ACCEPTABILITY OF ANTENATAL SCREENING FOR DEPRESSION IN ROUTINE ANTENATAL CARE.

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Key words: perinatal depression, Edinburgh Postnatal Depression Scale, midwife feedback, community sample, telephone interviews

ABSTRACT

Objective:

The Edinburgh Postnatal Depression Scale (EPDS) is generally recognised as a valid, reliable, cost-effective and simple tool to implement within routine care, however there is controversy regarding the acceptability of screening for depression. This paper aims to examine how acceptable women find (1) completing a battery of questionnaires, including the EPDS and (2) receiving feedback from midwives regarding the significance of their EPDS score when being screened for depression as part of routine antenatal care.

Design:

Telephone interviews with women following completion of the questionnaire battery and receiving feedback from midwives.

Setting:

Antenatal primary care in a hospital setting.

Subjects:

Community sample of 407 women screened by midwives in antenatal clinics. Main outcome measures: Information regarding women's experience of participating in the screening process.

Results:

100% of women reported that the screening experience was acceptable and not upsetting. Almost 50% reported that the screening process raised their awareness of perinatal depression. No woman reported feeling stigmatised, labelled or distressed by the screening process. Women reported that gaining immediate feedback from midwives was reassuring.

Conclusion:

This study strongly supports the acceptability of routine screening for perinatal depression in the context of registered midwife support.

INTRODUCTION

Antenatal depression is prevalent and has potentially far-reaching adverse consequences. Reported prevalence rates of depression in the antenatal period are similar to postpartum levels and range from 12% to 20% (Marcus et al 2003; Evans et al 2001; Josefsson et al 2001; Buist et al 2000; Areias et al 1996). Depression in pregnancy may also compromise a woman's physical and mental health and the health of her unborn baby through diminishing her capacity for self-care, including inadequate nutrition, increased drug or alcohol abuse and poor antenatal clinic attendance (Austin 2003).

Antenatally depressed mothers have been found to experience increased episodes of pre-eclampsia (Kurki et al 2000), preterm delivery and placental abruption (Seguin et al 1995; Zuckerman et al 1989) as well as adverse obstetric outcomes (Chung et al 2001). Antenatal depression is also recognised as a powerful predictor of postnatal depression (Buist 2002; Josefsson et al 2001). Thus, some women may not only spend time in pregnancy depressed, but might also enter parenthood in a depressed state, which in turn has been associated with cognitive and behavioural developmental difficulties in infants (Milgrom et al 2004).

Successful treatment for depression is available (Zlotnick et al 2001; Milgrom et al 1999; Elliott 1989) but early detection and management seems imperative to achieve this outcome. A popular and widely used test for screening for perinatal depression is a self-report

questionnaire, the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al 1987).

Given the potential seriousness of depression, it is not surprising that routine screening has been advocated by experts and government bodies. The American College of Obstetricians and Gynecologists (2002) endorse the routine screening of all patients for symptoms of depression and advocate the use of the EPDS for postpartum women (Dell 2002). This is consistent with the United States of America Preventive Task Force (2002) which recommends routine screening of all adults across the lifespan for depression in primary care settings (Piagnone et al 2002; USA Preventive Services Task Force 2002). The United Kingdom's National Screening Committee (UK NSC) has promoted screening guidelines that may be applied to a vast array of conditions. However in relation to screening for perinatal depression, concerns have been raised regarding the paucity of empirical evidence that exists for some criteria endorsed by the UK NSC (McLennan and Offord 2002; Shakespeare 2001). One such criterion pertains to the 'acceptability' of the test to the population under investigation.

Whilst compliance with participation of screening appears to be remarkably high in antenatal samples with 95% complying (Zlotnick et al 2001; Brugha et al 2000) there exists only a small amount of literature reporting on acceptability of the process and findings are inconsistent. In one study a large representative community sample was used (n=674), but acceptability of the EPDS was not directly assessed only inferred from a high (97.3%) postal response rate (Murray and Carothers 1990). While another study reported positive responses from women though interview, the time elapsing between administration of the EPDS and interview follow-up (three months) may have served to lessen any concerns (Holden 1990). A more recent study reported that just over half of a sample of postnatal women recruited at general practices found the EPDS less than acceptable (Shakespeare et al 2003). These women raised concerns about their feelings of personal intrusion and potential stigma in completing the EPDS. However, the sample size was small (n=39).

