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Research report

Prevalence and correlates of depression among HIV-infected and -affected older people in rural South Africa

M. Nyirenda [a,b,*], S. Chatterji [c], T. Rochat [a,d], P. Mutevedzi [a], M.-L. Newell [a,e]

[a] Africa Centre for Health and Population Studies, University of KwaZulu-Natal, Somkhele, South Africa
[b] School of Social Sciences, University of Southampton, Highfield, Southampton, UK
[c] Multi-Country Studies Unit, Health Statistics and Information Systems, World Health Organization, Geneva, Switzerland
[d] Department of Psychology, Stellenbosch University, Stellenbosch, South Africa
[e] Centre for Paediatric Epidemiology and Biostatistics, UCL Institute of Child Health, London, UK

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ABSTRACT

Background: Little is known about depression in older people in sub-Saharan Africa, the associated impact of HIV, and the influence on health perceptions.
Objectives: Examine the prevalence and correlates of depression; explore the relationship between depression and health perceptions in HIV-infected and -affected older people.
Methods: In 2010, 422 HIV-infected and -affected participants aged 50+ were recruited into a cross-sectional study. Nurse professionals interviewed participants and a diagnosis of depressive episode was derived from the Composite International Diagnostic Interview (Depression module) using the International Classification of Diseases diagnostic criteria and categorised as major (MDE) or brief (BDE).
Results: Overall, 42.4% ($n=179$) had a depressive episode (MDE: 22.7%, $n=96$; BDE: 19.7%, $n=83$). Prevalence of MDE was significantly higher in HIV-affected (30.1%, 95% CI 24.0–36.2%) than HIV-infected (14.8%, 95% CI 9.9–19.7%) participants; BDE was higher in HIV-infected (24.6%, 95% CI 18.7–30.6%) than in HIV-affected (15.1%, 95% CI 10.3–19.8%) participants. Being female (aOR 3.04, 95% CI 1.73–5.36), receiving a government grant (aOR 0.34, 95% CI 0.15–0.75), urban residency (aOR 1.86, 95% CI 1.16–2.96) and adult care-giving (aOR 2.37, 95% CI 1.37–4.12) were significantly associated with any depressive episode. Participants with a depressive episode were 2–3 times more likely to report poor health perceptions.
Limitations: Study limitations include the cross-sectional design, limited sample size and possible selection biases.
Conclusions: Prevalence of depressive episodes was high. Major depressive episodes were higher in HIV-affected than HIV-infected participants. Psycho-social support similar to that of HIV treatment programmes around HIV-affected older people may be useful in reducing their vulnerability to depression.

1. Background

Depression is a leading cause of disease burden globally (Collins et al., 2011; Patel et al., 2011; Mathers and Loncar, 2006), and with the growing proportions of older people, the overall numbers of people with depressive symptoms are expected to rise. Projections suggest that by 2030 unipolar depressive disorders will contribute 6.2% to the global burden of disease in terms of disability-adjusted life years, roughly equal to the contribution of heart disease (WHO, 2008). Estimates of depression in older people vary widely across regions and populations. Early estimates from a systematic review of community-based studies of older people put the weighted average of major depression at about 2% (Beekman et al., 1999). More recently, substantially higher estimates have been reported from various settings: between 8% and 20% (Barry et al., 2008; Beekman et al., 2001; Blazer, 2003); in a European study, estimated prevalence ranged from 18% in Denmark to 37% in Spain. (Castro-Costa et al., 2007) and a review of studies in Africa, South America and Asia reported estimates from 11% to 53% (Akena et al., 2012). However, a recent study from South Africa reported a low prevalence of depression in older people of 4% (Peltzer and Phaswana-Mafuya, 2013).

* Corresponding author at: Africa Centre for Health and Population Studies, University of KwaZulu-Natal, R618 Enroute Somkhele, PO Box 198, Mtubatuba, KwaZulu-Natal, 3935 South Africa. Tel.: +27 35 550 7526; fax: +27 35 550 7565.
E-mail addresses: mnyirenda@africacentre.ac.za (M. Nyirenda), chatterjis@who.int (S. Chatterji), trochat@africacentre.ac.za (T. Rochat), pmutevedzi@africacentre.ac.za (P. Mutevedzi), mnewell@africacentre.ac.za (M.-L. Newell).

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Overall, the prevalence of depression in older people in sub-Saharan Africa remains poorly quantified, partly because it is rarely diagnosed in the public health care systems, partly because older people are seldom research subjects, and lastly because differences in diagnostic methodology hinder the interpretation of differences in prevalence estimates (Robins and Cottler, 2004).

While frequently under-diagnosed, depression in older people is fairly commonplace and debilitating (Lapid and Rummans, 2003; Reynolds et al., 2008); is associated with increased disability (Castro-Costa et al., 2007; Arnow et al., 2006); increased burden on public health service utilization (García-Peña et al., 2008; Lapid and Rummans, 2003; Rowan et al., 2002) and increased risk of mortality (Snowden et al., 2008; Antelman et al., 2007). Older people are also at risk of other chronic morbidities such as hypertension, arthritis, heart disease and diabetes (Mayosi et al., 2009b; Christensen et al., 2009; He et al., 2012); the management and outcomes of which may be impacted by undiagnosed depression (Demyttenaere et al., 2004). When depression occurs in the context of these chronic diseases it is known to complicate help-seeking, diagnosis (Cuijpers et al., 2004; Pilling et al., 2009) and can adversely impact health status (Moussavi et al., 2007) and adherence to medical treatments (Kagee, 2010; Andrews, 2001).

