

HIV-infection as a self-reported risk factor for attempted suicide in South Africa

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Abstract

Objective: The aim of this study was to examine variables associated with recently diagnosed HIV-infection as a self-reported attempted suicide risk factor. **Method:** The study cohort consisted of 112 general hospital in-patients who attempted suicide because of HIV-infection. All the patients were subject to a comprehensive mental state examination and administration of a semi-structured questionnaire to obtain biographical, sociodemographic and other relevant information. Pearson uncorrected Chi-square (X^2) or Fisher's Exact Probability Test were used to analyze data utilising Epicalc 2000, version 1.02. **Results:** Most patients expressed a heterosexual preference. The average age was 34.9 years. Females predominated and in both genders depression and substance abuse (mainly alcohol-related) accounted for the most common psychiatric diagnoses. Less than half of the patients were married. Partner relational problems was a statistically significant variable. The most prevalent co-morbid stressors were poor social support, fear of disclosure/stigmatization and socio-economic pressures. Cognitive deficits included problems with cognitive flexibility, concentration and memory. Based on estimated national suicidal behaviour prevalence rates, a descriptive HIV-related attempted suicide rate of 67.2 per 100 000 and an increased risk for attempted suicide of 13.33% to 18.87% were calculated. **Conclusion:** HIV-infection can be an underestimated suicide risk factor. Effective management and prevention programmes should include as imperatives early diagnosis of HIV-related suicidal behaviour, recognition of underlying psychopathology, neurocognitive deficits, associated stressors, the dynamics of partner relationship problems, as well as cultural awareness and sensitivity. Potential neurocognitive complications that can act as additional risk factors require further research.

Key Words: HIV-infection; Attempted suicide risk; Management; Prevention

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Introduction

The approximate one million people who commit suicide worldwide every year is likely to increase to about 1.53 million by 2020.¹ Attempted suicides occur at least twenty times more frequently.¹ In developing countries, where some 85% of suicides already occur², HIV/AIDS is one of the greatest health care issues.³ Globally about 33 million people live with it, 2.1 million died from it in 2007 and more than 25 million have died from it since it was first diagnosed in 1981.³ Although, sub-Saharan Africa is the worst affected, South Africa has the largest epidemic worldwide where

approximately 5.7 million people and nearly one in three pregnant women are living with HIV/AIDS.³⁻⁴ One of the highest infection rates appears in the young³, an age group with a disturbing rise in suicidal behaviour.⁴ Suicide accounts for up to 11% or more of all non-natural deaths in South Africa. Studies have reported national suicide rates of between 17 and 25 per 100 000 per year in the country depending on when or where the sampling was done⁴, giving an estimated average of approximately 21 per 100 000. Approximately 20 times or more non-fatal suicidal behaviours occur.⁴ The average age of people who commit suicide in the country is around 35 years, and the peak age for non-fatal suicidal is about 20-29, followed by the 10-19 year age group, according to some studies.⁴

Diverse variables can affect suicidal behaviour in people with HIV/AIDS who are vulnerable to: various psychiatric disorders (including acute stress reactions, adjustment disorders, obsessive compulsive disorders involving

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obsessive ruminations and scrutiny for disease progression, bereavement reactions, cognitive impairment, personality disorders, depression, mania, psychoses and substance abuse); pre-existing psychiatric disorders; neuropathology; neuropsychiatric side-effects of ARV and psychotropic medication; anxiety reactions associated with the "worried well", "AIDS phobia", AIDS panic" or "AIDS anxiety" despite repeated reassurances/negative test results; risk-taking sexual behaviour including deliberate attempts to become infected with HIV as a form of suicidal behaviour; and suicidal behaviour in the early stages of HIV-infection in attempts to avoid the fearful prospects of eventual disability.⁴⁻⁹

Earlier studies reported higher suicide risks in HIV/AIDS-infected people compared to the general population which seems to have reduced with improved treatment although figures vary.^{4,6-7,10} In Africa few published studies are available. South African research^{4,6,11} suggests a correlation between suicidal behaviour and the prevalence of HIV/AIDS. As part of ongoing research^{4,6} in this regard the present study examined variables associated with recently diagnosed HIV-infection as a self-reported risk factor for suicide attempts.

