable evidence suggests that people with HIV disease are significantly more distressed and are at risk to develop psychiatric manifestations such as dementia, mood, and psychotic disorders, either due to the primary disease process of HIV or secondary infections.³ Yet, psychiatric disorders are commonly under-detected in HIV care settings. It has been said that persons with serious mental illnesses such as schizophrenia and major affective disorders are more likely to contract HIV-related diseases. Reviews of HIV risks associated with schizophrenia suggest that this greater risk is a function of lower socioeconomic status, homelessness, higher rates of substance use, and risky sexual behaviour, including unprotected sex and prostitution.^{4,5}

The resulting co-morbidity complicates help-seeking, diagnosis, quality of care provided, treatment and its outcomes, and adherence. Mental illness worsens functional impairment and

quality of life and is associated with a more rapid and harder-to-treat progression of HIV disease.⁶⁻⁸ These worsened outcomes are believed to be related to both behavioural mechanisms (noncompliance with HIV medications)⁹ as well as direct biological measures.^{10,11} Given this risk, many medical professionals have used the identification of a psychiatric illness coexisting with HIV infection as a red flag to target for more aggressive and comprehensive clinical management.^{12,4}

In spite of this bi-directional link between HIV/AIDS and mental illnesses, there has been a paucity of research focusing on mental health among PLHA. This article, therefore, aims to highlight this issue among the stakeholders by reviewing the research on the topic in Nepal and making them aware of the need to identify the gaps in overall care of PLHA and promote research in the topic that aids in national policy development.

HIV/AIDS SITUATION IN NEPAL

HIV is characterized as a concentrated epidemic in Nepal with HIV prevalence of 0.30 percent among adult aged 15-49 years in 2011. There are

approximately 50,200 people estimated to be living with HIV.² According to the report, there are over 200 national non-governmental organizations (NGOs), NGO networks and community-based organizations working in the HIV/AIDS sector. Considerable financial support has been provided by Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) (single stream of funding (SSF)), United States Agency for International Development (USAID), United Nations (UN) agencies and UK Department for International Development (DFID). The study revealed that in 2009, 20.45 million USD was spent on HIV programmes in the country, with bilateral and multilateral agencies contributing 61.9 percent and 34.5 percent of the total spending, respectively and the Government funding only 1.3 percent of the overall spending on the programmes.² Nepal has successfully secured an additional USD 57 million for the national response on HIV and AIDS for the period 2011–2016 from GFATM.²

A significant proportion of people with HIV/AIDS in some developed countries receive some form of psychosocial and/or mental health intervention, including psychotropic medication, psychotherapy and other services. There is gross lack of data from developing countries on how many people with HIV/AIDS seek mental health services and receive treatment, but anecdotal evidence suggests that only a small number of HIV treatment programmes in these settings provide mental health services, and only a fraction of those with HIV/AIDS receive mental healthcare. Similar is the situation in Nepal. In spite of such a good support from international partners, PLHA in Nepal do not receive necessary psychiatric services. The reason for this gap is not known.

RELATION BETWEEN HIV/AIDS AND MENTAL ILLNESS

With regard to the impact of HIV/AIDS, the onset of mental health problems may manifest from the initial HIV diagnosis. Subsequently, adverse social circumstances and life stressors may exacerbate psychological symptoms while living with HIV, and certain HIV medications have negative mental health side effects (Global Initiative on Psychiatry [GIP], 2008). Difficulties may arise at each phase of HIV infection, such as during the time of testing, receiving a HIV-

positive diagnosis, the symptomatic phase, beginning anti-HIV treatment, and the terminal care phase.

Research studies have shown that there is considerable overlap between HIV infection and several major mental disorders such as major depressive disorder and bipolar disorder. It has been estimated that the prevalence of HIV among individuals with a serious mental illness (SMI) ranges from 1 percent to 24 percent (De Hert et al., 2011), much higher than the rates found among HIV-uninfected persons. Frequently, these individuals are also diagnosed with a substance use disorder (Parry, Blank, & Pithey, 2007), which can make treatment and management of HIV and mental health problems even more challenging.

SMI is associated with a more rapid and harder-to-treat progression of HIV disease because of relationship between stress, depression and immune response such that HIV infection may progress more rapidly in individuals with these symptoms.

