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Disparities of Prevalence and Causes of Maternal Antenatal Anxiety among Primigravida Pregnant Women in Egypt

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Abstract

Background: Pregnancy is a standout amongst the most vital periods in a lady's life, as it brings along various changes, in the physical aspects, as well as socially and psychologically. Fear of unknown, stress, rootless feeling and everyday issues associated with physical and hormonal changes can much of the time prompt antenatal anxiety. Anxiety is common among pregnant women. Be that as it may, inquire about consideration in the territory of conceptive mental wellbeing has mainly focused on postpartum depression in past decades. Given unfavorable results of antenatal anxiety, there is a dire need to fill the exploration holes.

The aims of the present study were to assess the prevalence of antenatal anxiety symptoms and examine the associated causes among primigravidapregnant women.

Method: A descriptive approach was carried out at the Egyptian University Hospitals in Beni Suef, El-Fayoum, and Benha from February to April in 2017, with a consecutive sample of 150 pregnant women. Antenatal anxiety was measured using Taylor scale. Chi-Square, Monte Carlo corrected and Fisher's Exact test were performed to evaluate the association of related factors of antenatal anxiety.

Results: Most of the pregnant woman feels anxious firstly about factors connected with the pregnant woman herself as prolonged sick leave during pregnancy (94.0%), possible vaginal and perineal trauma (96.0%), and possible cesarean sections (98.0%). Followed by anxiety causes connected to newborn as possible prematurity (92.0%). The results showed that most of the pregnant women manifested anxiety symptoms in the 1st and 3rd trimester of pregnancy and mothers who received secondary or technical educational level.Monte Carlo corrected test analysis revealed that antenatal anxiety showed significant relationship with age ($^{MC}P = 0.001$), & occupational status ($P = 0.0005$).

Conclusion: The higher level of anxiety was found to be more common in the urban areas, among women with a middle level of education, housewives, and low socioeconomic status. Additionally, pregnant women have high levels of anxiety in 1st and 3rd trimester.

Recommendations: It is vital to keep or diminish antenatalanxiety from happening by enhancing the well-being status of pregnant women and reinforcing pre-birth related instruction and mental intervention.

Keywords: Disparities, Antenatal Anxiety, primigravida

INTRODUCTION

Women are more exposed to anxiety because of significantly more changes in life, first menstrual cycle, pregnancy then menopause. [1] Pregnancy is a standout amongst the most imperative time frames in a lady's

life, as it brings along various changes, in the physical aspects, as well as socially and psychologically. Fear of unknown, stress, rootless feeling and everyday issues associated with physical and hormonal changes can much of the time prompt anxiety. [2] The progress to parenthood is a time of developmental challenge including considerable changes & adjustments, both physiologically & psychologically. Pregnancy is in this manner apotential stressor & a high-risk period during which women with psychological defenselessness may create psychological wellness issues. Although mild symptoms of anxiety in light of this challenge & stressor are expected, a significant proportion of pregnant women show indications of anxiety which may progress and develop into clinical anxiety disorders. [3]

State anxiety arises when the individual makes a mental evaluation of some kind of danger. At the point when the question or circumstance that is seen as undermining leaves, the individual never again encounters anxiety. Trait anxiety additionally arises in light of an apparent risk, however it contrasts in its force, term and the scope of circumstances in which it happens. Attribute anxiety alludes to the contrasts between individuals as far as their propensity to encounter state anxiety because of the reckoning of arisk. Trait anxiety portrays an identity trademark as opposed to abrief feeling. In straightforward, words state anxiety is tension around an occasion and attribute nervousness is an individual trademark.[2]

Anxiety is an all too common condition during pregnancy. The pregnant woman becomes more anxious when an unexpected threat occurs. It has been noted that anxiety often takes place when apregnant woman expects one thing and is suddenly confronted with something quite different; sometimes may experience mood swings, asurge of energy and walking may become more difficult at the end of pregnancy, sometimes women must be worried because of minor ailments which occur during pregnancy. But if anxiety is becoming all-consuming & regularly interferes with day-to-day functioning, it's time to find a better way to deal with it. [4]

Significance of the study

There is presumably that anxiety during pregnancy can have both immediate and long-term effects on her offspring. [5] Antenatal anxiety, as a typical type of psychological issues, is an impression of stress reaction, which happens when individual prosperity is threatened during pregnancy. Antenatal anxiety is accepted to be a psycho-organic process, which implies that it is additionally affected by complex biological systems, especially the endocrine system. The vacillation of estrogen & progesterone may likewise initiate anxiety among pregnant women. With respect to the certainty that endocrine framework changes to a great extent, it is conceivable that antenatal anxiety ascends as birth approaches. [6] Evidence for impacts of maternal anxiety in pregnancy on adverse neurodevelopmental outcomes for the child is substantial, through aprocess known as 'fetal programming'. Late research on symptoms of anxiety & depression during pregnancy is reviewed similarly within two subsections distinguishing findings on pre-term birth (PTB) from those on low-birth-weight (LBW).[7]

