Incidence and Impact of Various Complications on Pregnancy Related Anxiety in Women Attending an Obstetrics Clinic in a Tertiary Care Hospital

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ABSTRACT

Background: Pregnancy itself is associated with a slight percentage of risk. The presence of any complication can worsen it. Objectives: The study aimed to check the incidence and impact of various complications on pregnancy-related anxiety. Methods: This was a prospective observational study. All pregnant women irrespective of gestational weeks were included in the study. The anxiety levels of all pregnant women were checked using PRAQ-R2. A total of 212 women enrolled for the study but 12 women backed off due to incomplete data and finally 200 pregnant women attending an OBG clinic in a Tertiary care hospital were included in the study. The anxiety level scores of both pregnant women without any complication and those with complication was studied and compared. Correlation and significance were checked statistically. Results: The incidence of complications in pregnancy was 46%. The most common complication seen among the study population was thyroid problem. Pregnant women having some kind of complications showed a slightly higher score of anxiety when compared to women who didn't have any complications. Pregnant women with a wheezing problem, thyroid problem and PIH showed moderate levels of anxiety while pregnant women with other complications showed mild anxiety level. Pregnant women having twins showed a moderate level of anxiety. Conclusion: Age and parity of pregnancy had a significant effect on anxiety which was also proved statistically. Pregnant women having complications have slightly more levels of anxiety when compared to pregnant women who didn't have any complications along with present pregnancy.

Key words: Pregnancy, Complications in pregnancy, Pregnancy-related anxiety, PRAQ-R2.

INTRODUCTION

Pregnancy is the most beautiful moment which comes along every woman's life. The woman gets prepared both physically and mentally to bring forth a new life to this world. Due to its dynamic nature, each stage of pregnancy is unique. Pregnancy itself is associated with a slight percentage of risk. The presence of any complication can worsen it. Some complications may affect the health of the women, the baby or both. Certain diseases or conditions the mother had before she became pregnant can also lead to a complication during pregnancy and some complications occur during delivery.

The most common complications of pregnancy are pregnancy-induced hypertension, gestational diabetes

mellitus (GDM), low amniotic fluid (Oligohydramnios), preeclampsia, placenta previa, hyperemesis, iron deficiency anemia, Rh-negative disease, urinary tract infection (UTI) and other mental health conditions along with pregnancy.

Pregnancy is one of the most important events in women's' life. Being pleasant on one side, pregnancy is also one of the most stressful events in the life of a woman and a psychologist describes pregnancy as an emotional crisis.³ If this crisis is not properly managed and controlled, it will turn into a prolonged crisis and will leave countless undesirable consequences on the mother and her baby.⁴ Feeling of anxiety during pregnancy is relatively common with about 10 - 15% experience some type of anxiety during the various phases of pregnancy.⁵

DOI: 10.5530/ijopp.13.4.54

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Higher levels of anxiety during pregnancy may lead to preterm labor, low birth weight and a range of adverse child outcomes.

Pregnancy-specific anxiety was assessed with English and Tamil translations of the 10-item self-report Pregnancy-Related Anxiety Questionnaire-Revised Version 2 (PRAQ-R2). Scores on each item ranged from 1 (definitely not true) to 5 (definitely true). The items of the PRAQ-R can be ordered into three subscales.

- ➤ The first subscale, Fear of giving birth, consists of three items such as "I am worried about the pain of contractions and the pain during delivery".
- ➤ The second subscale, Worries about bearing a physically or mentally handicapped child, consists of four items, including "I sometimes think that our child will be in poor health or will be prone to illnesses".
- ➤ The third subscale, Concern about own appearance consists of three items, such as "I am worried about my enormous weight gain".

MATERIALS AND METHODS Study Design and study setting

A prospective observational study conducted for a period of ten months from June 2018 to March 2019 at MMCH Multispecialty Hospital, Erode, Tamil Nadu in the Gynecological outpatient department. The study was approved by the Institutional Ethical Committee (EC/M. PHARM/2018 – 2). A total of 200 women were selected by a random systematic sampling method. Informed consents were obtained from the participants who agreed to participate in the study.

Selection of participants Inclusion and exclusion criteria Inclusion criteria

- All pregnant women irrespective of gestational weeks, naturally pregnant women and in vitro fertilization (IVF) pregnant women were included in the study.
- Pregnant women with complications.

