

# The Feasibility of Adapted Group-Based Interpersonal Therapy (IPT) for the Treatment of Depression by Community Health Workers Within the Context of Task Shifting in South Africa

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**Abstract** Within the context of a large treatment gap for depression and a scarcity of specialist resources, there is a need for task shifting to scale up mental health services to address this gap in South Africa. This study assessed the feasibility of an adapted manualized version of grouped based Interpersonal Therapy (IPT) for use by supervised community health workers through a pilot study on 60 primary health care clinic users screened as having moderate to severe depression. Retention was good and participants in the group-based IPT intervention showed significant reduction in depressive symptoms on completion of the 12-week intervention as well as 24 weeks post

baseline compared to the control group. Qualitative process evaluation suggests that improved social support, individual coping skills and improved personal agency assisted in the reduction of depressive symptoms.

**Keywords** Task shifting · Depression · Community health workers · South Africa

## Introduction

With the shift to a democratic political dispensation in 1994, South Africa embarked on a programme of de-institutionalization and integration of mental health into primary health care (PHC). This is framed within the first post-apartheid policy guidelines for mental health (Department of Health 1997) and more recently stipulated in the new Mental Health Care Act, no 17, of 2002 (MHCA) (Department of Health 2004). A recent situational analysis by the Mental Health and Poverty Project (MHAPP)<sup>1</sup> suggests that South Africa has made some gains with respect to decentralization, de-hospitalization, and access to psychopharmacological care for patients with acute and chronic psychiatric conditions. Service gaps still remain with respect to community-based rehabilitation programmes for people with chronic mental illness, mental health promotion and prevention programmes, and access to care for more common mental disorders, such as anxiety and depression (Lund et al. 2009; Petersen et al. 2009).

The importance of scaling up treatment services for depression in South Africa is highlighted by a recent

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<sup>1</sup> MHAPP is a four country study in Africa aimed at mental health policy development and implementation to break the cycle of poverty and mental ill-health (Flisher et al. 2007).

epidemiological survey in South Africa that found major depression to be the most prevalent individual mental disorder in the last 12 months (4.9%) (Williams et al. 2008). The same study found 16.5% of the South African population had suffered mood, anxiety and/or substance use disorders in the previous 12 months (Williams et al. 2008). Of this population, only one in four had reported receiving treatment from any source, resulting in a treatment gap of 75% (Seedat et al. 2008). In keeping with international trends, women were found to be at greater risk for mood and anxiety disorders, and men for substance use disorders (Williams et al. 2008).

The relationship between depression and physical illnesses, in particular the link between depression and HIV/AIDS is of concern given that South Africa has one of the highest prevalence rates of HIV/AIDS in the World (UNAIDS 2008). HIV/AIDS constitutes the greatest disease burden in South Africa (Bradshaw et al. 2007). Depression has been linked to sexual risk behavior (Shrier et al. 2002), poor anti-retroviral (ARV) adherence (Amberbir et al. 2008) and accelerated disease course of AIDS (Evans et al. 2002). Depression is also the most common individual mental disorder in people with HIV/AIDS in Africa (Brandt 2009).

In resource-scarce contexts, where the availability of specialists is limited, a stepped care approach incorporating task shifting has been mooted as the most viable option for scaling up mental health services for common mental disorders in low- and middle-income countries (LMICs) (Saraceno et al. 2007). Task shifting involves engaging non-specialists in the provision of psychopharmacological and effective psychosocial treatments under the supervision of mental health specialists.

In South Africa there is a scarcity of PHC doctors to provide psychopharmacological treatment, particularly in rural areas. There is also increasing evidence that PHC nurses neither have the time, nor often the skills to provide psychosocial treatments given South Africa's overstretched primary health care system (Petersen et al. 2009; WHO and WONCA 2008). The need to harness community health workers (CHWs) for the provision of evidence-based psychosocial treatments for depression is thus indicated. There is an increasing body of evidence from LMICs that suggests that Cognitive Behaviour Therapy (CBT) and Interpersonal Therapy (IPT) can be successfully delivered by CHWs within a task shifting approach (Bolton et al. 2003; Rahman et al. 2008).