AIM

The purpose of this paper is to add to the small body of literature regarding women's experiences and perceived acceptability of routine screening for antenatal depression by directly interviewing a large representative sample of women who have been routinely screened in community hospitals as part of antenatal care. Additionally, the limited evidence reported thus far has largely pertained to screening in the postnatal period. By contrast, this study evaluates acceptability of antenatal depression screening as well as the acceptability of receiving immediate feedback from midwives about EPDS scores.

METHOD

Participants

Participants were recruited from two major public maternity hospitals in suburban Melbourne as part of the Victorian component of the *beyondblue* National Postnatal Depression Program (2001-2005). The program screened women in Australia for antenatal and postnatal depression using a screening pack that collected psychosocial background information and included the EPDS. The program has been described more fully elsewhere (Buist et al 2002).

Consecutively screened women were included in this subsidiary study over a period of 12 months. A total of 407 women participated in the telephone interviews. Only three women were uncontactable by phone.

Edinburgh Postnatal Depression Scale (EPDS)

The Edinburgh Postnatal Depression Scale (EPDS) was used to screen for antenatal depression. The EPDS (Cox et al 1987) measures current mood disturbance for women in the perinatal period and comprises 10 items (eg 'I have felt sad or miserable') and is rated on a 4-point scale. It is not a diagnostic but a screening tool (Pope 2000; Cox et al 1987). Scores above the specified threshold indicate the participant may be depressed and further investigation is recommended (Cox and Holden 2003). Research has suggested that scores above 9 indicate a 'possible depression' while scores above 12 indicate a 'probable depression' (Leverton and Elliott 2000).

A cut-off score of >13 has been validated with an Australian sample (Milgrom et al 2005; Boyce et al 1993). At this threshold, previous research reports sensitivity ranging from 86-100%; specificity ranging from 78-96%; and the positive predictive value of the scale from 69-73% (Milgrom et al 2005; Boyce et al 1993; Murray and Carothers 1990; Cox et al 1987).

PROCEDURE

Antenatal Screening Procedure

Midwives were trained in the use of the EPDS and how to discuss the results as part of the *beyondblue* National Postnatal Depression Program. After midwives obtained informed consent for participation in the study while at a routine 26-32 week antenatal visit, participants completed the screening questionnaire pack. Midwives scored the EPDS on the spot and the result was discussed. All women who participated received an educational booklet, *Emotional Health during Pregnancy and Early Parenthood*, which provided information and a list of available resources. They were also alerted that a telephone interview would follow. A letter of recommendation to consult their General Practitioner (GP) was sent to all women who scored >13 on the EPDS. Simultaneously, a notification letter and

depression management guide was sent to the woman's nominated GP. If necessary, referrals to appropriate health care professionals were made by midwives to ensure ongoing or more specialised care.

Telephone Interviews

After completing the screening questionnaires, each participant was contacted by telephone. Women were asked if they would be willing to discuss their experience in completing the EPDS through a structured telephone interview. The majority of women were contacted between one and two weeks after screening, with three weeks the maximum time before attempts at contact were terminated for the three uncontactable women. Duration of telephone calls averaged 10 minutes.

The telephone interview was designed to elicit information about the experience of completing the EPDS including the overall acceptability of all the questionnaires. Information was also sought regarding the feedback received from midwives to ascertain (1) if feedback about the EPDS score was regularly forthcoming, and (2) the women's experience of receiving feedback from the midwife. The following three sets of questions were asked:

1. What was it like for you completing the questionnaires? How did you find it?
2. Were there any questions that you found upsetting, distressing or confronting?
3. Did the midwife give you some feedback about your depression score? How did you experience receiving that feedback?

Conversations were transcribed with the interviewer clarifying all participant responses through rephrasing for confirmation and accuracy of data recording. Raw data were then collapsed into categories on the basis of emergent themes based on the guidelines suggested by Murphy et al (1992). Frequencies of responses are reported in the results.

RESULTS

Description of Sample

Participants comprised primipara and multiparae mothers. Of the 407 participants contacted by telephone no one declined participation. Of these, 84 were identified as having an EPDS >13 and therefore were more likely to be depressed while the remaining 323 had EPDS scores <13. Participants ranged in age from 17 to 45, with a mean age of 30.8 (SD=5.1). The sample included a diverse range of cultural, educational, vocational and socio-economic backgrounds. Single as well as partnered women were included.

1. Women's Experience of Completing the Questionnaires

The first question was open-ended allowing for a range of responses without prompting. The responses were collapsed into three themes/categories (Fine, Relevant and Appropriate, and Raised Awareness), as shown in table 1. All participants (n=407) stated that completing the questionnaires was easy, straightforward and fine. Almost three-quarters of the sample (292 women) commented that the questionnaires contained relevant and appropriate questions and almost 50% (193 women) said completing the questionnaires raised their awareness of antenatal and postnatal depression, including some risk factors.

