

## Psychopathology and coping in recently diagnosed HIV/AIDS patients — the role of gender

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*Background.* Although there is growing literature on the psychological responses to and the psychopathology associated with HIV/AIDS, few investigations have focused on the role of gender. This study compared psychiatric morbidity, coping responses, and disability in male and female outpatients recently diagnosed with HIV/AIDS.

*Method.* One hundred and forty-nine patients (44 male, 105 female) with HIV/AIDS (mean  $\pm$  standard deviation (SD) months since diagnosis  $5.8 \pm 4.1$ ) attending an infectious diseases clinic at Tygerberg Hospital, Cape Town, were evaluated. Subjects were assessed using the MINI International Neuropsychiatric Interview (MINI), the Carver Brief COPE, and the Sheehan Disability Scale. In addition, negative life events and risk behaviours were evaluated.

*Results.* Fifty-six per cent of patients were diagnosed with a psychiatric disorder, most commonly major depression (34.9%), dysthymic disorder (21.5%), post-traumatic stress disorder (14.8%), and alcohol dependence (10.1%). There were no significant gender differences in the prevalence of mood disorders in the sample. Men, however, were more likely than women to meet diagnostic criteria for alcohol abuse or dependence, and to engage in certain risky sexual behaviours. Women were more likely to suffer from post-traumatic stress dis-

order, and to use coping strategies of planning and religion to deal with the illness. There were no significant gender differences in disability.

*Conclusion.* Psychiatric disorders are common in recently diagnosed HIV/AIDS patients in South Africa. Clinicians should be aware of the high prevalence of mood disorders in both men and women, and of gender-different responses such as increased alcohol and substance use and more risky sexual behaviour in men.

A review of the psychiatric sequelae of HIV infection shows that the disease is associated with substantial psychiatric morbidity, psychological distress, and negative social impact.<sup>1</sup> Evidence from meta-analysis of the prevalence of mood disorders in patients with HIV/AIDS also suggests that depression is present in 10% of subjects.<sup>2</sup> Furthermore, psychopathology associated with HIV/AIDS may contribute to non-adherence to antiretroviral drug regimens, disease progression, and even mortality.<sup>3</sup>

Relatively few studies of the psychological responses to and the psychopathology associated with HIV/AIDS have focused on the role of gender. Estimates of psychopathology in patients with HIV/AIDS vary,<sup>1,2</sup> and there is some evidence that HIV-infected women are twice as likely to be depressed as HIV-infected men.<sup>3,4</sup>

The majority of work to date has been undertaken in the developed world. Given that in developing contexts women with HIV/AIDS may face greater stigmatisation<sup>5</sup> and more previous and current negative life events than men,<sup>4</sup> it is possible that in these regions there is a concomitantly greater risk of psychopathology, maladaptive coping, and disability among women. We investigated this hypothesis in a sample of recently diagnosed HIV/AIDS patients in South Africa.

### Methods

#### Procedure

The study was approved by the Ethics Committee of the University

of Stellenbosch Medical School. All consecutive patients were first seen by their treating physicians. Patients were then interviewed by a researcher trained in the use of the diagnostic instrument (the MINI International Neuropsychiatric Interview).<sup>6</sup>

## Subjects

Subjects comprised 149 patients (44 male, 105 female), recently diagnosed with HIV/AIDS (mean  $\pm$  standard deviation (SD) months since diagnosis  $5.8 \pm 4.1$ ), attending an outpatient infectious diseases clinic of the Department of Internal Medicine at Tygerberg Hospital, Cape Town. Inclusion criteria were: age 18 - 55 years, recently diagnosed HIV/AIDS (less than 1 year), no diagnosable neurological disorder, and willingness to provide informed consent. The hospital is one of two major tertiary health facilities in the Western Cape and receives referrals from surrounding community health centres as well as medical and obstetric/gynaecology clinics at Tygerberg Hospital.

