Original Research Article **Allied health science**

International Journal of Pharma and Bio Sciences **ISSN 0975-6299**

EFFECT OF ANTENATAL EDUCATION IN IMPROVING MATERNAL CONFIDENCE AND REDUCING ANXIETY ABOUT LABOR IN PRIMIGRAVIDA WOMEN ATTENDING SAVEETHA MEDICAL COLLEGE AND HOSPITAL,CHENNAI,TAMIL NADU, INDIA

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ABSTRACT

Child birth is perceived as a natural process in woman's life. The women those who attend delivery for the first time definitely would have some sort of fear and anxiety. This fear is due to lack of knowledge and idea about what is happening around her and it will lead to lack of cooperation during delivery. Antenatal education gives knowledge about labour and teach how to overcome pain and what to do during each stage of labour. This may reduce the anxiety associated with child birth. This study was conducted to find out whether the antenatal education is effective in reducing maternal anxiety about labor in primigravida women attending Saveetha medical college and Hospital, which is located in rural community where the women are more exposed to myths. Twenty subjects were taken from obstetric ward and they were equally divided into two groups. The pre-test and post-test evaluation of maternal anxiety was made with the childbirth attitude questionnaire. Subjects were treated for their complaints and the antenatal education with different syllabus were given to both the groups individually. The post-test values were noted. The data was statistically analyzed using paired t-test and student t-test. The pre-test mean value of Group A and Group B is 38.8 and 40.1 respectively. The post-test mean value of Group A is 36.4 and in Group B is 23.6. This study showed the statistically significant reduction in maternal anxiety about labor in primigravida women who attended antenatal classes (p=0.0016). This study concludes that antenatal education helps in reducing maternal anxiety about labor in primigravida mothers.

KEY WORDS: **Antenatal education, Maternal anxiety, Self efficacy, child birth attitude questionnaire.**

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Received on : 16-06-2016
Revised and Accepted on 24-11-2016
DOI: http://dx.doi.org/10.22376/ijpbs.2017.8.1.b261 -265

INTRODUCTION

According to the World Health Organization (WHO), a normal birth can be defined as, "spontaneous in onset, low-risk at the start of labor and remaining so throughout labor and delivery" [1]. Certain levels of fear and anxiety about childbirth are expected, especially among primi mothers. However, problems arise when these feelings negatively impact a woman's decisions and perceptions about the birth process. The Fear of childbirth may overshadow the whole pregnancy, complicate labor and lead to difficulties in the mother–infant relationship and to postpartum depression. Some studies have shown both anxiety and depression during pregnancy are associated with an increased risk of preterm delivery, low birth weight and other obstetric complications[2,3]. According to Storkesenet al. in the study on fear of childbirth and anxiety, the fear of childbirth was screened with the Wijma Delivery Expectancy Questionnaire (W-DEQ-A) assumed that 5–20% of all pregnant women fear giving Birth and the number of Planned cesarean deliveries performed because of fear of childbirth has increased markedly. 8% (137 of 1642) of the women reported fear of childbirth (W-DEQ score≥85) and 6% (94 of 1642) of the women had fear of childbirth using (Numerical Rating Scale score≥9). The prevalence of anxiety (Hopkins Symptoms Check List-anxiety score≥18) was 8.8% (145 of 1642), and the prevalence of depression (Edinburgh Postnatal Depression Scale score≥12) was 8.9% (146 of 1642). Five per cent (78 of 1642) of the women reported both anxiety and depression[4]. Pain is a complex phenomena impacted by an individual's culture, mindset and past experience with painful events. When a women is stressed a series of chemical changes is set off in our bodies and brain, such as release of adrenaline and cortisol. When a pregnant woman is stressed the fetus is in a risk of getting exposed to the high levels of these stress hormones which has an impact on the fetus brain development. It may also cause changes in the blood flow to the fetus making it difficult to carry oxygen and nutrients to the baby developing organs. Maternal stress and anxiety during pregnancy may even lead to short gestation, higher incidence of preterm birth and increased risk of miscarriage. This can also have an effect on infant postnatally such as temperamental problems, fussiness, hyperactivity and inattention in boys and emotional problems in girls and boys [5]. At the same time improvement in self efficacy that is person's belief in their ability to succeed may reduce anxiety and improve confidence which also helps in coping up labor by producing endorphins also known as pain relieving hormones. High endorphin levels during birth may produce altered state of consciousness that will help in the process of labor. This study aims to find out how effectively the antenatal education worked out in reducing the maternal anxiety among primigravida women.

