

PROSPECTIVE STUDY ASSESSING MENTAL HEALTH ISSUES DURING
PREGNANCY AND POSTPARTUM AT MILLENNIUM HOSPITAL

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ABSTRACT

Introduction: Depression and anxiety are the most common mental health problems in pregnancy. This affects 10-15 out of every 100 pregnant women. Lack of recognition of high-risk factor or failure to develop appropriate management leads to many health problems in pregnancy and puerperium. **Purpose of study:** To assess the prevalence of mental health issues in pregnant patients presenting to Millennium hospital. Early detection of mental health issues during pregnancy and post-natal period and counselling thereby Improving the safety of the mother and fetus. **Methods:** The prospective study included 150 women, aged between 19 and 42 years, who received perinatal care at the Millennium hospital between October 2024 to October 2025. **Results:** There was an association of age group and high Edinburgh scores. The score is statistically significant in the age group of 19-26 during 6 weeks post-natal visit and it correlates mostly with issues of coping up with the baby and the change in sleep patterns. **Conclusion:** Screening the patients at the booking visit will definitely help us to identify high score –high risk patients. Frequent follow ups of such patients will immensely help health care providers approach such patients with better plan of care.

KEYWORDS: Anxiety, Depression, Edinburgh postnatal depression scale, Perinatal mental illness, Psychiatric disorders Puerperium.

INTRODUCTION

Pregnancy and the postpartum period are associated with profound biological, psychological, and social changes that can influence a woman's mental health. Although pregnancy and childbirth are generally considered positive life events, they may also increase vulnerability to psychological problems, particularly depression and anxiety. Perinatal mental health problems can negatively affect maternal well-being, functioning, quality of life, and the mother–infant relationship. They may also have adverse consequences for infant growth, development, and family functioning if they remain unrecognized and untreated. Depressive symptoms may occur during pregnancy as well as after childbirth. Antenatal depression is an important risk factor for postnatal depression, and women who experience depressive symptoms during pregnancy may require closer monitoring after delivery. Several factors, including previous mental health problems, inadequate social support, marital or family difficulties, financial stress,

unwanted pregnancy, obstetric complications, and stressful life events, may contribute to the development of perinatal depressive symptoms. However, symptoms may be overlooked because they can be attributed to the normal physical and emotional changes associated with pregnancy and motherhood.

Routine screening can facilitate early identification of women who may require further psychological assessment and intervention. The **Edinburgh Postnatal Depression Scale (EPDS)** is a widely used 10-item self-report screening instrument developed to identify symptoms of depression during the perinatal period. It assesses depressive symptoms experienced over the preceding seven days and can be used during both pregnancy and the postpartum period. The EPDS is a screening tool rather than a diagnostic instrument; women with elevated scores require appropriate clinical assessment to establish a diagnosis and determine the need for intervention.

A prospective assessment of mental health from pregnancy through the postpartum period provides an opportunity to examine the evolution of depressive symptoms over time.

Repeated administration of the EPDS can help identify women with persistent symptoms, new-onset symptoms after delivery, or improvement in symptoms following childbirth. It can also help determine the relationship between antenatal depressive symptoms and subsequent postpartum depressive symptoms.

Therefore, the present prospective study aims to assess mental health problems among pregnant women using the Edinburgh Postnatal Depression Scale during pregnancy and following childbirth. The study will evaluate changes in EPDS scores over the antenatal and postpartum periods and identify the proportion of women who develop clinically significant depressive symptoms. It will also explore selected sociodemographic, obstetric, and psychosocial factors associated with higher EPDS scores. The findings of the study may contribute to improved recognition and timely management of perinatal mental health problems and support the incorporation of systematic mental health screening into antenatal and postnatal care.

MATERIALS AND METHODS

Methods

The prospective study included 150 women, aged between 19 and 42 years, who received perinatal care at the Millennium hospital between October 2024 to October 2025.

Sample Collection Technique

1. All antenatal mothers after getting informed written consent are given the Edinburgh questionnaire at booking visit or at 10 weeks, above 35 weeks, 1 week and 1 month postnatal.

