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Original Article

Prevalence of Mental Health Disorders During Pregnancy and Puerperium In A Tertiary Health Care In Ernakulam

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ABSTRACT

Background and Objective: Pregnancy is a period in a women life where she undergoes physical and mental changes. In the recent era prevalence of mental health disorders are on the rise. Anxiety and depression are the most common faced by the pregnant women. Effect of mental health can affect the newborn care and can lead to long term behavioral and psychological impacts on the child. The objective of this study is to assess the prevalence of mental health disorders during pregnancy and puerperium in a tertiary health care in Ernakulam.

Methods: A cross sectional study conducted among 100 participants in a tertiary health care in Ernakulam Kerala. The study was conducted from July to August 2021. Data was collected using a questionnaire and analyzed. Approval was obtained from institutional ethics committee prior to the study.

Results: The prevalence of mental pressure or tension experienced by the women was found to be 32% antenatally which reduced to 9% postnatally. 37% women reported of having sleeplessness, depression or lack of interest at the period of pregnancy. This was found to reduce to 7% postnatally. One woman was found to show active suicidal thoughts, attempts or self-harm. The prevalence of women who experienced anxiety, palpitations or over sweating was found in 21% antenatally which reduced to 5% postnatally. A previous history of any mental health disorder or any episodes of seizure was reported only by one participant. From the data analysed from the bystander information, it was found that 34% women showed excessive anger or overtalkativeness antenatally which reduced to 4% postnatally. Antenatally 20% of women showed signs of underlying doubts or fear which was found to reduce to 5% postnatally. Only 2% of women were reported to laugh, talk or murmur to oneself during the period of pregnancy. Women showed good interest in child care after delivery as only one woman was reported to show lack of interest in child care. 1% of women was noticed to show any other mental disorders both antenatally and postnatally.

Interpretation and Conclusion: The study concludes by determining the various prevalence of mental health disorders during pregnancy and puerperium in a tertiary health care centre. Prevalence of various mental health issues were found to be more during the antenatal period. Antenatal depression, sleeplessness or lack of interest was the major problem followed by excessive anger and mental pressure or tension. The prevalence was seen to reduce postnatally.

Key Words: *Anxiety, Depression, Mental health,Pregnancy, Puerperium, Tertiary health care*

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INTRODUCTION

World health organization (WHO) defines mental health as a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community [1]. On the other hand, a mental disorder or mental illness is an involuntary psychological or behavioral pattern that occurs in an individual and is thought to cause distress or disability that is not expected as part of normal development or culture [2]. Pregnancy and puerperium are the period in a women's life when she undergoes physical and mental changes. It is mainly during this time she may predispose to mental health disorders like anxiety and depression[3]. According to a report by WHO, the prevalence of depression is about 10% in pregnant women and 13% in women who have just given birth. In developing countries, the rate is even higher, i.e., 15.6% during pregnancy and 19.8% after child birth [4].

Anxiety and depression are the two main factors faced by the pregnant woman. Pregnancy is always associated with an increased risk of developing depression. Such mental health disorders can affect the period of gestation and lead to maternal and fetal side effects. They can lead to low birth weight, premature birth, perinatal and infant death, postnatal depression, as well as can lead to long term behavioral and psychological impacts on the child [6].

As per reports, in developing countries one in three to one in five women face mental health problem during pregnancy. The same is faced by one in ten women in developed countries [6]. Women who have had two or more stressful events in their life are likely to have 3.7 times more depressive symptoms during their pregnancy [7]. Many factors can contribute to the mental health problems during pregnancy. They can include personal or family history which may also include any history of psychiatric illness. Stress of childcare, complications arising from pregnancy, poor relation with partner and low socio-economic status are among the other risk factors.

Mental disturbances frequently occur during late pregnancy and in the postpartum period. As per studies 50% to 80% women are affected by postpartum blues which is the most common but the least severe[2]. Postpartum depression usually occurs within an onset of 6 weeks postpartum and is a major mental health disorder. The newborn is very sensitive to the new environment. Such mental health disorders thus can have a huge impact on the quality of care leading to compromised mother-infant attachment, poor breast feeding and infant care. These factors can affect the development of the newborn.