Exclusion criteria

Non-Consenters and incomplete data entries and pregnant women who had multiple abortions were excluded from the study.

Data collection

The self-administered questionnaire comprises of three sections, the first section contains the socio-demographic details of each individual patients such as gender, age, marital status, educational status, employment status. The general health status and condition of pregnancy also was included in this section. The second section includes the clinical factors of pregnancy which involves lab investigations, status of pregnancy and complications in pregnancy. The third section assess pregnancy related anxiety with the use of PRAQ-R2. The PRAQ-R2 incorporates 10 questions to assess total anxiety during pregnancy. Question number 1, 2, 6 scores were used to assess the fear of child birth; question 4, 8 – 10 were used to assess worries about bearing a handicapped child and question 3, 5, 7 were used to assess the concern about own appearance.

The total score provides scores of subscale scores of Fear of giving birth, Worries of bearing a handicapped child and Concern of own appearance which range between 10-50. The scores of the subscales were summed separately and evaluated to understand the cause of anxiety in detail. A score equal 10 shows the patient is not anxious, a score between 11-12 shows mild anxiety, a score of 21-30 shows moderate level of anxiety, a score of 31-40 shows severe anxiety and a score above 41 shows very severe anxiety.

Analysis of Data

Data entry and analyses was carried out using the Statistical Package for the Social Sciences (SPSS) version 16.0, IBM. The continuous variables of two groups were described and interpreted by student independent "t" tests and more than two groups were analyzed and interpreted by one-way ANOVA. The categorical variables were described in terms of percentages and interpreted by χ^2 (Chi-square) test. The relation between the continuous variables were analyzed and interpreted by Pear sonic correlation coefficient (r). The P-values less than or equal to 0.05 ($P \leq 0.05$) were treated as statistically significant.

RESULTS

Demographic details

Majority of the age group were of 20-24 yrs and the least were above 35 yrs. 45.5% of the study population were graduates and 83% were home managers. Majority of the study population (74%) were in their third trimester and 58.8% were nulliparous (Table 1).

| Table 1 | 1: Demographic details. | | | |
|---------|-------------------------|-----------------|------------|----------------|
| S.no | Category | Sub-Category | Number (N) | Percentage (%) |
| | | 15 – 19 | 12 | 6 |
| | | 20 – 24 | 70 | 35 |
| 1 | AGE | 25 – 29 | 84 | 42 |
| | | 30 – 35 | 29 | 14.5 |
| | | 35 – 39 | 5 | 2.5 |
| | | PRIMARY | 8 | 4 |
| | | HIGH SCHOOL | 16 | 8 |
| 2 | EDUCATION | HR. SECONDARY | 44 | 22 |
| 2 | EDUCATION | GRADUATE | 91 | 45.5 |
| | | POST GRADUATE | 38 | 19 |
| | | M.PHIL and Ph.D | 3 | 1.5 |
| | | HOME MANAGERS | 166 | 83 |
| | | STUDENTS | 8 | 4 |
| 3 | OCCUPATION | PROFESSIONAL | 18 | 9 |
| | | SERVICE | 6 | 3 |
| | | OTHERS | 2 | 1 |
| | | FIRST | 12 | 6 |
| 4 | TRIMESTER | SECOND | 40 | 20 |
| | | THIRD | 148 | 74 |
| 5 | SEQUENCE OF PREGNANCY | FIRST | 117 | 58.5 |

History of complication in the previous pregnancy

Among the total study population 82 women were conceiving for more than one time and among that 36 pregnant women had a history of complication in their previous pregnancy which is 43.9% of the study population and 46 pregnant women didn't have any complication in their previous pregnancy.

Condition of pregnancy (Figure 1)

Among the total study population, 92 women had a complication during the present pregnancy which is 46% of the study population.