In the context of the development of a sub-district mental health demonstration site, which embraced a task shifting framework for the provision of district mental health services in South Africa (cf. Petersen et al. 2011), group-based IPT was selected for adaptation. This was on the basis of an initial qualitative scoping study, which

sought to understand the characteristics of an appropriate psychosocial intervention and feasible service delivery approach for the treatment of depression by trained CHWs. Using focus group and individual interviews with PHC service providers and service users from a PHC clinic in the sub-district rural study site, factors that emerged as triggering depression were mostly interpersonal and contextual. They included receiving an HIV positive diagnosis; loss and bereavement, particularly multiple loss as a result of HIV/AIDS; partner and family conflict, particularly abuse of women; and financial stress, especially not having a reliable source of income and constant worry about how to support oneself and children (Bana et al. 2009).

In relation to service delivery models, a mixed response to individual and group counseling emerged, with some participants wary of a group approach because of fear of gossip, as was found by Rahman (2007) in India. However, the merits of group counselling included that it presented as an efficient model for dealing with inter personal causes of depression, as well as providing a mechanism to decrease social isolation and increase social support through improved social networks. Strengthening the existing individual counseling already provided via the CHW home visitation programme as well as the option of group counseling emerged as the most appropriate service delivery approach to adopt within the rural context (Bana et al. 2009).

Interpersonal Therapy traditionally deals with four key interpersonal problem areas which have been found in Western contexts to be at the core of most depressive symptoms, namely, grief, role/interpersonal disputes, role transitions and interpersonal deficits, to help socially isolated depressed patients gain new skills and build new social relationships (Weissman et al. 2000). The findings of the qualitative scoping study suggested that the adaptation of IPT for use by CHWs in the provision of counseling for depression in the rural South African study site include the following four domains: grief (especially associated with multiple losses due to HIV/AIDS), interpersonal conflicts (particularly involving abuse), life transitions (specifically finding out and living with an HIV+ status), and financial stress (Bana et al. 2009). The South African adaptation was derived from an adaptation of IPT for CHW facilitated groups in Uganda (Clougherty et al. n.d.) and was preceded by a 2-day training course in basic counseling skills to strengthen individual counseling provided by CHWs on their home visitation programme, which had previously been used for the training of CHWs in South Africa (Sawyer et al. 1996).

The training of thirty CHWs was provided over two 4 day workshops (two groups of 15 CHWs) by a psychologist and trainee psychologists, who are mental health specialists increasingly found in rural districts in South

Africa as a result of the development of community service posts. These posts provide a mandatory one year of community service for clinical psychologists on completion of their training in South Africa. These psychologists are thus well placed to provide training and supervisory support for task shifting of psychosocial interventions.

The aim of this study was to assess the feasibility of the adapted IPT intervention for women with depressive symptoms that could be delivered by trained CHWs within a task shifting approach.

## Method

A pilot study using both outcome and process evaluation was undertaken to assess the intervention effects as well as to understand how the intervention had worked.

### Study Site

The pilot study was located in the same site as the qualitative scoping study. It was the Hlabisa sub-district in northern KwaZulu-Natal, a province on the eastern seaboard of South Africa having a population of 220,000 people. It is fairly typical of rural areas in South Africa in relation to both infrastructure and services (Tanser et al. 2008). The pilot study was conducted in one of 15 clinics servicing the sub-district and was selected to ensure a spread of service users who came from near and far to reach the clinic.

### Outcome Evaluation

Purposive sampling was used to enlist participants into the study. A mental health counselor, a cadre of mental health specialists with a 4 year B. Psychology degree, employed by the project invited general clinic service users who were 18 years or older to participate in the study. All participants recruited were women with similar educational and low socio-economic levels. Only women were recruited given that men rarely visit PHC clinics in South Africa.

Following informed consent procedures, the mental health counselor administered the Self Reporting Questionnaire (SRQ) (WHO 1994). The SRQ has been validated in South Africa as a first stage screen in two community-based studies of common mental disorders using a cut off point of 8+ (Bhagwanjee et al. 1998; Rumble et al. 1996). Seventy-eight participants scoring above the cut-off score were recruited and received a further screen using the *Beck Depression Inventory* (BDI). Sixty participants scoring in the moderate to severe range of depression on the BDI were considered eligible for the study and were also administered the *Hopkins Symptom Checklist (HSCL-25)*. The BDI has been extensively used in South Africa and has

been found to be a reliable screening device for depression in the adolescent as well as adult populations across a range of socio-cultural contexts (e.g., Kagee 2008; Ward et al. 2003). The *HSCL-25* assesses global psychological functioning and is derived from the 90-item Symptom Checklist and has been previously used on a sample of South African primary health care patients living with chronic illness to detect depression and anxiety (Kagee 2008). The Cronbach reliability co-efficient for the BDI administration pre and post the intervention was .71 and .86 respectively and .91 and .95 respectively for the *HSCL-25*.