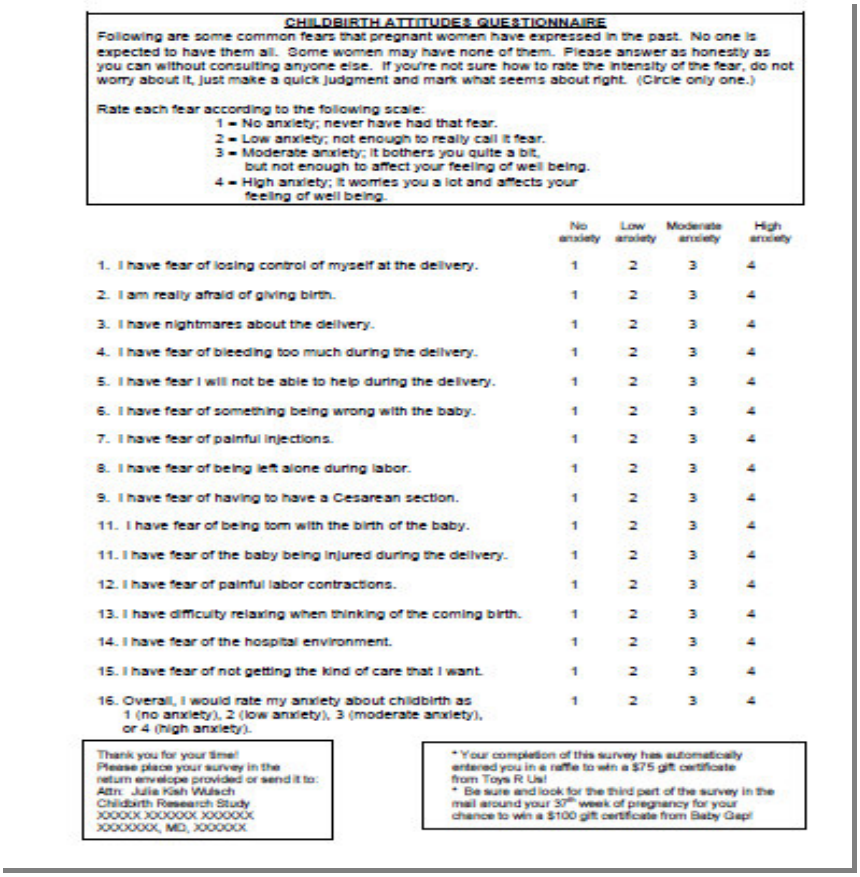
METHODOLOGY

This study was approved by Institutional ethics committee-009/ 03 / 2015 / IEC /SU. The study was conducted from August 2015 – November 2015. This study was conducted in the Urology and obstetric physiotherapy department of Saveetha medical college and hospital. There are many studies have done across the country but this study aims to do it in rural population where the people are more prone for myths and not aware about the actual scientific facts. On other hand it gives awareness to the people those who are attending along with antenatal mothers. It is a Randomized controlled trial. After getting referral from obstetrician, using convenient sampling method twenty primigravida women was selected for the study. Third trimester primi mothers <30 years were included and those women with high risk pregnancy, pelvic surgeries and non cooperative mothers were excluded. After briefing them about the study procedure, informed consent was obtained. Then subjects were allocated into two groups based on their entry into the research, all odd numbers were allocated into one group and even numbers into another group by co-investigator and the pre-test evaluation of maternal anxiety with the child birth attitude questionnaire was done. Antenatal education was given to both the groups with different syllabus through power point presentation. The antenatal syllabus followed for both groups as follows, Group A (control group) presenting complaints and treatment for the same, antenatal exercises pertaining to the present trimester, antenatal education on Physiology of fertilization. Group B (experimental group) presenting complaints and treatment for the same, antenatal exercises pertaining to the present trimester, antenatal education on physiology of labor and labor coping up strategies. After the antenatal education the post-test values were taken. The tester was blinded for the group allocation and questionnaire evaluation. The pre-test and post-test values were collected, tabulated and analyzed.

Outcome measure

Outcome of this study was measured using the Childbirth Attitude questionnaire which assessed the maternal anxiety before and after antenatal education. This questionnaire was adopted from the following study- the development of maternal confidence for labor among nulliparous pregnant women by JA Kish[1]. This questionnaire had sixteen questions which asses the anxiety of labor with the values ranging from one to sixty four in which sixteen indicated low anxiety and sixty four indicated high anxiety and was evaluated accordingly.

Figure 1
Child berth attitude questionnaire



CHILDBIRTH ATTITUDES QUESTIONNAIRE

Following are some common fears that pregnant women have expressed in the past. No one is expected to have them all. Some women may have none of them. Please answer as honestly as you can without consulting anyone else. If you're not sure how to rate the intensity of the fear, do not worry about it, just make a quick judgment and mark what seems about right. (Circle only one.)