Table 1: Categorised Responses and Response Rate for Telephone Data.

Question	Response	Number (%)
Question 1: Experience of Completing Questionnaires	Fine	407 (100)
Relevant and appropriate	292 (72)	
Raised awareness	193 (47)	
Question 2: Upsetting, Distressing or Confronting?	No	407 (100)
Question 3: Midwife feedback	Yes	402 (99)
	- Positive experience	190 (47)
	- Neutral experience	212 (53)
	No	5 (1)
n=407		

2. Acceptability of the Questionnaire Battery

Question 2 was designed to assess the extent to which women found the questionnaires acceptable. 100% of participants (n=407) stated that they did not feel upset, distressed or confronted by any of the questions in the EPDS or other questionnaires. To allow participants a further opportunity to raise concerns the interviewer clarified each participant response by stating, '*Were there any questions that you found upsetting or that you objected to?*' Even with this prompt participants reported no objections. The following quotes highlight this:

'*There are a couple of tough questions, but it's good to ask these and you need to know*' (participant no.170, age 35, EPDS score 6).

'*The questions seemed relevant to finding out about depression*' (participant no.207, age 32, EPDS score 14).

Interestingly, concerns raised were related to concerns for other women rather than themselves. A small number (33) of non-depressed women expressed that the questionnaires were acceptable to them but speculated that they might not be acceptable to women who were struggling with either their present mood or past experience. The following quote exemplifies this:

'*The questions were easy for me because I've never been depressed, but maybe someone who is depressed*

might find it more difficult' (participant no.82, age 31, EPDS score 4).

3. Feedback from Midwives

Question 3 attempted to confirm that midwives were providing feedback to participants about their EPDS score and how participants experienced this. All but five women confirmed that they received feedback from their midwife. These five participants had EPDS scores below 10. Women overwhelmingly reported positive or neutral experiences in receiving feedback about their EPDS. The following quotes exemplify the responses:

'*It's good and reassuring to know that I'm being monitored. There was no support like this last time and I suffered PND*' (participant no.174, age 31, EPDS score 14).

'*It's good to get some immediate feedback from the midwife*' (participant no.36, age 33, EPDS score 18).

'*I knew I was depressed and I see a psychiatrist, but now my midwife knows. We decided that I would continue to see the same midwife for my other antenatal appointments because now she knows my situation. She's going to help me through a bit more*' (participant no.52, age 23, EPDS score 18).

'*I was fine. She [the midwife] didn't say much, just checked that I really was ok*' (participant no.18, age 31, EPDS score 5).

All 84 women who scored 13 or over stated they discussed avenues of care and support with their midwife. Many reported feeling relieved and supported that additional care was offered. Of these 84 participants, eight women asserted that they were not depressed, four of whom discussed this with the midwife at screening and four of whom stated that they were not told the EPDS is not a diagnostic tool. At the time of the telephone interview it was explained to them that an elevated score was not necessarily indicative of depression as the EPDS is a screening instrument. High scores suggest they are presently struggling with some negative mood symptoms and indicate the need for further assessment to determine if the woman is depressed. They found this to be a more satisfactory explanation of their screening status.

DISCUSSION

Using a telephone survey, women's experiences of participating in an antenatal screening program was investigated; a previously unreported area. This study contributes to the limited literature on acceptability of screening for perinatal depression in a large community sample and will hopefully stimulate further research in this important area. Overall, women in this sample found screening by midwives highly acceptable. Many participants remarked that they thought routine screening was beneficial and should be implemented universally. The overwhelming response from women in this study was that completing questionnaires antenatally to assess risk of perinatal depression was acceptable.

The current findings support the positive findings of Murray and Carothers (1990) and Holden (1990). By contrast, Shakespeare et al (2003) reported relatively low acceptability among their small sample of postnatal women completing the EPDS. They speculated that this may be due to issues of personal intrusion and potential stigma. These issues did not emerge in the current research which surveyed more than ten times the number of women. Contrary to the findings of Shakespeare et al, feelings of relief and increased support from midwives were frequently reported. The different outcomes in this study may reflect differences in culture, training of administrators or the method used to administer the EPDS and the immediate support of midwives. Alternatively, it is possible that an antenatal population feels less intruded upon by being asked questions. Perhaps this is due to many questions and tests being performed when a woman is pregnant, as opposed to the postnatal period. Interestingly, women in this sample who were identified as having an EPDS >13 and therefore more likely to be depressed found the questionnaires acceptable. It was only a small number of women who were not depressed who speculated on the acceptability of such questions for depressed women. Those who argue against routine screening may do so to protect depressed women from potential negative outcomes (stigma, labelling) but perhaps these are concerns of a non-depressed population and do not necessarily represent the concerns of those who are depressed.