Eligible participants were then placed in a treatment (30) and non-treatment group (30). Assignment was non-random and based on practicalities of whether eligible participants were available to participate in a 12-week group intervention as well as the availability of space within a group at the time of screening. The participants in the treatment group were assigned to four different therapy groups who received the IPT group-based intervention from two of the trained CHWs, under the supervision of the mental health counsellor. The non-treatment group received enhanced normal standard of care. This involved care delivered by PHC nurses at the PHC Clinic site who had been trained in identification of mental disorders and basic counselling skills by project staff as well as care provided by CHWs attached to the clinic on their normal home visits, and who had received the same training as the CHWs who facilitated the group intervention.

Pre-assessment scores on the BDI indicated that participants did not differ on levels of depression at baseline with mean BDI scores for both groups falling in the severe range. Post evaluation using the BDI and *HSCL-25* was administered to both groups on completion of the 12-week intervention as well as 24 weeks post baseline to assess how well the intervention effects were sustained over time. In order to test the equality of means on the BDI and *HSCL-25* over three different times with the same participants in the treatment group compared to a non-treatment control group, a repeated measures analysis of variance was used.

### Process Evaluation

Process evaluation involved in-depth interviews with nine of the participants across the four groups as well as the two CHW facilitators, using volunteer purposive sampling. The interviews focused on developing an understanding of the participants experience and perceptions of how their participation in the group was helpful in reducing depressive symptoms. Following informed consent procedures, the interviews were recorded in isiZulu with the permission of respondents, translated, and transcribed into English, with back-translation checks by an independent, bilingual

English-isiZulu speaker. The data was analyzed using thematic analysis.

Ethical approval for the study was granted by the University of KwaZulu-Natal Ethics Committee.

## Results

### Outcome Evaluation Results

Group retention was good, with 23 (77%) completing the programme over the 12-week period. Dosage was equally good, with all remaining 23 participants attending 8–12 group sessions, with over 50% attending all 11–12 sessions.

Analysis of the data for participants who completed all three assessments indicates that the IPT intervention led to a significant reduction in depressive symptoms as measured by the BDI in the intervention participants ( $n = 20$ ) compared to the controls ( $n = 22$ ) over a 12 and 24-week period. At the start of the intervention, the mean BDI scores for both groups were in the severely depressed range (34.85 for the intervention participants and 32.45 for the controls). At 12 and 24 weeks post the intervention, the mean BDI scores for the intervention participants was in the mild range (17.85 and 12.90 respectively). At 12 weeks post the intervention, the mean BDI score for the control participants who received enhanced normal standard of care remained in the severe range (31.23), and only reduced to the moderate range (26.86) at 24 weeks ( $F(2, 1.739) = 46.645, P < 0.0001$ ).

With respect to the overall HSCL-25 scale, at the start of the intervention, the mean HSCL-25 scores for both groups fell above the commonly used cut-off of 1.75 for psychological dysfunction (2.99 for the intervention participants [ $n = 18$ ] and 2.64 for the controls [ $n = 22$ ]). At 12 weeks, intervention participants showed significant improvement in overall psychological functioning (mean HSCL-25 score of 1.85) compared to controls who showed no improvement (mean HSCL-25 score of 2.68). At 24 weeks the mean HSCL-25 score for the intervention participants was below the cut-off for psychological dysfunction (mean HSCL-25 score of 1.60) compared to controls which was still above the cut-off score (mean HSCL-25 score of 2.26) ( $F(2, 1.651) = 34.55, P < 0.0001$ ).

### Process Evaluation Results

At an individual level, increased coping mechanisms amongst participants through the development of cognitions that were more positive, improved interpersonal skills as well as improved personal agency were reported as captured in the quote below.