Rate each fear according to the following scale:
1 = No anxiety; never have had that fear.
2 = Low anxiety; not enough to really call it fear.
3 = Moderate anxiety; it bothers you quite a bit, but not enough to affect your feeling of well being.
4 = High anxiety; it worries you a lot and affects your feeling of well being.

	No anxiety	Low anxiety	Moderate anxiety	High anxiety
1. I have fear of losing control of myself at the delivery.	1	2	3	4
2. I am really afraid of giving birth.	1	2	3	4
3. I have nightmares about the delivery.	1	2	3	4
4. I have fear of bleeding too much during the delivery.	1	2	3	4
5. I have fear I will not be able to help during the delivery.	1	2	3	4
6. I have fear of something being wrong with the baby.	1	2	3	4
7. I have fear of painful injections.	1	2	3	4
8. I have fear of being left alone during labor.	1	2	3	4
9. I have fear of having to have a Cesarean section.	1	2	3	4
11. I have fear of being torn with the birth of the baby.	1	2	3	4
11. I have fear of the baby being injured during the delivery.	1	2	3	4
12. I have fear of painful labor contractions.	1	2	3	4
13. I have difficulty relaxing when thinking of the coming birth.	1	2	3	4
14. I have fear of the hospital environment.	1	2	3	4
15. I have fear of not getting the kind of care that I want.	1	2	3	4
16. Overall, I would rate my anxiety about childbirth as 1 (no anxiety), 2 (low anxiety), 3 (moderate anxiety), or 4 (high anxiety).	1	2	3	4

Thank you for your time!
Please place your survey in the return envelope provided or send it to:
Attn: Julie Kish Wilsch
Childbirth Research Study
XXXXX XXXXXX XXXXXX
XXXXXXX, MD, XXXXXX

* Your completion of this survey has automatically entered you in a raffle to win a $75 gift certificate from Toys R Us!
* Be sure and look for the third part of the survey in the mail around your 37th week of pregnancy for your chance to win a $100 gift certificate from Baby Gap!

Statisyical analysis

The collected data was tabulated & analyzed using descriptive & inferential statistics. To all parameters mean & standard deviation (SD) were calculated. Paired t test was used to analyze the pre-test and post-test values within the groups. Student t-test was used as to analyze the post-test values between the groups.

Figure 2
Comparision of pre-test and post-test values of group-a

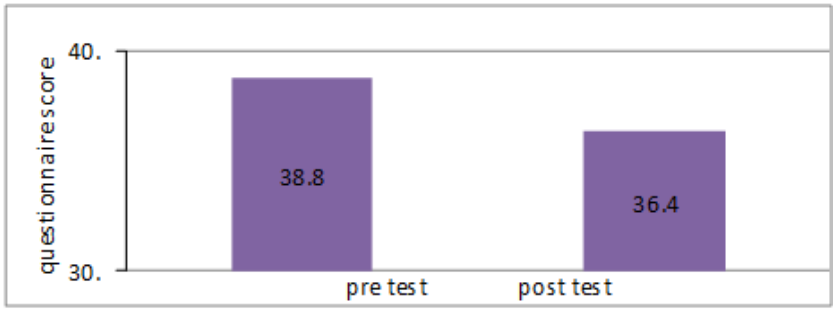


Table 1
Comparision of pre-test and post-test values of group-a

Group A			Mean	Standard deviation	t value	p value
Child Birth	Attitude Questionnaire.	Pre test	38.80	11.98	14.69	<0.001
		Post test	36.40	11.82		

It is observed from above table 1 and figure 2 that mean value of Child birth attitude questionnaire (figure 1) in pre-test is 38.80 with standard deviation of 11.98 and the post test mean value is 36.4 with standard deviation of 11.82. and p-value is <0.001,is considered as statistically significant.

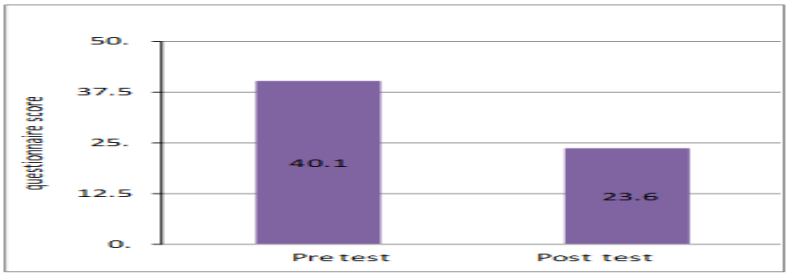


Figure 3
Comparision of pre-test and post-test values of group-b

Table 2
Comparision of pre-test and post-test values of group-b

Group B			Mean	Standard deviation	t value	p value
Child Birth	Attitude Questionnaire.	Pre test	40.10	8.60	15.16	<0.001
		Post test	23.60	8.25		