Thus, the period of pregnancy and puerperium must be assessed and screened to determine the health status of the women. Hence this study aims to assess the mental health disorders during pregnancy and puerperium in a tertiary health care in central Kerala.

OBJECTIVES

The objective of this study is to assess the prevalence of mental health disorders during pregnancy and puerperium in a tertiary health care in Ernakulam.

MATERIAL AND METHODS

Study design: Cross sectional study.
Study setting: A tertiary health care in Ernakulam, Kerala.
Study Population: Pregnant women registered at the tertiary health care.

Exclusion criteria:

- Women with bad obstetric history, obstetric complications in the present pregnancy, known psychological disorders, women on an antiepileptic, neurogenic drugs, anti-depressants or CNS stimulant were excluded from the study.
- Pregnant women who did not give consent.

Sample size: Based on a similar study done at a Government maternity hospital, Bengaluru city [5], the minimum sample size was calculated using the formula

$$\mathbf{n = \frac{4pq}{d^2}}$$

p=5.8%, which is the percentage of knowledge
q=94.2%, which is (100-p)
d=5, which is the precision

$$\text{So, } n = \frac{4 \times 5.8 \times 94.2}{(5)^2} = \mathbf{87.41}$$

Minimum sample size = **87.41**
Allowing for 10% non-response rate, the sample size was calculated to be 96. I decided to include 100 subjects in my study.

Sampling method: The study subjects was selected by Consecutive sampling. It is the sampling technique in which every subject meeting the criteria of inclusion is selected until the required sample size is achieved.

Study duration: July to August 2021.

Study tool: Preformed questionnaire from the programme 'Amma manasu' under National Mental Health Programme was used. It contains 10 questions, first five questions to the subject and the next five questions to the subject's bystander. The questionnaire originally being in the local language (Malayalam) was translated to English by linguistic experts for analysis.

Data Collection: After explaining the purpose of the study and obtaining the informed consent of the participants, the questionnaire was administered to them. The responses will be maintained as confidential. The participants were asked to complete the questionnaire without leaving any question unanswered. Written informed consent was taken from each participant.

Statistical Analysis: The data was entered into Microsoft Excel and analysed using Statistical Package for Social Sciences Version 20.

Ethical Consideration: Approval was obtained from Institutional Research and Ethical Committee prior to study. Written informed consent was taken from each participant.

RESULTS

A total of 100 pregnant women were included in the study. The mean age of the study participants was 28.05 ± 4.48 years.

In our sample of pregnant women, it was found that 32% of pregnant women experienced mental pressure or tension during their antenatal period. This was found to be reduced to 9% in the postnatal period. (Figure I)