When the group was almost finished, they would come with good news...Even when a person was no

longer studying she would think of going back to school. You find that she has found a job. She is thinking of selling things for herself... They grew. Their minds are thinking differently. Like a person would come and say I am thinking of killing myself. You can see that that person's mind is disturbed. But, as time goes on, you ask her if she still has thoughts of killing herself and she doesn't. She would explain that it's because she can see that if she does this - things will be ok (Group facilitator)

Further the group intervention also played an important role in improving capacity to cope with stressful situations at an interpersonal level through the provision of health enhancing social support—including emotional, instrumental, appraisal and advisory support, as exemplified in the following quotations.

someone would ...just tell her own problem which is much bigger than yours just to comfort you. That is why I like working with the group (group member)

Sometimes you find that a group member would say that I have money problems and my child is sick. Then you would find them putting together something (group facilitator).

What the group helped me with is that they were able to correct me (and tell me) the right ways in which to say things... (group member)

A person would even ask that we all comment. When a person tells her story, it needs for you to go deep in thought in search of how you can help her because we are here to patch up each other, make each other strong, to take out... how do I say this? We are here to heal and save each other (group member)

Strengthened social networks as a result of the group intervention and the accompanying benefits of health enhancing social support were also reported to have been sustained post the intervention as illustrated in the quotation below.

It was nice, we were together...and really...we still keep in contact. If you have money you call others and find out how they are doing, because now we are relatives. This is the family we came to know in the group session. You made us into a family in the group (group participant).

## Concluding Discussion

In relation to the choice of IPT over other psychosocial treatments for depression, the results of the initial

qualitative scoping study suggested that the interpersonal triggers of depression identified in IPT were applicable to the rural South African study site, with modifications needed to address the issue of multiple losses as a result of the HIV/AIDS pandemic, interpersonal conflicts specifically related to abuse and the added contextual issues of financial stress and receiving an HIV+ diagnosis (Bana et al. 2009).

Poverty has many facets and while Verdeli et al. (2003) viewed poverty as an issue that exacerbated rather than triggered depression in their Ugandan study, our initial qualitative study suggested that the stress and worry of not being able to provide basic necessities was directly related to depression (Bana et al. 2009) and is in keeping with other studies (e.g., Lund et al. 2010; Plageron et al. 2010).

Given that IPT emphasizes ways in which a person's social context and relationships cause or maintain symptoms (Weissman et al. 2000), it thus presented as a potentially useful approach to address differential exposure to social determinants of depression. There is convincing evidence that stressful life events cause depression (Patel et al. 2010). We surmised that financial stress as well as receiving an HIV-positive diagnosis and the associated stigma impact on social relationships and could be addressed through interventions to build supportive social relationships. For this reason, they were included in the adapted IPT group intervention for the South African context.

Further, the advantages of using IPT within a task shifting approach is that it is conducive to manualization and follows clearly defined stages, which is useful to aid non-specialist mental health workers in the provision of counseling. Moreover, it has been successfully adapted previously for use for a variety of problems and contexts, for adolescents and adult individual and group counseling in the US and Africa, including within a task shifting approach (Verdeli et al. 2003; Wilfrey et al. 2000).

The South African adapted IPT manualised group intervention, delivered by trained CHWs over a 12-week period to four groups of PHC clinic users, screened as having moderate to severe depression, provides promising outcome data which attests to the feasibility of this approach as a psychosocial treatment that can be delivered by trained CHWs under the supervision of a mental health specialist. Depressive symptoms in the intervention participants showed a significant reduction from the severe range to the mild range at 12 weeks, which was sustained at 24 weeks. In comparison, depressive symptoms remained within the severe range at 12 weeks, and only reduced to the moderate range at 24 weeks in the control participants. Further, service user retention and dosage was good, with just over one fifth dropping out, and the remainder attending 67–100% of the sessions, with 50% attending 11–12 sessions.

Process evaluation data suggests that improved individual coping was facilitated by cognitions that were more positive, strengthened interpersonal skills, as well as health enhancing social support afforded by the group process that appeared to be sustained post the intervention. In addition to serving to reduce depressive symptoms, the intervention also emerged as a potentially useful health promoting intervention for adult women, in that it contributed to improved personal agency, resilience and coping.

