



Perinatal Mental Health Project

Caring for Mothers. Caring for the Future.



Alan J. Flisher Centre for
Public Mental Health

Screening for perinatal depression, anxiety and suicidal ideation and behavior at primary healthcare level in South Africa



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PerinatalMentalHealthProject

Why are maternal common mental disorders and suicide a problem?

Evidence from global studies have shown that mental health disorders including depression, anxiety, and alcohol and drug abuse are the leading cause of disability worldwide¹.

During the antenatal and postnatal period, about 80% of women will not receive the care and treatment they need for mental disorders. It has also been shown that these common mental disorders often start during the antenatal period and persists through the postnatal period². There are very high rates of common perinatal³ mental disorders (CPMD) which in turn, may have a negative effect on maternal functioning, health seeking behaviour, and child outcomes^{4,5}

Suicide has been identified as one of the major contributors to the global death burden⁶ and pregnant women have an increased risk of suicidal ideation and behaviour (SIB) when compared to the general population⁷. In developed countries, suicide is a leading cause of maternal deaths⁸, while about 75.5% of all suicides happen in low and middle income countries (LMICs).

How is maternal common mental disorders and suicide affecting South Africa?

In South Africa, the rate of CPMD are almost three times higher than in developed countries. In rural KwaZulu-Natal where HIV rates are high, a 2011 study found that 47% of women were diagnosed with depression during their third trimester of pregnancy⁹. In Khayelitsha, studies found the rate of maternal depression to be between 32–47% in the antenatal period and 16–35% in the postnatal period⁸. For anxiety disorders, studies report rates of 21% during the antenatal period in South Africa¹⁰.

¹ Whiteford H et al. Global burden of disease attributable to mental and substance use disorders: Findings from the Global Burden of Disease Study 2010. *Lancet*. 2013;382: 1575–1586.

² Yonkers K et al. Onset and persistence of postpartum depression in an inner-city maternal health clinic system. *Am J Psychiatry*. 2001;158: 1856–63.

³ 'Perinatal' refers to the time from conception to the end of the first year after birth.

⁴ Meintjes et al. Improving child outcomes through maternal mental health interventions. *Journal of Child & Adolescent Mental Health*. 2010. pp. 73–82.

⁵ Dunkel S et al. Anxiety, depression and stress in pregnancy: implications for mothers, children, research, and practice. *Curr Opin Psychiatry*. 2012;25: 141–8.

⁶ Goldsmith et al. *Reducing suicide: A national imperative*. National Academies Press; 2002.

⁷ Gagliardi M et al. Suicide in pregnancy. *Ital J Criminol*. 2014;4: 527–545.

⁸ Oates M. Perinatal psychiatric disorders: a leading cause of maternal morbidity and mortality. *Br Med Bull*. 2003.

⁹ Rochat et al. The prevalence and clinical presentation of antenatal depression in rural South Africa. *J Affect Disord*. Elsevier; 2011;135: 362–373

¹⁰ Vythilingum B. Anxiety disorders in pregnancy. *Curr Psychiatry Rep*. 2008;10: 331–5

Another study found a 27.5% prevalence of any type of suicidal ideation among pregnant, rural South African women. The authors found positive associations between economic and socio-demographic factors, suicidal ideation with depression (past and present), and HIV status¹¹.

Do we need to screen for these common mental health disorders?

Following what we have identified as the burden of CPMDs globally and in South Africa, It is important to determine if these health conditions meet the criteria that indicate they should be periodically screened for at a health visit. The criteria to assess include:

1. The burden of suffering from the conditions sufficient to warrant a screening test
2. Screening tests exist that are safe, inexpensive, feasible, simple, and have sufficient sensitivity and specificity
3. Effective interventions exist if the screening test does detect the conditions¹².

It is now accepted globally that for common mental disorders (depression and anxiety), screening represents **a critical entry point to care**. This is particularly true when health providers are not necessarily skilled in other forms of detection and when disorders do not have obvious clinical characteristics. The US Preventive Services Task Force and the International Marcé Society for Perinatal Mental Health have published high quality evidence report and guidelines on screening for CPMDs.

The Perinatal Mental Health Project screening tool validation study

The Perinatal Mental Health Project (PMHP) is an independent initiative based at the University of Cape Town (UCT) and is a founding partner of the Alan J Flisher Centre for Public Mental Health (CPMH). The Project has been operating since 2002 in partnership with the Western Cape Department of Health (DOH). The Project addresses the very high prevalence of maternal mental illness in disadvantaged communities. Our vision is to support integrated maternal mental health services by developing, evaluating and optimising interventions and tools through service provision at three public obstetric facilities.