More steady impacts have been found for 'pregnancy anxiety' (known as 'pregnancy-specific anxiety' & like 'pregnancy distresses). An expansive assortment of research is presently accessible in regards to emotional states & stress pregnancy as indicators of particular pregnancy conditions & birth outcomes.[8]

Anxiety during pregnancy is observed to be related with an assortment of antagonistic results in terms of pregnancy outcomes & obstetrics complications such as somatic complaints, gestational and obstetric complications, and alterations in fetal motor activity, and affected fetal heart rate patterns. Regarding the development of the offspring, antenatal anxiety symptoms significantly predict difficult temperament at 4 & 6 months amonginfants and a delay in mental development among two-year-old children. Accordingly, given the wellbeing implications of antenatal anxiety, there is a pressing need to refocus research efforts on antenatal anxiety. [3] Along these lines, given the potential high prevalence and its conceivable unfriendly impacts of antenatal anxiety[9, 10]. The researchers wanted to determine the prevalence of antenatal anxiety symptoms and to understand the associated antenatal risk factors among primigravida pregnant women. We trust that

by raising the familiarity with maternal antenatal anxiety amongsocial insurance experts & parental figures, moms will be screened at a very early stage in their pregnancy and offered personalized services for their psychological health in order to reduce distress and improve pregnancy outcomes.

Operational definitions

Anxiety: State anxiety describes the experience of unpleasant feelings when confronted with specific situations, demands or a particular object or event. Anxietyis anormal response to a threat or danger & part of the usualhuman experience, but it can become amental health problem if the response is exaggerated, lasts more than three weeks & interferes with daily life. [2,11]

Research Aims

Assess prevalence rate of maternal antenatal anxiety among primigravida pregnant women.

Explore causes of maternal antenatal anxiety among primigravida pregnant women.

Research Questions

What is the prevalence rate of antenatal anxiety symptoms among primigravida women?

What are the causes for antenatal anxiety symptoms among primigravida women?

SUBJECTS AND METHODS

Research design

A descriptive design was utilized for the current study.

Research Setting

The study was conducted at Egyptian University Hospitals in Beni Suef, El-Fayoum, and Benha from February to April in 2017. Each woman took approximately 30-45 minutes to complete the questionnaire.

Subjects

A consecutive sample of 150 Egyptian pregnant women at the antenatal outpatient clinic and/or inpatient ward of three regional hospitals in Egypt was invited to participate in the study. Eligible women included all pregnant women of Egyptian ethnicity above 18 years of age. Women considering termination of pregnancy or having conceived through in-vitro fertilization were excluded.

Tool for data collection

The researcher reviewed related literature. Afterwards, face-to-face interviews with participants were carried out in private using a structured questionnaire. After the participants were informed of the objectives of the study, oral informed consent was obtained from those who were willing toparticipatein the study. Finally, we enrolled a sample group of 150 pregnant women who met the previously mentioned criteria.

The questionnaire was written in the Arabic language to suit women's level of intellect. It covered three main parts as follows:

The 1st part included demographic and personal data such asage, education and income adequacy.

The 2nd part includedcauses and risk factors of anxiety during pregnancy. The potential risk factors of antenatal anxiety were selected, based on our literature search; it consisted of five subsections;

Section (1): women life dissatisfaction including: unwanted pregnancy, body changes during pregnancy, disharmony in the family relationship (conjugal relationship, family relationship), life satisfaction, marital satisfaction, sex of pregnancy, number of babies (multiple pregnancy), suspiciousness of ability to be a good mother, obstetricians' attitude, lack of social support.

Section (2): Associated medical disorder including anemia before pregnancy, diabetes mellitus, essential hypertension, heart disease.

Section (3): Complications during pregnancy including morning sickness, sleep deprivation, anemia during pregnancy, pregnancy-induced hypertension, gestational diabetes, prolonged sick leave during pregnancy

Section (4): Expected birth mode and birth complications including possible birth stimulation (augmentation of labor), expected episiotomy, expected vaginal and perennial trauma, expected cesarean sections, planned cesarean delivery and use of analgesia.

Section (5): Expected fetus's birth complications including known congenital anomalies, low birth weight, fetal growth restriction, prematurity, possible birth trauma to newborn, possible neonatal development disorder, successful breastfeeding initiation.

The 3ʳᵈpart included an Arabic edition of theTaylor scale was developed by **Fahmy M., & Ghally M.** Thescale consists of 50 statements, asked the women to describe how they generally feel. The subject responded to each item by rioting on a point scale. Each item was assigned a score of"1"given when the symptom was present, a score"0"was given when the symptom was absent.The range of possible score is from "0"to "50". Scoring system: (1) 0 to 24 considered normal (no anxiety); (2) 25 to 36 considered minimal to moderate level of anxiety; (3) >37 consideredmarked to severe level of anxiety. [12]

The study tool was reviewed & tested for content validity by three experts from maternity & gynecological nursing professor, and psychiatric health professor.Internal consistency, reliability was assessed by Cronbach's alpha coefficient. The internal reliability of the instruments was 0.75. The pilot study included 15 pregnant women (about 10%) of the study sample.