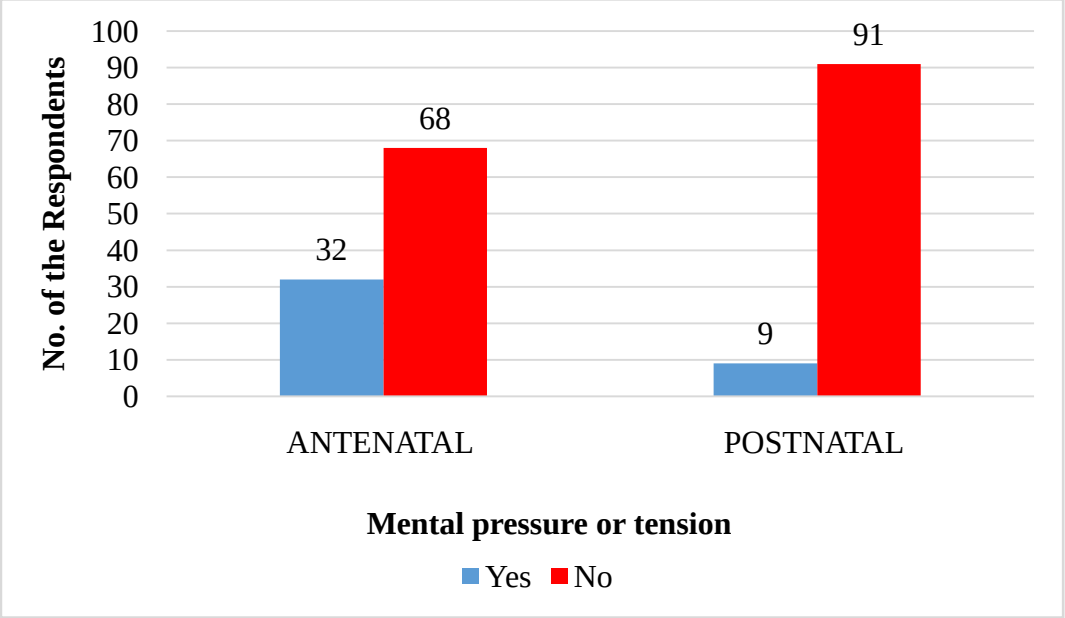


Figure I Mental pressure or tension among study participants (n=100)

Prevalence of sleeplessness, depression, crying without any reason or lack of interest was found to be 37% antenatal which reduced to 7% in the postnatal period. (Figure II)

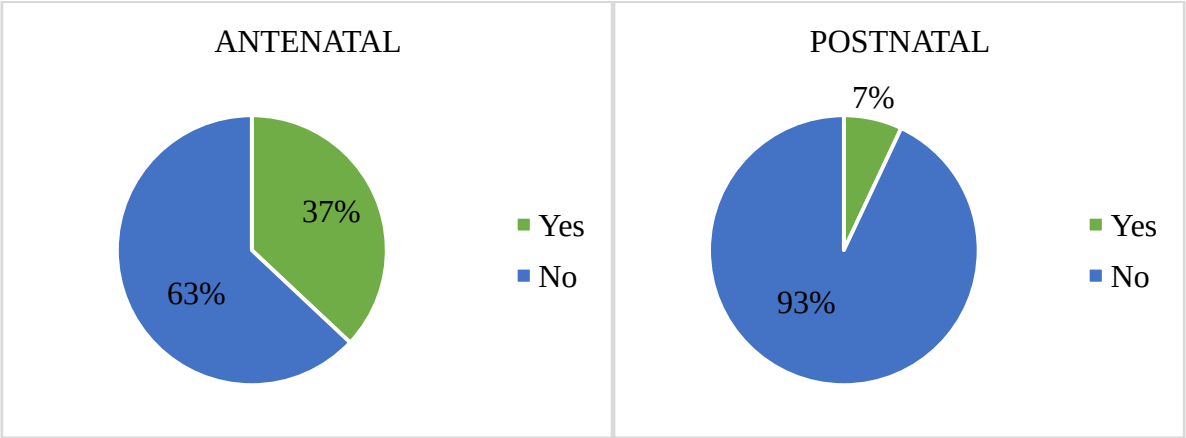
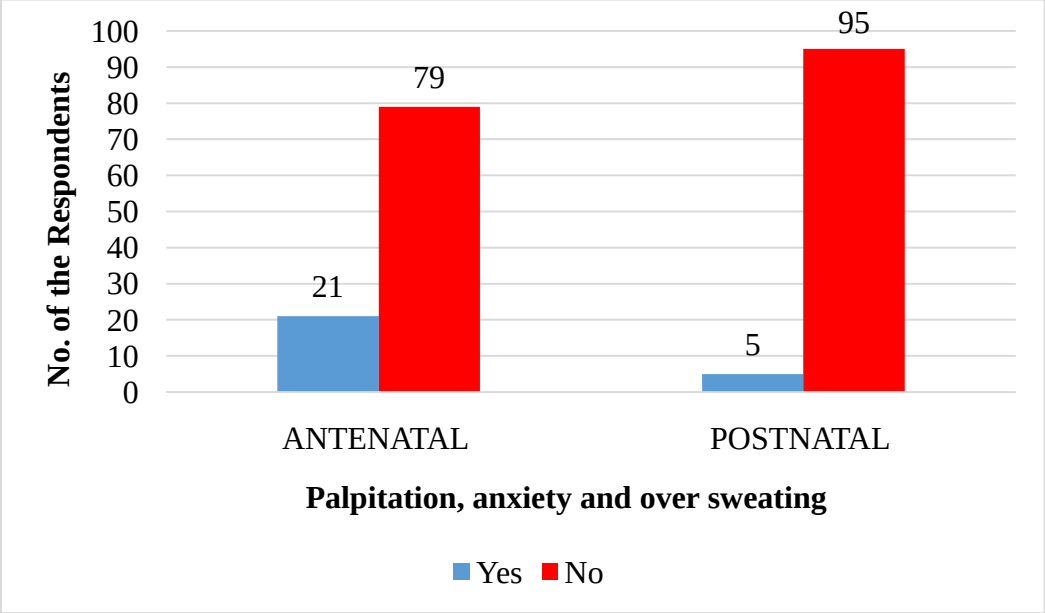