Complication of pregnancy (Figure 2)

The common conditions seen in the study population were Anemia, GDM, PIH, Rh-negative, Thyroid problem, wheezing which made the present pregnancy complicated. The most common complication was a thyroid problem with 24 patients having it and the least common was the mother having an Rh-negative blood group. Among the study population, 16 pregnant women had a combination of more than one condition which complicated the present pregnancy and 13 pregnant women had other conditions which were not common. Among the study population, 3 pregnant women had twins which were not a complication on its own but may lead to an LSCS.

| Table 2: Relationship between maternally related variables with total anxiety. | | | | | | | |
|--|-------------------|--------|-----------------|-------|----------------------------|------------------------|--|
| Anxiety | Maternal variable | "r" | Significance | r² | % of <i>r</i> ² | Determined anxiety | |
| | Age | -0.252 | <i>P</i> <0.001 | 0.064 | 6.4 | Age determined 6.4% | |
| | Parity | -0.199 | <i>P</i> <0.001 | 0.039 | 3.9 | Parity determined 3.9% | |
| | Trimester | -0.078 | <i>P</i> >0.05 | - | - | - | |
| Total | НВ | 0.022 | <i>P</i> >0.05 | - | - | - | |
| anxiety | TSH | 0.026 | <i>P</i> >0.05 | - | - | - | |
| | SBP | 0.273 | <i>P</i> <0.001 | 0.075 | 7.5 | SBP determined 7.5% | |
| | DBP | 0.244 | <i>P</i> <0.001 | 0.060 | 6.0 | DBP determined 6.0% | |
| | GCT | 0.064 | <i>P</i> >0.05 | - | - | | |

The following variables such as age, parity, SBP and DBP have significantly determined the anxiety as 7.2%. 3.9%, 7.5% and 6.0% respectively (P<0.001). The other variables such as trimester, Hb, TSH and GCT were not statistically significantly correlated (P>0.05).

Table 3: Relationship between maternally related variables with Subscale 1 Fear of giving birth. % of **Anxiety** Maternal variable "r" Significance **Determined anxiety** r^2 Age -0.124 P>0.05 Parity -0.078 P>0.05 Trimester -0.129 P>0.05 0.016 1.6 Fear of HB 0.017 P>0.05 giving **TSH** 0.099 P>0.05 birth SBP 0.249 P<0.001 0.058 5.8 SBP determined 5.8% **DBP** P<0.001 DBP determined 7.3% 0.271 0.073 7.3 **GCT** 0.070 P>0.05

The following variables such as SBP and DBP have significantly determined the fear of giving birth as 5.8% and 7.3% (*P*<0.001). The other variables such as age, parity, trimester, HB, TSH and GCT were not statistically significantly correlated with fear of giving birth (*P*>0.05).

Table 4: Relationship between maternally related variables with Subscale 2 Worries of bearing a handicapped child.

| Anxiety | Maternal variable | "إم" | Significance | r² | % of r ² | Determined anxiety |
|-------------------------|----------------------|--------|-----------------|-------|---------------------|---------------------|
| | Age | -0.199 | <i>P</i> <0.001 | 0.040 | 4.0 | Age determined 4.0% |
| | Parity | 0.035 | <i>P</i> >0.05 | - | - | - |
| | Trimester | -0.061 | <i>P</i> >0.05 | - | - | - |
| Worries about bearing a | НВ | 0.019 | <i>P</i> >0.05 | - | - | - |
| handicapped child. | TSH | 0.019 | <i>P</i> >0.05 | - | - | - |
| Crilia. | SBP | 0.245 | <i>P</i> <0.001 | 0.060 | 6.0 | SBP determined 6.0% |
| | DBP | 0.241 | <i>P</i> <0.001 | 0.058 | 5.8 | DBP determined 5.8% |
| | GCT | -0.050 | <i>P</i> >0.05 | - | - | |

The following variables such as age, SBP and DBP have significantly determined the worries about bearing a handicapped child as 4.0%. 6.0% and 5.8% respectively (P<0.001). The other variables such as parity, trimester, HB, TSH and GCT were not statistically significantly correlated (P>0.05).