Data Analysis

Data were entered into SPSS statistical software program, version 16.0 &were then analyzed after being checked & corrected for any errors, including continuous variables (age, anxiety score) and categorical variables (income level, education level, occupation). The following statistical measures were used:

A. Descriptive statistics: -

- Frequency distributions and descriptive statistics for major demographic variables were computed.

B. Inferential statistics: - tests were used to analyze the significant associations between variables and antenatal anxiety included.

- χ^2: Chi-squaretest.
- ^{MC}P: Monte Carlo corrected P-value
- ^{FE}P: Fisher's Exact test
- Bar chart diagrams were used to express the graphical presentation of the data.

C. The overall level of significance was taken as 5% and all estimates were accompanied by 95% confidence intervals. Probability (P-value) was considered as follows:

P value >0.05 insignificant.

* P <0.05 mild Statistical significant.

** P <0.01 moderate Statistical significance.

*** P <0.001 highly Statistical significant.

Results

Table (1) presents the distribution of the study subjects according to their characteristics. It showedthat one-third (33.3%) of the study subject aged 20 – 30 years old. More than half (54.7% and 52.0%)of them had secondary or technical education, and housewives, respectively.

Table1. women's characteristics of the studied primigravida women

women's characteristics	Studied primigravida women (n = 150)	
	No.	%
Age (years)		
>20	54	36.0
20 -	50	33.3
30 -	46	30.7
Educational Qualification		
Basic	18	12.0
Secondary or Technical	82	54.7
University graduate or higher	50	33.3
Gestational age		
1st trimester	50	33.3
2nd trimester	45	30.0
3rd trimester	55	36.7
Occupational status		
House wife	78	52.0
Worker	72	48.0
Monthly family income		
not enough	73	48.7
Just enough	33	22.0
More than enough	44	29.3
Type of family		
Nuclear	55	36.7
Extended	95	63.3

P value< 0.0001*   ***significant at p ≤ 0.001**

Table (2) shows the distribution of the study subjects according to causes of antenatal anxiety. *Firstly,* the main causes among women in Beni Suef are sex of pregnancy (88.0%), expected birth mode and birth complications as expected cesarean sections (80.0%) and expected prematurity (92.0%). *Secondly,* the main causes (80.0%) mentioned by women in El-Fayoum are suspiciousness of ability to be a good mother and marital satisfaction, expected vaginal and 82.0% stated that their cause of anxiety is perineal trauma and expected prematurity. *Thirdly,* the main causes of anxiety that mentioned by pregnant women in Benha are suspiciousness of ability to be a good mother, lack of social support and sleep deprivation (90.0%), 94.0% mentioned prolonged sick leave during pregnancy. Additionally, all of them (100.0%) mentioned that they were anxious because of their suspiciousness of possible neonatal development disorder and expected episiotomy. Moreover, 96.0% expected vaginal and perineal trauma, and 98.0% expected cesarean sections.

Table2. Causes of anxiety during pregnancy among studied primigravida women

Cause of anxiety	Beni-Suef		El-Fayoum		Benha		P value
	No.	%	No.	%	No.	%	
Dissatisfaction							
1. Unwanted Pregnancy	2	4.0	1	2.0	5	10.0	< 0.0001***
2. Body changes during pregnancy	6	12.0	4	8.0	19	38.0	< 0.0001***
3. Disharmony in the Family Relationship (conjugal relationship, family relationship)	9	18.0	14	28.0	16	32.0	< 0.0001***
4. Life Satisfaction	2	4.0	23	46.0	42	84.0	< 0.0001***
5. Marital Satisfaction	11	22.0	40	80.0	14	28.0	< 0.0001***
6. Sex of pregnancy	44	88.0	33	66.0	5	10.0	< 0.0001***
7. Number of babies (multiple pregnancy)	2	4.0	1	2.0	0.0	0.0	< 0.0001***
8. Suspiciousness of ability to be a good mother	14	28.0	40	80.0	45	90.0	< 0.0001***
9. Obstetricians attitude	5	10.0	35	70.0	13	26.0	0 .003**
10. Lack of Social Support	7	14.0	36	72.0	45	90.0	< 0.0001***
Associated medical disorder							
1. Anemia before pregnancy	5	10.0	0.0	0.0	9	18.0	0.049*
2. Diabetes mellitus.	0.0	0.0	8	16.0	5	10.0	< 0.0001***
3. Essential hypertension	0.0	0.0	4	8.0	0.0	0.0	0.002*
4. Heart disease	0.0	0.0	0.0	0.0	2	4.0	< 0.0001***
Complications diagnosed during pregnancy							
1. Morning Sickness	14	28.0	39	78.0	48	96.0	< 0.0001***
2. sleep deprivation	8	16.0	34	68.0	45	90.0	< 0.0001***
3. Anemia During Pregnancy	9	18.0	5	10.0	14	28.0	< 0.0001***
4. Pregnancy-Induced Hypertension	4	8.0	31	62.0	11	22.0	< 0.0001***
5. gestational diabetes	7	14.0	4	8.0	0.0	0.0	< 0.0001***
6. prolonged sick leave during pregnancy	4	8.0	23	46.0	47	94.0	< 0.0001***
Expected birth mode and birth complications							
1. Possible birth stimulation (augmentation of labor)	31	62.0	36	72.0	42	84.0	0.039*
2. Expected episiotomy	37	74.0	37	74.0	50	100.0	0.021*
3. Expected Vaginal and perineal trauma	39	78.0	40	80.0	48	96.0	0.035*
4. Expected Cesarean Sections	40	80.0	41	82.0	49	98.0	0.049*
5. planned Cesarean delivery and use of analgesia	5	10.0	5	10.0	9	18.0	< 0.0001***
Expected fetus's birth complications							
1. Twins	2	4.0	1	2.0	0.0	0.0	< 0.0001***