2. The Edinburgh form consists of 10 short statements. Mother checks off one of the four possible answers that is closest to how she felt during the past week, most mothers easily complete the form in less than 5 minutes, if they don't understand the statement it is clarified by the gynecologist.
3. Responses are scored 0,1,2,3 based on the seriousness of the symptoms. Items 3, 5 and 10 are reverse scored 3,2,1,0. The total score is found adding the scores for each of the 10 items. Mothers scoring score above 9 need health education by gynecologist and follow up and reassessment in next visit and scores above 12 are likely to suffer from depression and should be referred to psychiatrist for further management.

Inclusion Criteria

All pregnant mothers visiting Millennium Hospital who consent to participate.

Exclusion Criteria

Patient not willing to consent.

Patients with chronic mental health issues like bipolar disorder, schizophrenia, depression or anxiety disorder were excluded from the study.

Data collection procedure

Data collected using Edinburgh form.

Data analysis and interpretation.

The data will be entered into MS Excel latest version and further analyzed using SPSS (version 26.0; SPSS Inc., Chicago IL, USA) For descriptive analysis, the categorical variables will be analyzed by using frequency and percentages and the continuous variables will be analyzed by calculating mean $\pm$ Standard Deviation. For inferential analysis, The numerical data were analyzed using the Paired "t" test. The categorical data were analyzed using Chi square test. will be applied and "p" < 0.05 will be considered as statistically significant.

Table 1: Frequency and Percentage Distribution of Participants According to Selected Demographic and Clinical Variables (n = 150)

Variable	Category	Frequency (n)	Percentage (%)
Age group	19–26 years	27	18.0
	27–34 years	94	62.7
	35–42 years	29	19.3
Parity	Primi	42	28.0
	Multi	108	72.0
Nationality	Indian	105	70.0
	Bangladeshi	7	4.7
	Pakistani	19	12.7
	Other	19	12.7
Employment status	Employed	24	16.0
	Not employed	126	84.0
Period of gestation at booking	<14 weeks	121	80.7
	>14 weeks	29	19.3
Health insurance coverage	Yes	104	69.3
	No	46	30.7

Age group of the patients included in the study ranges from 19 to 42 years.
 Most of the patients are multigravida.
 Most of the patients belonging to Asian population.
 Most of the patients are home makers.
 Most of the patients are having insurance.

Table 2: Frequency and Percentage Distribution of Participants According to Obstetric History, Medical Comorbidities, and EDS Scores (n = 150)

Variable	Category	Frequency (n)	Percentage (%)
Obstetric History	Nil	54	36.0
	Previous LSCS	51	34.0
	FTND / NVD	16	10.7
	Abortion / Miscarriage	13	8.7
	Medical Comorbidity (GDM, HTN, Hypothyroidism)	12	8.0
	Other / Mixed (PROM, IUD, IUGR, RPL, etc.)	4	2.7
Medical Comorbidities	Anemia	64	42.7
	Gestational Diabetes Mellitus (GDM)	41	27.3
	Thyroid Disorders	16	10.7
	Vitamin D Deficiency	9	6.0
	Other	14	9.3
	No Comorbidity	6	4.0
EDS Score – 1st Assessment	<13 (No Depression)	144	96.0
	>13 (Possible Depression)	6	4.0
EDS Score – 2nd Assessment	<13 (No Depression)	148	98.7
	>13 (Possible Depression)	2	1.3
EDS Score – 3rd Assessment	<13 (No Depression)	145	96.7
	>13 (Possible Depression)	5	3.3
EDS Score – 4th Assessment	<13 (No Depression)	147	98.0
	>13 (Possible Depression)	3	2.0

Patients with Edinburg score more than 13 overall is less than 10.

Table 3: Mean and Standard Deviation of EDS Scores Across Four Assessment Periods (n = 150).

Assessment Period	Mean	Standard Deviation (SD)	Minimum	Maximum
EDS Score 1 (First assessment)	4.81	4.46	0	18
EDS Score 2 (Second assessment)	3.45	3.73	0	16
EDS Score 3 (Third assessment)	3.27	4.34	0	19
EDS Score 4 (Fourth assessment)	2.21	3.61	0	20

Table 4: Comparison of Mean EDS Scores Between Assessment Periods (Paired t-test, n = 150).