Figure II Sleeplessness, depression, crying without any reason, lack of interest among study participants (n=100)

One woman was found to show active suicidal thoughts, attempts or self-harm during the antenatal period. No women had such similar thoughts during the postnatal period. (Table I)

Table I Suicide thoughts, attempts or self-harm among study participants (n=100)

ANTENATAL		POSTNATAL	
Yes	**No**	**Yes**	**No**
1	99	0	100



Antenatally it was found that 21% of women experienced palpitations, anxiety and over sweating during the pregnancy. It was found to reduce to 5% postnatally. (Figure III)

Figure III Palpitation, anxiety and over sweating among study participants (n=100)

A previous history of any mental health disorder or any episodes of seizure was reported only by one study participant. (Figure IV)

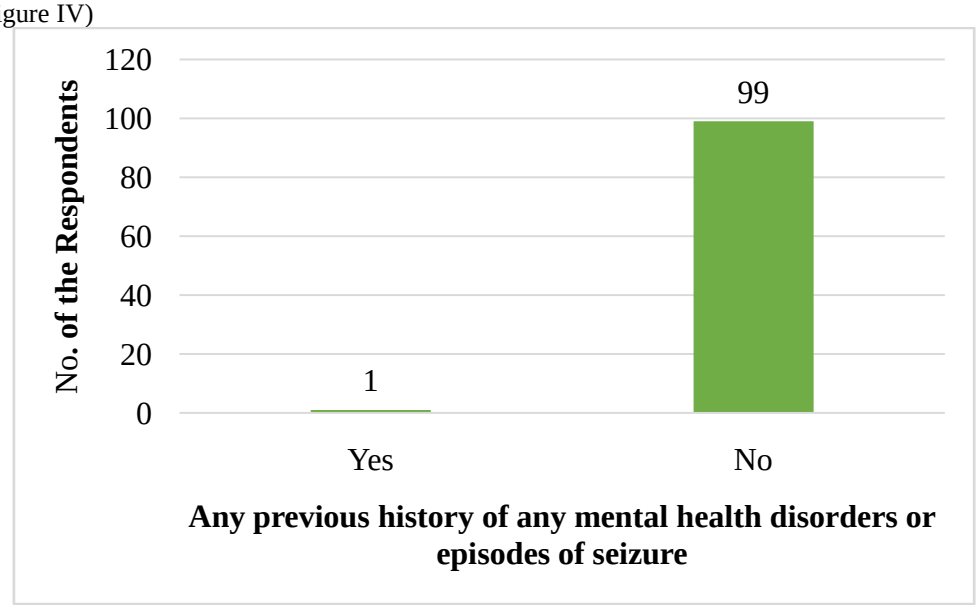


Figure IV Previous history of any mental health disorders or episodes of seizure among study participants (n=100)

Prevalence of excessive anger or overtalkativeness among study participant was found to be 34% in the antenatal period. It was found to be reduced to 4% in the postnatal period. (Table II)

Table II Excessive anger or overtalkative among study participants (n=100)

ANTENATAL		POSTNATAL	
Yes	**No**	**Yes**	**No**
34	66	4	96

Among the study participants, 20% signs of underlying doubts or fear antenatally, which reduced to 5% postnatally. (Figure V)