Table 5: Relationship between maternally related variables with Subscale 3 Concern of own appearance.

| Anxiety | Maternal variable | "r" | Significance | r² | % of r² | Determined anxiety |
|-----------------|----------------------|--------|-----------------|----|------------|--------------------|
| | Age | -0.199 | <i>P</i> >0.05 | - | - | - |
| | Parity | -0.068 | <i>P</i> >0.05 | - | - | - |
| | Trimester | -0.042 | <i>P</i> >0.05 | - | - | - |
| Concern about | НВ | 0.060 | <i>P</i> >0.05 | - | - | - |
| own appearance. | TSH | 0.052 | <i>P</i> >0.05 | - | - | - |
| | SBP | 0.089 | <i>P</i> <0.001 | - | - | - |
| | DBP | 0.061 | <i>P</i> <0.001 | - | - | - |
| | GCT | 0.108 | <i>P</i> >0.05 | - | - | - |

All the variables such as age, parity, trimester, HB, TSH, SBP, DBP and GCT were not statistically significantly correlated with concern about their own appearance (*P*>0.05).

| .No | Age of Pregnant Women | n | Pregnancy Related Anxiety | Mean (Std. Deviation) |
|-----|-----------------------|----|---------------------------|--------------------------|
| 1 | 15 - 19 yrs | 12 | TOTAL ANXIETY | 23.833 ± 11.5 |
| | | | SUBSCALE 1 | 8.917± 3.7 |
| | | | SUBSCALE 2 | 9.250 ± 6.5 |
| | | | SUBSCALE 3 | 5.667 ± 4.0 |
| 2 | 20 - 24 yrs | 70 | TOTAL ANXIETY | 21.000 ± 8.3 |
| | | | SUBSCALE 1 | 8.857 ± 3.3 |
| | | | SUBSCALE 2 | 7.400 ± 5.0 |
| | | | SUBSCALE 3 | 4.729 ± 2.7 |
| 3 | 25 - 29 yrs | 84 | TOTAL ANXIETY | 20.107 ± 7.5 |
| | | | SUBSCALE 1 | 8.250 ± 2.8 |
| | | | SUBSCALE 2 | 6.643 ± 3.8 |
| | | | SUBSCALE 3 | 5.214 ± 3.1 |
| 4 | 30 - 34 yrs | 29 | TOTAL ANXIETY | 16.966 ± 6.0 |
| | | | SUBSCALE 1 | 7.276 ± 2.8 |
| | | | SUBSCALE 2 | 5.689 ± 3.3 |
| | | | SUBSCALE 3 | 4.000 ± 1.7 |
| 5 | 35 - 39 yrs | 5 | TOTAL ANXIETY | 16.400 ± 7.2 |
| | | | SUBSCALE 1 | 7.200 ± 3.5 |
| | | | SUBSCALE 2 | 5.800 ± 4.0 |
| | | | SUBSCALE 3 | 3.400 ± 1.0 |

Pregnant women of younger age have a moderate level of anxiety and older women showed a mild level of anxiety. Anxiety level is inversely proportional to age, i.e. as age increases anxiety level decreases.

| Table 7: | Measurement of Pregnar | ncy-relate | d Anxiety according to Trim | ester of Pregnancy. |
|----------|------------------------|------------|------------------------------|--------------------------|
| S. No | Trimester of Pregnancy | n | Pregnancy Related Anxiety | Mean (Std. Deviation) |
| 1 | First | 12 | TOTAL ANXIETY | 19.750 ± 5.8 |
| | | | SUBSCALE 1 | 8.250± 3.6 |
| | | | SUBSCALE 2 | 7.333 ± 4.3 |
| | | | SUBSCALE 3 | 4.167± 1.3 |
| 2 | Second | 40 | TOTAL ANXIETY | 21.425 ± 8.0 |
| | | | SUBSCALE 1 | 8.775 ± 3.1 |
| | | | SUBSCALE 2 | 7.250± 4.1 |
| | | | SUBSCALE 3 | 5.400± 3.0 |
| 3 | Third | 148 | TOTAL ANXIETY | 21.777 ± 7.5 |
| | | | SUBSCALE 1 | 8.372 ± 3.1 |
| | | | SUBSCALE 2 | 6.777 ± 4.5 |
| | | | SUBSCALE 3 | 4.757 ± 2.8 |

Pregnant women in the second trimester and third trimester had a moderate level of anxiety and those in the first trimester had mild levels of anxiety.

