RESEARCH ARTICLE

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Analysis of Stress, Anxiety and Depression in Working Women During Pregnancy and in the Post-Partum Phase

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Abstract

Aim: To evaluate the influence of lifestyle on stress and psychological changes in pregnant and postpartum women and the rate of working women suffering from stress, anxiety, and depression and its effect on their health during pregnancy and postpartum period. **Methods:** The study was carried out in Karad and used an observational design on 200 working women. They answered a web questionnaire which inquired about their demographics, obstetrics, as well as signs of depression, stress, and anxiety linked to pregnancy and the postpartum period. The DASS-21 Scale was used to assess these symptoms. **Results:** Significant severity for depression, anxiety and stress was seen among the age group of 18-20 years 21-25 and 36-40. Significant a connection was discovered between the factors responsible for depression, anxiety and stress females mostly responded to having a lack of family support and workplace and work-related discrimination. **Conclusion:** In conclusion, considering this study the findings were elevated in the age 18-20 and 36-40 groups. A noteworthy correlation was discovered between the factors responsible for depression, anxiety and stress females mostly responded to having a lack of family support and workplace and work-related discrimination. Programs to assist women overcome stress, anxiety, and depression during pregnancy and the postpartum period should be offered at healthcare facilities. Family counselling and awareness for attending the early bird classes in their pregnancy period.

Keywords: Anxiety, Depression, Mental Illness, Postpartum, Pregnancy, Stress

1. Introduction

In many nations, particularly in underdeveloped ones where women are given immense respect for becoming pregnant, pregnancy is seen as a holy spiritual experience[1]. This is a physiological expansion including psychological and social effects. Since pregnancy is a growth for the mother as well, it can cause a variety of beneficial and negative changes in a childbearing woman's physiological, emotional, and psychological characteristics. In addition to the baby growing throughout pregnancy, the mother also grows during all three trimesters. Many hormonal changes will occur throughout pregnancy which might result in alteration in behavior and mental health[2,3]. Psychological, cultural and environmental stresses may hurt pregnancy the health of the mother and the fetus and current research shows that prenatal stress can possess long-term effects[4]. Most human research indicates that mild, moderate, and severe stress can have negative impacts on pregnancy outcomes as well as the behavioural and physiological development of offspring, even though several early studies indicated limited effects of stress on pregnancy. Pregnancy-specific distress and anxiety refers to worries about things that are direct results of prenatal screenings fear for the health and development of the unborn child uncertainly about the changes to her life that will accompany her baby and /or worries that may have an impact on the standard of postpartum care[5-7].

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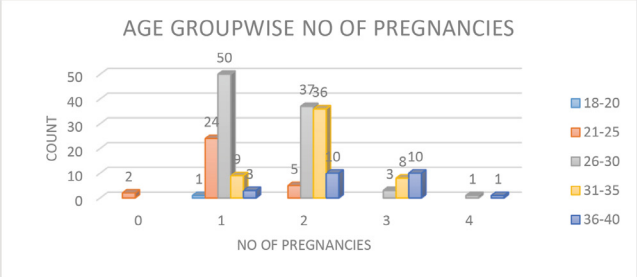
The human literature shows several conceptualizations of prenatal stress that mirror the variety of stresses that may be encountered during gestation[4,8,9]. Negative pregnancy outcomes, such as preeclampsia, premature birth, low birth weight, and neonatal illness, are linked to mother stress[1]. Changes in personal life, employment situation, housing situation, domestic violence and family structure are considered psychosocial stressors and call for the affected person to use adaptive coping mechanisms. Domestic abuse and a lack of social support as well as the familial desires for male children, will significantly damage a mother's mental health increasing her risk of developing major depression or any other psychological issue[5,10]. Mental and psychological changes may result from difficult relationships, life events or work-related stress. Pregnancy rates for domestic abuse in all its manifestations are 49.5% Stress rates are 82% and depression rates are 33%[10]. Family support and spouse support play a crucial part in sustaining the mental and physical health of the women, if there is no support from family she may end up in a difficult existence. Working or seeking a job due to the physical changes that occur during pregnancy women may also face mental abuse Additionally, they must cope with work-related stress issues and workplace discrimination that negatively impacts their health[11,12]. The major employment issues concerning pregnant women include pregnancy-related discrimination work accommodation that allowed continued employment, job-protected leave, and wage replacement while on leave. According to a national poll, 37% of working women who were pregnant never asked for adjustments to their job tasks, even though 53% of them felt the necessity[6]. Pregnancy discrimination also includes perceived bias when expectant workers encounter mildly hostile acts like social exclusion, unkind or harsh interpersonal treatment like lowering performance standards, moving the pregnant worker to a less desirable assignment or shift, offensive jokes, and intrusive comments[12]. Lower birth weights, shorter gestational ages, and increased rates of postpartum depression in women have all been linked to prenatal discrimination. and more healthcare visits for the kid[11,12]. According to researchers, Discrimination against pregnant people harms both the mothers' and the newborns' health[6,12].