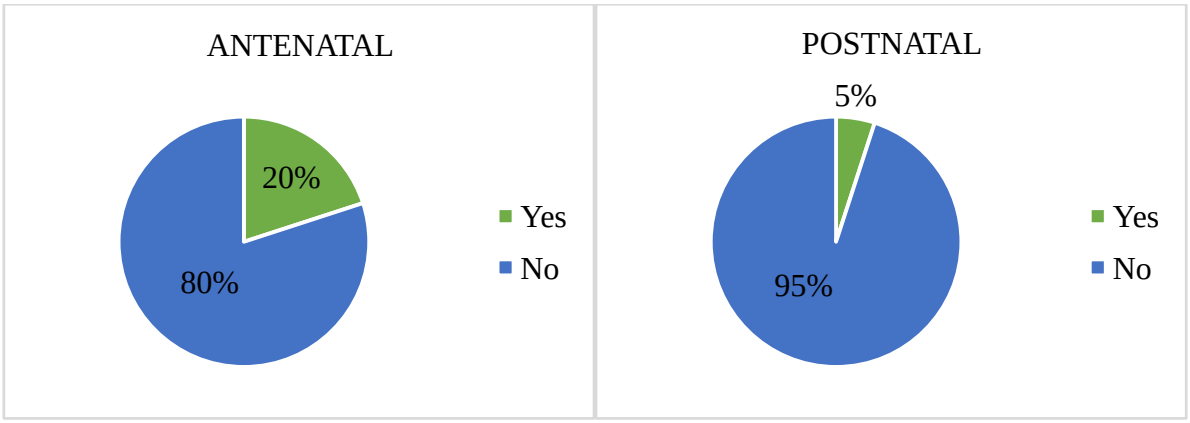


Figure V Underlying doubts or fear among study participants (n=100)

2% of study participants were found to laugh, talk or murmur to oneself during the antenatal period. Its prevalence was not found postnatally. (Figure VI)

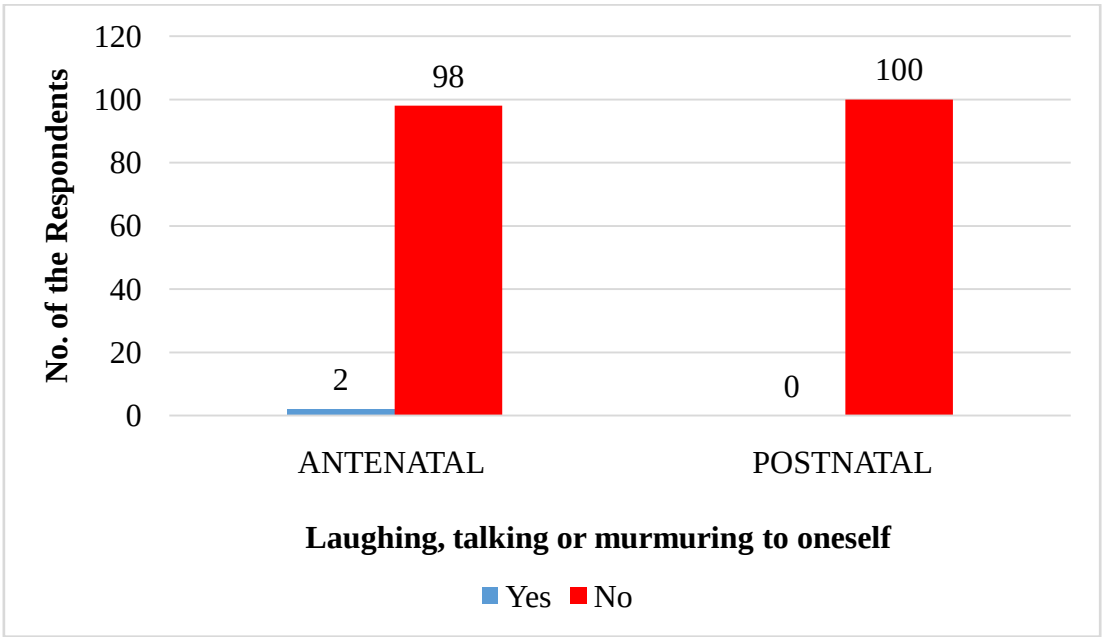


Figure VI Laughing, talking or murmuring to oneself among study participants (n=100)

