Psychological Distress during the Perinatal Period: Using Edinburgh Postnatal Depression Scale (EPDS) General Health Questionnaire (GHQ-12) and the Study Specific Measure of Perinatal Distress (SSMPD) on a Zambian Cohort

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ABSTRACT

Background: Psychological distress during the perinatal period affects the woman experiencing it, her baby, and the family a whole. It presents a challenge during this exciting and special time in woman’s life. Various screening instruments have been established to identify psychological distress. This paper reports results of the data collected to determine the prevalence of psychological distress using the EPDS, GHQ-12, and the Study Specific Measure of Psychological Distress.

Aim: The study investigates the prevalence of psychological distress during the perinatal period in a Zambian cohort.

Methods: A longitudinal descriptive study was conducted on a Zambian cohort consisting of 300 women during their antenatal and postnatal periods. The participants were accessed through antenatal and postnatal clinics in primary health care facilities.

Findings: The study revealed high prevalence of psychological distress in the cohort under study in comparison to global estimations. This is as detected by the EPDS and GHQ-12, including the study specific measure of psychological distress.

Conclusion: The prevalence of psychological distress during the perinatal period in Zambia is high. Therefore, the psychological well-being of a woman during the perinatal period needs to be given the attention that it deserves in order to safeguard the well-being of the baby and all the people around her.

Recommendations: Screening women for the presence of psychological distress during the antenatal and postnatal periods should be mandatory. Appropriate referral should then be made depending on the outcome of the screening.

Key words: Psychological distress, Perinatal period, Edinburgh Postnatal Depression Scale, General Health Questionnaire-12

1. Introduction

Psychological distress is uncommonly regarded as a separate concept and is frequently embedded in the context of strain, stress, and distress [1]. The presence of psychological distress does not imply the presence of mental disorder or depression, until the diagnosis is confirmed using one of established diagnostic tools. Numerous screening tools for antenatal and postnatal distress have been developed and are in use especially in developed countries like Sweden and the United Kingdom [2] but also in Africa and other developing countries outside Africa.
The tools include the Edinburgh Postnatal Depression Scale (EPDS) and (General Health Questionnaire (GHQ-12). The EPDS is a ten item screening tool designed to identify clinical depression for both the antenatal and postnatal periods [3, 2]. The GHQ-12, is a twelve item screening instrument for psychological disturbance in a wide variety of clinical groups. It has been recommended by the World Health Organisation as a pragmatic measure especially in busy settings, and situations where participants require the questionnaire to be read out for them [4].

Careful selection of measures that are sensitive to the culture of the clinical group under study is an important undertaking for easy identification of psychological distress and subsequent prevention of mental disorders [5]. Mental Health in general and perinatal mental health in particular is one area that has been neglected in Zambia.

Psychological problems in the perinatal period have been widely identified in developed countries. In the past, literature on psychological problems was limited to the postnatal period but recently, it is being extended to the antenatal period as well. The perinatal period is considered by some psychologists as a time of crisis brought about by emotional, psychological and social stress [6]. For many women this period can be a time of heightened risk for mental health problems and negative emotional responses. Women in the perinatal period may be increasingly vulnerable to affective disorders, psychotic illness and psychological distress [7]. Exacerbation of pre-existing mental disorders such as depression, that were present in antenatal period or a psychotic illness such as schizophrenia might be experienced. For others, the perinatal period might bring the first experience of mental difficulties and psychological distress [8].

According to Crawford and Unger [9] psychosocial factors such as stressful situations, trait anxiety and life changes have been associated with pregnancy and birth complications such as pre-eclampsia, pre-term labour and prolonged pregnancy. Additionally, transition to motherhood is said to be associated with a decline in personal well-being and a general increase in distress resulting from the magnitude of adjustments that have to be made as a result of the changes that occur in a woman during this period. Research has found that stress in pregnancy contributes to emotional instability. This instability is exhibited through depressive feelings, hostility and heightened anxiety [10].