Sub-Saharan Africa faces a triple burden of HIV, TB and chronic disease epidemics. In South Africa, communicable and non-communicable disease burden is high (Coovadia et al., 2009; Karim et al., 2009; Mayosi et al., 2009a) as is the burden of depression (Tomlinson et al., 2009). Psychological distress has been associated with HIV as well as hypertension and diabetes (Kagee, 2010). However, the relationship between depression and HIV is complex (Gupta et al., 2010). Some studies report a HIV diagnosis to be associated with becoming depressed (Hand et al., 2006; Boarts et al., 2009), while others report that depression is associated with rapid HIV disease progression (Ickovics et al., 2001) either directly, or through inconsistent use or poor adherence to antiretroviral treatment (Carrico et al., 2011; Gonzalez et al., 2011). There is even evidence of an increased risk of onset of HIV-related dementia among depression patients (Farinpour et al., 2003), but less information on the impact of antiretroviral treatment (ART) on this relationship.

In Southern Africa older people have been shown to have a higher burden of HIV than previously expected (Wallrauch et al., 2010a; Mutevedzi and Newell, 2011; Negin and Cumming, 2010), and are frequently caregivers of children and young adults (Richter and Desmond, 2008). Little is however known of the prevalence and correlates of depression in older people by HIV status or how this may impact on their health perceptions. The aim of this analysis was to examine the prevalence and correlates of depression in HIV-infected and HIV-affected older people living in a rural area of South Africa heavily affected by HIV. We also explored the relationship between depression and self-reported health.

2. Methods

2.1. Research context

The Wellcome Trust-funded Africa Centre for Health and Population Studies (www.africacentre.com) is based in rural northern KwaZulu-Natal, South Africa and is heavily affected by HIV (Tanser et al., 2008). The Africa Centre carries out socio-demographic and HIV surveillance in a geographically defined area in the south of the Hlabisa sub-district. The population in the Demographic Surveillance Area (DSA) covers about 40% of that of the sub-district. Approximately 11,000 households, with approximately 90,000 resident and non-residents members, are visited twice a year since 2000. Nested within the household surveillance cohort is the population-based HIV cohort which started in 2003. Between 2003 and 2006, all women aged 15–49 years and men aged 15–54 years resident in the surveillance area were eligible for HIV testing. From 2007, eligibility was extended to all residents aged 50 years and above. In addition, there is extensive Geographic Information System (GIS) location information of all structures in the Surveillance, including homes, clinics, and roads (Tanser et al., 2008; Tanser et al., 2001).

2.2. The health and well-being of older people study (WOPS)

Data used for this analysis was collected as part of a cross-sectional study called the 'Health and Well-being of Older People Study (WOPS)'. In this World Health Organisation (WHO) supported study inclusion criteria required participants to be: aged 50 years or above; members of the Africa Centre for Health and Population Studies Demographic Surveillance System (ACDIS) (Tanser et al., 2008); and resident in the surveillance area during the study period (March–August 2010). WOPS and some of the main findings regarding the health status of older people are described in detail elsewhere (Nyirenda et al., 2012). The WOPS study was endorsed by the Africa Centre community advisory board (CAB) on behalf of the study community. All participants in the study provided written informed consent. The University of KwaZulu-Natal Biomedical Research Ethics Committee provided ethical approval of the study (Ref. no. BF136/09).

2.3. Sampling strategy

Given that HIV infection, HIV treatment and/or HIV burden in the household may affect depression status, the sample was selected using stratified random sampling of older people aged 50 years and above in four groups of

1. older persons who were HIV-infected and on ART for a year or longer;
2. older persons who were HIV-infected but not yet on ART or on ART for up to 3 months;
3. older persons living with an adult HIV-infected offspring (18–49 years) who is on ART; and
4. older persons with an adult child who died of HIV-related causes.

Participants could belong to only one of the four groups. For the few individuals who were HIV-infected but also had an HIV-infected adult or HIV-related death of an adult offspring, their own HIV status was prioritised and assigned to either group 1 or 2, as applicable. The sampling frame identified 241, 117, 662 and 142 participants eligible for groups 1 to 4 respectively, from which 100 participants were randomly selected for each group. Participants in groups 1 and 2 were later categorised as 'HIV-infected', while those in groups 3 and 4 were categorised as 'HIV-affected'. All sampled individuals were visited at their homesteads and if other older people 50+ who met the eligibility criteria were found at the homesteads they were similarly invited to participate in the study; the final sample consisted of 422 older people aged 50+.

2.4. Depression assessment

A shortened version of the WHO Study on Global Ageing (SAGE) instrument (WHO, 2011) was used, including a set of questions on depressive symptoms adapted from the Composite International Diagnostic Interview (CIDI 3.0) depression module (Kessler and Ustun, 2004) translated into the local language, IsiZulu, using a standard WHO translation protocol involving translation, back-translation and review by bilingual experts. The study questionnaires were administered in face-to-face interviews by two IsiZulu-speaking professional nurses.