In conclusion, these findings suggest that the South African adaptation of the manualized group-based IPT intervention is feasible and acceptable to the population. Further, it can be delivered within a task shifting approach whereby trained CHWs deliver the intervention with the support and supervision of a mental health specialist. A major limitation of the study was that the sample was not randomly assigned. This could have resulted in selection bias. Availability of participants to participate in the intervention may have been a function of their greater need to receive help for their condition which may have influenced the significant improvement in functioning in the intervention participants compared to the controls. A randomized control trial to establish the effectiveness of the delivery of the manualized IPT intervention by CHWs will be necessary.

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## References

- Amberbir, A., Woldemichael, K., Getachew, S., Girma, B., & Deribe, K. (2008). Predictors of adherence to antiretroviral therapy among HIV-infected persons: A prospective study in Southwest Ethiopia. *BMC Public Health*, 8, 265. doi:10.1186/1471-2458-8-265.
- Bana, N., Cambanis, E., Dada, F., Kadwa, Z., Khosa, X., Mbonambi, T., et al. (2009). *Adapting Interpersonal Therapy (IPT) for the treatment of depression within the context of task shifting to scale up mental health services for common mental disorders in rural KwaZulu-Natal*. Unpublished report, School of Psychology, University of KwaZulu-Natal, South Africa.
- Bhagwanjee, A., Parekh, A., Paruk, Z., Petersen, I., & Subedar, H. (1998). Prevalence of minor psychiatric disorders in an adult