Research findings show that SMI clients are highly vulnerable to contracting HIV partly because of the relationship between SMI and low Socio-economic Status, which places this population in contact with high-risk populations. For those who have both HIV and SMI, the risk of transmitting HIV to others may be particularly great, given that individuals with prolonged psychiatric illnesses can exhibit poor judgment, affective instability and impulsivity.

One very concerning problem among persons with HIV and SMI is suicidality. Comorbid psychiatric illnesses, especially major depressive disorder and substance use disorders, have been found to be highly predictive of suicidal ideation in HIV positive individuals.

Neuropsychological impairment is another possible negative consequence of the comorbidity between HIV and SMI, and this impairment may exacerbate other possible outcomes such as increased engagement in risk behaviors and worse medication adherence.

Hence, it is crucial for PLHA to have easy access to mental health facilities to promote their health and well-being, and to prevent secondary transmission.

CONSEQUENCES OF UNTREATED MENTAL ILLNESS IN PLHA

Mental health problems among persons living with HIV are closely associated with impaired quality of life, family problems, worker absenteeism, suicide risk and interpersonal difficulties, in addition to poor adherence among ART (Anti-Retroviral Therapy) users. Poor ART adherence has many adverse implications for patients which include a low CD4 count, a high viral load, vulnerability to opportunistic infections, more rapid disease progression, slower recovery times from bouts of illness, and the development of resistance to first-line ART, requiring more expensive second-line treatment.

The psychosocial implications of declining health include psychological distress associated with illness, poor quality of life for patients and their families, and mortality and its psychosocial and economic effects on family wellbeing.

Further, the wastage of resources such as medical consultation time, unconsumed medication, worker absenteeism and mortality is also likely to exact an economic toll on society.

On the basis of the data from various studies, it is likely that common mental disorders, as well as sub-clinical psychological distress, can be common among persons living with HIV. Persons experiencing psychological distress may be helped by means of problem-solving counseling and information about their condition, and how to access treatment. For the smaller proportion who meet criteria for a psychiatric diagnosis (e.g. Major Depression: 10%-12%), appropriate psychological and psychiatric treatment is indicated.

VARIOUS PSYCHIATRIC COMORBIDITIES ASSOCIATED WITH HIV/AIDS

MOOD DISORDERS

Mood disorders are the most prevalent psychiatry disease in HIV infected persons followed by anxiety disorders and substance use disorders. Depression accounts for nearly all diagnoses of mood disorders.^{15,16}

Sometimes it may be difficult to distinguish the classic symptoms of major depression for HIV-infected patients because it may be a

manifestation of the infection or other factors like grief, rather than an indication of major depression, because they have strong reasons for feeling dejected. As these patients can present with both demoralization and major depression, it is important to make a distinction between them so that interventions with the greatest benefit can be chosen. In both HIV-infected patients (males and females), major depression is associated with a decrease in CD4 cell count and the progression of HIV disease; in HIV-infected women, it is associated with an increased mortality rate.¹⁶ Though Mania associated with cognitive deficit is seen in advanced stage of HIV disease, the prevalence rate is very low as compared to major depression.

ADJUSTMENT DISORDER

HIV/AIDS imposes a significant psychological burden. People with HIV often suffer from depression and anxiety due to various factors like a) the impact of the being diagnosed with HIV, b) stigmatization and loss of social support, family or friends and c) having to face the difficulties of living with a chronic life-threatening illness, for instance shortened life expectancy, complicated therapeutic regimens etc. HIV infection can be associated with high risk of suicide or attempted suicide. The psychological predictors of suicidal ideation in HIV-infected individuals include concurrent substance-use disorders, past history of depression and presence of hopelessness.^{1,17}

SUBSTANCE ABUSE

Substance abuse is quite common in patients with HIV/AIDS. With increasing psychological burden due to social stigmata, the problem is ever rising in these patients. Substance abuse can be seen in both injectable and non injectable forms. Alcohol and crack/cocaine use accounts for most of the substance use disorders.¹⁵ These drugs interfere with the treatment regimes and the adherence to treatment for HIV infection is poorer among persons with serious mental illness. Poorer treatment adherence among persons with serious mental illness could lead to poorer outcomes and the development of treatment-resistant strains of HIV in this population.