It is observed from above table 2 and figure 3 that mean value of Child birth attitude questionnaire in pre-test is 40.10 with standard deviation of 8.60 and the post test mean value is23.60 with standard deviation of 8.25. and p-value is <0.001, is considered as statistically significant

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Figure 4
Comparision of post-test value of group-a and group-b

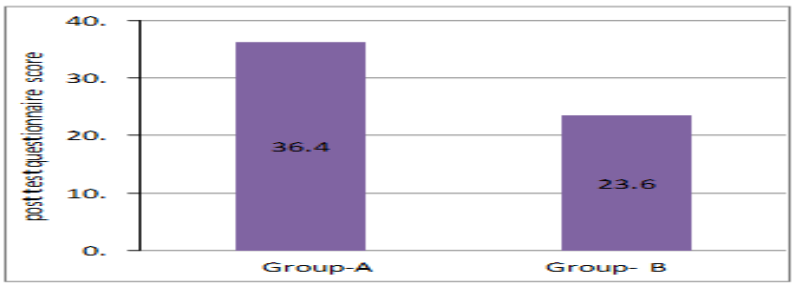

Table 3
Comparision of post-test value of group-a and group-b

Post-test			Mean	Standard deviation	t value	p value
Child Birth	Attitude Questionnaire.	Group-A	36.40	11.82	2.807	=0.0116
		Group-B	23.60	8.25		

It is observed from above table 3 and figure 4, that post-test mean value of child birth attitude questionnaire in Group-A is 36.40 with standard deviation of 11.82 .Where as in the post test mean value of Group-B is 23.60 with standard deviation of 8.25.and p value is =0.0116, is considered as statistically significant.

RESULTS

The data was statistically analyzed using paired t test and student t test. From statistical analysis made with the quantitative data revealed statistically significant difference were found between pretest and post-test values within the group and post-test values among the groups. The pre test mean value of Group A and group B is 38.8 and 40.1 respectively. The post-test mean value of Group A is 36.4 and Group B is 23.6. when comparing the pre-test and post-test mean value of Group B, the maternal anxiety has got reduced significantly after antenatal education comparing to Group A. This study showed the statistically significant reduction in the maternal anxiety after brief antenatal education about labor in Group B (p=0.0116).

DISCUSSION

A positive childbirth experience is an important goal of obstetric care where childbirth is defined as a normal life event, with outcomes defined as “A live, healthy mother and baby and satisfaction of individual needs”. As pain in labor is affected by many physical, social and emotional factors, many of which are not under the women’s control. Many women find labor intensely painful. Antenatal education which includes preparing women for the strong sensations of labor involves better improvement of maternal confidence and reduction of

maternal anxiety[1] A positive childbirth experience increases first-time mothers self-confidence and leads to positive expectations for future childbirth experiences. Perineal risks of untreated depression during pregnancy by Bonari et al shows that first negative birth experience may have an effect on subsequent birth experience and this may lead to anxiety and depression leading to fear of childbirth in subsequent deliveries or it may lead to choosing caesarean section at the next delivery or abortion as a future desire. Bonari Let al also says that a negative child birth experience has effects on the mother even post partum. The mothers tend to be state of panic, anxiety, depression and may develop post partum post traumatic stress disorder[2] The future studies can also be done to evaluate the effect of inadequate support from the professionals that could lead to a negative birth experience where women may feel abandoned, immobilized, and not prioritized by the professionals. This area needs more research as not many evidences are available. The majority of women with presence of anxiety or depression increased the prevalence of fear of childbirth. In particular, women with both these conditions did fear childbirth. Hence, anxiety and/ or depression may be the most prominent health problem for most of the primigravida mothers who fear childbirth. In the present study, most women who participated had myths about labor and pregnancy. Initially the patient was sticking to their own thoughts acquired through their elderly members of the family, their friends, their siblings, more over the community where the study has been done not done in literate. It was quite difficult to make them understand the facts about the labor and pregnancy. After antenatal education the anxiety level reduced for both the groups though both the groups were given antenatal education with different syllabus. This shows that apart from consultation, the counseling and guidance from the professionals itself gives them confidence about labor.

CONCLUSION

Although determining statistically significant differences within the sample was difficult due to the small sample size, a significant inverse relationship between maternal confidence for labor and fear of childbirth was found. It is expected that confidence would increase throughout gestation as women became more knowledgeable about the birth process. From this study, it is concluded that the antenatal education on labour has helped to reduce maternal anxiety in first time mothers.

CONFLICT OF INTEREST

Conflict of interest declared none.

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