The study by Jomeen and Martin [2], which assessed women in the antenatal period for antenatal depression, has emphasised the importance of identification of maternal psychological distress during the course of pregnancy and in months following childbirth. Other studies on antenatal depressive mood have examined antenatal mood as predictor of postnatal depression [11, 12] and have found that psychological disturbance and distress during pregnancy are risk factors. Postnatal depression has been extensively studied in both the biomedical and social science realms focusing on individual factors, (such as hormones and previous psychiatric morbidity), context and experience of childbirth, and motherhood, respectively [13]. Postnatal depression involves a range of depressive symptoms variable in its severity and duration that may be suffered by a mother after childbirth. The difference between postnatal depression and psychological distress is embedded in the difference in severity of the symptoms exhibited by the patient.

In depression, the mother may present with increased levels of anxiety [14], declining levels of satisfaction with spouse, and reduced enjoyment and positive attitude towards the baby [15]. In psychological distress similar symptoms may be exhibited but the levels will be lower than those in depression, but both depression and psychological distress can be identified when the cut-off for the measure being used is adjusted to accommodate those with mild symptoms to be identified [2]. The prevalence rate of postnatal depression has been reported as 13 percent [16], with adverse consequences for women and the family as whole, some cases of which have resulted in maternal deaths through suicide. Suicide has been described as accountable for a significant number of deaths in young women in developing countries [17].

Austin [18] in his study on perinatal mental health, highlighted the impact of maternal distress and depression on the offspring stating that high levels of distress arising from an increase in cortisol in the mother is associated with increased irritability and poor neurological scores at birth. Although not much is known about the experiences and perceptions of babies in utero, it has been found that perceptual abilities and reactions of the foetus in the third trimester of pregnancy include the ability to hear, see, and taste. The unborn child is said to recognise the mother’s voice and is receptive to what is happening both in utero and in the life of the mother. The negative impact that might result from distress during the perinatal period on the offspring may include poor mental health outcomes in childhood. Evidence also suggests that early parent-infant interactions directly affect the development of certain key regions of the brain and that repeated psychological trauma in infancy will impair functions in the brain and consequently contribute to the development of post-traumatic stress disorder [18].

2. Methodology

The present paper is based on a multi-staged longitudinal study that was conducted on a Zambian cohort of women during the perinatal period in fulfilment of a Doctor of Philosophy Degree. The study had both quantitative and
The qualitative phase preceded and informed the quantitative phase. Data for the quantitative Phase was collected using the EPDS, the GHQ12, and the Study Specific Measure of Psychological Distress (SSMPD), Interview Schedules. A sample of 200 women were required however, 294 women were interviewed during the antenatal period in order to cater for the attrition rate. During the first 6 weeks of the postnatal period, 199 of the 294 were re-interviewed as they came up for their postnatal check-up. This paper reports the quantitative component of the study.

Limitations of the available screening scales for the perinatal period make it more difficult to predict depression and identify depressed mothers. Selection of a measure that is appropriate is essential in identifying psychological distress. The EPDS has been found to have satisfactory validity, split half reliability and also showed sensitivity to the changes in the severity of depression over time while the GHQ-12 has been recommended as an accurate measure of psychological distress in all clinical populations because of its design as a self-report questionnaire that is easy to administer and score. In recent years the GHQ-12 has been extensively used as a short screening instrument. On the other hand, the SSMPD was developed from the data collected during the qualitative stage. Analysis of the performance of the three tools in detecting perinatal distress serves as their convergence point.

Approval for the study was obtained from both the Leeds Metropolitan University Research Ethics Committee and the University of Zambia Biomedical Research Ethics Committee. Participation in the study was voluntary and based on informed consent. Clearance was also sought from the Lusaka District Health Management Team in order to gain access to health facilities that were included in the study. Information concerning participation and consequences of the study was availed to all the participants. Participants were informed that the information collected was anonymous and confidential, but it could be shared with medical personnel in case of risk. Participants were informed of their right to withdraw from participation any time without prejudice. Numbers as opposed to names were used on all interview scripts in order to maintain anonymity.

Data were analysed using the Statistical Package for Social Sciences (SPSS) version 11.0. The sequence of the analysis is uniform for both antenatal and postnatal phases of the study except for measures of central tendency on regular variables which were carried out only for the antenatal phase and could not be repeated in postnatal phase considering that participants were the same for both phases. They were also carried out on all the three tools used to measure psychological distress (SSMPD, EPDS and GHQ-12) in the present study. Measures of central tendency were done in order to get the overall summary of the data [19] related to participants age, and their scores on the EPDS, SSMPD, and GHQ-12. Univariate descriptive analysis of the SSMPD domains was also conducted to explore factors that may contribute to psychological distress in the population under study. This was done in the form of basic frequency tables.