The design for this study was simple as the aim was to investigate women's overall acceptability of being screened antenatally, a previously unreported area. However, there were some limitations to this study, which was a first attempt at asking questions with face validity regarding the acceptability of the EPDS. The data generated was also reduced to simple categories and thus failed to capture fine-grained subtlety within participant responses. Future researchers might consider providing women questions with Likert response options and 'other' option for comments. This may produce greater discrimination within the data.

If a serious debate is to continue regarding women's acceptability of the EPDS, perhaps the method of administration and feedback needs to be uniform and the development of some agreed objective criteria for the concept and relative term of acceptability is required. Only then will more accurate comparisons be available both within and across cultures, clinical practice and research settings.

Whilst women reported that the extended midwife care in relation to the EPDS was reassuring and not intrusive, the study found a very small number of participants believed they were falsely identified as depressed. This brings into focus the nature of the EPDS as a screening instrument and the importance of accurate feedback.

Administrators need a clear understanding that the EPDS is suggestive of depression and accurate diagnosis needs to follow. Training in effective communicative skills to responsibly discuss results to those being screened is indicated.

SUMMARY

In summary, the overwhelming response from women in this study was that completing questionnaires antenatally to assess risk of perinatal depression was acceptable. They did not report feeling that the questionnaires were upsetting, distressing, confronting or intrusive. Given women's high level of acceptability for depression screening, the results of this study strongly support the use of universal routine screening for antenatal depression in the context of registered midwife support.

REFERENCES

Areias, M.E.G., Kumar, R.C., Barros, H. and Figueiredo, E. 1996. Correlates of postnatal depression in mothers and fathers. *The British Journal of Psychiatry*, 169(1):36-41.

Austin, M.P.V. 2003. Psychosocial assessment and management of depression and anxiety in pregnancy. *Australian Family Physician*, 32(3):119-20, 122-6.

Boyce, P.M., Stubbs, J. and Todd, A. 1993. The Edinburgh Postnatal Depression Scale: validation for an Australian sample. *Australian and New Zealand Journal of Psychiatry*, 27(3):472-476.

Brugha, T.S., Wheatley, S., Taub, N.A., Culverwell, A., Friedman, T., Kirwan, P.H., Jones, D.R. and Shapiro, D.A. 2000. Pragmatic randomized trial of antenatal intervention to prevent post-natal depression by reducing psychosocial risk factors. *Psychological Medicine*, 30(6):1273-1281.

Buist, A. E. 2002. Mental health in pregnancy: the sleeping giant. *Australasian Psychiatry*, 10(3):203-206.

Buist, A.E., Barnett, B.E.W., Milgrom, J., Pope, S., Condon, J.T., Ellwood, D.A., Boyce, P.M., Austin, M.V. and Hayes, B.A. 2002. To screen or not to screen - that is the question in perinatal depression. *Medical Journal of Australia*, 177(7):101-105.

Buist, A.E., Milgrom, J., Morse, C., Durkin, S. and Rolls, C. 2000. Integrating services in the recognition and management of postpartum depression. *Australian Journal of Primary Health Interchange*, 6(3-4):74-79.

Chung, T.K.H., Lau, T.K., Yip, A.S.K., Chiu, H.F.K. and Lee, D.T.S. 2001. Antepartum depressive symptomatology is associated with adverse obstetric and neonatal outcomes. *Psychosomatic Medicine*, 63(5):830-834.

Cox, J. and Holden, J. 2003. *Perinatal mental health: a guide to the Edinburgh Postnatal Depression Scale (EPDS)*. London: Gaskell.

Cox, J., Holden, J. and Sagovsky, R. 1987. Detection of postnatal depression: development of a 10 item postnatal depression scale. *British Journal of Psychiatry*, 150(6):782-786.

Dell, D. L. 2002. *Depression in Women*. Washington: The American College of Obstetricians and Gynecologists.

Elliott, S.A. 1989. Psychological strategies in the prevention and treatment of postnatal depression. *Baillieres Clinical Obstetrics and Gynaecology*, 3(4):879-903.