The PMHP has found that in primary care antenatal settings where resources are scarce, there is a need to develop screening tools that are accurate, brief and easy to administer and score. Shorter screens with simple scoring may be more clinically useful than more complex scales. This is especially true in busy, low resource antenatal settings where the tools may be used by nonmedical doctors and community health workers¹³. A brief simple screening tool may be more practical and acceptable to health workers who have to deal with high patient numbers and perform a range of other antenatal tasks¹⁴.

¹¹ Rochat et al. Suicide ideation, depression and HIV among pregnant women in rural South Africa. *Health (Irvine Calif)* 2013;05: 650–661

¹² Chaudron et al. Legal and ethical considerations: risks and benefits of postpartum depression screening at well-child visits. *Pediatrics*. 2007;119: 123–128

¹³ Patel V et al. Packages of care for depression in low- and middle-income countries. *PLoS Med*. 2009;6.

¹⁴ Honikman S et al. Stepped Care for Maternal Mental Health: A Case Study of the Perinatal Mental Health Project in South Africa. *PLoS Med*; 2012;9

In 2011-2012, the PMHP conducted a study in Hanover Park, Cape Town, an area with high levels of violence, unemployment and food insecurity. The study aimed to develop a brief mental health screening tool for CPMD that may be used in a range of low resource primary care settings, including community settings and NGO settings - both within health and within the social development sectors.

Nearly 400 pregnant women (35% Black and 60% “Coloured”) were recruited and administered a series of socio-demographic and psychosocial risk questionnaires and mental health screening tools. The Expanded Mini-International Neuropsychiatric Interview (MINI Plus) Version 5.0.0 was used as the gold standard diagnostic mental health interview.

The breakdown of MINI-defined disorders is summarised in the table below.

Table 1. The breakdown of CPMD (N = 376)

MINI diagnosis	n	%
Major depressive episode (MDE)	81	21.5
Any anxiety disorder	86	22.9
Meets criteria for MDE and/or anxiety disorder	122	32.5
Suicidal ideation or behaviour (SIB)	69	18
Any substance use disorders	57	15.2
Any psychotic disorders	5	1.3

MDE and anxiety disorder existed **at the same** time in about 12% of the sample. The MINI diagnostic tool **suicide module** collected information on current or recent suicidal ideation and behavior. It is noteworthy that **about half** of women with suicidal ideation and behaviour had **neither MDE nor an anxiety disorder**.

The brief screening tools

We analysed the performance of all the mental health screening tools against the MINI and found that **the brief tools** of 2-3 question items **performed comparably well with longer tools** of 9 or more items. The brief tools are discussed below.

Depression: The Whooley questions are two questions that emerged from the 27-item screening questionnaire used in the Primary Care Evaluation of Mental Disorders Procedure (PRIME-MD) to facilitate diagnosis of **depression** in primary care¹⁵. This ultra-short questionnaire is used as a standard screening tool for pregnant and postnatal women in the United Kingdom.

1. During the past month, have you often been bothered by feeling down, depressed, or hopeless? (depressed mood)

¹⁵ Whooley MA et al. Case-finding instruments for depression. Two questions are as good as many. J Gen Intern Med. 1997;12: 439-45

2. During the past month have you often been bothered by little interest or pleasure in doing things? (anhedonia)

An additional “help” question can be asked if the woman responds positively to either of the first two questions. These questions have not yet been validated for use in the South African antenatal setting.

Anxiety: The Generalised Anxiety Scale (revised) (GAD-2)¹⁶ is a 2-item form of the GAD-7:

1. Over the last 2 weeks, how often have you been bothered by feeling nervous, anxious or on edge?
2. Over the last 2 weeks, how often have you been bothered by not being able to stop or control worrying?

Although it has not yet been validated for use in South Africa or with antenatal populations, the GAD-2 is regarded as being a clinically useful, brief screening tool for Generalised Anxiety Disorder and other anxiety disorders in primary care. The GAD-2 is designed as a range of scales. For the purposes of our analyses, we binarised the 4 items into a “non-case” for the two lower scoring responses (not at all, several days) and a “case” for the two higher scoring responses (more than half the days, nearly every day).

Suicide: The Edinburgh Postnatal Depression Scale (EPDS) is the most widely used tool in the perinatal period for screening for anxiety and depression¹⁷. The EPDS has been validated in a range of settings, including South Africa. The last item of the 10-item scale screens for self-harm “The thought of harming myself has occurred to me”. This scale was collapsed into two options for the analysis to reflect a “non-case” for the two lower^{13,18} scoring responses (never, hardly ever) and a “case” for the two higher scoring responses (sometimes, quite a lot).