2. Methods

Out of the 200 responses received for the study, 29 were found to be ineligible according to the predefined standards. A statistical analysis was performed on the information obtained from the questionnaire using the DASS-21 scale. The scale's scoring system was used to determine the responses. The data that was collected was used to produce master spreadsheets and graphs.

Criteria for Inclusion- 20 to 40-year-old females and working women who are expecting or just gave birth.

Criteria for Exclusion- Women without jobs and women who have used medicine in the past for mental health conditions such as depression, anxiety, or stress.



Graph 1. Age-group-wise number of pregnancies.

Age-wise five groups were made, and the females were distributed as per their present number of pregnancies.

In the first age group 18-20 years 1 female was in her 1st pregnancy.

21-25 years 24 females were in their 1st pregnancy and 5 females were in their 2nd pregnancy.

26-30 years 50 females were in their 1st pregnancy, 37 females in their 2nd pregnancy, 3 females in their 3rd pregnancy and 1 in her 4th pregnancy.

31-35 years 9 females were in their 1st pregnancy, 36 females in their 2nd pregnancy 8 females in their 3rd pregnancy.

36-40 years 3 females were in 1st pregnancy, 10 females were in their 2nd pregnancy 10 were in their 3rd pregnancy and 1 was in her 4th pregnancy.

2 females were not pregnant they were excluded from the study.

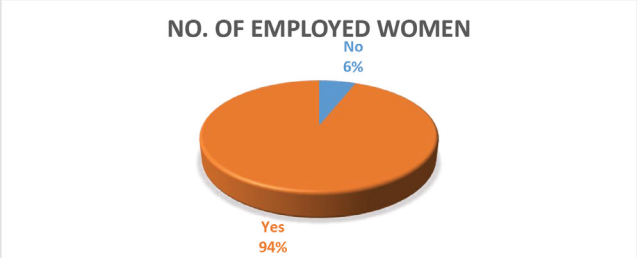
94% of females were employed.

6% of females were not employed which were excluded from the study.

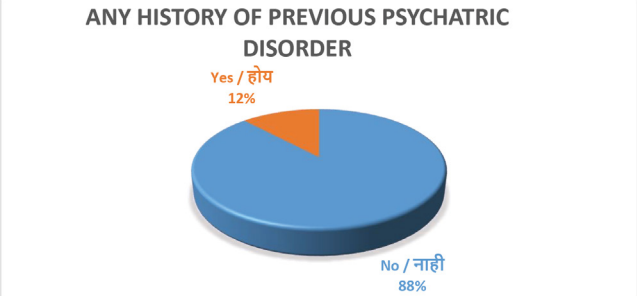
88% of the female population has never taken medicine before.

12% of females responded yes, they were excluded from the study as per the criteria.

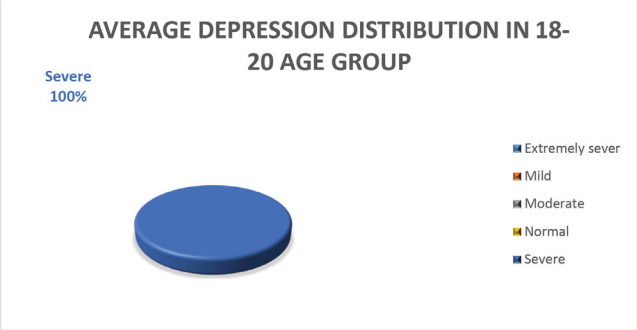
The highest degree of depression is noted in the 18-20 age group and the lowest degree of depression is noted in the 21-25 age group.