ANXIETY DISORDER

Post traumatic stress disorder is the most common anxiety disorder associated with HIV

Infections followed by panic disorder, social and specific phobias and obsessive compulsive Disorder.¹⁵

HIV ASSOCIATED DEMENTIA AND NEUROCOGNITIVE IMPAIRMENT

HIV-1 infection can induce neurocognitive complications which has been termed as HIV-associated neurocognitive disorders (HANDs) and includes three categories of disorders according to standardized measures of dysfunction: asymptomatic neurocognitive impairment, mild neurocognitive disorder (MND) and HIV-associated dementia (HAD), which is the most severe form of HAND.¹⁸ These occur despite administration of highly active antiretroviral therapy (HAART), although the onset of HAD has delayed and the severity has reduced. Several studies suggest that both neurotoxic processes and impairment of neurogenesis contribute to the development of HIV-associated neurocognitive disorders.^{19,20,21}

HAD manifests as a subcortical dementia with clinical features such as psychomotor retardation, mood disturbances, anxiety and deficits in memory, abstract thinking, information processing, verbal fluency, decision-making, and attention.^{22,23,24}

PSYCHOTIC DISORDER

HIV infection may lead to psychosis either directly / indirectly or patient with psychosis maybe vulnerable to contract HIV infection because of various factors such as sexual abuse, homelessness, substance abuse and impaired judgment regarding sexual relationships. Direct effect of HIV on CNS, opportunistic infection, CNS neoplasm, medications, substance use and other psychological stresses are implicated as contributing factors.^{25,26} Psychotic symptoms in HIV infection can be a part of delirium, dementia or any other organic brain syndrome. Individuals with psychosis have greater tendency of neuropsychological impairment, higher rates of substance abuse and higher mortality rate. Psychosis in these patients has been divided into primary and secondary psychosis. Those patients with no HIV-related neurological disease or acute metabolic dysfunction are said as having 'primary psychosis' and those with opportunistic cerebral infection or metabolic encephalopathy related to pulmonary, hepatic and renal failure are said to have 'secondary psychosis'.^{25,27} Prevalence of

new-onset psychosis among HIV patients ranges from 0.23%–15.2%.²⁸ Psychotic symptoms usually occur as a late complication of HIV infection, most common in fourth decade. They predominantly present as paranoid delusions and hallucination but catatonic symptoms can also be seen in some patients.²⁸

RECOMMENDATIONS

It is important for practitioners treating HIV-infected individuals to be aware of the high likelihood of co-morbid mental health conditions, have a basic understanding of the diagnosis and treatment of these conditions, and be prepared to partner with mental health professionals in the treatment of affected individuals.

In addition to the treatment of specific mental disorders, several behavioural interventions derived from mental health practice may also contribute to adherence. These include motivational interviewing, cognitive-behavioural therapy and group supportive therapy by including mental health in the treatment guidelines and ensuring adequate training in basic medical and psychological management of disorders, a holistic and integrated primary mental healthcare approach can be promoted.

Data regarding the prevalence of co-morbid psychiatric illness in PLHA is lacking in Nepal, so we should support research on mental health and HIV/AIDS.

Finally, advocacy is needed from a range of stakeholders to highlight the role of mental health in HIV/AIDS treatment programmes.

REFERENCES

1. World Health Organization. HIV/AIDS and mental health. World Health Organization: Switzerland(Geneva). 20 Nov 2008.
2. Ministry of Health and Population, National Centre for AIDS and STD Control. Nepal Country Progress Report 2012. To contribute to Global AIDS Response Progress Report 2012. Kathmandu.
3. Owe-Larsson B, Sall L, Salomon E, Allgulander C. HIV infection and psychiatric illness. *Afr J Psychiatry* 2009; 12(2):115-28.
4. Sullivan G, Koegel P, Kanouse D, et al. HIV and people with serious mental illness: the public