2.	known congenital anomalies	0.0	0.0	0.0	0.0	1	2.0	< 0.0001***
3.	Low birth weight	4	8.0	37	74.0	45	90.0	< 0.0001***
4.	Fetal growth restriction	20	40.0	24	48.0	47	94.0	0.001***
5.	Prematurity	46	92.0	41	82.0	45	90.0	< 0.0001***
6.	Possible birth trauma to newborn	19	38.0	38	76.0	46	92.0	< 0.0001***
7.	Possible neonatal development disorder	12	24.0	38	76.0	50	100.0	< 0.0001***
8.	Successful breastfeeding initiation	2	4.0	38	76.0	47	94.0	< 0.0001***

*P<0.05 mild Statistical significant. **P<0.01 moderate Statistical significance. ***P<0.001 highly Statistical significant.

Distribution of prevalence & frequency and levels of anxiety among pregnant womenis displayed in **Figure 1**. As the figure portraysthat 54.0% of the studied subjects in Beni Suef were hadn't anxiety, while 84.0% of studied women in El-Fayoum suffer from minimal to moderate anxiety. Moreover, 48.0% of studied women in Benha demonstrate marked to severe anxiety.
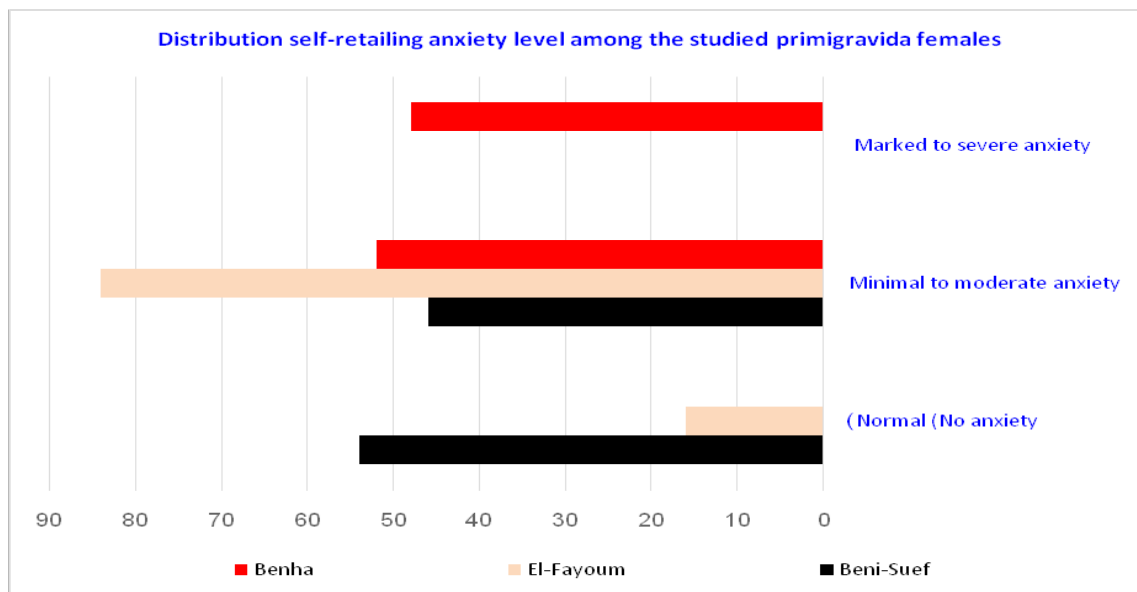

Fig1. Distribution self-retailing anxiety level among the studied primigravidas women

Table (3) illustrates the association between the level of anxiety among pregnant women and their characteristics. In pregnant women from Beni Suef, minimal to moderate anxiety was observed among women aged 20-30 years old (52.2%), secondary or technical education (78.3%), housewives (82.6%), inadequate family income (56.5%), live in extended family (100.0%) and in 2nd trimester (65.2%). Statistically significant difference, in anxiety level amongst those women in relation to their age (p = 0.001) and occupational status (p = 0.0005), were found. Whereas, in pregnant women from El-Fayoum, minimal to moderate anxiety was observed among women aged ≥ 30 years old (50.0%), university or higher graduate (71.4%), worked women (59.5%), women who their income more than enough (61.9%), live in extended family(90.5%), and in 3rd trimester (57.1%). Additionally, in pregnant women from Benha, marked to severe anxiety was observed among women aged < 20 years old (37.5%), secondary or technical education (66.6%), housewives (66.7%), inadequate family income (66.7%), live in nuclear family (95.8%), and in 1st trimester (58.3%). A statistically significant difference in anxiety level amongst those women in relation to their age (p = 0.042).