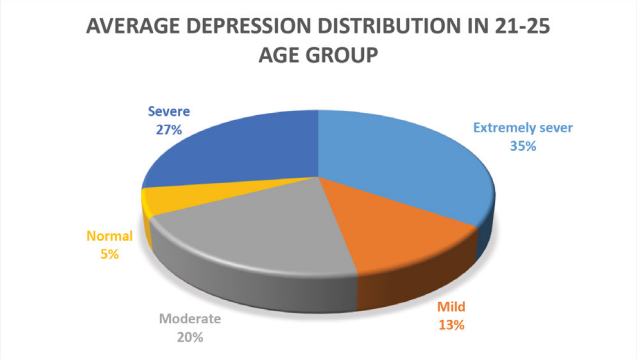
Graph 2. Number of employed females in the collected data.



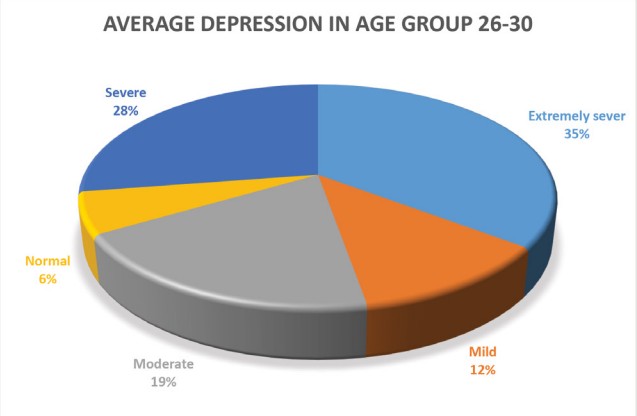
Graph 3. Previous history of medications for psychological disorder.



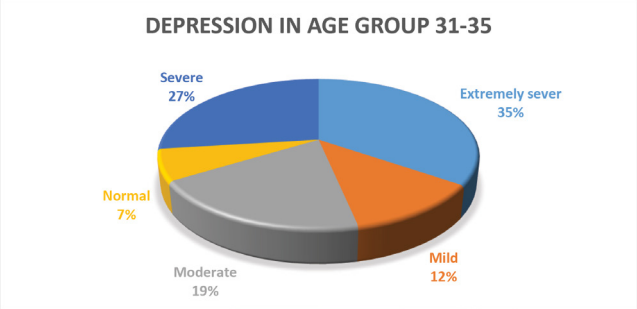
Graph 4. Average depression distribution in 18-20 age group.



Graph 5. Average depression distribution in 21-25 age group.



Graph 6. Average depression in age group 26-30.

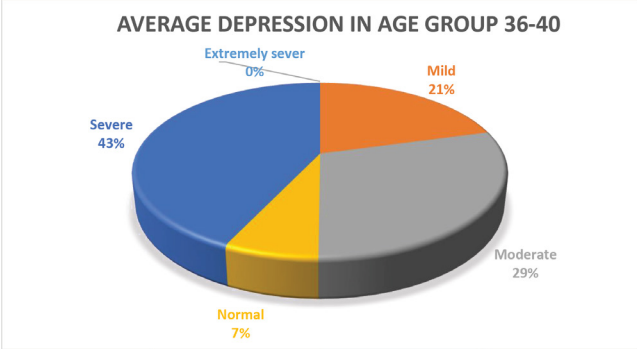


Graph 7. Depression in age group 31-35.

