

Research Paper

Assessment of Anxiety Among Pregnant Mothers



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ABSTRACT

Objectives: We aimed to assess anxiety in pregnant women. We also investigated the probably associated factors in anxiety in pregnant women.

Methods: This research is a descriptive correlational study. The samples (209 pregnant women) were recruited by non-probability (purposive) sampling, and the study instrument consisted of the Hamilton anxiety rating scale and interviews with mothers. The obtained data were analyzed by SPSS software, version 25.

Results: Most respondents were 17-26 years old, and around half were satisfied with their income. Studies show a significant positive correlation between anxiety and gestational age, watching TV, sleeping, and drinking tea.

Discussion: Anxiety increased with mothers working and with mothers with low socioeconomic status. About 26.3% of pregnant mothers had severe anxiety. Some habits like drinking tea, sleeping, and watching TV increase when anxiety increases.

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Highlights

- Anxiety is higher in pregnant women who work and have low socioeconomic status.
- About 26.3% of pregnant mothers had severe anxiety.
- Some habits among mothers, such as drinking tea, sleeping, and watching TV increase when their anxiety rises.

Plain Language Summary

Pregnant women may feel alterations in their mental condition throughout their pregnancy; for instance, their anxiety increases. Although maternal anxiety throughout childbearing is mixed, anxiety signs and complaints are common during labor time, and manifestations may range from mild to severe.

1. Introduction

Females are more exposed to anxiety resulting from changes in their lives, such as hormonal alterations, menstruation onset, and gravidity to the menopause period. Gestation is the most significant period in the female's life since it carries several alterations, not just physically but also socially and psychologically [1]. Worry of mystery, tension, a sense of rootlessness, and everyday difficulties associated with bodily and hormonal alterations can usually result in anxiety. Anxiety considers a normal reaction to danger and usual human practice. It may become a mental problem if the reaction is extravagant, continues over 3 weeks, and affects daily activities and life [2, 3].

Anxiety during pregnancy is of concern because it will affect the development of the fetus. Pregnant mothers with extraordinary stages of tension, depression, or anxiety are in bigger danger of opposing labor results [4]. Anxiety throughout the prenatal period is connected with prematurity, low birth weight, and intrauterine embryo growth restriction, which are a risk for compromised cognitive and social development effects. It accompanies the augmented feeling of sickness and vomiting, a long disease process throughout gravidity [5].

Fetuses of females with severe anxiety were recorded as hyperactive. At 7 months, these children tend to be difficult, irritable, and cry excessively. At 9 years, the boys, in particular, continued to be agitated, show attention shortage symptoms, and involved in aggressive behaviors. Anxiety affects women of childbearing age. Approximately more than 500000 pregnancies worldwide every year suffer from females with psychiatric conditions such as anxiety. The occurrence of anxiety during pregnancy differs according to records and assessment methods [6].

Scant data are available to inform the effectiveness of interventions for anxiety disorders during pregnancy. Pharmacological intervention is likely the most frequent for antenatal women with anxiety complaints. Numerous treatments, like acupuncture, workouts, massage, and herbal medications, have been used for treating anxiety among antenatal mothers. A few studies have discussed labor anxiety, and fewer discussed the incidence of anxiety during the antenatal period. As manifestations of anxiety are often analogous to those existing in pregnancy, careful evaluation of anxiety during this time is crucial [7].

Anxiety involves 4 levels: Mild, moderate, severe, and panic. Every degree causes physiologic and emotional alterations in the individual.

A mild level of anxiety is defined as the feeling that something is changed and deserves unusual attention. Sensory stimulation rises and aids individuals in centering attention to study, solve problems, think, act, feel, and defend themselves. A mild level of anxiety often motivates persons to modify or engage in a goal-focused activity. Moderate anxiety is the distressing sensation that something is wrong; the person becomes anxious. At a moderate level, the individual can still process information, solve problems, and learn new skills with support from others. She has trouble concentrating autonomously but can be redirected to the subject [8].

As the individual develops severe anxiety and panic, more primitive survival skills dominate, defensive reactions result, and cognitive abilities reduce significantly. An individual with severe anxiety has a concern about thinking and reasoning. Muscles tighten, and vital signs rise. The individual gets agitated, irritable, and upset or uses similar emotional and psychomotor methods to re-

lieve the pressure. Panic level means that the emotional, psychomotor dominion dominates associated with fight, flight, or freeze reactions. When adrenaline flows, it greatly raises vital signs. Pupil dilation allows the incoming of more light, and the individual cognition focuses only on self-defense [9].

The current study was conducted to assess anxiety in pregnant mothers. In addition, we investigated the possible associated factors with anxiety, for instance, socioeconomic data, demographical data, obstetric history, and daily habits, and finally, compare the anxiety levels among prenatal women.