Comparison	Mean (Time 1)	Mean (Time 2)	t-value	p-value
EDSCORE1 vs EDSCORE2	4.81 ± 4.46	3.45 ± 3.73	4.59	<0.001*
EDSCORE1 vs EDSCORE3	4.81 ± 4.46	3.27 ± 4.34	3.81	<0.001*
EDSCORE1 vs EDSCORE4	4.81 ± 4.46	2.21 ± 3.61	7.04	<0.001*

Significant at $p < 0.05$.

Edinburg score is more than 9 in over 18 patients but after counselling and mental health education the score significantly reduced.

Table 5: Association Between Age Group and Depression Status (EDS Scores) Across Assessment Periods (n = 150).

Assessment	Age Group	<13 (No Depression)	>13 (Possible Depression)	χ^2 (df = 2)	p-value
EDS 1	19–26 yrs (n=27)	96.3%	3.7%	0.045	0.978

	27–34 yrs (n=94)	95.7%	4.3%		
	35–42 yrs (n=29)	96.6%	3.4%		
EDS 2	19–26 yrs (n=27)	100.0%	0.0%	1.403	0.496
	27–34 yrs (n=94)	98.9%	1.1%		
	35–42 yrs (n=29)	96.6%	3.4%		
EDS 3	19–26 yrs (n=27)	96.3%	3.7%	1.578	0.454
	27–34 yrs (n=94)	97.9%	2.1%		
	35–42 yrs (n=29)	93.1%	6.9%		
EDS 4	19–26 yrs (n=27)	92.6%	7.4%	6.257	0.044*
	27–34 yrs (n=94)	100.0%	0.0%		
	35–42 yrs (n=29)	96.6%	3.4%		

Significance level: $p < 0.05$.

Regarding the association of age group and high edinburg score the score is statistically significant in the age group 19-26 during 6 weeks post natal visit and it correlates mostly with issues of breast feeding.

Table 6: Association Between Parity and Depression Status (EDS Scores) Across Assessment Periods (n = 150).

Assessment	Parity	<13 (No Depression)	>13 (Possible Depression)	χ^2 (df = 1)	p-value
EDS 1	Primi (n=42)	100.0%	0.0%	2.43	0.119
	Multi (n=108)	94.4%	5.6%		
EDS 2	Primi (n=42)	100.0%	0.0%	0.79	0.375
	Multi (n=108)	98.1%	1.9%		
EDS 3	Primi (n=42)	97.6%	2.4%	0.16	0.685
	Multi (n=108)	96.3%	3.7%		
EDS 4	Primi (n=42)	95.2%	4.8%	2.27	0.132
	Multi (n=108)	99.1%	0.9%		

Significance level set at $p < 0.05$.

There is no statistically significant association seen in parity and high Edinburg score.

Table 7: Association Between Nationality and Depression Status (EDS Scores) Across Assessment Periods (n = 150).

Assessment	Nationality	<13 (No Depression)	>13 (Possible Depression)	χ^2 (df = 3)	p-value
EDS 1	Indian (n=105)	96.2%	3.8%	3.20	0.362
	Bangladeshi (n=7)	100.0%	0.0%		
	Pakistani (n=19)	89.5%	10.5%		
	Other (n=19)	100.0%	0.0%		
EDS 2	Indian (n=105)	98.1%	1.9%	0.87	0.833
	Bangladeshi (n=7)	100.0%	0.0%		
	Pakistani (n=19)	100.0%	0.0%		
	Other (n=19)	100.0%	0.0%		
EDS 3	Indian (n=105)	95.2%	4.8%	2.22	0.529
	Bangladeshi (n=7)	100.0%	0.0%		
	Pakistani (n=19)	100.0%	0.0%		
	Other (n=19)	100.0%	0.0%		
EDS 4	Indian (n=105)	98.1%	1.9%	1.57	0.667
	Bangladeshi (n=7)	100.0%	0.0%		
	Pakistani (n=19)	94.7%	5.3%		
	Other (n=19)	100.0%	0.0%		

Significance level: $p < 0.05$.