3. Results

Demographic Characteristics of Participants

A total of 300 women in their third trimester of gestation (32 weeks gestation) aged between 18 and 45 years were enrolled to take part in phase one (antenatal) and two (postnatal) of the study. Of the 300 participants, n= 6 (2%) was the non-response rate leaving n= 294 (98%). The results revealed that the age of women ranged from 18 to 45 with the mean age of 27 years (SD = 5.9). The population was young below the median 27 where expectant mothers have greater risk of psychological distress and other perinatal problems [20]. It is however recognised that the distribution of this sample by age is dependent on the sampling method (purposive sampling method) used in the present study.

The social demographic characteristics that were used as variables to measure social economic status in the present study included: employment status, marital status, educational level, residential area and parity. The largest number of participants which is concentrated within the age of 20-34 (n=206 (70.1%) were not employed compared to n=49 (16.7%) who were in employment. Employment in this context means formal or informal employment, referring to working for an organisation and drawing a salary on a regular basis or running a private business respectively. The Central Statistics Office (CSO) [21] shows employment rates as 50 percent and 79 percent for women and men respectively, generally showing lower employment rates for women in Zambia.

The majority n=250 (83.3 %) participants were married among whom n=242 (82.3%) were in the age group 20-39 in comparison with those in the same age group who were single n=28 (9.5%). For the CSO [21] figures show 60.2 percent of women in Zambia were married. However, this number does not include those that are cohabiting with or have separated from their spouses.

The majority of the women, n= 254 (83.3%) did not have college or university education but have had either basic education (secondary and primary) or no education at all n=17 (5.7%). Secondary level of education is concentrated within the age group 20-29 n=86 (29.2%) compared to primary level n=50 (17%) and college/university n=32 (10.9%) respectively. The CSO [21] shows that only 21 percent of women between ages 20-29 had completed secondary education compared to 45 percent of their male counterparts.
It is acceptable in Zambia to measure social status using residential area, which is mostly categorised as high density, medium density and low density. A high density residential area, for instance, is highly populated and mostly occupied by the poorest people who, in most cases have low educational attainments as well. Although participants in the present study were drawn from representative health centres within Lusaka for the purpose of painting a holistic picture, the majority \( n = 220 \) (73.3\%) of them lived in high density to medium density residential areas as compared to the minority \( n = 74 \) (24.7\%) who lived in low density areas. There were more participants aged between 20 and 29 residing in medium density areas \( (n=74 \ (25.1\%)) \) compared to those in the same age group residing in high density areas \( (n=57 \ (19.4\%)) \) and low density areas \( (n=43 \ (14.6\%)) \) respectively. The social economic status of the participants interviewed was rather low. Table 1 below shows the social demographic characteristics of participants.

**Study specific measures of psychological distress during the perinatal period**

The study specific measures of psychological distress during the perinatal period were derived from the qualitative component of the study. The categories in the study specific measures of psychological distress during the perinatal period had between two and four questions each with either two (yes or no) or four (most of the time; quite often; occasionally; No, never) responses. Each of the responses attracted a score. The categories include; anxiety about HIV status and testing (two questions), lack of social support (four questions), uncertainty about survival from childbirth (three questions), and vulnerability/oppression (two questions). They formed part of the answer to establishing the extent to which the population under study experienced psychological distress during the perinatal period. Results of the current study are presented in table 2.

The table 2 shows that during the antenatal period a substantial proportion of women were worried about their own HIV status and as well as that of their baby at birth (47.6\%, 51.7\% respectively), while the post natal period shows a slight reduction (45.2\% and 41.8\%) in the proportion of women’s worry about their HIV status and that of the baby. The results further show that a minority (13.9\%) of participants said that they would not have anyone to take care of their child if they became unwell. No comparison is provided for the postnatal period as results were not significant. This is an indication of vulnerability to psychological distress. Table 2 further shows that during the antenatal period almost half (44.9\%) of the women in the study responded that they were worried about their ability to provide for their baby once it was born. In the post natal period the proportion of women who expressed worry on how to provide for their babies increased to 58.1 percent. A magnitude of 10.5 percent of women expressed lack of help when they needed it. This proportion shows that lack of social support for participant’s in this study fall within the global prevalence of psychological distress which has been estimated between 10 and 15 percent and has been considered a public health concern [17].

