Author's response to reviews

Title: Anxiety and depression amongst patients enrolled in a public sector antiretroviral treatment programme in South Africa: a cross sectional study

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Author's response to reviews: see over
21 November 2011

Dear Rob van Hest

Submission to BMC Public health: Anxiety and depression amongst patients enrolled in the public sector antiretroviral treatment programme in South Africa: a cross sectional study

Thank you for the opportunity to revise this article for possible publication in BMC Public Health. The amended manuscript reflects our efforts to address each of the comments and suggestions raised. Here, we describe the changes made and indicate corresponding page numbers.

Introduction:
You rightfully commented that there is no need to elaborate on studies which identified factors predicting anxiety and depression among HIV+ populations. These studies were referenced. We deleted as per you comments the text starting on page 5 and ending on page 7. We added stigma and positive coping to the list of psychosocial factors predicting anxiety and depression and amended the reference to read [7, 9, 12-24]. We also deleted the first three sentences that were on page 7 below “....excessive depressive symptoms”. [Page 5]

Methods:
You recommended that the three page detail to describe the variables under measures in the method section be done in table format or an appendix. We complied with the request and the variables are now an appendix to the manuscript. The content under the heading “measures” in the method section now includes a list of variables collected in the survey and details of the outcome variable anxiety and depression. [Page 7-8; Appendix]

Results:
The results presented in Table 1 are multivariate logistic regression and not univariate logistic regression. We added the word “multivariate” to the text describing the type of analysis performed [Page 8]. The heading of Table 1 and Table 2 also read “multivariate logistic regression model” We created a categorical variable for age as requested. The categories for the age variable are under 30 years, 30-34 years, 35-39 years, 40-44 years and 45+ years.

We are in agreement with you that many of the OR’s were borderline significant. Thus we no longer report on OR’s which are borderline significant. We only report results of variables with a p-value ≤ 0.05 or ≤ 0.01. The results in the abstract have being re-written to state the following: The prevalence of anxiety and depression amongst this study population in the Free State was 30.6% and 25.4%, respectively. The multivariate logistic regression analyses identified five correlates of symptoms of anxiety and depression. Disruptive side effects (OR=3.62, CI 1.95-6.74) and avoidant coping (OR=1.42, CI 1.22-1.65) were associated with symptoms of anxiety. Being a widow (OR=0.30, CI 0.13-0.69) and participating in a support group (OR=0.21, CI 0.05-0.99) were associated with decreased symptoms of depression. While stigma was associated with increase in symptoms of anxiety (OR=1.14, CI 1.07-1.21) and depression (OR=1.13, CI 1.06-1.20). [Page 2-3].

Discussion:
You comment that there is little “what’s new in the study”. Indeed a number of studies have separately studied different correlates of anxiety and depression in public sector ART but very few studies have simultaneously include all the correlates of both anxiety and depression in one analysis.
The multivariate analysis identified ART side effects as one of the correlates of anxiety. In a resource limited setting it is important that side effects to ART be addressed with the available means, firstly to maintain patients’ adherence to ART and secondly to improve mental health outcomes. A study in the Free State reported that adverse side effects to ART were the result of mild toxicity and can be treated symptomatically and does not require drug substitution. Support group was associated with decrease in depression. Thus patients from a public sector ART programme with limited health resources should be encouraged to join support groups which will improve the mental health of patients and not burden the health system. Finally stigma, (although the odds ratio is low) stigma after all these years still remains a correlate of both anxiety and depression and thus interventions that focus on stigma are still needed.

We moved the second paragraph which was on page 18 to be the first paragraph of the discussion as recommended. The discussion is now firstly, a brief presentation of the main findings of the study and secondly, details of strengths and limitations of the study. We replace the wording “the most important predictors” with “important correlates”. [Page 10]

**Conclusion:**

Finally, you are correct in asking how would we like to realise our suggested interventions, and is there sufficient capacity in the Free State Public Health System? We reworked the conclusion taking these comments into consideration. The conclusion now reads as follows, “This study sheds some light on the nature of symptoms of anxiety and depression in patients receiving ART in a resource-limited setting. The prevalence of symptoms of anxiety and depression were 30.6% and 25.4%, respectively. Side effects to ART, coping strategies, participating in a support group and stigma are correlates of anxiety and/ or depression. This study has both theoretical and practical implications.