There is no statistically significant association seen between the nationality and high Edinburg score.

Table 8: Association Between Employment Status and Period of Gestation at Booking with Depression Status (EDS Scores) Across Assessment Periods (n = 150)

Variable	Assessment	Category	<13 (No Depression)	>13 (Possible Depression)	χ^2 (df)	p-value
Employment Status	EDS 1	Employed (n=24)	100.0%	0.0%	1.19 (1)	0.275
		Not employed (n=126)	95.2%	4.8%		
	EDS 2	Employed	100.0%	0.0%	0.39 (1)	0.534
		Not employed	98.4%	1.6%		
	EDS 3	Employed	100.0%	0.0%	0.99 (1)	0.321
		Not employed	96.0%	4.0%		
	EDS 4	Employed	100.0%	0.0%	0.58 (1)	0.445
		Not employed	97.6%	2.4%		
POG at Booking	EDS 4	<14 weeks (n=121)	97.5%	2.5%	0.73 (1)	0.392
		>14 weeks (n=29)	100.0%	0.0%		

Significance level: $p < 0.05$.

Overall the statistical score is not significant between employed and unemployed mother with regards to high Edinburg score.

Table 9: Association Between Period of Gestation (POG) at Booking and Depression Status (EDS Scores) Across Assessment Periods (n = 150).

Assessment	POG at Booking	<13 (No Depression)	>13 (Possible Depression)	χ^2 (df = 1)	p-value
EDS 1	<14 weeks (n=121)	96.7%	3.3%	0.79	0.375
	>14 weeks (n=29)	93.1%	6.9%		
EDS 2	<14 weeks	98.4%	1.7%	0.49	0.486
	>14 weeks	100.0%	0.0%		
EDS 3	<14 weeks	95.9%	4.1%	1.24	0.266
	>14 weeks	100.0%	0.0%		
EDS 4	<14 weeks	97.5%	2.5%	0.73	0.392
	>14 weeks	100.0%	0.0%		

Significance level set at $p < 0.05$.

There is no association between period of booking and high Edinburg scores.

Table 10: Association Between Health Insurance Coverage and Depression Status (EDS Scores) Across Assessment Periods (n = 150).

Assessment	Health Insurance	<13 (No Depression)	>13 (Possible Depression)	χ^2 (df = 1)	p-value
EDS 1	Yes (n=104)	98.1%	1.9%	3.81	0.051
	No (n=46)	91.3%	8.7%		
EDS 2	Yes	99.0%	1.0%	0.36	0.551
	No	97.8%	2.2%		
EDS 3	Yes	96.2%	3.8%	0.28	0.599
	No	97.8%	2.2%		
EDS 4	Yes	99.0%	1.0%	1.87	0.172
	No	95.7%	4.3%		

Significance level set at $p < 0.05$.

Also, there is no association found between the period of antenatal booking and high Edinburg or possibility of depression.

Table 11: Association Between Obstetric Outcome and Depression Status (EDS Scores) Across Assessment Periods (n = 150).

Assessment	Obstetric Outcome	<13 (No Depression)	>13 (Possible Depression)	χ^2 (df = 2)	p-value
EDS 1	LSCS (n=67)	95.5%	4.5%	0.29	0.864
	Normal Vaginal Delivery (n=77)	96.1%	3.9%		
	Others (n=6)	100.0%	0.0%		
EDS 2	LSCS	98.5%	1.5%	0.09	0.954
	Normal Vaginal Delivery	98.7%	1.3%		
	Others	100.0%	0.0%		
EDS 3	LSCS	95.5%	4.5%	0.61	0.738
	Normal Vaginal Delivery	97.4%	2.6%		
	Others	100.0%	0.0%		
EDS 4	LSCS	97.0%	3.0%	0.65	0.723
	Normal Vaginal Delivery	98.7%	1.3%		
	Others	100.0%	0.0%		

Significance level: $p < 0.05$.

Overall the high Edinburg score patients did not have alternative obstetric outcome when considering the total sample.

Table 12: Association Between Psychiatrist Consultation and Depression Status (EDS Scores) Across Assessment Periods (n = 150).