## Measures

A brief questionnaire was used to gather information on age, gender, marital status, home language, years of education, religion and employment status. Psychiatric morbidity was assessed using the MINI International Neuropsychiatric Interview (MINI),<sup>6</sup> a brief structured diagnostic interview for major psychiatric disorders. Results of studies comparing the MINI with the Structured Clinical Interview for DSM-III-R (SCID), Composite International Diagnostic Interview (CIDI), Diagnostic Interview Schedule (DIS), and Present Status Examination (PSE) show that the MINI has acceptably high validity and reliability scores.<sup>6</sup>

Coping responses to HIV infection were assessed using the abridged version of the COPE, called Brief COPE.<sup>7</sup> Brief COPE is a 12-item scale comprising items on active coping, planning, positive reframing, acceptance, humour, turning to religion, venting of emotions, mental disengagement, denial, substance use, behavioural disengagement, and emotional support, with two items per scale. For each item, subjects were asked to respond on a four-point Likert scale (where 1 = I did not do this at all and 4 = I did this a lot) for activities in the past 3 months. Disability was assessed using the Sheehan Disability Scale (SDS),<sup>8</sup> a patient-rated 3-item measure that uses Likert scales for assessing impairment in the domains of work, family and social life, with higher scores indicative of greater impairment and disability.

In addition, a Life Events Scale was employed. This is a 42-item clinician-administered checklist enquiring about the number of positive and negative life events during the past 6 months as well

as degree of stress associated with these events (impact score 0 - 2).<sup>9</sup> Two measures were derived from this: (i) the number of events; and (ii) the degree of impact (assessed on a scale of 0 - 2 for each event). This was supplemented by a scale developed to measure exposure to traumatic events that occurred during the apartheid era, in particular gross human rights violations.<sup>10</sup>

Finally, a risk behaviour scale was employed. This 20-item interviewer rating measure was adapted from a previous measure.<sup>11,12</sup> Subjects were asked about their sexual activities in both the preceding month and in the 12 months before the study. Questions included: Did you use a condom at last sex?, Have you had sex with a partner who uses intravenous drugs?, Have you had sex after heavy alcohol or drug intake?, and Have you had sex with a partner known for less than 1 day?

A brief questionnaire, which also doubled as a referral form, was used to screen patients (based on the inclusion criteria) and to collect clinical information from treating physicians, including HIV staging and CD4 and CD8 counts. Both CD4 (helper/inducer) and CD8 (suppressor) T-lymphocyte subsets were analysed by staining peripheral blood specimens with flow cytometry enzyme-linked immunosorbent assay (ELISA) and the Western blot test.

## Statistical analyses

Data were analysed using the Statistical Package for the Social Sciences (SPSS), version 10. Chi-square tests for categorical variables and Student's *t* tests for continuous variables were used to examine differences between male and female patients.

## Results

### Demographics

Subjects comprised 44 males (30%) and 105 females (70%). Males were significantly older (mean  $\pm$  SD =  $33.04 \pm .6.8$ ) than females (mean  $\pm$  SD =  $28.61 \pm 6.62$ ) ( $p < 0.001$ ), and were more likely to be employed (41% versus 23%,  $p = 0.004$ ). Female patients were more likely to be educated (mean  $\pm$  SD =  $10.84 \pm 1.99$  years) than males (mean  $\pm$  SD =  $7.90 \pm 3.70$  years) ( $p = 0.05$ ). There were no other significant differences in demographic features. Thirty-four per cent of males and 27.6% of females were married. The majority were Xhosa-speaking (50% of males and 62% of females). Two female patients (1.9%) and two male patients (4.5%) were on antiretroviral drug therapy, and 60% of males and 47% of females were receiving antibiotics at the time of assessment. Males and females did not differ by HIV

**Table 1. Gender differences in psychiatric morbidity of HIV/AIDS patients (N (%))**

Clinical diagnosis	Male (N = 44)	Female (N = 105)	$\chi^2$	df	p-value
Current major depression	12 (27.2)	40 (38)	1.59	1	0.25
Dysthymia	8 (18)	24 (22.8)	0.40	1	0.66
Suicide risk	1 (4.5)	12 (11.4)	3.26	1	0.10
Previous major depression	7 (15.9)	20 (19)	0.20	1	0.81
Panic disorder	3 (6.8)	8 (7.6)	0.02	1	1.00
Hypomania	–	3 (2.9)	1.28	1	0.55
Agoraphobia	1 (4.5)	–	2.40	1	0.29
Social anxiety	3 (6.8)	7 (6.7)	0.00	1	1.00
Obsessive-compulsive disorder	–	–	–	–	–
PTSD	22 (4.5)	20 (19.0)	5.18	1	0.02*
Alcohol dependence	10 (22.7)	5 (4.7)	11.05	1	0.002*
Alcohol abuse	9 (20.4)	4 (3.8)	10.78	1	0.002*
Drug abuse	1 (4.5)	1 (0.9)	0.05	1	0.29
Generalised anxiety disorder	3 (6.8)	7 (6.7)	0.001	1	1.00
Antisocial personality	2 (4.5)	1 (0.9)	1.40	1	0.38

\*Denotes statistically significant differences.