From a theoretical point of view, the impact of ART side-effects, coping strategies, support groups and stigmatization on the mental health of HIV/AIDS-patients draws attention to the inter-linked nature of treatment aspects, social support and mental health in achieving durable ART success. However, further research is required to fully disentangle the complex interrelationships between these social, mental and physical aspects of public-sector ART in high HIV-prevalence resource-limited settings.

From the perspectives of practical policy and management, the study findings provide valuable insights in the psychosocial aspects of the Free State public-sector ART programme. Combined with the literature on the intricate link between mental health problems and treatment outcomes our results emphasize to policy makers firstly, the necessity that resources be allocated for screening and treating mental health problems and secondly, interventions are needed that will encourage support group participation, address ART side effects, reduce maladaptive coping styles and minimise stigma associated with symptoms of anxiety and/or depression. [Page 12-13]

The above writings address all your comments and suggestion. We ask you to reconsider our revised manuscript for publication in BMC Public Health. We strongly believe that the paper is appropriate for an international readership. South Africa’s HIV/AIDS epidemic is unprecedented and mental health is a low priority issue in South Africa. This research and further research which investigates mental
health, HIV/AIDS and poverty is needed. Firstly, to emphasize to policy makers the necessity that resources be allocated for mental health. Secondly, to recommend interventions which will enable patients suffering with symptoms of anxiety and depression to be referred and treated for mental illness where appropriate. Lastly, to implement interventions that will address factors associated with symptoms of anxiety and/ depression.

Yours sincerely,
Michele Pappin
21 November 2011

Dear Judith Rabkin

Submission to BMC Public health: Anxiety and depression amongst patients enrolled in the public sector antiretroviral treatment programme in South Africa: a cross sectional study

Thank you for the opportunity to revise this article for possible publication in BMC Public Health. The amended manuscript reflects our efforts to address each of the comments and suggestions raised. Here, we describe the changes made and indicate corresponding page numbers.

General comments:

1. You mention that a major issue is the lack of distinction between anxiety and depression symptoms and Axis I anxiety and depressive clinical disorders. We addressed this by mentioning under the method section, “Anxiety and depression in this study referred to self reported symptoms of anxiety and depression and not Axis I anxiety and depressive clinical disorders” [page 7]. You indicated that it would be useful to mention in the literature review the method used to generate prevalence rates, and also sample sizes. We complied with this by adding the method and sample size to each study in the literature as detailed below, “symptoms of anxiety and depression among 386 people initiating ART in Brazil were measured using the Hospital, Anxiety and Depression Scale (≤10); a study in Uganda assessed the prevalence of symptoms of depression in 1017 patients eligible for ART using the Centre for Epidemiologic Studies Depression Scale (≥23); a study in Cape Town, South Africa, assessed the prevalence of psychiatric disorders using the Mini International Neuropsychiatric Interview among 149 recently diagnosed HIV/AIDS patients. We added following text to the literature review; prevalence rates must however be interpreted with caution as location of study, study population and different types of measures make it impossible to arrive at a single prevalence rate for anxiety or depression. In addition, self reported measures and psychiatric screening tools report higher rates of depression compared to diagnostic evaluations [Rabkin G: HIV and depression: 2008 review and update. Current HIV/AIDS reports 2008, 5: 163-171] [page 4-5]

2. We incorrectly used the term “predictor” in the manuscript. The study is cross-sectional and there is no way to determine causality when two variables are measured on the same occasion. We thus addressed this and replaced the word “predictor” with the word “correlate” throughout the manuscript.