Assessment	Psychiatrist Consultation	<13 (No Depression)	>13 (Possible Depression)	χ^2 (df = 1)	p-value
EDS 1	Yes (n=2)	100.0%	0.0%	0.08	0.771
	No (n=148)	96.0%	4.0%		
EDS 2	Yes	100.0%	0.0%	0.03	0.869
	No	98.7%	1.3%		
EDS 3	Yes	50.0%	50.0%	13.70	0.000*
	No	97.3%	2.7%		
EDS 4	Yes	100.0%	0.0%	0.04	0.839
	No	98.0%	2.0%		

Significant at $p < 0.05$.

Patients with high Edinburg score more than 13, 97% of patients did not go for psychiatric consultation as the consultation is not covered insurance also, they are reluctant to go for psychiatric consultation.

RESULTS

In our study the sample size was 150 patients. The cut off points which we analyzed were both the score more than 9 and the score more than 12.

During the immediate postnatal visit, the Edinburg score 3, score 9 in 6 patients mostly due to maternal worries regarding the baby care and changes in sleep pattern.(table3)

In our study the overall prevalence of high scores above 9 was 12% and 18 % of total patients had high scores at booking.(table4)

There were 18 out of 150 patients with Edinburg score persistently more than 9 at least in 2-3 scoring periods.(table 4).

There was an association of age group and high Edinburg scores. The score is statistically significant in the age group of 19-26 during 6 weeks post-natal visit

and it correlates mostly with issues of coping up with the baby and the change in sleep patterns.(table 5)

The significant factors contributing to high Edinburg scores in our studies were mostly unemployed mothers(table 8) (100%) and 11/18 (61%) were multigravida (table 6). Lack of additional support and the need to manage the pregnancy symptoms and the child at home could be the social factors which showed high score in them.

There were 15 patients with Edinburg score more than 9 ranging from 2 to 4 scoring periods and analysis showed that all the patients were unemployed and were home makers. The reasons for the high score were mostly hyperemesis, staying alone in the room for long time while partner goes to work and with previous poor obstetric history. When evaluating the Edinburg score of employed mothers, we found 24 mothers who were employed, of whom 2 had scored more than 9 in the initial booking visit. No antenatal employed patients had Edinburg score more than 13.(table 8)

Patients with high Edinburg scores more than 13, of which 97% did not go for psychiatric consultation as the consultation is not covered by insurance. Further more,

they were reluctant to go for psychiatric consultation. The main reason for non-consultation is the lack of insurance coverage.(table 12)

When analyzing the Edinburgh score individually, we noticed the scores were mostly high during the first booking visit. For 27 patients the score was more than 9 and 7 out of 27 patients' score was more than 13. Only patients with scores above 13 consulted a psychiatrist.(table 12)

Home maker(generation shapers) especially the multigravida, should be given more social and moral support to manage the pregnancy symptoms, cope with daily chores, and get support from family members in managing children at home.

DISCUSSION

The present prospective study assessed depressive symptoms among women during pregnancy and the postpartum period using the Edinburgh Postnatal Depression Scale (EPDS). A prospective design provides an important advantage because it allows changes in depressive symptoms to be followed over time and permits identification of women who have symptoms during pregnancy and subsequently develop or continue to experience symptoms after childbirth. Perinatal depression is an important public health concern because it can affect maternal functioning, quality of life, mother–infant interaction, and family well-being.

In the present study, EPDS screening demonstrated the presence of depressive symptoms among a proportion of women during pregnancy, with [X%] having an EPDS score above the predefined cut-off. During the postpartum assessment, [Y%] of women had an EPDS score above the cut-off. The [increase/decrease] in EPDS scores from pregnancy to the postpartum period suggests that mental health symptoms may change substantially during the perinatal period. Women who had higher antenatal EPDS scores were [more likely/not more likely] to have elevated postpartum scores in the present study.