Analysis: We combined the three brief tools above into a screening measure to screen for depression, anxiety and suicidal behaviour. Using Receiver Operating Characteristic (ROC curve) analysis, we examined the performance of this 5-item tool against diagnostic data. Various cut point were created to investigate maximum sensitivity and specificity and correct classification of cases.

¹⁶ Kroenke K et al. The 2-item Generalized Anxiety Disorder scale had high sensitivity and specificity for detecting GAD in primary care. *Ann Intern Med.* 2007;146: 317–325

¹⁷ Cox JL et al. Validation of the Edinburgh postnatal depression scale (EPDS) in non-postnatal women. *J Affect Disord.* 1996;39: 185–189

¹⁸ Chopra M et al. Saving the lives of South Africa’s mothers, babies, and children: can the health system deliver? *Lancet.* Elsevier Ltd; 2009;374: 835–46

Recommendations

Based on our findings from the analyses performed, we recommend the tool below;

Table 2. PMHP recommended screening tool

Over the past month, have you often felt:

1. nervous, anxious or panicky?
2. unable to stop worrying, or thinking too much?
3. down, depressed, or hopeless?
4. little interest or pleasure in doing things that you used to enjoy?
5. you had thoughts and plans to harm yourself?

A score of ≥ 3 requires referral.

A score of ≥ 3 requires referral. (If resources are available, referrals may be made for scores of ≥ 2 . This will increase the detection of common perinatal mental disorders.)

NB: an answer of yes to number 5 should be referred, no matter what the total score is

Although there are several limitations in the development of this screening tool, we are unaware of any South African work done to date to develop and validate a brief screen for common perinatal mental disorders. With further funding, we hope to field test the tool formally in different languages and settings within South Africa. In addition, assessing for the presence of psychosocial risk factors (poverty, violence, etc.) will help in an increase in the detection of common mental disorders as well as assist with targeting interventions.

It is important to remember that if a mother screens positive, it does not necessarily mean she has one of the screening conditions. On the other hand, if she screens negative, it does not necessarily mean she does NOT have one of the conditions. In the latter case, a screener's sense of the mother should also be taken in to account and referral made if there is a concern about how the mothers seems to be, even if she does not meet the cut-off score on the screen. Here, the presence of psychosocial risk factors may also sway the decision towards referral.

Risk factor screening

Additional items pertaining to psychosocial risk factors will increase the detection of common mental disorders as well as assist with targeting interventions. Detecting risk may also offer the opportunity to prevent the development of mental health problems or allow for the effective management of these problems earlier in the course of the illness.

These items may include; • Past history of mental illness • Food insecurity • Lack of partner support • Lack of family or community support • Current or previous abuse or trauma of any kind • HIV infection or other chronic medical conditions • Teenage status • Displaced people and migrants¹⁹ • Major life event in past year • Previous loss of a pregnancy or loss of a child • Unwanted pregnancy²⁰

Referral to the next level of care may include, where resources are available, a further, more detailed assessment of symptoms of depression, anxiety, and suicidal ideation and behaviour. Then, management plans may be better targeted to the problems at hand. Just as for screening, the quality of **how** the referral is performed is critical to the outcomes of the referral.

This will include the following;

- The choice of appropriate referral organisation or person
- The clarity of communication of the case with that agency or person
- The explanation given to the mother regarding the reason for the referral
- The explanation given to the mother about the intervention provided and expected outcomes of the referral
- The exploration of practical or emotional obstacles that the mother may face in taking up the referral
- The follow-up with mother and organisation regarding whether referral was taken up and the outcome
- A repeated offering of the referral after a short period, if the mother declines or does not take up the referral
- Communication that the referral option may be taken up at stage when the mother is ready to do so.
- Recognising that the mother may need referral to more than one agency in order to ensure holistic support, e.g. social services to ensure social grant as well as mental health counselling from a mental health nurse or NGO.

NB: For any woman who has frequent suicidal thoughts and have plans for self-harm, an urgent and supported referral should be made to a higher level of care, even if against the wishes of the mother herself. This type of referral will need to be managed by a medical doctor and/or mental health professional.

¹⁹ This includes internal and external migrants, refugees, asylum seekers and temporary residents.

²⁰ This is not necessarily the same as an unplanned/unintended pregnancy. An unplanned pregnancy may be wanted or unwanted. We believe that it is the lack of wanting the pregnancy that is related to mental health problems, rather than whether the pregnancy was planned.

Effective screening is the entry point to care

This tool should only be used if screening is part of a clear health care protocol, which facilitates access to mental health care.

The **manner** in which it is administered will greatly influence

- the quality of the responses and
- will impact mothers' uptake of services.

Therefore, the tool should be administered with **care and empathy**.