Specific suggestions:

Abstract:
You commented that the conclusion in the abstract is rather glib. We re-worked the conclusion. The conclusion now states, “The findings from the study provide valuable insights in the psychosocial aspects of the Free State public-sector ART programme. Combined with the literature on the intricate link between mental health problems and treatment outcomes our results emphasize firstly, the necessity that resources be allocated for screening and treating mental health problems and secondly, the need for interventions that will encourage support group participation, address ART
side effects, reduce maladaptive coping styles, and minimise stigma associated with symptoms of anxiety and/or depression.” [Page 3]

Background:
1. You commented that reference 5 (people suffering from depression may be more likely to engage in risky sexual behaviour, and they are therefore at greater risk of contracting HIV) and reference 6 (conversely, an HIV+ diagnosis may trigger symptoms of anxiety and depression) seem generic. We addressed this comment by referencing more specific studies. Reference 5 is now references 4, 5 and 6;
   Reference 6 is now reference 7 and 8;
   2. We replaced “predictors” with the word “correlates” where appropriate in the manuscript. We complied with your suggestion by adding “prior depression” and “family history of depression” to the list of correlates [Page 5]. The background section regarding associations as referred to by you is no longer in the manuscript as reviewer Rob van Hest suggested that the text was repetitive and we have taken the text out the manuscript at the reviewer’s request.

Methods:
1. We added references for the measures of health related quality of life measures (EQ-VAS) and psychosocial support as recommended. The references for health related quality of life variable Eq-VAS are,
The following references were added for psychosocial support variables;

2A. Studies which were referenced 28 and 30 were not done in limited resource settings. We moved the reference three words forward so that the reference refers to, “previous psychometric investigations have shown that the HADS achieves good internal consistency and test-retest reliabilities, is sensitive to change and provides valid assessments of HIV-positive populations [34, 35] in resource-limited settings [36, 37]. [Page 7]

2B. You mention that the cut-off of 7 on the HADS scale is a low threshold and that we may be missing salient factors associated with other levels of anxiety and depression. We have addressed this in the limitation section of the manuscript as follows, “Finally, the standard cut-off points for HADS are; 0-7 (normal), 8-10 (mild), 11-15 (moderate) and 16-21 (severe). By using a low cut-off of 7 the study may be missing important correlates of mild, moderate or severe anxiety and depression. Thus, further analysis using multinomial analysis is required to identify factors correlated with symptoms of anxiety and depression across the four HADS categories.” [Page 12]

Results:
We have replaced the word “predictor” with “correlates”.

Discussion:
You mention that the discussion is too long and repetitive and that we should focus on our main findings. We therefore reworked the discussion focusing on our main findings.
1. The text in the manuscript previously on page 16 “because ART does not combat anxiety or depression....treated for these disorders” is no longer in the manuscript.
2. Positive coping was a weak trend. We no longer report borderline significant trends, so this finding is no longer referred to in the results.

Table 1: You commented that table 1 is too dense and suggested that we present a table describing the sample in terms of socio demographic, demographic and medical status. We do describe the socio demographic, demographic and medical status in the text under results. In order to make the table readable we split the table into two, table 1 reports on the multivariate logistic regression results for anxiety and table 2 reports on the multivariate logistic regression results for depression.

The above writings address all your comments and suggestion. We ask you to reconsider our revised manuscript for publication in BMC Public Health. We strongly believe that the paper is appropriate for an international readership. South Africa’s HIV/AIDS epidemic is unprecedented and mental health is a low priority issue in South Africa. This research and further research which investigates mental health, HIV/AIDS and poverty is needed. Firstly, to emphasize to policy makers the necessity that resources be allocated for mental health. Secondly, to recommend interventions which will enable patients suffering with symptoms of anxiety and depression to be referred and treated for mental
illness where appropriate. Lastly, to implement interventions that will address factors associated with symptoms of anxiety and/or depression.

Yours sincerely,
Michele Pappin