Method

Sample/Site

The study cohort consisted of 112 patients who attempted suicide. They constituted one sixth (15.91%) of an original sample of 704 patients who were admitted over a twelve month period because of suicide attempts to a university-affiliated general state hospital in Durban, South Africa. Unlike the balance of the patients in the original sample (N=592) who gave other reasons for their suicide attempts, all the patients in the sample studied cited a recent diagnosis of HIV-infection (< one month) as the primary reason for their suicide attempts. The study was ethically approved by the institution where the research was undertaken.

Procedure

Confirmation of their HIV status was extracted from their medical files. They were also subjected to a comprehensive mental state examination and administration of a semi-structured questionnaire to obtain biographical, socio-demographic and other relevant data. Their assigned psychiatric diagnoses on admission were checked against DSM-IV-TR¹² criteria.

Statistics

Pearson uncorrected Chi-square (X^2) or Fisher's Exact Probability Test were used to analyse data utilising Epicalc 2000, version 1.02.

Results

There were statistically significantly more females (82; 73%) than males (30; 27%) (Fisher's Exact; $p=0.000035$). Most patients (94%) expressed a heterosexual preference. Ethnic distribution reflected the demographics of the patient population where the study was undertaken: Blacks = 76%, Indians = 20%, and Whites = 4%. Ages ranged from 18 to 48 years ($\bar{x} = 34.9$). Of the males 47% were employed compared to 16% of the females, which was statistically significant ($\chi^2=11.40$; $p=0.000735$). Differences in marital status were statistically not significant ($\chi^2=1.70$; $p=0.790959$), although

less than half of the sample were married: 37% males compared to 44% females. Of the rest 43% males and 32% of the females were co-habiting, 10% of the males and females respectively were single, 7% of the males and females respectively were divorced and 3% of the males and 7% of the females were widowed. On average, mood disorders accounted for 80% of all psychiatric diagnoses (males = 77% and females = 82%) with no statistically significant gender difference ($\chi^2=0.90$; $p=0.825730$). This included: partner relationship problems with depression (40% of the males and 39% of the females), adjustment disorders with depression (20% of the males and 23% of the females), and major depressive disorder (17% of the males and 12% of the females). In addition, substance abuse (mainly alcohol-related) was diagnosed in 23% of the males and 18% of the females. Most of the patients reported the onset of their depression subsequent to HIV-infection, whereas those who abused substances had a pre-existing history of such abuse.

The following co-morbid stressors were identified (patients verbalised more than one each): fear of major developmental task disruptions and the need for lifelong behaviour changes associated with anxiety about being ostracized and of lack of social support (71%); fear of disclosure of their HIV status because of possible victimisation/stigmatization (54%); socio-economic problems (44%); fear of HIV disease progression (24%); inadequate access to health care services, (22%); being forced to resign or being dismissed from work because of their HIV status (10%). In addition, partner relational problems (especially regarding negative/distorted communication) was statistically significant ($\chi^2=4.50$; $p=0.033941$). All the women were concerned with partner infidelity while 40% of the males blamed their partners for infecting them. There was one murder-suicide whereby a male patient had shot his partner and then attempted suicide believing she had infected him. Although all the patients in the sample studied gave recent HIV-infection as a primary reason for their suicide attempts, only 71% were in fact HIV-positive, the majority of them being on ARV treatment (38% males and 62% females). Most of this sub-sample reported reduced cognitive flexibility, concentration and memory. The HIV-negative patients (29%) were all females.

Utilizing the stated estimated national average suicide rate of 21 per 100 000 of the population per year, and an attempted suicide: suicide ratio of 20:1, a descriptive HIV-related attempted suicide risk of 67.2 per 100 000 was calculated. The 95% confidence interval around the estimate is 15.91% rounded off as 16% [95% CI of 13.33 to 18.87], which means that in the population from which the sample was drawn, one can be 95% confident that the real increased risk for HIV-related attempted suicides is between 13.33% and 18.87%.