Evans, J., Heron, J., Francomb, H., Oke, S. and Golding, J. 2001. Cohort study of depressed mood during pregnancy and after childbirth. *British Medical Journal*, 323(7307):257-260.

Holden, J. M. 1990. Using the Edinburgh Postnatal Depression Scale in clinical practice. In J. Cox (eds), *Perinatal Psychiatry: uses and abuses of the EPDS*. London:Gaskell.

Josefsson, A., Berg, G., Nordin, C. and Sydsjo, G. 2001. Prevalence of depressive symptoms in late pregnancy and postpartum. *Acta Obstetricia et Gynecologica Scandinavica*, 80(3):251-255.

Kurki, T., Hiilesmaa, V., Raitasalo, R., Mattila, H. and Ylikorkala, O. 2000. Depression and anxiety in early pregnancy and risk for preeclampsia. *Obstetrics and Gynaecology*, 95(4):487-493.

Leverton, T.J. and Elliott, S.A. 2000. Is the EPDS a magic wand?: a comparison of the Edinburgh Postnatal Depression Scale and health visitor report as predictors of diagnosis on the Present State Examination. *Journal of Reproductive and Infant Psychology*, 18(4):279-296.

Marcus, S.M., Flynn, H.A., Blow, F.C. and Barry, K.L. 2003. Depressive symptoms among pregnant women screened in obstetrics settings. *Journal of Women's Health*, 12(4):373-380.

McLennan, J.D. and Offord, D.R. 2002. Should postpartum depression be targeted to improve child mental health? *Journal of the American Academy of Child and Adolescent Psychiatry*, 41(1):28-35.

Milgrom, J., Ericksen, J., Negri, L.M. and Gemmill, A.W. 2005. Screening for postnatal depression in routine primary care: properties of the Edinburgh Postnatal Depression Scale in an Australian community sample. *Australian and New Zealand Journal of Psychiatry*, 39(9):833-839.

Milgrom, J., Martin, P.R. and Negri, L.M. 1999. *Treating Postnatal Depression: a psychological approach for health care practitioners*. Chichester: Wiley.

Milgrom, J., Westley, D.T. and Gemmill, A.W. 2004. The mediating role of maternal responsiveness in some longer-term effects of postnatal depression on infant development. *Infant Behavior and Development*, 27(3):443-454.

Murphy, B., Cockburn, J. and Murphy, M. 1992. Focus groups in health research. *Health Promotion Journal of Australia*, 2(2):37-40.

Murray, L. and Carothers, A.D. 1990. The validation of the Edinburgh Postnatal Depression Scale on a community sample. *British Journal of Psychiatry*, 157(2):288-290.

Piagnone, M.P., Gaynes, B.N., Rushton, J.L., Burchell, C.M., Orleans, C.T., Mulrow, C.D. and Lohr, K.N. 2002. Screening for depression in adults: a summary of the evidence for the USA Preventive Services Task Force. *Annals of Internal Medicine*, 136(10):765-776.

Pope, S. 2000. *Postnatal depression: a systematic review of published scientific literature to 1999*. Canberra: NHMRC.

Seguin, L., Potvin, L., St-Denis, M. and Loiselle, J. 1995. Chronic stressors, social support, and depression during pregnancy. *Obstetrics and Gynaecology*, 85(4):583-589.

Shakespeare, J. 2001. Evaluation of screening for postnatal depression |against the NSC handbook criteria, available: http://www.nelh.nhs.uk/screening /adult_pps/postnatal_depression.html (accessed: 2002).

Shakespeare, J., Blake, F. and Garcia, J. 2003. A qualitative study of the acceptability of routine screening of postnatal women using the Edinburgh Postnatal Depression Scale. *British Journal of General Practice*, 53(493):614-619.

UK National Screening Committee: http://www.nsc.nhs.uk/ (accessed 2004).

USA Preventive Services Task Force. 2002. Screening for depression: recommendations and rationale. *Annals of Internal Medicine*, 136(10):760-764.

Zlotnick, C., Johnson, S.L., Miller, I.W., Pearlstein, T. and Howard, M. 2001. Postpartum depression in women receiving public assistance: pilot study of an interpersonal-therapy-oriented group intervention. *American Journal of Psychiatry*, 158(4):638-640.

Zuckerman, B., Amero, A., Bauchner, H. and Cabral, H. 1989. Depressive symptoms during pregnancy: relationship to poor health behaviours. *American Journal of Obstetrics and Gynaecology*, 160(5) Pt1:1107-1111.