A good number of women in the antenatal period (60.5\%) expressed worry about going through the process of childbirth and surviving it as well as whether they would give birth to a live baby. In the post natal period, half of the women (49.5\%) reported worry about survival from childbirth as well as whether they would give birth to a healthy baby, showing a 10 percent reduction from the antenatal period. In addition, majority of women (71.4\%) experienced fear antenatally that the process of childbirth may give rise to complications, while 28.6 percent did not worry at all about whether they would suffer any complications. On the hand the percentage of women who expressed worry about complication during postnatal period reduced to 50.8 percent. With regard to feeling in control of their lives, nearly all (96.6\%) women interviewed during the antenatal period reported being in control. Results from the postnatal period have not been reported as they were not significant.
Presence a score’s absence of distress EPDS), Postnatal mean score of general health index was during the antenatal period, which is related to the factors with scores above 10 indicating the pre indicating absence of distress as compared to (80.3%) had scores below 10 (a noticeable skew to the left) More than 80 percent of the expectant mothers antenatal period, that the prevalence of psychological distress during the mothers about the occurrence of distress, it was observed it follows therefore that inquiring from these expectant mothers about the occurrence of distress, it was observed clinically depressed or progressing to levels of disorder could have been missed. The favourable cut-off for major depression is 14/15 [24]. However, considering that the aim of the study was to determine the prevalence of psychological distress, it was suitable to adjust the cut-off to 8 in order to accommodate all cases of distress [2] and minimise chances of missing many cases and reduce chances of including non-cases. The cut-off point for psychological distress was set at 10. The selection of the cut-off was guided by Mofrad et al, [22] in whose study the cut-off for the GHQ-28 was 23 from the total of 84. This was done to minimise the chances of missing many cases. According to Elliott [23], if a higher cut-off is chosen, some women who might otherwise be clinically depressed or progressing to levels of disorder could have been missed. However, measures should be taken to minimise inclusion of non-cases. Likert scoring method was used with the response scale ranging from 0 – 3 (where 0 is the lowest and 3 is the highest score) on seven items, and 0 – 1 (where 0 is the lowest score and 1 is the highest score) on four items, giving a total of score of 25. It follows therefore that inquiring from these expectant mothers about the occurrence of distress, it was observed that the prevalence of psychological distress during the antenatal period in the population under study was high. More than 80 percent of the expectant mothers n= 236 (80.3%) had scores below 10 (a noticeable skew to the left) indicating absence of distress as compared to n= 58 (19.7%) with scores above 10 indicating the presence of distress during the antenatal period, which is related to the factors highlighted in table 2. The modal score was 3 whereas the mean score of general health index was 6.46 (SD = 4.7). Having given a descriptive picture of participants regarding the possible sources of psychological distress during the antenatal and postnatal period, the section below presents the prevalence of psychological distress in both the antenatal and postnatal period, using study specific measures of psychological distress and widely used measures of psychological distress (EPDS and GHQ-12). The EPDS and the GHQ-12 are validated and widely used especially in developed countries like the United Kingdom as well as some developing countries such as Nigeria. **Prevalence of psychological distress**

The cut-off point for psychological distress was set at 10. The selection of the cut-off was guided by Mofrad et al, [22] in whose study the cut-off for the GHQ-28 was 23 from the total of 84. This was done to minimise the chances of missing many cases. According to Elliott [23], if a higher cut-off is chosen, some women who might otherwise be clinically depressed or progressing to levels of disorder could have been missed. However, measures should be taken to minimise inclusion of non-cases. Likert scoring method was used with the response scale ranging from 0 – 3 (where 0 is the lowest and 3 is the highest score) on seven items, and 0 – 1 (where 0 is the lowest score and 1 is the highest score) on four items, giving a total of score of 25. It follows therefore that inquiring from these expectant mothers about the occurrence of distress, it was observed that the prevalence of psychological distress during the antenatal period in the population under study was high. More than 80 percent of the expectant mothers n= 236 (80.3%) had scores below 10 (a noticeable skew to the left) indicating absence of distress as compared to n= 58 (19.7%) with scores above 10 indicating the presence of distress during the antenatal period, which is related to the factors highlighted in table 2. The modal score was 3 whereas the mean score of general health index was 6.46 (SD = 4.7).