| Table 8: Mea | Table 8: Measurement of Pregnancy-related Anxiety according to Parity of Pregnancy. | | | | | |
|--------------|---|-----|------------------------------|--------------------------|--|--|
| S. No | Parity of Pregnancy | n | Pregnancy Related Anxiety | Mean (Std. Deviation) | | |
| 1 | First | 117 | TOTAL ANXIETY | 21.256 ± 8.2 | | |
| | | | SUBSCALE 1 | 9.111± 3.2 | | |
| | | | SUBSCALE 2 | 6.726± 4.5 | | |
| | | | SUBSCALE 3 | 4.897± 3.0 | | |
| 2 | Second | 74 | TOTAL ANXIETY | 19.378± 7.7 | | |
| | | | SUBSCALE 1 | 7.446± 3.2 | | |
| | | | SUBSCALE 2 | 7.014± 4.2 | | |
| | | | SUBSCALE 3 | 4.919± 2.7 | | |
| 3 | Third | 9 | TOTAL ANXIETY | 19.889± 7.3 | | |
| | | | SUBSCALE 1 | 7.889± 4.0 | | |
| | | | SUBSCALE 2 | 8.333± 4.0 | | |
| | | | SUBSCALE 3 | 3.667± 1.4 | | |

Pregnant women who conceived for the first time showed a moderate level of anxiety when compared to those who conceived for more than once. Pregnant women who have conceived more than once showed only a mild level of anxiety.

Table 9: Measurement of Pregnancy-related Anxiety according to the presence of some kind of complication in Pregnancy.

| S. No | Complication in pregnancy | n | Pregnancy Related Anxiety | Mean (Std. Deviation) |
|-------|---------------------------|-----|------------------------------|--------------------------|
| 1 | ABSENT | 108 | TOTAL ANXIETY | 19.315 ± 7.8 |
| | | | SUBSCALE 1 | 8.250 ± 3.0 |
| | | | SUBSCALE 2 | 7.463 ± 4.8 |
| | | | SUBSCALE 3 | 5.092 ± 3.0 |
| | PRESENT | 92 | TOTAL ANXIETY | 21.740 ± 6.6 |
| 2 | | | SUBSCALE 1 | 9.100 ± 3.0 |
| | | | SUBSCALE 2 | 6.337 ± 3.7 |
| | | | SUBSCALE 3 | 4.565 ± 2.6 |
| | | | | |

Pregnant women who had some kind of complication showed a moderate level of anxiety when compared to pregnant women who didn't have any complications. Pregnant women without any complications showed an only mild levels of anxiety.

| Table 10: | : Measurement of Preg | nancy-related | Anxiety and various compli | cations. |
|-----------|------------------------------|---------------|------------------------------|--------------------------|
| S. No | Complication of Pregnancy | n | Pregnancy Related Anxiety | Mean (Std. Deviation) |
| 1 | ANEMIA | 12 | TOTAL ANXIETY | 20.083± 3.8 |
| | | | SUBSCALE 1 | 10.167± 2.7 |
| | | | SUBSCALE 2 | 6.000± 2.3 |
| | | | SUBSCALE 3 | 3.917 ± 1.6 |
| 2 | GDM | 10 | TOTAL ANXIETY | 18.100 ± 4.8 |
| | | | SUBSCALE 1 | 9.000± 3.8 |
| | | | SUBSCALE 2 | 4.500 ± 0.8 |
| | | | SUBSCALE 3 | 4.600 ± 2.1 |
| 3 | PIH | 5 | TOTAL ANXIETY | 25.400± 12.0 |
| | | | SUBSCALE 1 | 10.600± 2.5 |
| | | | SUBSCALE 2 | 8.200± 5.7 |
| | | | SUBSCALE 3 | 6.600 ± 5.4 |