2. Materials and Methods

A correlational study was conducted to assess anxiety and its association with some variables on 209 pregnant women living in the governorate of Babylon, Iraq, from December 7, 2021, to February 14, 2022. The Ministry of Health approved the study. Written consent was obtained from the study participants. The present study was conducted in Babylon Province at Primary Health Care Centers (PHCCs), divided into 5 health sectors. A total of 9 main PHCCs were randomly selected to accomplish the study. The samples were chosen by purposive sampling. A study questionnaire was designed for the objectives of the current study. It involves 7 parts: Demographical data, obstetric history, history of infertility, medical history, present pregnancy, practices to reducing anxiety, and the Hamilton anxiety rating scale. This scale consists of 14 items arranged under 14 domains: Anxious mood domain, tension, fears, insomnia, intellectual, depressed mood, somatic (muscular), somatic (sensory), cardiovascular symptoms, respiratory symptoms, gas-

trointestinal symptoms, genitourinary symptoms, autonomic symptoms, and behavior at interview.

These domains are rated on a Likert scale (always, sometimes, and never) from 2 to 0.

The reliability of the instrument's consistency and stability was determined by calculating Cronbach α (0.85). The tool's validity concerns its ability to gather the information it is anticipated to collect. The instrument was translated into Arabic as a valid and reliable scale [10]. It is reviewed by 9 experts from the College of the Nursing/University of Babylon.

The data were obtained by using the questionnaire and structured interviews. The researcher was available during the distribution of the study tool to clarify for the participants the main aim behind the research and to ease correct reaction by the participants.

The data of the current study were analyzed by SPSS software, version 25.

Table 1 shows that 63.2% of samples were in the age group of 17-26 years; the highest percentage (47.4%) of pregnant women were diploma holders or above. According to the occupation status, the highest sample rate (60.3%) was unemployed. Most participants (99%) were married. About 54.5% were satisfied with their economic status. Also, 56.5% of pregnant women live in urban areas. Most pregnant women (36.4%) experienced normal vaginal delivery. Most study samples (79%) had no history of infertility. About 86% of participants did not suffer from chronic diseases. The highest percentage (67.5%) of samples did not experience any complications during pregnancy.

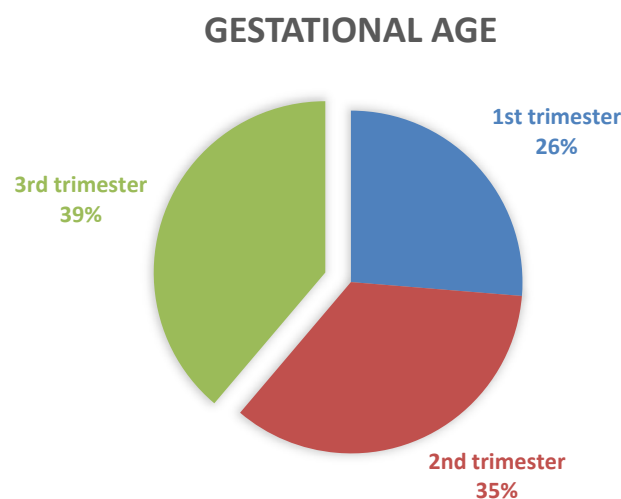


Figure 1. Distribution of samples regarding their gestational age

Table 1. Distribution of pregnant women according to their characteristics (n=209)

Variables	Categories	No. (%)
Age (y)	≤16	1(0.5)
	17-26	132(63.2)
	27-36	63(30.1)
	>37	13(6.2)
Level of education	Illiterate	17(8.1)
	Read & write	22(10.5)
	Primary	32(15.3)
	Secondary	39(18.7)
	Diploma & above	99(47.4)
Occupation	Employed	83(39.7)
	Unemployed	126(60.3)
Marital status	Married	207(99.0)
	Divorced	2(1.0)
	Separated	0(0)
	Widow	0(0)
Socioeconomic status	Satisfy	114(54.5)
	Satisfy to some extent	79(37.8)
	Not satisfy	16(7.7)
Residency	Rural	91(43.5)
	Urban	118(56.5)
Mode of the previous delivery	Normal	76(36.4)
	Cesarian section	66(31.6)
	Mixed	67(32.0)
History of infertility	No	79(79.0)
	Yes	21(21.0)
Chronic diseases	No	86(86.0)
	Yes	14(14.0)
Complication during pregnancy	No	141(67.5)
	Yes	68(32.5)

Table 2. Descriptive statistics of pregnant mothers regarding their gravida history (n=209)

Items	No. (%)
Primigravida	64(30.6)
Multigravida	145(69.4)

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Table 3. Correlation between the Hamilton anxiety rating scale and obstetric history (n=209)

Mean	No. of Living Children	Gravida	Para	Abortion	Gestational Age	Complication During Pregnancy
Spearman's rho Correlation	-0.058	-0.038	-0.021	-0.004	0.248**	0.008
Sig. (2-tailed)	0.407	0.587	0.765	0.959	0.000	0.9140

**Correlation is significant at the 0.01 level (2-tailed).

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Table 2 indicates that 69.4% of samples were multigravida.

Table 3 demonstrates a significant positive correlation between anxiety level and gestational age, and negative correlation with the number of living children, gravida, para, and abortion.