### Table 2: Study Specific Measures of Psychological Distress during the perinatal period

<table>
<thead>
<tr>
<th>LEVELS</th>
<th>VARIABLES</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Anxiety related to HIV (Self) (%)</td>
</tr>
<tr>
<td>Most of the time</td>
<td>14.3</td>
</tr>
<tr>
<td>Quite Often</td>
<td>7.1</td>
</tr>
<tr>
<td>Occasionally</td>
<td>26.2</td>
</tr>
<tr>
<td>No, Never</td>
<td>52.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0</td>
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</tbody>
</table>

### Antenatal and Postnatal EPDS Profiles

Using the Edinburgh Postnatal Depression Scale (EPDS), the study set out to measure the extent to which women at 32 weeks gestation (third trimester), and between one and six weeks after childbirth experienced distress. As indicated earlier, the EPDS is a ten item screening tool designed to identify clinical depression for both the antenatal and postnatal periods. The total score on the EPDS is 30 points. The favourable cut-off for major depression is 14/15 [24]. However, considering that the aim of the study was to determine the prevalence of psychological distress, it was suitable to adjust the cut-off to 8 in order to accommodate all cases of distress [2] and minimise chances of missing many cases and reduce chances of including non-cases.

![Psychological Distress (EPDS)](image)

**Figure 1: Psychological distress during antenatal and postnatal**

The cut-off point was adjusted for the same reasons given under the SSMPD. Taking that into account, the cut-off point used for the present study is 8 where a score below 8 indicates absence of psychological distress while a score above 8 is indicative of presence of psychological distress. Using the stated cut-off point, the prevalence of psychological distress in the population under study was 39.5 percent during the antenatal period and 27.9 percent during the postnatal period. The mean score for psychological distress during the antenatal period was 9.2 while that for the postnatal period was 4.8. Special attention was paid to one of the components of the EPDS-the thought
of harming oneself (suicidal thoughts) if it had occurred to any mother. However it was interesting to note that the thought occurred in a small number of participants, giving a cumulative rate of, \( n = 38 \) (12.7%). This was done because suicide due mental health problems during the perinatal period has been identified by the United Kingdom’s Department of Health [7] as one of the common causes of death in women.

DISCUSSION

There is paucity of research information in the area of psychological distress in Zambia which underscores the importance of conducting a study on the prevalence of psychological distress during the perinatal period on a Zambian cohort. This study therefore examined the extent to which women experienced psychological distress during the antenatal and postnatal periods using the EPDS, GHQ-12, and the SSMPD.

Prevalence of Psychological Distress

Findings suggest high prevalence of psychological distress during the antenatal period as revealed by the EPDS, GHQ-12, and the SSMPD scores. Psychological distress was found in 39.9 percent of the participants during the antenatal period as measured by the EPDS. A reduction to 27.9 percent was noted in the postnatal period. This result supports previous studies which have shown that rates of psychological distress are higher in the antenatal period than the postnatal period, and that about a third of women who experience postnatal psychological distress show high scores even during pregnancy [25]. One possible reason for high rates of psychological distress during antenatal compared to the postnatal period could be the uncertainty about dying and uncertainty about complications associated with delivery which are almost immediately eliminated upon a successful delivery. Using the SSMPD, the proportion of women who reported uncertainty about dying and uncertainty about surviving complications during delivery dropped by more than half from 14.7 to 7.1 percent and 14.6 to 5.6 percent during the antenatal and postnatal periods respectively (Table 1). Literature has indicated that a decline in the rate of distress would normally be expected considering that women have gone through childbirth and survived it without any complications, and may not need to be uncertain about the outcome [10, 26].

Women appeared uncertain about the outcome of the process of childbirth. The thought of dying during childbirth occurred to most of the women. The high maternal mortality rates reported in many developing countries like Zambia appears to be the main reason behind having such thoughts. It is estimated that the maternal mortality rate for Zambia was 591 per 100,000 live births [27]. In relation to childbirth, thoughts about possible complications during labour appear common to the population under study. Women were also worried about their own HIV status and the status of their baby when it is born. Social support during the antenatal period appeared to be inadequate to a good number of women.