These findings are consistent with the concept that antenatal depressive symptoms may be an important marker of subsequent postpartum mental health problems. In a prospective cohort study of 1,620 women, van der Zee-van den Berg *et al.*^[1] found that women who subsequently developed postpartum depressive symptoms had significantly higher EPDS scores during pregnancy than women who did not develop postpartum symptoms. However, the authors also demonstrated that the commonly used antenatal cut-off of ≥ 13 had relatively low sensitivity for predicting postpartum depressive symptoms, emphasizing that EPDS should be interpreted as a screening instrument rather than a definitive predictive test.^[1]

Depression screening involves the use of self-report depression symptom questionnaires to identify women above a preidentified cut-off value for further evaluation to determine whether depression is present.^[2] In the United Kingdom, the National Institute for Health and Care Excellence guidelines^[3] suggest that healthcare providers consider asking pregnant or postpartum women the two Whooley questions, and administering the Edinburgh Postnatal Depression Scale (EPDS) or Patient Health Questionnaire^[4] screening questionnaires as part of a full assessment if depression is suspected. The guidelines do not recommend administering a screening tool to all women. The UK National Screening Committee and Canadian Task Force on Preventive Health Care recommend against screening owing to concerns about false positives, possible harms, and the lack of evidence from well conducted trials that screening improves mental health outcomes. However, the United States Preventive Services Task Force (USPSTF) and Australian national guidelines recommend depression screening in pregnant and postpartum women, although the USPSTF notes that “screening should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up.” Depression screening is sometimes promoted in low- and middle-income countries, but it is not known whether it would improve mental health in those settings.^[5,6]

The 10 item EPDS is the most commonly used depression screening tool in perinatal care; cut-off values of 9 or higher and 12 or higher are most often used to identify women who might have depression.^[7]

It has been proven that the 10 items comprising the EPDS are suitable for screening and regular use. As the scale assesses a psychopathological trait, item distributions exhibit asymmetry. Item 10 presents a distinct floor effect and shows the lowest discriminating power and internal consistency compared to the other items, which perform strongly on these psychometrics.^[8]

Developed by Cox *et al.* in 1987^[9] to assist primary care health professionals to detect postpartum depression disorders, the Edinburgh postpartum depression scale (EPDS) is a screening questionnaire that has been widely used to evaluate symptoms of depression during pregnancy and the puerperium. The test can be completed by the patient in 5 minutes and consists of a scale with 10 items, assessing symptoms related to depression over the preceding 7 days, with scores ranging from 0 to 3 for each item. The final result, therefore, varies from 0 to 30. The authors evaluated its psychometric properties in the United Kingdom, obtaining a sensitivity of 86% and a specificity of 78%. Different scores (between 9–13 points) were compared in the EPDS, with a good correlation. The scores often used for diagnosis were ≥ 10 or ≥ 12 points.

More recent evidence also supports the diagnostic accuracy of the EPDS while demonstrating the importance of selecting an appropriate cut-off. A large individual-participant-data meta-analysis involving more than 15,000 women found that an EPDS cut-off of ≥ 11 provided a balance between sensitivity and specificity, whereas a higher cut-off such as ≥ 13 increased specificity at the expense of sensitivity.^[9] Therefore, the choice of cut-off in the present study should be interpreted in relation to the population studied and the objective of screening.

The use of the EPDS in the present study is supported by extensive evidence regarding its usefulness for screening depressive symptoms during the perinatal period. The EPDS is a 10-item self-report instrument specifically developed to identify symptoms of depression during the postnatal period and has subsequently been extensively evaluated during pregnancy as well. A systematic review of EPDS validation studies in antepartum and postpartum women demonstrated considerable variation in sensitivity and specificity across studies, reflecting differences in populations, settings, languages, diagnostic standards, and cut-off values.^[10]

The present findings should also be interpreted in the context of differences between screening-positive symptoms and clinically diagnosed depression. An elevated EPDS score does not establish a psychiatric diagnosis. A systematic review and individual-participant-data meta-analysis showed that prevalence estimates based solely on different EPDS cut-offs can differ considerably from prevalence established through structured clinical interviews.^[11] Consequently, women who screen positive should undergo appropriate clinical assessment rather than being considered to have definite major depressive disorder solely on the basis of their EPDS score.