Lack of interest in child care was found only in one woman during the study. (Figure VII)

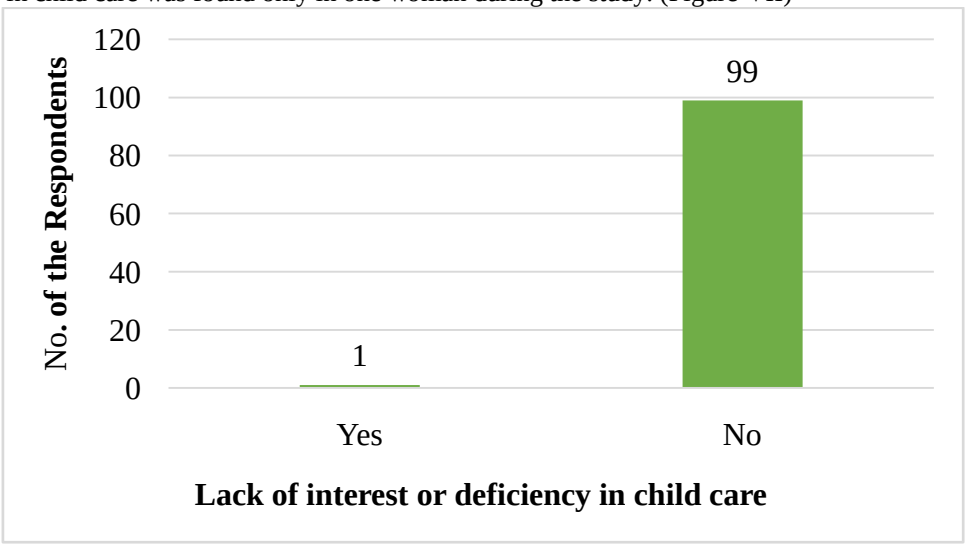


Figure VII Lack of interest or deficiency in child care among study participants (n=100)

Regarding the prevalence of any other noticeable mental disorder among study participants, it was found to be 1% both antenatally and postnatally. (Table III)

Table III Any other noticeable mental disorders among study participants (n=100)

ANTENATAL		POSTNATAL	
Yes	**No**	**Yes**	**No**
1	99	1	99

DISCUSSION

Pregnancy is state in which a woman undergoes changes in her body both physiologically and mentally. With advancement in health care facilities and routine antenatal visits, the normal physiological or the complications arising in pregnancy are always looked up on and are managed accordingly. Mental health being an important part of such a phase was mostly ignored at times and not looked up to. This study focuses to find the prevalence of common mental health disorders during pregnancy.

A woman is most likely to experience mental pressure or tension at any stage during the period of pregnancy. This may be due to the physiologically changes occurring throughout the pregnancy period from the first trimester till the time of post-delivery. Mental pressure can have various causes which may include pressure from her own personal life, work, family or care of the newborn. The prevalence of mental pressure or tension was found to be 32% antenatally which reduced to 9% postnatally. On comparing it with a study in Bengaluru [10] which showed a prevalence of 11%, stress and mental pressure was found to have a three-fold increase. This may be attributed to phase of pregnancy being taking place during the time of the COVID19 pandemic. The risk of being infected and the safety of the fetus can contribute to the existing causes.

The prevalence of antenatal depression was found to be 37% in the study. This was found to be higher when compared to studies which showed prevalence of 10.1% [5], 26% [6], 2.8% [8], 12.54% [9], 10.4 [10], 8.62% [11], 5.3% [12] and 10% [14]. Depression is one among the most common mental health problem seen on the rise recently. As mentioned earlier, the COVID 19 pandemic has restricted the pregnant women to be locked up in their homes mostly. Lack of social interactions with mental pressure may be the reason for increased rates of depression among pregnant women. Many women may have also have been separated from their parents and families during this period and the lack of mental support can also be a cause. Sleeplessness was another factor which was seen increased when compared to studies in Bengaluru [5] and Beijing [12].