Unavailability of someone to confide in when they had a problem also appeared to be prevalent in the area of social support. These factors might be the sources of psychological distress for women during the perinatal...
period [28]. On the positive, it appears most of the women who participated in the study took part in decision making in their homes and were in control of their lives. This might make vulnerability and oppression the least source of worry for participants in the present study.

The GHQ-12 on the other hand showed that 42.8 percent of the participants experienced psychological distress during the antenatal period which increased to 56.7 percent in the postnatal period. The increase in the prevalence rates in the postnatal period as measured by the GHQ-12 may be attributed to the possibility that the GHQ-12 might be measuring other aspects of psychological distress that were not being captured by the EPDS. This may also be understood from the context that the GHQ-12 was designed to detect psychological distress in various clinical groups while the EPDS focuses on depressive symptoms during the perinatal period. However, from the context that previous studies have shown that the prevalence of psychological distress is higher in the antenatal period than in the postnatal period, the increase in prevalence rate in the postnatal period in the present study as measured by the GHQ-12 might add to the debate of its unsuitability for detecting psychological distress in the perinatal period.

Ip and Martin [4] state that while the GHQ-12 is a useful screening instrument in many clinical groups, it is not suitable for use during the perinatal period due to its underlying factor structure as well as its scoring methods. Likert scoring method was used in the present study. It has been documented that likert scoring method, although recommended, has a tendency to increase case detection rates in the perinatal period [4]. In this regard, research employing a different design is needed where factor analysis should be undertaken in order to identify components of the instrument which make a positive contribution to identifying psychological distress in the population under study. Further research which is specific to validating screening instruments for psychological distress in the perinatal period will facilitate identification of robust instruments for this period in Zambia.

The rates of psychological distress suggested by the present study are higher than found in a population survey conducted in Zambia by Chipimo and Fylkenes [29] who reported the prevalence rate as falling between 13.6 percent and 15.3 percent. The low prevalence rates in Chipimo and Fylkenes [30] may be attributable to the fact that their study was based on primary health care clinic attendees in Lusaka, Zambia who were visiting health facilities for general health problems while the latter was focused on women at 32 weeks gestation and at 6 weeks postnatal. Sub-Saharan Africa has shown higher prevalence of psychological distress in perinatal women than non-perinatal women [31, 3].

Global estimations of the prevalence of psychological distress during the perinatal period have been reported to fall between 13 and 15 percent [17, 32]. These are also far lower than suggested by the present study findings and those found in South Africa by Honikman and Field [33]. Therefore the present study findings support the perinatal mental health study in South Africa led by Honikman and Field [33] which also showed the prevalence rates as higher than the global estimations (41%). Developing countries have been found to show higher rates of perinatal mental health problems compared to developed countries. This has been confirmed by WHO [34] in the report on maternal mental health, which revealed the prevalence of maternal mental disorders as falling between 10 and 41 percent, and 10 and 15 percent in developing and developed countries respectively.

Although the prevalence rates are varied between developing and developed countries it is arguable that different prevalence rates may refer to different levels of the problem. For instance, variability has been found in studies conducted in developed countries and has been attributed to cultural differences, reporting patterns, and differences in social-economic status, among other variables [34]. Differences in methodologies as well as the measures used to identify psychological distress may also play a role in contributing to the variations in the rates of psychological distress [35]. WHO [34] has emphasised that it is inappropriate to generalise results among different countries because of the wide difference in mental health systems, social demographic patterns, cultural orientations, political, influences, and economic strengths.

The high prevalence rates revealed by the present study findings do not come as a surprise given the limited resources available for mental health in general in Zambia. But Honikman and Field [33] argue that one would expect lower rates of psychological distress during the perinatal period because women are more in contact with health professionals during this period compared to any other time. Despite the increased contact with health professionals the quality of contact maybe questionable considering the critical shortage of human resources for health being experienced by most low and middle income countries arising from increased burden of ill health [36].

CONCLUSIONS

The prevalence of psychological distress in during the perinatal period in Zambia is high. Therefore, the psychological well-being of a woman during the perinatal period needs to be given the attention that it deserves in order to safeguard the well-being of the baby and all the people around her. Screening women for the presence of psychological distress during the antenatal and postnatal periods should be mandatory. Appropriate referral should then be made depending on the outcome of the screening.
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