Table 4 shows a significant positive correlation between anxiety and level of education, a significant inverse correlation between anxiety and socioeconomic status, and a weak correlation between anxiety and occupation.

Table 5 indicates a significant positive correlation between anxiety and habits such as drinking tea, watching TV, and sleeping.

Table 6 reveals that the highest percentage (26.3%) belongs to severe anxiety among pregnant mothers.

4. Discussion

The current study revealed that most participants were 17-26 years old. This result agrees with Eman et al. [11], who investigated anxiety among pregnant mothers and found that most respondents were aged 17-40 years. Most of them were married and did not work; this result agrees with Fadzil et al. [12], who conducted a study in Malaysia, and Mohamed et al. [13], who ran a study in Egypt and concluded most respondents were married and homemakers. This result may be due to the current Iraqi circumstances and lack of working opportunities.

Regarding socioeconomic status, approximately half of the pregnant mothers were satisfied and had a diploma or above. These results were consistent with Sutter-Dallay et al. [14], who also found most of their respondents were satisfied with their income and had a diploma or above.

Table 4. Correlation between the Hamilton anxiety rating scale and demographic variables (n=209)

Mean	Level of Education	Occupation	Socioeconomic Status
Correlation Coefficient Spearman's rho	0.250**	-0.207	-0.211**
Sig. (2-tailed)	0.000	0.003	0.002

**Correlation is significant at the 0.01 level (2-tailed).

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Table 5. Correlation between the Hamilton anxiety rating scale and certain habits (n=209)

Mean	Drinking Tea	Watch TV	Sleeping
r	0.589**	0.208**	0.153*
Sig. (2-tailed)	0.000	0.003	0.027

*Correlation is significant at the 0.05 level (2-tailed),

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*Correlation is significant at the 0.01 level (2-tailed), r=Pearson correlation

Table 6. Assessment of anxiety level among pregnant mothers (n=209)

Variables	No. (%)
No symptoms	35(16.7)
Mild	42(20.1)
Moderate	48(23.0)
Severe	55(26.3)
Extremely severe	29(13.9)
Total	209(100)

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Most samples did not suffer from chronic diseases or have a history of infertility. These findings support the study conducted in Canada by Bayrampour et al. [15], which showed that most of their samples lacked a history of chronic diseases or infertility. These findings may be because most women were multiparous.

The current findings show that more than half of the samples were multiparous, which agrees with Andersson et al. [16], who revealed that more than half of their study samples were multiparous.

The present findings showed a significant correlation between anxiety level and gestational age and a negative correlation with the number of living children, gravida, para, and abortion. Figure 1 showed the sample distribution according to their gestational age. This result agrees with Kang et al. [17], who conducted a study on pregnant women in China, and Eman et al. [11], who found an increased prevalence of anxiety with higher gestational age, and increased anxiety with multiparous mothers. Likewise, Rallis et al. [18] revealed more severity of anxiety with a higher gestational period. This is a normal response since women's fear and anxiety increase when labor time comes soon because they fear labor and pain.

The current study revealed a significant positive correlation between anxiety and level of education, a significant negative correlation between anxiety and socioeconomic status, and a weak correlation between anxiety and occupation. This finding disagrees with Bayrampour et al. [15], which found that most samples show lower anxiety levels if they were diploma holders and above. They also showed increased anxiety levels when participants' income increased. Employed women become more anxious because they have extra responsibilities and efforts.

The current research showed a significant positive correlation between anxiety and some habits, such as drinking tea, watching TV, and sleeping. This result disagrees with Silva et al. [19], who found a positive correlation between anxiety and smoking.

This study revealed that many pregnant (26.3%) mothers had severe anxiety. This result disagrees with Eman et al. [11], who concluded that most samples had mild anxiety levels. Also inconsistent with Bayrampour et al. [15], who found that the healthiest percentage was with mild anxiety levels. Some habits serve to relieve anxiety and provide relaxation after performing it.

5. Conclusion

Anxiety frequently occurs during pregnancy. The study concluded that anxiety increases with higher gestational age. Also, anxiety increases in mothers working and those with low socioeconomic status. The highest proportion of pregnant mothers had severe anxiety. Some practices, such as drinking tea, sleeping, and watching TV increase when anxiety increases.

Study limitations

The study limitations included some pregnant women who refused to participate in the current study and uncompleted responses to the study tool that resulted in the cancellation of these questionnaires.

Strengths and weakness of the study

The present study discussed a vital topic affecting the fetus and mother's health, well-being, and daily activities.

The weakness may be the lack of references and articles investigating women at risk for developing anxiety at different gestational ages.

Study recommendations

The harmful impacts of anxiety during gravidity on offspring's well-being are serious and stimulating, so recognizing and screening anxiety conditions in antenatal care is crucial. Further studies should be conducted about associated factors with anxiety and coping methods.

Ethical Considerations

Compliance with ethical guidelines

The Ethics Committee of the Faculty of Nursing, University of Babylon, Iraq (Code: 3795) approved the study protocol.

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Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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