| 4 | RH-VE | 4 | TOTAL ANXIETY | 20.000 ± 10.0 |
|---|-----------------|----|---------------|-----------------|
| | | | SUBSCALE 1 | 7.500± 1.3 |
| | | | SUBSCALE 2 | 7.750 ± 7.5 |
| | | | SUBSCALE 3 | 4.750 ± 1.7 |
| 5 | THYROID PROBLEM | 24 | TOTAL ANXIETY | 21.167 ± 7.6 |
| | | | SUBSCALE 1 | 9.417± 3.5 |
| | | | SUBSCALE 2 | 6.583 ± 3.8 |
| | | | SUBSCALE 3 | 5.167 ± 2.8 |
| 6 | WHEEZING | 5 | TOTAL ANXIETY | 26.400± 8.8 |
| | | | SUBSCALE 1 | 12.000± 2.8 |
| | | | SUBSCALE 2 | 9.600± 6.0 |
| | | | SUBSCALE 3 | 4.800 ± 3.0 |
| 7 | TWINS | 3 | TOTAL ANXIETY | 22.333 ± 4.7 |
| | | | SUBSCALE 1 | 8.333 ± 3.0 |
| | | | SUBSCALE 2 | 5.667 ± 3.0 |
| | | | SUBSCALE 3 | 8.333 ± 4.7 |
| 8 | COMBINATION | 16 | TOTAL ANXIETY | 18.563± 4.5 |
| | | | SUBSCALE 1 | 8.563± 1.7 |
| | | | SUBSCALE 2 | 6.188± 3.3 |
| | | | SUBSCALE 3 | 3.813 ± 1.4 |
| 9 | OTHERS | 13 | TOTAL ANXIETY | 16.308 ± 3.4 |
| | | | SUBSCALE 1 | 7.462± 2.0 |
| | | | SUBSCALE 2 | 5.692 ± 2.7 |
| | | | SUBSCALE 3 | 3.154 ± 0.5 |
| | | | | |

Pregnant women with various complications have mild to moderate levels of anxiety. Pregnant women with a wheezing problem, thyroid problem and PIH showed moderate levels of anxiety while pregnant women with other complications showed mild anxiety level. Pregnant women having twins showed a moderate level of anxiety.

Pregnancy-Related Anxiety

Pregnancy-related anxiety was measured using PRAQ-R2. Various parameters and lab values were statistically correlated and checked for significance. The total score and the subscale scores were measured. The mean score of total anxiety and subscales was calculated for each category of pregnant women and impact checked.

Relationship of various parameters on pregnancyrelated anxiety

The relationship of the variables such as age, parity, SBP and DBP has significantly determined the total anxiety with *P* value < 0.001(Table 2). The variables such as SBP and DBP has significantly determined the subscale 1 Fear of giving birth (Table 3) and variables such as age, SBP and DBP significantly determined the subscale 2 Worries of bearing a handicapped child (Table 4). All the variables

were not statistically significantly correlated with Subscale 3, Concern of own appearance (Table 5).

Anxiety score using PRAQ-R2

The score of Pregnancy related Anxiety was determined according to various variables like age, trimester, parity, presence of some complications and the relationship of the different complications was determined. Pregnant women of younger age have a moderate level of anxiety and older women showed a mild level of anxiety. Anxiety level is inversely proportional to age, i.e. as age increases anxiety level decreases (Table 6). Pregnant women in the second trimester and third trimester had a moderate level of anxiety and those in the first trimester had mild levels of anxiety (Table 7). Pregnant women who conceived for the first time showed a moderate level of anxiety when compared to those who conceived for more than once.

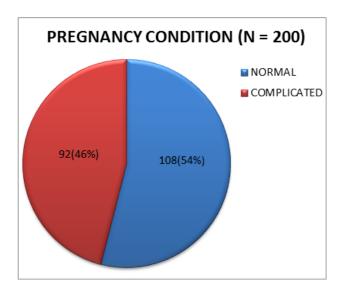


Figure 1: Condition of Pregnancy.

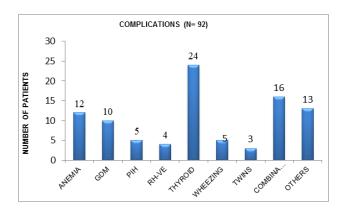


Figure 2: Complications in pregnancy.

Pregnant women who have conceived more than once showed only a mild level of anxiety (Table 8). Pregnant women who had some kind of complication showed a moderate level of anxiety when compared to pregnant women who didn't have any complications. Pregnant women without any complications showed only a mild level of anxiety (Table 9). Pregnant women with various complications have mild to moderate levels of anxiety. Pregnant women with a wheezing problem, thyroid problem and PIH showed moderate levels of anxiety while pregnant women with other complications showed mild anxiety level. Pregnant women having twins showed a moderate level of anxiety (Table 10).

DISCUSSION

This study aimed at studying the incidence and impact of complications in pregnancy related anxiety carried out in the outpatient department of a Multispecialty hospital. The study showed that 46% of the study population had some complication along with the present pregnancy and the most common complications seen

in the study population were Anemia, GDM, PIH, Rhnegative, Thyroid problem and wheezing which made the present pregnancy complicated. Majority of the study population (26.10%) had thyroid problem and 17.4% had a combination of more than one complication along with the present pregnancy.