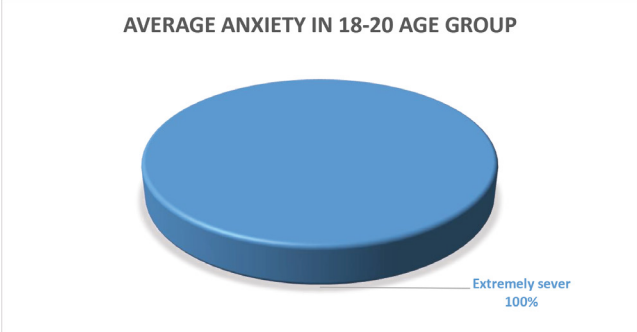
Table 1. Depression levels as per the age group

Depression	18-20 years	21-25 years	26-30 years	31-35 years	36-40 years
Normal		5%	6%	7%	7%
Mild		13%	12%	12%	21%
Moderate		20%	19%	19%	29%
Severe	100%	27%	28%	27%	43%
Extremely severe		35%	25%	35%	

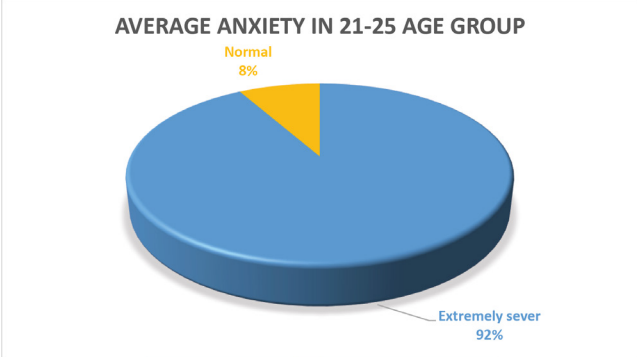
The highest degree of anxiety is noted in the 18-20 age group and the lowest degree is noted in the 26-30 age group.



Graph 8. Average depression in age group 36-40.



Graph 9. Average anxiety in 18-20 age group.

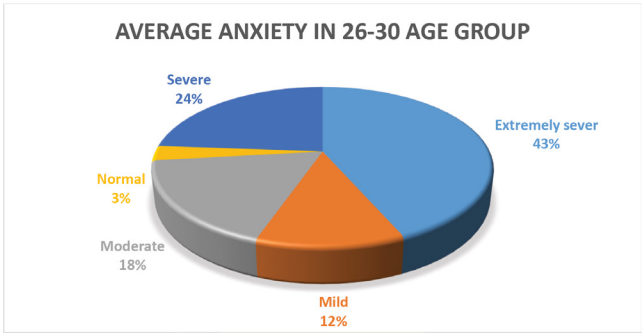


Graph 10. Average anxiety in 21-25 age group.

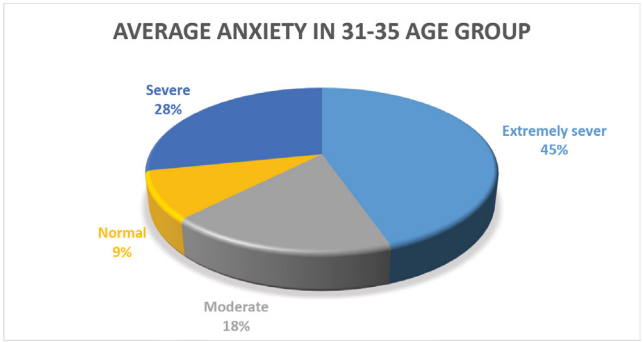
The highest degree of stress is noted in the 18-20 age group and the lowest in the 26-30 age group.

2% of females responded they were having issues/ fear of previous pregnancy.

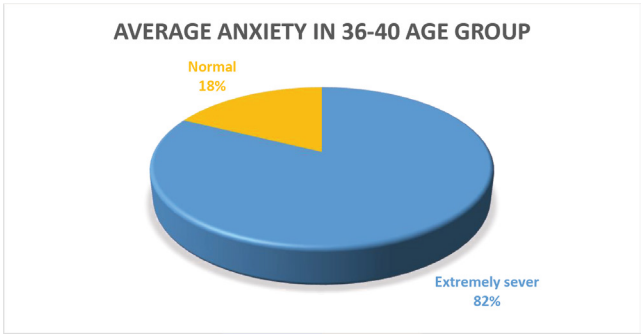
19% of females responded they were worrying or fear about the baby.



Graph 11. Average anxiety in 26-30 age group.



Graph 12. Average anxiety in 31-35 age group.



Graph 13. Average anxiety in 36-40 age group.