- sector's role in reducing HIV risk and improving care. *Psychiatric Services* 1999; 50:648–652.
5. Gottesman I, Groome C. HIV/AIDS risks as a consequence of schizophrenia. *Schizophrenia Bulletin* 1997; 23:675–684.
 6. Sherbourne CD, Hays RD, Fleishman JA, Vitiello B, Magruder KM, Bing EG, McCaffrey D, Burnam A, Longshore D, Eggan F, Bozzette SA, Shapiro MF. Impact of psychiatric conditions on health-related quality of life in persons with HIV infection. *Am J Psychiatry* 2000;157:248–54.
 7. Ickovics JR, Hamburger ME, Vlahov D, Schoenbaum EE, Schuman P, Boland RJ, Moore J. Mortality, CD4 cell count decline, and depressive symptoms among HIV-seropositive women: longitudinal analysis from the HIV epidemiology research study. *JAMA* 2001;285:1466–74.
 8. Pence BW, Miller WC, Gaynes BN, Eron JJ Jr. Psychiatric illness and virologic response in patients initiating highly active antiretroviral therapy. *J Acquir Immune Defic Syndr* 2007;44:159–66.
 9. Gordillo V, del Amo J, Soriano V, Gonzalez-Lahoz J. Sociodemographic and psychological variables influencing adherence to antiretroviral therapy. *AIDS* 1999;13:1763–9.
 10. Bagasra O, Pomerantz RJ. Human immunodeficiency virus type 1 replication in peripheral blood mononuclear cells in the presence of cocaine. *J Infect Dis* 1993;168:1157–64.
 11. Leserman J. The effects of stressful life events, coping, and cortisol on HIV infection. *CNS Spectr* 2003;8:25–30.
 12. Angelino AF, Treisman GJ. Management of psychiatric disorders in patients infected with human immunodeficiency virus. *Clin Infect Dis* 2001;33:847–56.
 13. Yun LW, Maravi M, Kobayashi JS, Barton PL, Davidson AJ. Antidepressant treatment improves adherence to antiretroviral therapy among depressed HIV-infected patients. *J Acquir Immune Defic Syndr* 2005;38:432–8.
 14. Bouhnik AD, Preau M, Vincent E, Carrieri MP, Gallais H, Lapeu G, Gastaut JA, Moatti JP, Spire B. Depression and clinical progression in HIV-infected drug users treated with highly active antiretroviral therapy. *Antivir Ther* 2005;10:53–61.
 15. Gaynes BN, Pence BW, Eron JR JJ, Miller WC. Prevalence and Comorbidity of Psychiatric Diagnoses Based on Reference Standard in an HIV Patient Population. *Psychosomatic Medicine* 2008;70:505–11.
 16. Treisman G, Angelino A. Interrelation between Psychiatric Disorders and the Prevention and Treatment of HIV Infection. *Clinical Infectious Diseases* 2007; 45:S313–7.
 17. Jia CX, Mehlum L, Qin P. Comorbid Psychiatric Illness and Risk for Subsequent Suicide. A Nationwide Register Linkage. *J Clin Psychiatry* 2010;73:1315-21.
 18. Antinori A, Arendt G, Becker JT, et al. Updated research nosology for HIV-associated neurocognitive disorders. *Neurology* 2007;69:1789–99.
 19. Kaul M. HIV-1 associated dementia: update on pathological mechanisms and therapeutic approaches. *Curr Opin Neurol*. 2009 June ; 22(3): 315–20.
 20. Kaul M, Garden GA, Lipton SA. Pathways to neuronal injury and apoptosis in HIV-associated dementia. *Nature* 2001; 410.
 21. Kaul M, Zheng J, Okamoto S, Gendelman HE, Lipton SA. HIV-1 infection and AIDS: consequences for the central nervous system. *Cell Death Differ* 12 (Suppl 1)
 22. Navia BA, Jordan BD, Price RW. The AIDS dementia complex: I. Clinical features. *Ann Neurol* 1986; 19:517–24.
 23. Grant RM, Wiley JA, Winkelstein W (1987) Infectivity of the human immunodeficiency virus: estimates from a prospective study of homosexual men. *J Infect Dis* 156:189–93.
 24. Price RW, Brew B, Sidtis J, Rosenblum M, Scheck AC, Cleary P. The brain in AIDS: central nervous system HIV-1. Infection and AIDS dementia complex. *Science* 1988; 239:586–92.
 25. Sewell DD, Jeste DV, Atkinson JH, Heaton RK, Hesselink JR, Wiley C, Thai L, Chandler JL, Grant I & the San Diego WV Neurobehavioural Research Center Group. HIV-Associated Psychosis: A Study of 20 cases. *Am J Psychiatry* 1994;151:237-242.
 26. McDaniel JS, Chung JY, Brown L. Practice guidelines for the treatment of patients with HIV/AIDS. *Am J Psychiatry* 2000;157:61-62.
 27. Alciati A, Fusi A, Monforte AD, Coen M, Ferri A, Mellado C. New-onset delusions and hallucinations in patients infected with HIV. *J Psychiatry Neurosci* 2001;26:229-34.
 28. Nebhinani N and Mattoo SK. Psychotic Disorders with HIV Infection: A Review. *German Journal of Psychiatry*.