Table3. Relation between self-retailing anxiety level and women's characteristics among the studied primigravida (N = 50)

women's characteristics	Anxiety level among primigravida women in Beni-Suef				Significance	Anxiety level among primigravida women in El-Fayoum				Significance	Anxiety level among primigravida women in Benha				Significance
	Normal (n = 27)		Minimal to moderate anxiety (n = 23)			Normal (n = 8)		Minimal to moderate anxiety (n = 42)			Minimal to moderate anxiety (n = 26)		Marked to severe anxiety (n = 24)		
	No	%	No	%		No	%	No	%		No	%	No	%	
Age (years)															
>20	17	63.0	9	39.1	X^2 = 12.967 ^{MC}P= 0.001**	3	37.5	11	26.2	X^2 = 2.414 ^{MC}P = 0.311	5	19.2	9	37.5	X^2 = 6.519 ^{MC}P = 0.042*
20 -	2	7.4	12	52.2		0	0.0	10	23.8		18	69.3	8	33.3	
30 -	8	29.6	2	8.7		5	62.5	21	50.0		3	11.5	7	29.2	
Educational level															
Basic	11	40.7	3	13.0	X^2 = 6.836 ^{MC}P = 0.070	0	0.0	2	4.8	X^2 = 3.0 ^{MC}P = 0.350	1	3.8	1	4.2	X^2 = 2.064 ^{MC}P = 0.641
Secondary or Technical	16	59.2	18	78.3		4	50.0	10	23.8		18	69.3	16	66.6	
University graduate or higher	0	0.0	2	8.7		4	50.0	30	71.4		7	26.9	7	29.2	
Gestational age															
1st trimester	4	14.8	4	17.4	X^2 = 1.648 ^{MC}P = 0.523	1	12.5	12	28.6	X^2 = 1.183 ^{MC}P = 0.663	15	57.7	14	58.3	X^2 = 0.031 ^{MC}P = 1.0
2nd trimester	14	51.9	15	65.2		2	25.0	6	14.3		4	15.4	4	16.7	
3rd trimester	9	33.3	4	17.4		5	62.5	24	57.1		7	26.9	6	25.0	
Occupational status															
Housewives	9	33.3	19	82.6	X^2 = 12.24 P = 0.0005***	5	62.5	17	40.5	^{FE}P = 0.277	12	46.2	16	66.7	X^2 = 2.131 P = 0.144
Worker	18	66.7	4	17.4		3	37.5	25	59.5		14	53.8	8	33.3	
Monthly family income															
Not enough	21	77.8	13	56.5	X^2 = 3.475 ^{MC}P = 0.190	0	0.0	5	11.9	X^2 = 4.482 ^{MC}P = 0.142	18	69.3	16	66.7	X^2 = 0.329 ^{MC}P = 0.908
Just enough	5	18.5	6	26.1		0	0.0	11	26.2		5	19.2	6	25.0	
More than enough	1	3.7	4	17.4		8	100.0	26	61.9		3	11.5	2	8.3	
Type of family															
Nuclear	5	18.5	0	0.0	^{FE}P = 0.054	1	12.5	4	9.5	^{FE}P = 1.0	22	84.6	23	95.8	^{FE}P = 0.351
Extended	22	81.5	23	100.0		7	87.5	38	90.5		4	15.4	1	4.2	

X^2: Chi-Square test ^{MC}P: Monte Carlo corrected P-value ^{FE}P: Fisher's Exact test

* P < 0.05 mild Statistical significant.   ** P < 0.01 moderate Statistical significance.   *** P <0 .001 highly Statistical significant.

DISCUSSION

As the modern medical model develops, psychological health has been increasingly given more attention.The Past inquiries about have demonstrated a high prevalence of psychiatric illness among pregnant women in the

developedcountries, as well as in developing ones.[13, 14, 15] Besides, a huge assemblage of research exists on the unfavorable outcomes of maternalpsychologicalwell-being;the most outstandingly are depression & anxiety during pregnancy. [16, 6] For instance, psychiatric ailment during pregnancy is considered to prematurity, low birth weight & obstetric complications. [6]

A considerable measure of research consideration is focused on postpartum depression. Moderately little consideration has been paid to antenatal emotional wellness issues particularly antenatal anxiety. [3] When we looked & take about psychosocialprosperity among pregnant women; we found that mood & anxiety issuesare common during their childbearingyears. The gestational period is considered to be relatively high-risk times for women with pre-existing a number of mental health problems which arise during or soon after pregnancy. [17, 18] Although obstetric intervention for physical care of pregnant women has improved dramatically in Egypt over the past several decades, little attention has been paid to emotional care. This study is performed to assess the incidence of antenatal anxiety during pregnancy as well as associated risk factors in the Egyptian population in Beni Suef, El-Fayoum, and Benha.[6]