Discussion

The finding that most patients were heterosexual was expected within the African context where HIV/AIDS is a predominantly heterosexual disease.³ The results also support other findings^{1,4-7,9} of an age reduction in suicidal behaviour, that women are especially vulnerable to HIV-infection and attempted suicides and that acute psychological reactions, depression, substance abuse, cognitive deficits, relationship

problems and various other co-morbid stressors can be powerful exacerbating factors in suicidal behaviour. Not only is stress a critical consideration in suicidal behaviour generally, but it can have a detrimental impact on HIV-progression¹³ and stress management can be beneficial in this regard.⁴ The co-morbid stressors identified in our patient sample are consistent with some of the unique stressors reported elsewhere for HIV/AIDS sufferers.^{4,7} In Africa, women, in particular, face a further array of HIV-related stressors.⁶⁻⁷ The disease is sometimes conceptualised as a mystical force that can impact on a diminished resistance to living with it, resulting in isolation suggestive of a 'social death' experience.^{4,6} For example, a woman recently killed her four children before committing suicide because a rumor that she was HIV-positive led to her being ostracized.¹⁴ Some women talk of living with a "spoiled identity" or of being "not fresh" and they draw on negative social discourses around the disease which are internalized as part of the self.¹⁵ People are affected in their most productive years with a lack of basic resources such as adequate food, housing, clean water, electricity and other socio-economic pressures impacting heavily on coping resources. Because of imbalances of gender/power issues, women often end up the sole supporters of the family.⁷

Different patterns of increased risk for suicidal behaviour through the progression of HIV/AIDS arise^{4,6,9,16-19}, amongst others, with: the manner in which testing for HIV is done and inadequate psychosocial support at the time; anxiety before the results are known; being diagnosed seropositive; the development of full-blown AIDS with its implications; later stages of the disease which may be characterized by physical and mental deterioration and a decrease in the quality of life; sufferers who consider suicide wanting to control the way in which they die; and vulnerability of survivors whose loved ones have died as a result of HIV/AIDS-related suicide, especially if they themselves are also HIV/AIDS positive.

Regarding the cognitive impairment reported by most of our patients studied, there is evidence that this can occur fairly early in the disease, although it is seen mostly following profound immunosuppression where the clinical picture can be complicated by a syndrome of progressive cognitive impairment reflecting a constellation of cognitive, motor and behaviour changes, referred to by different designations such as⁹: AIDS-dementia complex, HIV/AIDS-related encephalopathy, HIV-associated cognitive/motor complex, HIV encephalitis and HIV-associated dementia (HAD). HAD seems to encapsulate the broader clinical picture.⁹ Impaired neuropsychological function can include^{4,6-7,9,20-23}: reduced IQ scores; psychomotor slowing; deficits in fine motor speed/dexterity; reduced cognitive flexibility; impaired concentration/memory; problems with visuospatial skills/visual scanning; and minor cognitive-motor disorder in early HIV-infection. Although it is possible that some of the cognitive, behaviour and motor changes could be confused with depressive symptomatology, evidence suggests direct brain invasion by the HIV virus, diffuse cortical loss with notable sulci ("walnut sign") on CT and MRI scans in HAD, and neuronal loss in the occipital, parietal and superior temporal areas with loss in the frontal cortex being most severe.⁹ How these neurocognitive complications influence

relationships or decision-making processes and thereby act as risk factors for suicidal behaviour and whether suicidal behaviour can be prevented if cognitive function improves following ARV treatment, require further research. For example, moral judgements can be affected by damage to the pre-frontal cortex²⁴ and some studies^{6-7,25} describe enhanced neurocognitive performance following highly active ARV therapy. The sub-sample of patients in the present study who were HIV-positive had only recently started ARV treatment (less than one month on average), and had not yet reported the improved cognitive functions that might be expected with long term treatment. Also, reduced neurocognitive functioning should be differentiated from other psychopathology⁹ that can precipitate suicidal behaviour.

Limitations

Limitations of this study include the sample size, the fact that it was state hospital-based, the need to assess ARV treatment response in relation to suicidal behaviour and the lack of a comparator population that may affect definitive comparisons and the generalizability of our findings.

Conclusions

The results of the present study indicate that HIV-infection can be an underestimated attempted suicide risk factor and that effective management and prevention of suicidal behaviour in this population should include as imperatives early recognition of associated neurocognitive implications, psychopathology, the dynamics of dysfunctional partner-relationships and related stressors. Fear of a potentially life-threatening disease itself is not always the real suicide risk factor, but rather how the disease and its sequelae are perceived and managed, including dealing with accompanying stress and psychopathology.^{4,26-30-32}

General suicide prevention guidelines^{4,5,33-35} and strategies to deal with HIV/AIDS-related suicidal behaviour and the large numbers of AIDS orphans should be integrated into HIV/AIDS counseling programmes, guided by cultural sensitivity because of the importance of the socio-cultural context in which persons living with HIV/AIDS and their partners are embedded.⁴

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