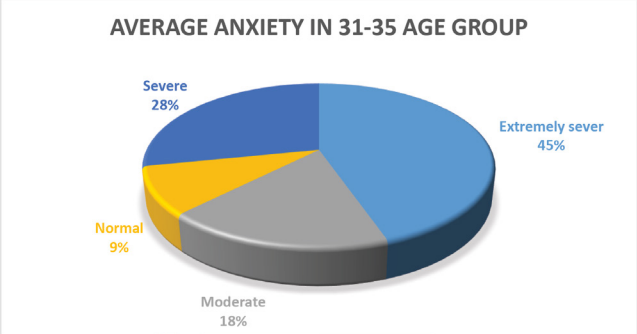
Table 2. Anxiety level as per age group

Anxiety	18-20 years	21-25 years	26-30 years	31-35 years	36-40 years
Normal		8%	3%	9%	18%
Mild			12%		
Moderate			18%	18%	
Severe			24%	28%	
Extremely severe	100%	92%	43%	45%	82%

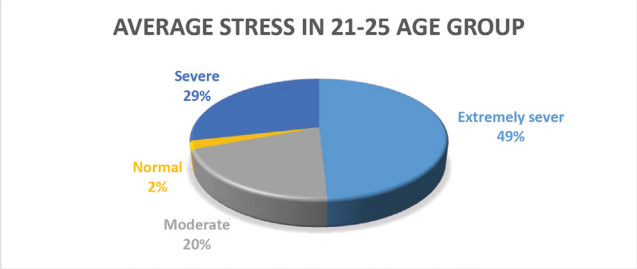
32% of females responded they were having lack of family support.

10% of females responded they were dealing with domestic violence.

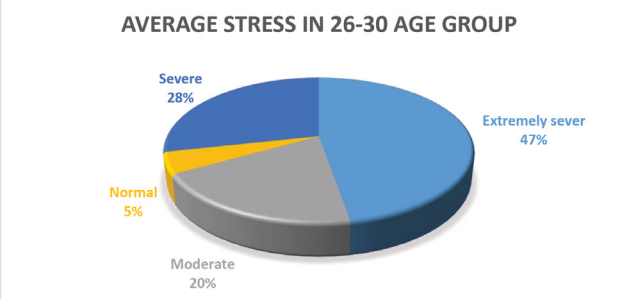
32% of females responded they were having work-related or workplace discrimination.



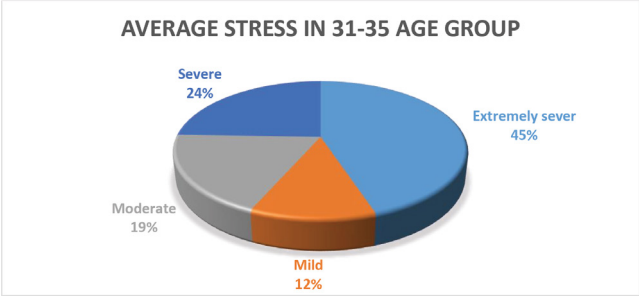
Graph 14. Average sress in 18-20 age group.



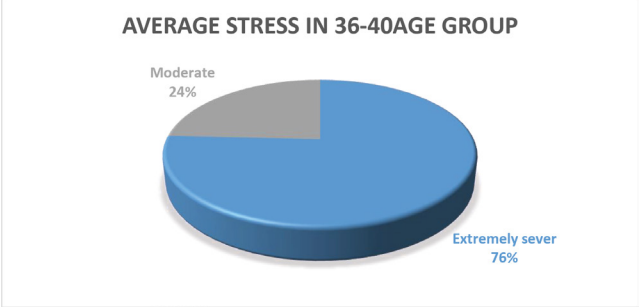
Graph 15. Average stress in 21-25 age group.