Postnatal depression of 7% was found to be comparatively low when compared to studies done in New Delhi [9,14] which showed a result of 12.75% and 12% respectively. With the ease in restrictions of the lockdown and the rates of COVID case decreasing with rise in vaccination, helped the women in the puerperal period to attain a good mental health. With advanced care and facilities puerperal period is now mostly uneventful and thus the rates of postpartum depression are less.

Active suicidal thoughts, attempts or self-harm was found in 1% of the study participants. This was slightly higher when compared to a study in Bengaluru [10] which had a prevalence rate of 0.3% antenatally. No study participants were found to have such thoughts postnatally.

Prevalence of anxiety and associated somatic symptoms antenatally was found to be 1% [5], 12.5% [8], 0.51% [11] and 6.8% [12] among various studies. This was found to less when compared to this study which showed a prevalence rate of 21% antenatally which reduced to 5% postnatally.

From the data analyzed from the bystander, prevalence of excessive anger among study participants has shown a decrease from 34% antenatally to 4% postnatally. Symptoms of underlying doubts or fear also showed a decrease in prevalence from 20% antenatally to 5% postnatally. This was found to be higher when compared with a study done in Haryana [8] which showed a prevalence rate of 10.7% for panic disorders. 2% of study participants was reported to be found to laugh, talk or murmur to oneself during the antenatal period.

The practice of good child care was noted as this study showed 99% with no lack of interest in child care. This prevalence was very high when compared to studies which showed good practice of neonatal care of 15.8% [13] and 38.4% [15] only.

Thus, the prevalence of common mental health disorders during pregnancy and puerperium in a tertiary health care was studied. Most of the prevalence were found to be higher when compared with similar studies. This shows the rise in mental health issues increasing during pregnancy. An effort is required to identify such situations and bring in necessary actions for the same.

CONCLUSION

The study was conducted among 100 pregnant women. The mean age of the participants was 28.05 ± 4.48 years. The prevalence of mental pressure or tension experienced by the women was found to be 32% antenatally which reduced to 9% postnatally. 37% women reported of having sleeplessness, depression or lack of interest at the period of pregnancy. This was found to reduce to 7% postnatally. One woman was found to show active suicidal thoughts, attempts or self-harm. The prevalence of women who experienced anxiety, palpitations or over sweating was found in 21% antenatally which reduced to 5% postnatally. A previous history of any mental health disorder or any episodes of seizure was reported only by one participant.

From the data analysed from the bystander information, it was found that 34% women showed excessive anger or overtalkativeness antenatally which reduced to 4% postnatally. Antenatally 20% of women showed signs of underlying doubts or fear which was found to reduce to 5% postnatally. Only 2% of women were reported to laugh, talk or murmur to oneself during the period of pregnancy. Women showed good interest in child care after delivery as only one woman was reported to show lack of interest in child care. 1% of women was noticed to show any other mental disorders both antenatally and postnatally.

The study concludes by determining the various prevalence of mental health disorders during pregnancy and puerperium in a tertiary health care centre. Prevalence of various mental health issues were found to be more during the antenatal period. Antenatal depression, sleeplessness or lack of interest was the major problem followed by excessive anger and mental pressure or tension. The prevalence was seen to reduce postnatally.

Mental health being an important part during the period of pregnancy requires more attention and follow up. There is scope for further studies in this field.

The importance of mental health is recently being on rise as more studies are bringing out the hidden side of its effects. In pregnancy too this plays an important part as a woman undergoes major changes during this phase of her life. The increasing prevalence of common mental health disorders is just the tip of the iceberg. As many cases are masked, it is up to the society to look and understand and help those in need. Especially in wake of the pandemic, many are facing mental health problems as there is lack of social interactions and the effects of being locked up in their homes. Proper education and awareness regarding the effects of mental health problems must be carried out and to make sure help is available to a one who is in need. Thus, screening for mental health must be implemented along with the routine antenatal and postnatal checkups in order for the mother and child to be healthy at all times.

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Conflict of interest: The authors declare that they have no conflict of interest.
Ethical approval: Approval was obtained from Institutional Research and Ethical Committee prior to study.
Informed consent: Informed consent was obtained from all individual participants included in the study.