- African rural community in South Africa. *Psychological Medicine*, 28(5), 1137–1147.
- Bolton, P., Bass, J., Neugebeur, R., Verdelli, H., Clougherty, K. F., Wickramaratne, P., et al. (2003). Group interpersonal psychotherapy for depression in rural Uganda: A randomized control trial. *JAMA*, 289(23), 3117–3124.
- Bradshaw, D., Norman, R., & Schneider, M. (2007). A clarion call for action based on refined DALY estimates for South Africa. *SAMJ*, 97(6), 438–440.
- Brandt, R. (2009). The mental health of people living with HIV/AIDS in Africa: A systematic review. *African Journal of AIDS Research*, 8(2), 123–133.
- Clougherty, K. F., Verdelli, L., & Weissman, M. M. (n.d.). *Interpersonal therapy adapted for a group in Uganda (IPT-G-U)*. Unpublished manual.
- Department of Health. (1997). *National health policy guidelines for improved mental health in South Africa*. Pretoria: Directorate for Mental health and Substance Abuse, National Department of Health.
- Department of Health. (2004). *Mental Health Care Act (17 of 2002)*. Pretoria: Department of Health.
- Evans, D. L., Ten Have, T. R., Douglas, S. D., Gettes, D. R., Morrison, M., Chiappini, M. S., et al. (2002). Association of depression with viral load, CD8 T lymphocytes, and natural killer cells in women with HIV infection. *American Journal of Psychiatry*, 159, 1752–1759.
- Flisher, A. J., Lund, C., Funk, M., Banda, M., Bhana, A., Doku, V., et al. (2007). Mental health policy development and implementation in four African countries. *Journal of Health Psychology*, 12(3), 505–516.
- Kagee, A. (2008). Symptoms of depression and anxiety among a sample of South African patients living with chronic illness. *Journal of Health Psychology*, 13(4), 547–555.
- Lund, C., Breen, A., Flisher, A. J., Kakuma, R., Corrigall, J., Joska, J., et al. (2010). Poverty and common mental disorders in low and middle income countries: A systematic review. *Social Science and Medicine*, 71(3), 517–528.
- Lund, C., Kleintjies, S., Kakuma, R., & Flisher, A. J. (2009). Public sector mental health systems in South Africa: Inter-provincial comparisons and policy implications. *Soc Psychiat Epidemiol*, 45(3), 393–404.
- Patel, V., Lund, C., Hatherill, S., Plagerson, S., Corrigall, J., Funk, M., et al. (2010). Mental disorders: equity and social determinants. In E. Blas & A. S. Karup (Eds.), *Equity, social determinants and public health programmes* (pp. 115–134). Geneva: WHO.
- Petersen, I., Bhana, A., Campbell-Hall, V., Mjadu, S., Lund, C., Kleintjies, S., et al. (2009). Planning for district mental health services in South Africa. A situational analysis of a rural district site. *Health Policy and Planning*, 24(2), 140–150.
- Petersen, I., Lund, C., Bhana, A., & Flisher, A. J. (2011). A task-shifting approach to primary mental health care for adults in South Africa: Human resource requirements and costs for rural settings. *Health Policy and Planning*. doi:10.1093/heapol/czr012.
- Plagerson, S., Patel, V., Harpham, T., Kielmann, K., & Mathee, A. (2010). Does money matter for mental health? Evidence from the Child Support Grants in Johannesburg, South Africa. *Global Public Health*. doi:10.1080/17441692.2010.516267.
- Rahman, A. (2007). Challenges and opportunities in developing a psychological intervention for perinatal depression in rural Pakistan—a multimethod study. *Archives of Women's Mental Health*, 10(5), 211–219.
- Rahman, A., Malik, A., Sikander, S., Roberts, C., & Creed, F. (2008). Cognitive behaviour therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: A cluster-randomised control trial. *Lancet*, 372, 902–909.
- Rumble, S., Swartz, L., Parry, C., & Zwarenstein, M. (1996). Prevalence of psychiatric morbidity in the adult population of a rural South African village. *Psychological Medicine*, 26(5), 997–1007.
- Saraceno, S., Van Ommeren, M., Batniji, R., Cohen, A., Gureje, O., Mahoney, J., et al. (2007). Barriers to improvement of mental health services in low and middle-income countries. *Lancet*, 370, 1164–1174.
- Sawyer, S., Ngwenya, N., Memela, Z., Petersen, I., Subedar, H., & Parekh, A. (1996). *Training and resource manual for community care givers*. Unpublished manual, Department of Psychology, University of Durban-Westville.
- Seedat, S., Stein, D. J., Herman, A., Kessler, R., Sonnega, J., Heeringa, S., et al. (2008). Twelve-month treatment of psychiatric disorders in the South African Stress and Health Study (World Mental Health Survey Initiative). *Social Psychiatry and Psychiatric Epidemiology*, 43(11), 889–897.
- Shrier, L. A., Harris, S. K., & Beardslee, W. R. (2002). Temporal associations between depressive symptoms and self-reported sexually transmitted disease among adolescents. *Archives of Pediatric Adolescent Medicine*, 156, 599–606.
- Tanser, F., Hosegood, V., Barnighausen, T., Herbst, K., Nyirenda, M., Muhwaya, W., et al. (2008). Cohort profile: Africa Centre Demographic Information System (ACDIS) and population-based HIV survey. *International Journal of Epidemiology*, 37, 956–962.
- UNAIDS. (2008). South Africa. Country situation analysis. Retrieved April 2010, from [http://www.unaids.org/en/CountryResponses/Countries/south\\_africa.asp](http://www.unaids.org/en/CountryResponses/Countries/south_africa.asp).
- Verdelli, H., Clougherty, K., Bolton, P., Speelman, L., Lincoln, N., Bass, J., et al. (2003). Adapting group interpersonal psychotherapy for a developing country: Experience in rural Uganda. *World Psychiatry*, 2, 114–120.
- Ward, C., Flisher, A., Zissis, C., Muller, M., & Lombard, C. (2003). Reliability of the Beck Depression Inventory and the Self-Rating Anxiety Scale in a sample of South African adolescents. *Journal of Child and Adolescent Mental Health*, 15(2), 73–75.
- Weissman, M. M., Markowitz, J. C., & Klerman, G. L. (2000). *Comprehensive guide to interpersonal psychotherapy*. New York: Basic Books.
- WHO. (1994). *User's guide to the Self-Reporting Questionnaire (SRQ)*. Geneva: World Health Organization.
- WHO, & WONCA. (2008). *Integrating mental health into primary care: A global perspective*. Geneva: WHO and WONCA.
- Wilfrey, D. E., Roy Mackenzie, K., Robinson Welch, R., & Weissman, M. M. (2000). *Interpersonal psychotherapy for group*. New York: Basic Books.
- Williams, D. R., Herman, A., Stein, D. J., Heeringa, P. B., Moomal, H., & Kessler, R. C. (2008). Twelve month mental disorders in South Africa: Prevalence, service use and demographic correlates in the population-based South African Stress and Health Study. *Psychological Medicine*, 38(2), 211–220.