According to recent reports, anxiety disorders are common among women of childbearing age. Pregnant women may suffer from anxiety disorders.[7] One study assessed women during pregnancyand discovered that 21% of pregnant women met no less than one disorder; another study detailed that the prevalence of state & trait anxiety symptoms were 59.5% and 45.3% respectively amongpregnant women. Antenatal anxiety is common during pregnancy&current reports detailed that antenatal anxiety symptoms were more predominant than antenatal depressive symptoms. [3]

The results of the present study revealed that 115 (76.7%) of the all study sample (150 pregnant women) suffer from several levels of anxiety; 23 (46.0%) in Beni Suef, 42 (84.0%) in El-Fayoum and 50(100.0%) in Benha. This study finds are in contrast with a Brazilian report that found that antenatal anxiety is prevalent in around one-fifth (20.6%)of the pregnant women in that review.[19] Another study from developed Asiannations have revealed a lower prevalence of such anxieties, for example, a study on a specimen of Singaporean women who were hospitalized during pregnancy demonstrates that 12.5% of those women experienced anxiety. [20] In spite of the fact that the prevalenceof assessed antenatal anxiety may vary significantlycrosswise over various studies because of various inspecting procedures and estimation mistakes. [21] These studies concur that anxiety is a typical & critical issue during pregnancyandthat antenatal anxiety hasturned into an important public health issue, especially in developing countries.[6]

Overall assessment analysis of the prenatal anxiety reasons showed that the main reason for anxietyis not only the pregnant woman herself but also the state of the newborn. The leading causes of anxiety amongst pregnant women are shown as presented in our results. Among Benisuefian pregnant women, it was observed that the main reasons for anxiety were the sex of pregnancy (88.0%) and expected prematurity of baby (92.0%). It is not amazing as the sex of pregnancy is a main social onus for women as well as her husbands' family in Upper Egypt, for a long time there is male preference. Couples are required to have male children early in their marital life. Girl pregnancy resulted in a social stigmatization of women and may place them at risk of serious social consequences. In Upper Egypt, male children consider the main important issueoffamily fame and its extension. Moreover, women without male kids often feel incomplete and may deprive them of theinheritance which results in blame and pressure from their relatives, families, neighbors, and society, as well as threat her married life; therefore, contributing to anxiety.This result is in accordance with Kang et al. (2016) who stated that, in Chinese culture, there exists a widespread gender preference for male progeny. For a long time, this preference led to a high number of sex-selected abortions of female fetuses, contributing to an unequal male-to-female ratio. Today, fetal sex determination is forbidden, which may increase the level of anxiety in pregnant women who have apreference for a male child, because of the uncertainty of the fetal sex. A study in Bangladesh reported a 29% high prevalence of antenatal anxiety regarding the gender sensitivities in their country. Similarly, there may be a potentially high prevalence of anxiety among Chinese women.[6]

Additionally, among pregnant women from El-Fayoum, it was found that expectation of prematurity (82.0%) was the main causes of anxiety. Deklavaa et al (2015) added that anxiety during pregnancy is associated with prematurity, low birth weight &fetal growth restriction which in turn, are risk factors for impaired cognitive and social developmental outcomes. [2] Among pregnant women from Benha, 90.0% of them had lack of social support.Interestingly, this is consistent with studies on paternal anxiety during pregnancy, which is due to low self-esteem & poor social support. [22] In particular, individuals in these surroundings of disharmony are less likely to seek useful support or help, suggesting the importance of social support during pregnancy, especially family care.[6]

In addition, 96.0% of pregnant women in the studied sample from Benha suffer from prolonged morning sickness which might leadto anxiety. This result is in line with astudy performed by Tan et al (2014) andsuggested that morning sickness and anxiety disorders are frequently observed among pregnant women.[23] Morning sickness may develop into hyperemesis gravidarium, so make the mother may likely to be arisen by anxiety. [4] Expected vaginal and perineal trauma is presented by 96.0% of the studied sample while the expected cesarean section is presented by 98.0% of them, and 92.0% stared that their cause of anxiety is their expectation of the possibility of birth trauma of newborn. This result is in accordance with Deklavaa et al (2015) who found statistically significant differences when comparing the anxiety about vaginal and perineal tears.[2] Kang et al (2016) added thatthe fear of giving birth and experiencing a natural delivery is a real challenge for women, and this fear is strongly linked to the request for acesarean section. [6]

According to the findings of the current study, it was revealed that pregnant women exhibited relationship between level of anxiety and their sociodemographic variables, statistically significant between some variables such as age and occupation type, while no significant between other variables as level of educational, type of family, family income adequacy and gestational age and anxiety level in all studied setting (Beni Suef, El-Fayoum, and Benha. Our resultsreinforce the need for gynecologists & professionals as well as healthcare sectors to look for anxiety level in pregnant women. Psychological interventions and improvements in the organization of care are essential to positively impact on outcome during follow-up in this group of women.These results are consistent with the study which carried out by Kang et.al, (2016) which studied anxiety among pregnant women at the Changchun Gynecology & Obstetrics Hospital from January to March 2015, with 467 pregnant women and found that socio-demographic factors may cause anxiety; pregnancy could be an important alternative explanation.[6] In addition,other authors stated that risk factors for antenatal psychological alterations include dissatisfaction, lack of a partner or family psychosocial supports and lower socioeconomic status.[18, 17]