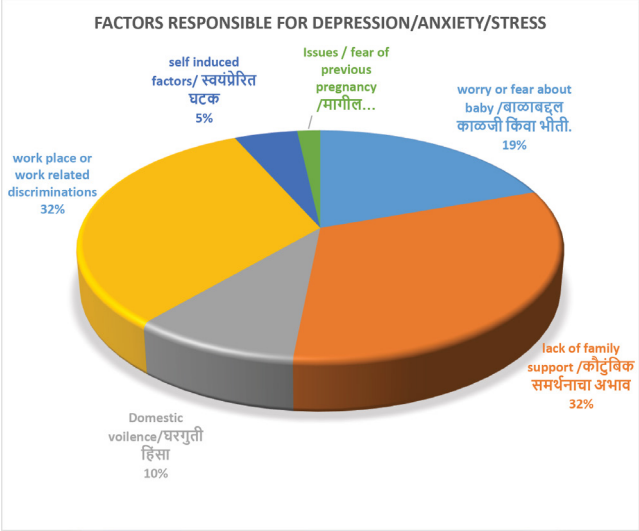
Graph 16. Average stress in 26-30 age group.



Graph 17. Average stress in 31-35 age group.



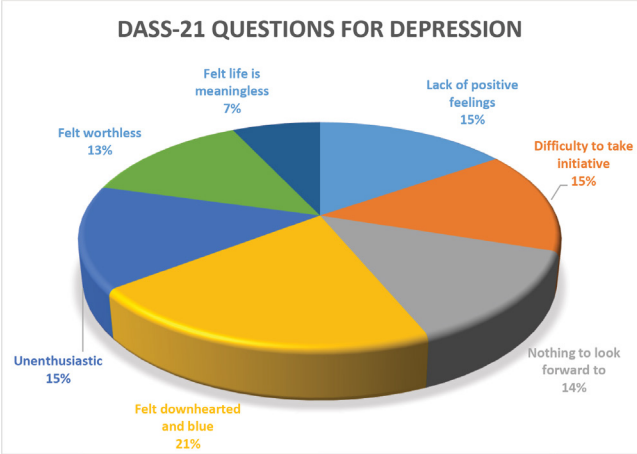
Graph 18. Average stress in 36-40age group.



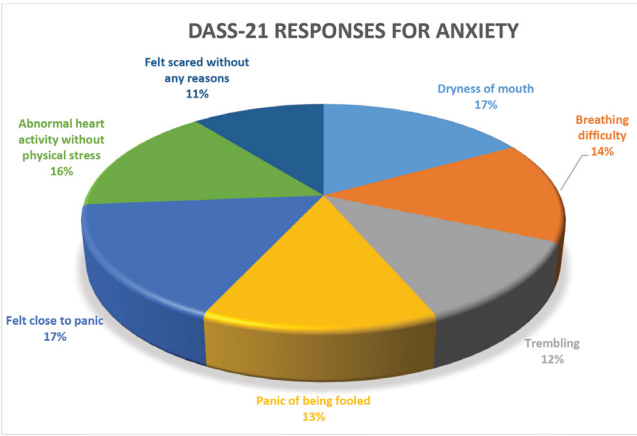
Graph 19. Factors responsible for depression/anxiety/stress.

Table 3. Stress level as per age group

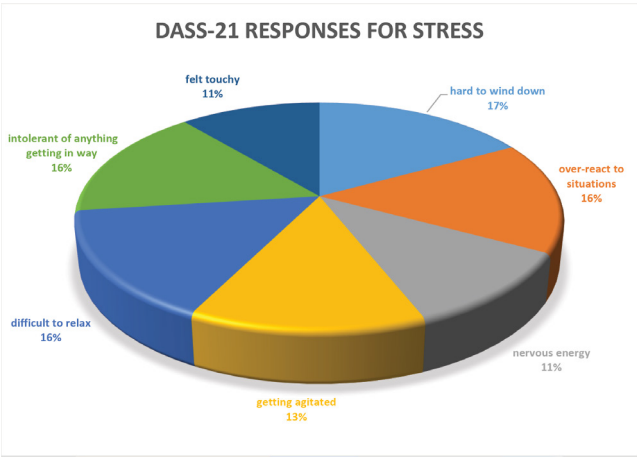
Stress	18-20 years	21-25 years	26-30 years	31-35 years	36-40 years
Normal		2%	5%		
Mild				12%	
Moderate		20%	20%	19%	24%
Severe		29%	28%	24%	
Extremely severe	100%	49%	47%	45%	76%



Graph 20. DASS-21 questions for depression.