PTSD = post-traumatic stress disorder.

stage or CD4/CD8 counts. An equal proportion of males and females (50%) were asymptomatic rather than symptomatic.

### Psychiatric diagnoses

Fifty-six per cent of subjects were diagnosed with at least one psychiatric disorder on the MINI (Table 1). The most frequent diagnosis was major depression (34.9%), followed by dysthymic disorder (21.5%). There was no significant gender difference in the total number of psychiatric diagnoses, or in the prevalence of mood disorders. Females were more likely to have post-traumatic stress disorder (PTSD) than males ( $\chi^2 = 5.18$ ,  $df = 1$ ,  $p = 0.02$ ). Conversely, males were significantly more likely to have a diagnosis of alcohol abuse ( $\chi^2 = 24.56$ ,  $df = 1$ ,  $p < 0.001$ ) or alcohol dependence ( $\chi^2 = 16.08$ ,  $df = 1$ ,  $p < 0.001$ ) than females.

### Coping and disability

Male and female HIV/AIDS patients did not differ significantly on most coping strategies, except that female patients were significantly more likely than males to engage in planning ( $t = 2.06$ ,  $df = 147$ ,  $p = 0.003$ ) and religious activities ( $t = 2.89$ ,  $df = 147$ ,  $p = 0.004$ ) as a way of coping with the disease. There were no significant differences between male and female patients with regard to the degree of disability reported.

### Life events

There were no significant gender differences in either the number or impact of recent negative life events. There were also no significant differences in the extent of human rights violations reported

by male and female patients.

### Risky behaviours

Men were significantly more likely than women to engage in the following risky behaviours: (i) having sex with a partner known for 1 day in both the month ( $\chi^2 = 12.34$ ,  $df = 1$ ,  $p = 0.002$ ) and 12 months ( $\chi^2 = 8.96$ ,  $df = 1$ ,  $p = 0.005$ ) preceding the diagnosis of HIV; and (ii) using alcohol heavily before sexual intercourse in both the month ( $\chi^2 = 13.03$ ,  $df = 1$ ,  $p = 0.001$ ) and 12 months ( $\chi^2 = 8.95$ ,  $df = 1$ ,  $p = 0.005$ ) preceding the diagnosis.

## Discussion

This study found that: (i) psychopathology was common in both male and female patients with newly diagnosed HIV/AIDS; (ii) male patients were more likely to abuse or depend on alcohol and to engage in risky sexual behaviours than females; and (iii) females were more likely to have PTSD and to use planning and religious activities as a means of coping.

The most prevalent psychiatric diagnosis was current depression; the prevalence rate was significantly higher than that obtained in past community surveys,<sup>13</sup> and also higher than that seen in previous studies on HIV/AIDS patients in developed countries.<sup>2</sup> This may reflect high levels of stigmatisation and stress faced by HIV/AIDS patients in South Africa.

In contrast to the general finding that women are more at risk for depression than men,<sup>4</sup> there was no gender difference in our sam-

ple, perhaps reflecting the relatively high prevalence of depression in men. Similarly, there were no differences in exposure to past stressors across gender. However, because of the small sample size our study may have lacked the statistical power to detect certain differences between men and women (for example, the numerical difference in suicide risk between males and females, 1 v. 1.2, as shown in Table 1, did not reach statistical significance).

The finding that PTSD was significantly more common in females is consistent with findings of previous work on this disorder.<sup>14</sup> Similarly, the finding that alcohol abuse and dependence were significantly more common in males is consistent with differential prevalence of alcohol-related disorders in males and females in the community,<sup>1</sup> and with previous work showing that male HIV/AIDS patients have higher rates of heavy alcohol use before sex.<sup>15</sup> Alcohol dependence was present in 22.7% of male patients in the sample, consistent with previously documented findings that substance use disorders are one of the most commonly reported psychiatric disorders in HIV-positive male patients.<sup>2</sup>

Male patients were more likely to engage in risky sexual behaviour, consistent with previous work showing that males are more likely to exchange sex for drugs and money, and are more likely than women to have partners with HIV/AIDS.<sup>15</sup> There were no significant differences in the use of most coping strategies employed; however, female patients were more likely to use adaptive strategies such as planning and religious practices.<sup>1</sup> Different kinds of coping have previously been documented in studies of HIV/AIDS patients. Our finding is consistent with that of Simoni and Ng,<sup>16</sup> who found that women with HIV/AIDS in New York used adaptive coping strategies more frequently than avoidant ones. However, our findings do not support those of other authors,<sup>17,18</sup> who found that more maladaptive than adaptive ways of coping were being used.