Previous studies demonstrated that women anxiety correlate well with demographic variables include age and educational levels. Pregnant women who are younger and who attain lower education level may find more challenges in adjusting anew role and anew set ofexpectations from themselves and others, and thus they are more likely to manifest anxiety symptoms in early pregnancy.[3]

The results of the current study showed that the group aged >20 years old displayed highest percentage 54 (36.0%) of the study sample. As well, it showed that the same group of women in Benhawas at risk of developing marked to severe level of anxiety (37.5%). The younger pregnant women had marked to severe anxiety than older ones, this may be attributed to that, 98.0% women of the studied sample in Benhaexpected cesarean section delivery. These findings were in agreement with the result of Deklavaa et al (2015) whose; their study data showed that anxiety is more characteristic for younger pregnant women. In their article, they were discovered that women >25 years old were more exposed to the development of anxiety. [2] While in Beni Suef, the age group (20 – 30) of women was at higher risk of developing minimally to moderate level of anxiety (52.2%). It was found that, 12.0% of studied pregnant women were worried about body changes during pregnancy, these findings were in agreement with the result of Deklavaa et al (2015) who stated, there are statistically important situation anxiety differences when comparing worries about changes in body during pregnancy:

when it depends on the age. Their results showed that 8.7% of women in the age group 18 -25 very much to worry about changes in their body during the pregnancy. The same authors added that Pregnant women >25 years old experienced greater anxiety about the changes in their body during the pregnancy, and this decreases with age.[2] In El-Fayoum, minimal to moderate level of anxiety (50.0%) was observed among women aged ≥ 30 years old. The older pregnant women significantly have aworse anxiety condition. It may conclude that severe anxiety level in older women can be related to their worries about their pregnancy outcome as 82.0% of them expected prematurity of their pregnancy. This result was opposing the result of another study which found that the younger subjects had higher anxiety compared to older ones. [11] A statistically significant difference was observed between women's anxiety level and their ages (Beni Suef, ^{MC}P = 0.001 and Benha, ^{MC}P = 0.042).

Women's education had been improved in Upper Egypt in recent decades.[11] According to the present study findings, 54.7% of the study subjects had secondary or technical level which considersa satisfactory level of education. Although the study illustrated that there was no statistically significant difference in anxiety level amongst those pregnant women who were from Beni-Suef (x^2 = 6.836, ^{MC}P = 0.070), El-Fayoum (x^2 = 3.0, ^{MC}P = 0.350)and Benha (x^2 = 2.064, ^{MC}P = 0.641) in regards to their educational level, minimal to moderate and severe anxiety levels were observed amongst women with satisfactory level of education. This may be due to that, ahigher level of education is correlated with ahigher socioeconomic status, and individuals with these qualities have adequate resources and information to improve their situation during pregnancy. These findings in the congruentwith the result of Beutel et al (1999), they denote that level of education has no significant relation to anxiety, [24] but the resultsof Deklavaa et al (2015) study were not similar. They used Pearson's chi-square test to identify whether there are statistically significant differences between anxiety during pregnancy and educational level; their results discovered statistically significant differences comparing state anxiety depending on the educational level (x^2 = 10.04, p = 0.04). They found that respondents' women with the primary education hadn't only got arelatively high/mid-level (44.4%) anxiety indicator, but the level of anxiety state is relatively high too (50%). respondents' women with secondary or higher education had very high/mid-level anxiety readings (80.5% & 75.6%).[2]

Minimal to moderate anxiety is more observed among pregnant women with university graduate education or higher in El-Fayoum (71.4%) and women with technical education in Beni Suef (78.3%), while severe anxiety was found among women with technical education or higher in Benha(66.6%); severe anxiety among pregnant women in Benhamay be attributed to 96.0% of them had expectation of vaginal and perineal trauma. These results aren'tin line with the study performed by Deklavaa et al (2015), they found that severe anxiety is more characteristic for pregnant women with basic educational level (x^2 = 10.04, p = 0.04). [2] Some other studies havealso found that pregnant women with poor education were at a higher risk for developing anxiety during their pregnancy. [6, 25]

Regarding the occupational status, the findings of the present study revealed that 52.0% of the studied women were housewives. The unemployed women had the minimal to moderate level of anxiety (82.6%) among studied women in Beni Suef compared with the employed ones in El-Fayoum (59.5%). A statistically significant difference was observed only among participants from Beni-Suef (x^2 = 12.24, P = 0.0005) compared with El-Fayoum (^{FE}P = 0.277). Our results are in line with other authors, they discovered that anxiety was more prevalent among housewives than in outside working ones.[26, 27,28, 18] Additionally, the results of our study revealed that severe level of anxiety displayed among housewives (66.7%) studied women in Benha, (x^2= 2.131, P = 0.144). This result is in line with other research that denoted that some of the stressors that commonly affect women during pregnancyaround the globe are unfavorable employment conditions, low material resources, heavy household and family responsibilities, strain in intimate relationships, and pregnancy complications.[29] Differences in anxiety level among studied setting may be attributed to differences in lifestyles, sources and amount of stressors among Upper versus Lower Egyptian dwellers.