Graph 21. DASS-21 responses for anxiety.



Graph 22. DASS-21 responses for stress.

3. Results

DASS-21 responses.

3.1 Depression

15% of female respondents cited a lack of optimism, 15% said they had trouble taking the initiative, 14% said they had nothing to look forward to, 15% said they were unenthusiastic, and 13% said they felt unworthy.

Most of the ladies typically answered with depressive symptoms. 21% reported "feeling downhearted and blue," which was the least common sign of depression. "I felt that life had no purpose" accounted for 7%.

3.2 Anxiety

14% of females responded that they experienced breathing difficulty, 12% experienced trembling, 13% were worried about situations in which they might panic and make fools of themselves, and 16% responded that they were aware of the action of the heart even in the absence of physical exertion. Most of the females frequently responded to the symptom of anxiety 17% said "I was aware of dryness of my mouth" and 17% "I felt I was close to panic".

3.3 Stress

A total of 16 per cent of the female respondents stated that they could not stand anything getting in their way, 16 per cent said it was hard for them to unwind, and 16 per cent said they overreacted in certain circumstances. 13% of the respondents said they were agitated, 17% said they found it difficult to wind down, and 11% said they felt like they were consuming a lot of nervous energy. Most of the female respondents answered most frequently for the stress symptoms.

3.4 Interpretation

- The preceding graph indicates that the age groups of 18-20 and 36-40 years old showed significantly higher levels of depression severity.
- There was a significant increase in anxiety severity among the 18-20, 21-25, and 36-40 age groups.

- There was a significant level of stress observed in the 18-20 and 36-40 age groups.
- A strong correlation was seen between the variables linked to stress, anxiety, and depression. Women mostly reported experiencing discrimination at work and a lack of family support.

4. Discussion

This study used observational methods which were aimed to study analysis of stress, anxiety and depression in working women during pregnancy and in the post-partum phase. The 200 pregnant and post-partum working females are included. In this study results as per the DASS-21 responses showed that significant severity for depression was seen among the age group of 18-20 years and 36-40 years. Significant severity for anxiety was seen among the age group of 18-20 years and 21-25 and 36-40 years significant severity for stress was seen among the age group of 18-20 years and 36 to 40 years. Factors responsible for depression, anxiety and stress females mostly responded having a lack of family support and workplace and work-related discrimination. Another significant socio-demographic component in mental illness is marital status. Existing vulnerabilities that exist before pregnancy can interact with marital status, increase stress, and have an impact on the maternal foetal system. Counselling, prenatal care, and mental security and stability can have a significant influence on pregnancy[11]. Another element that affects mental anguish is education, particularly the mother's educational background. The job is a predictor of higher mental suffering and can expose workers to a variety of linked factors, such as possible stressors. According to studies, a poor level of education is directly linked to socioeconomic difficulties because patients worry, that they won't be able to satisfy their child's needs. Unwanted pregnancies leave women from uncertain social origins and without the support of their families unable to handle life's financial demands and burdened emotionally[11]. A study demonstrates that healthcare professionals are usually aware of the risks associated with pregnancy-related maternal mental health disorders and are knowledgeable about their effects[1]. It has been found that most women do not seek treatment for signs of stress despite having regular interactions with healthcare professionals throughout pregnancy and after birth[1]. Another analysis summarizing obstetricians' opinions on mental health concerns connected to pregnancy found that they consider these subjects to be crucial[1].

5. Conclusion

In summary, the study's findings showed that the 18-20 and 36-40 age groups had higher rates. Research revealed a strong correlation between the variables linked to stress, anxiety, and depression. Women mostly reported experiencing discrimination at work and a lack of family support. The absence of familial support and workplace and employment-related discrimination have been identified as the main causes of the psychological alterations. Healthcare institutions must include programs aimed at helping women manage stress, anxiety, and depression throughout pregnancy and after giving birth. It's also important to offer family therapy. Education and awareness campaigns should be launched to encourage pregnant women to attend the early bird programs.

6. Limitations

The research only included working women; thus, it is not possible to extrapolate the findings to the full population because there was no discernible difference in the psychological alterations between working and non-working women.