Limitations of this study include the relatively small sample of male patients (with consequent limitations in power to differentiate prevalence of disorder by gender) and the possibility that this is a relatively select group of treatment-seeking patients. Nevertheless, our findings highlight the importance of including a thorough psychiatric evaluation of HIV-infected patients presenting to medical services. In particular, these findings suggest a need for service providers to evaluate for psychiatric disorders in HIV/AIDS patients.

In our setting mood and anxiety disorders may be equally common in males and females, but clinicians should be aware of male-female differences with regard to prevalence of some disor-

ders, risky behaviours, and coping methods. Given the stigmatisation associated with a diagnosis of HIV/AIDS, patients may be unwilling to disclose psychiatric symptoms unless clinicians take the initiative to address them. In addition, access to comprehensive interdisciplinary health services (including mental health services) for HIV/AIDS patients is an important goal.

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## References

- Catalan J. Psychological problems in people with HIV infection. In: Catalan J, ed. *Mental Health and HIV Infection. Psychological and Psychiatric Aspects*. London: UK UCL Press, 1999: 21-41.
- Clesla MA, Roberts JE. Meta-analysis of the relationship between HIV infection and risk for depressive disorders. *Am J Psychiatry* 2001; **158**: 725-730.
- Evans DL, Ten Have TR, Douglas SD, et al. Association of depression with viral load, CD8 lymphocytes, and natural killer cells in women with HIV infection. *Am J Psychiatry* 2002; **159**: 1752-1758.
- Lipsitz JD, Williams JBW, Rabkin JG, et al. Psychopathology in male and female intravenous drug users with and without HIV infection. *Am J Psychiatry* 1994; **151**: 1662-1668.
- Bennetts A, Shaffer N, Manopaiboon E, et al. Determinants of depression and HIV-related worry among HIV-positive women who have recently given birth, Bangkok, Thailand. *Soc Sci Med* 1999; **49**: 737-749.
- Sheehan DV, Lecrubier Y, Hainet-Sheehan K, et al. The MINI International Neuropsychiatric Interview (M. I. N. I.): The development and validation of a structured diagnostic psychiatric interview. *J Clin Psychiatry* 1998; **59**: suppl 20, 22-23.
- Carver CS. You want to measure coping but your protocol's too long: consider the brief COPE. *Int J Behav Med* 1997; **4**: 92-100.
- Sheehan DV. *The Anxiety Disease*. New York: Scribner, 1983.
- Swartz Elk R, Teggins AF, Gills LS. Life events in Xhosa in Cape Town. *J Psychosom Res* 1983; **27**: 223-231.
- Kaminer DK, Stein DJ, Mbangi I, Zungu-Dirwayi N. The Truth and Reconciliation Commission in South Africa: relation to psychiatric status and forgiveness among survivors of human rights abuse. *Br J Psychiatry* 2001; **178**: 373-377.
- Kelly JA, Murphy DA, Bahr R, et al. AIDS/HIV risk behaviour among the chronic mentally ill. *Am J Psychiatry* 1992; **149**: 886-889.
- McKinnon K, Cournois F, Meyer-Bahlburg HFL, et al. Reliability of sexual behaviour interviews with psychiatric patients. *Am J Psychiatry* 1993; **150**: 972-974.
- World Health Organisation. *The World Health Report: Reducing Risks, Promoting Healthy Life*. Geneva: WHO, 2002. WHO/WHR/02.
- Brewin CR, Andrews B, Valentine JD. Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *J Consult Clin Psychol* 2000; **68**: 748-766.
- Kalichman SC. Psychological and social correlates of high risk sexual behaviour among men and women living with HIV/AIDS. *AIDS Care* 1999; **11**: 415-428.
- Simoni JM, Ng MT. Trauma, coping, and depression among women with HIV/AIDS in New York City. *AIDS Care* 2000; **12**: 567-580.
- Kaplan MS, Marks G, Mertens SB. Distress and coping among women with HIV infection: Preliminary findings from a multiethnic sample. *Am J Orthopsychiatry* 1997; **67**: 80-91.
- Sherbourne C, Forge NG, Kung F-Y, et al. Personal and psychosocial characteristics associated with psychiatric conditions among women with human immunodeficiency virus. *Women's Health Issues* 2003; **13**: 104-110.

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