Mental illness in pregnancy and the first year after birth affects up to 20% of women globally,^[12] and in the UK costs the National Health Service (NHS) around £1.2 billion per annual cohort of births.^[13] Perinatal mental illness (PMI) varies in severity and depression and anxiety are the most common type.^[14] Without treatment, PMI can lead to poor psychological and employment outcomes for women, and a range of adverse child outcomes which can persist into late adolescence.^[15]

Perinatal psychiatric disorders usually occur within the first months postpartum, but can happen earlier, with the gradual development of depressive symptoms, which may be mistaken with the deep sadness syndrome after childbirth. Postpartum depression is a psychiatric disorder that causes emotional, behavioral, and physical changes associated with the puerperium. It is estimated that 25 to 35% of women develop depressive symptoms and around 20% may experience depression, with an intensification of symptoms in the 3rd trimester of pregnancy.

The observed association between antenatal and postpartum depressive symptoms in the present study may have important clinical implications. Identification of depressive symptoms during pregnancy provides an opportunity for early counselling, psychosocial support, closer follow-up, and referral to mental health services when required. Repeated assessment may be particularly valuable because some women may develop depressive symptoms only after delivery, while others may have persistent symptoms that began during pregnancy. Thus, screening at a single time point may fail to identify women whose symptoms emerge later.

The EPDS has also been studied in culturally diverse populations. Evidence from low- and lower-middle-income countries indicates that the reliability and validity of translated versions can vary according to language, cultural context, method of translation, and characteristics of the study population^[16] herefore, if the present study used a translated or locally adapted version of the EPDS, the findings should be interpreted with consideration of the validation status and cultural appropriateness of that version.

As suggested by Salum e Morais *et al.*^[17] the major risk factors for postpartum depression include the lack of support from the partner, family, and friends; low level of education; being a single mother with a high parity; pregnancy at a young age; stress; and low family income. Other factors, such as unwanted pregnancies, primiparous women, preterm births, marital conflicts, and the death of family members or the last infant, also contribute to the adversity.

Difficulties such as lack of time, the stigma related to mental illnesses during pregnancy and in the postpartum hinder the early detection by obstetricians. This study is done to emphasize the importance of the health professional for the early awareness of the aforementioned factors in the effort to prevent depressive disorders and their consequences in the perinatal period. In order to reduce the impact of depression in pregnancy and the puerperium on the mother, child, family, and community, it is necessary to discuss the different aspects of the complication in the context of public health.

In the present study, factors such as [previous psychiatric illness/family history of mental illness/lack of social support/unplanned pregnancy/obstetric complications/financial difficulties/marital problems] were associated with higher EPDS scores. These findings suggest that perinatal mental health is multifactorial and that screening should ideally be accompanied by assessment of relevant psychosocial and obstetric risk factors. Women with multiple risk factors may benefit from closer monitoring throughout pregnancy and the postpartum period.

The prospective nature of this study is one of its major strengths. Assessing women during pregnancy and subsequently following them after delivery reduces reliance on retrospective reporting and enables evaluation of the temporal relationship between antenatal and postpartum depressive symptoms. The use of a standardized instrument such as the EPDS also facilitates systematic assessment and comparison between different time points

However, several limitations should be considered. First, the EPDS is a screening instrument and cannot by itself establish a clinical diagnosis of depression. Second, the results may be influenced by the selected EPDS cut-off, as different thresholds produce different sensitivity and specificity. Third, self-reported responses may be affected by social desirability, stigma, or reluctance to disclose emotional difficulties. Fourth, if the study was conducted in a single centre, the findings may have limited generalizability to other populations. Finally, loss to follow-up between the antenatal and postpartum assessments may introduce attrition bias if women who were lost to follow-up differed systematically from those who completed both assessments.

Overall, the findings of the present study emphasize the importance of systematic assessment of maternal mental health during both pregnancy and the postpartum period. The EPDS is a practical and widely validated screening instrument, but positive results should be followed by appropriate clinical evaluation. Prospective and repeated screening may facilitate earlier recognition of women at risk and provide an opportunity for timely intervention. Incorporating mental health screening into routine antenatal and postnatal care may therefore contribute to improved maternal and family outcomes.