7. Future Scope

Women from diverse backgrounds and who are unemployed can be included in this research. The impact of their financial situation on their psychological condition should be included in this study to improve its accuracy. The precise degree of psychological elements in each trimester can be determined by doing this study on female participants in different trimesters. Additional information would help to improve the accuracy of this study.

8. Conclusion

According to this study, working women in the younger age group experience psychological alterations during pregnancy at a higher incidence. Out of the 200 women enrolled in the research, 171 were chosen for inclusion,

while the other women were rejected because they were not pregnant, some were not employed, and some had previously used psychological drugs.

Every sample received an online questionnaire, which they were invited to complete. The answers were then collected.

Age groups of 18-20 and 36-40 years old showed significantly higher levels of depressive severity.

Age groups of 18-20, 21-25, and 36-40 years old showed significantly higher levels of anxiety.

Considerably high levels of stress were observed in the age range of 18-20 years old and 36-40 years old.

A strong correlation was seen between the variables linked to stress, anxiety, and depression. Women mostly reported experiencing discrimination at work and a lack of familial support.

9. References

1. Khouj MA, Albasri S, Albishri AA, Softa SM, Almaslamani AS, Ahmad HM, Khouj M, Albishri A, Almaslamani A. Prevalence of stress, anxiety, and depression among pregnant women in Jeddah. Cureus. 2022; 14(7). https://doi.org/10.7759/cureus.27174
2. Kumar P, Magon N. Hormones in pregnancy. Journal of the Nigeria Medical Association. 2012; 53:179-83. https://doi.org/10.4103/0300-1652.107549 PMid:23661874 PMCid: PMC3640235
3. Rahman A. Hormonal changes in the uterus during pregnancy - Lessons from the Ewe: A Review. Journal of Agriculture and Rural Development. 2008. https://doi.org/10.3329/jard.v4i1.761
4. Coussons-Read ME. Effects of prenatal stress on pregnancy and human development: mechanisms and pathways. Obstet Med. 2013; 6(2):52-7. https://doi.org/10.1177/1753495x12473751 PMid:27757157 PMCid: PMC5052760
5. Patabendige M, Athulathmudali SR, Chandrasinghe SK. Mental health problems during pregnancy and the postpartum period: A multicenter knowledge assessment survey among healthcare providers. J Pregnancy. 2020. https://doi.org/10.1155/2020/4926702 PMid:32685213 PMCid: PMC7341390
6. Jackson R, Birsner ML, Terman S, Morris L. Employment considerations during pregnancy and the postpartum period. ACOG. 2018.
7. Pope J, Olander EK, Leitao S, Meaney S, Matvienko-Sikar K. Prenatal stress, health, and health behaviours during the COVID-19 pandemic: An international survey. Women Birth. 2022; 35(3):272-9. https://doi.org/10.1016/j.wombi.2021.03.007 PMid:33757750 PMCid: PMC9051042
8. Pope J, Olander EK, Leitao S, Meaney S, Matvienko-Sikar K. Prenatal stress, health, and health behaviours during the COVID-19 pandemic: An international survey. Women Birth. 2022.
9. Huizink AC, Delforterie MJ, Scheinin NM, Tolvanen M, Karlsson L, Karlsson H. Adaption of pregnancy anxiety questionnaire-revised for all pregnant women regardless of parity: PRAQ-R2. Arch Womens Ment Health. 2016; 19(1):125-32. https://doi.org/10.1007/s00737-015-0531-2 PMid:25971851 PMCid: PMC4728175
10. Mahapatro M, Nayar P, Roy S, Jadhav A, Panchkaran S. Domestic violence during pregnancy as risk factors for stress and depression: The experience of women attending ANC at a tertiary care hospital in India. Women Health. 2022; 62(2):124-34. https://doi.org/10.1080/03630242.2022.2029670 PMid:35045785
11. Naik MV, Kusuma *et al*. Pregnancy outcome in working women with workplace stress. Int J Reprod Contracept Obstet Gynecol. 2017; 6(7). https://doi.org/10.18203/2320-1770.ijrcog20172631
12. Robinson B. Pregnancy discrimination in the workplace affects mother and baby health; 2020. [Forbes]