The results of the present study revealed that 63.3% of the studied samples arelive in extended families. All of thesewomen from Upper Egypt, Beni Suef (100.0%) and 90.5% from El-Fayoum, suffered from minimal to moderate level of anxiety. While among women from Lower Egypt (Benha) 95.8% of women who suffered from asevere level of anxietythey were live in a nuclear family. Evidence of high vulnerability to a anxiety during pregnancy is more generally accessible, at least for certain subgroups of women. For instance, alate study of an assorted urban sample found that 78% experienced low &moderate antenatal psychosocial stress & 6.0% experienced abnormal levels.[8]

Touching on women's socioeconomic status, the outcomes of our study revealed that 48.7% of the studied subjects did not have adequate family income. Moreover, severe anxiety level was displayed 66.7% of the studied sample from Benhaand who did not have adequate family income. This is in line with another study which found 77.2% of morbid anxiety level among pregnant women who did not have adequate family income. [18] It wasn't amazing to find that, anxiety level was more prevalent among poor pregnant women than others; this would affect badly the women's health. Moreover, poverty might increase the burden on women caring for many individuals and striving hard for a living. [11] These results were supported by the fourth world conference (1995) which denoted that statistics about women and poverty were all too familiar, where women were the majority of 1.3 billion people living in extreme poverty.[30]

The main risk factor for anxiety, among pregnant women, is gestational age. Granting to the current study findings, one-third (33.3%) of the studied women were in their 1st trimester, 30.0% in the 2nd trimester and 36.7% of them in their 3rd trimester. It was found that marked to severe anxiety level was greatest observed among women from Benhain their 1st trimester pregnancy (58.3%) while minimal to moderate level of anxiety was observed among women from El-Fayoum in their 3rd trimester pregnancy (57.1%). These results are higher than the findings of Chan et al (2013) who reported, the prevalence of anxiety level by using the HADS-A, at a suggested cutoff of 7/8, was found to be 17.7% & 16.2% in the 1st & 3rd trimester, respectively.[3] In addition, Teixeira et al (2009) added, the prevalence of antenatal anxiety which was reported in western studies and astudy used a cutoff 44/45 of the State Anxiety Inventory (STAI-S) found that the prevalence of anxiety was 15.0% &18.2% in the 1st & 3rd trimester respectively.[31]

The main causes of anxiety symptoms in the 1st trimester may be attributed to unwanted pregnancy (10.0% in Benha), perceived low social support (90.0% in Benha & 72.0% in El-Fayoum), and low marital satisfaction (80.0% in El-Fayoum). Chan (2013) reported that unwanted pregnancy will significantly increase the psychological risk. Pregnant women with an unwanted pregnancy will have more difficulties in accepting the fact of pregnancy as well as adjusting herself to her maternal role and therefore she may increase her tension and fear in response to such dramatic challenges and changes resulting from her pregnancy. In addition, women with low marital satisfaction are more likely to reporta higher level of anxiety symptoms. The present finding is consistent with previous evidence that the quality of marital relationship played an importantrole in the antenatal mood. Moreover, the present finding is in line with past studies that there was a significant inverse relationship betweensocial support and anxiety symptoms in pregnancy. The perception of social support is particularly essential during pregnancy because pregnancy is a time of stress requiring psychological adjustments to physical and role changes. [3] Adriana et al (2013) added that pregnantwomen in absence of socialsupport are apt to be pessimistic & suffer fromlow self-esteem or self-worth. [32]

CONCLUSION

A lot of research attention is focused on postpartum depression. Relatively little attention has been paid to antenatal mental health problems specifically antenatal anxiety. Our study showed that antenatal anxiety is more prevalent among pregnant women live in an extended family in Upper Egypt versus nuclear one in Lower Egypt, with a middle level of education, housewives, and low socioeconomic status. Additionally, pregnant women have high levels of anxiety in 1st and 3rd trimester.

RECOMMENDATION

Based on the results of the study, the following recommendations can be derived:

1. Pregnancy is atime when women are more likely to face an increased level of anxiety. Anxiety during pregnancy is a focus of research because it may affect developmental outcomes in the child. So,it is vital to keep or diminish antenatal anxiety from happening by enhancing the well-being status of pregnant women and reinforcing pre-birth related instruction and mental intervention.

2. The present finding highlights the need for greater research and clinical attention to be paid to antenatal anxiety, given the adverse outcome of antenatal anxiety on maternal well-being and fetal development. In this respect, our findings highlight the importance of screening pregnant women dissatisfied with their lives so that the professionalcaregiverscan provide more psychologicalcare to the most vulnerable ones. In this way, wecan recognize anddecrease the incidence and the harmful consequences of antenatal anxiety effectively.

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