CONCLUSION

The present prospective study demonstrates the value of monitoring depressive symptoms from pregnancy through the postpartum period. The findings suggest that antenatal depressive symptoms may identify women who require closer postpartum monitoring, while postpartum screening remains necessary because depressive symptoms may also develop after delivery. The EPDS provides a simple and effective method for screening, but its results should be interpreted according to the selected cut-off, clinical context, and need for confirmatory assessment. Early identification and appropriate management of perinatal mental health problems should form an integral part of screening for depression in pregnancy. Incorporating mental health screening into routine antenatal and postnatal care may therefore contribute to improved maternal and family outcomes.

REFERENCES

1. Management of mental health issues in pregnancy and postnatal period –Good Practice No 14-RCOG.
2. Nurnberger JI Jr, Blehar MC, Kaufmann CA, York-Cooler C, Simpson SG, Harkavy-Friedman J, Severe

- JB, Malaspina D, Reich T. Diagnostic interview for genetic studies. Rationale, unique features, and training. NIMH Genetics Initiative. Arch Gen Psychiatry, 1994 Nov; 51(11): 849-59.
3. National Collaborating Centre for Mental Health (UK). Antenatal and Postnatal Mental Health: Clinical Management and Service Guidance: Updated edition. Leicester (UK): British Psychological Society; 2014 Dec. (NICE Clinical Guidelines, No. 192)
4. Littlewood E, Ali S, Dyson L, et al. Identifying perinatal depression with case-finding instruments: a mixed-methods study (BaBY PaNDA – Born and Bred in Yorkshire PeriNatal Depression Diagnostic Accuracy). Southampton (UK): NIHR Journals Library; 2018 Feb. (Health Services and Delivery Research, No. 6.6.) Chapter 8, Assessment of study findings against National Screening Committee criteria.
5. Siu AL, and the US Preventive Services Task Force (USPSTF). Screening for Depression in Adults: US Preventive Services Task Force Recommendation Statement. JAMA, 2016; 315(4): 380–387.
6. Hewitt CE, Gilbody SM, Mann R, Brealey S. Instruments to identify post-natal depression: Which methods have been the most extensively validated, in what setting and in which language? Int J Psychiatry Clin Pract. 2010 Mar; 14(1): 72-6.
7. Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. Br J Psychiatry, 1987 Jun; 150: 782-6.
8. Oliveira TA, Luzetti GGCM, Rosalém MMA, Mariani Neto C. Screening of Perinatal Depression Using the Edinburgh Postpartum Depression Scale. Rev Bras Ginecol Obstet, 2022 May; 44(5): 452-457.
9. Cox J L, Holden J M, Sagovsky R. Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. Br J Psychiatry, 1987; 150(06): 782–786.
10. confidential enquiries of maternal death UK, 2015-2017.
11. Jones E, Quinn L, Tanner JR, Jankovic J, Berrisford G, MacArthur C, Taylor B. Prevalence and incidence of moderate and severe mental illness in the second postpartum year in England (1995-2020): a national retrospective cohort study using primary care data. Lancet Reg Health Eur, 2025 May 9; 53: 101312.
12. World Health Organisation. World Health Organisation. World Health Organisation; Geneva: 2022. Guide for integration of perinatal mental health in maternal and child health services.
13. Bauer A., Parsonage M., Knapp M., Iemmi V., Adelaja B. 2014. The costs of perinatal mental health problems.
14. National Collaborating Centre for Mental Health. National Collaborating Centre for Mental Health;

- London, 2018. The perinatal mental health care pathways. Full implementation guidance.
15. Nishimura A, Fujita Y, Katsuta M, Ishihara A, Ohashi K. Paternal postnatal depression in Japan: an investigation of correlated factors including relationship with a partner. *BMC Pregnancy Childbirth*, 2015; 15: 128.
 16. Levis B, Negeri Z, Sun Y, Benedetti A, Thombs B D. Accuracy of the Edinburgh Postnatal Depression Scale (EPDS) for screening to detect major depression among pregnant and postpartum women: systematic review and meta-analysis of individual participant data *BMJ*, 2020; 371.
 17. **Salum e Morais, A. et al. (2017). "Postpartum depression: prevalence and associated factors."** Published in: *Revista Brasileira de Enfermagem* (Brazilian Journal of Nursing).