The association between various parameters in pregnancy and the score of anxiety was checked using PRAQ-R2. The study showed that women who conceived for the first time were more anxious than those who have conceived more than once.

H Rouhe *et al.* in their study of Fear of childbirth according to parity, gestational age and obstetric history states that nulliparous pregnant women showed severe fear of childbirth.¹²

We studied the relationship between maternal related variables with total pregnancy related anxiety. The variables such as age, parity, systolic blood pressure and diastolic blood pressure significantly determined the anxiety as 7.2%, 3.9%, 7.5% and 6.0% respectively (p< 0.001).

Qingzhi Hou *et al.* in their study "The associations between maternal lifestyles and antenatal stress and anxiety in Chinese pregnant women: A cross-sectional study." revealed that maternal age, pre-pregnancy BMI and gravidity history had a significant statistical difference in sub-stress level groups. Madhavi K Thombre *et al.* in their study on Association between Pre-Pregnancy Depression/Anxiety Symptoms and Hypertensive Disorders of Pregnancy suggest that the link between maternal chronic hypertension and depression/anxiety symptoms precedes pregnancy.

Pregnant women who conceived for the first time showed a moderate level of anxiety when compared to those who conceived for more than once. Pregnant women who have conceived more than once showed only a mild level of anxiety. H Rouhe *et al.* in their study of Fear of childbirth according to parity, gestational age and obstetric history states that nulliparous pregnant women showed severe fear of childbirth.⁷

In this study we found that pregnant women who had some kind of complications showed more pregnancy related anxiety than pregnant women without any complications.

Zahra Bostani Khalesi *et al.* in their study "Association between pregnancy-specific anxiety and pre-term birth: a cohort study" showed that change in pregnancy specific

anxiety was associated with pre-term birth among the participants in this study.¹⁰

Most of studies were done to check the impact of pregnancy related anxiety on the complications of pregnancy and not vice versa.

CONCLUSION

The various complications which came across in the study were varied. The majority being thyroid problems and the least being Rh-negative mothers. 17.40% of the study population had more than one complication along with present pregnancy. Age and parity of pregnancy had a significant effect on anxiety which was also proved statistically. Pregnant women of younger age were more anxious about pregnancy than those who got pregnant at an older age. Likewise, women who were conceiving for the first time were more anxious about pregnancy than those who already had conceived earlier. Pregnant women in the second and third trimester showed slightly higher levels of anxiety when compared to pregnant women in the first trimester. The incidence of various complications in pregnancy does have a significant effect on the anxiety of pregnant women. Patients with a wheezing problem, thyroid problem and pregnancy-induced hypertension showed a moderate level of anxiety whereas patients with other complications showed a mild level of anxiety. Pregnant women having twins showed a moderate level of anxiety.

Limitation of the Study

The cultural background from which the study population comes from doesn't have an open mind to accept their mental state. The study period was nine months which was comparatively less for understanding the impact of the study. The sample size was too small to come to an actual conclusion of the study.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ABBREVIATIONS

GDM: Gestational Diabetes mellitus; PIH: Pregnancy

Induced Hypertension; **ACOG**: The American College of Obstetrics and Gynaecologists; **IVF**: Invitro Fertilization; **IUI**: Intra Uterine Insemination; **LSCS**: Lateral Section C-section; **CPD**: Cephalopelvic Disproportion; **PCOD**: Poly Cystic Ovary Disorder; **PRAQ-R2**: Pregnancy Related Anxiety Questionnaire – Revised version 2.

SUMMARY

There exist a strong relation with complications in pregnancy and pregnancy related anxiety especially pregnancy induced pressure has direct association with pregnancy related anxiety. The effect of pregnancy related anxiety itself can cause many complications in pregnancy including pre-term baby or miscarriages but anxiety are mostly left undiagnosed. Moreover our Indian culture shows stigma towards mental health and are not given much importance as required and the patients are not open to express their fears regarding pregnancy and anxiety related to that. This may lead to misconceptions and chances of creating unwanted complications which could have been treated in a better way if dealt with care and with proper counselling.

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