REFERENCES

1. World Health Organisation. Mental Health Action Plan 2013-2030.
2. Malhotra, S., & Shah, R. (2015). Women and mental health in India: An overview. Indian journal of psychiatry, 57(Suppl 2), S205–S211. https://doi.org/10.4103/0019-5545.161479
3. Rondó, P. H. C., Ferreira, R. F., Lemos, J. O., & Pereira-Freire, J. A. (2016). Mental disorders in pregnancy and 5-8 years after delivery. Global mental health (Cambridge, England), 3, e31. https://doi.org/10.1017/gmh.2016.26
4. World Health Organisation. Maternal and child mental health. Available from: https://www.who.int/mental_health/maternal-child/en/
5. Johnson, A. R., George, M., Goud, B. R., & Sulekha, T. (2018). Screening for Mental Health Disorders among Pregnant Women Availing Antenatal Care at a Government Maternity Hospital in Bengaluru City. Indian journal of psychological medicine, 40(4), 343–348. https://doi.org/10.4103/IJPSYM.IJPSYM_41_18
6. Rehman, B. U., Ahmad, J., Kaul, R. U. R., & Haque, M. K. U. (2017). An epidemiological study to assess the mental health status of pregnant women in a tertiary care hospital, Srinagar, Jammu and Kashmir, India. International Journal of Reproduction, Contraception, Obstetrics and Gynecology,6(6), 2580+. https://link.gale.com/apps/doc/A534838527/AONE?u=anon~e9c80842&sid=googleScholar&xid=ad7cf294.
7. Satyanarayana, V. A., Lukose, A., & Srinivasan, K. (2011). Maternal mental health in pregnancy and child behavior. Indian journal of psychiatry, 53(4), 351–361. https://doi.org/10.4103/0019-5545.91911.
8. Jha, S., Salve, H. R., Goswami, K., Sagar, R., & Kant, S. (2021). Prevalence of Common Mental Disorders among pregnant women-Evidence from population-based study in rural Haryana, India. Journal of family medicine and primary care, 10(6), 2319–2324. https://doi.org/10.4103/jfmpc.jfmpc_2485_20
9. Zaidi, F., Anjum, R., & Nigam, A. (2018). Prevalence of postpartum depression and its association with antenatal depression amongst women. Journal of Drug Delivery and Therapeutics, 8(4), 205-208. https://doi.org/10.22270/jddt.v8i4.1766

10. Bavle, A. D., Chandahalli, A. S., Phatak, A. S., Rangaiah, N., Kuthandahalli, S. M., & Nagendra, P. N. (2016). Antenatal Depression in a Tertiary Care Hospital. Indian journal of psychological medicine, 38(1), 31–35. https://doi.org/10.4103/0253-7176.175101
11. Kassada, D. S., Waidman, M. A. P., Miasso, A. I., & Marcon, S. S. (2015). Prevalence of mental disorders and associated factors in pregnant women. Acta Paul Enferm., 28(6), 495-502..
12. Zhou, Y., Shi, H., Liu, Z. et al. The prevalence of psychiatric symptoms of pregnant and non-pregnant women during the COVID-19 epidemic. Transl Psychiatry 10, 319 (2020). https://doi.org/10.1038/s41398-020-01006-x.
13. Saaka, M., Ali, F. & Vuu, F. Prevalence and determinants of essential newborn care practices in the Lawra District of Ghana. BMC Pediatr 18, 173 (2018). https://doi.org/10.1186/s12887-018-1145-4.
14. Shrestha, N., Hazrah, P., & Sagar, R. (2015). Incidence and prevalence of postpartum depression in a rural community of India. Journal of Chitwan Medical College, 5(2), 11–19. Retrieved from https://nepjol.info/index.php/JCMC/article/view/13149.
15. Mersha, A., Assefa, N., Teji, K., Shibiru, S., Darghawth, R., & Bante, A. (2018). Essential newborn care practice and its predictors among mother who delivered within the past six months in Chencha District, Southern Ethiopia, 2017. PloS one, 13(12), e0208984. https://doi.org/10.1371/journal.pone.0208984