Original Research Article

Study to evaluate Benson's Relaxation Therapy on reducing anxiety among antenatal mothers with high risk pregnancy admitted at antenatal ward of GMCH, Guwahati, Assam

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A B S T R A C T

Background: Anxiety is very common during pregnancy, could be due to high risk pregnancy, history of miscarriage, history of anxiety or depression. High levels of anxiety during pregnancy have adverse effect on mother and baby.

Aims: To identify the difference in level of anxiety after application of Benson's Relaxation Therapy among antenatal mothers with high risk pregnancy

Setting and design: The study was conducted in Guwahati Medical College and Hospital, Assam. Pre-experimental research design was adopted for the study

Materials and methods: 30 antenatal mothers with high risk pregnancy were selected by convenient sampling technique. Self administered structured questionnaire and Perinatal Screening Anxiety Scale (PASS) were used for data collection. Benson's relaxation therapy was administered for 5 days. Validity and reliability were done.

Statistical analysis: Data were analyzed through SPSS Version 24. The level of anxiety before intervention 19(63.3%) had severe symptoms of anxiety, 6(20%) had mild to moderate symptoms and 5(16.7%) were asymptomatic whereas after intervention 16(53.3%) were asymptomatic, 9(30%) had severe symptoms and 5(16.7%) had mild to moderate symptoms.

Results: The mean score before intervention was 46.96±18.64 and after intervention was 32.06±18.53 with mean difference of 14.90. The calculated 't' value was 4.656, which was greater than table value indicates statistically highly significant.

Conclusion: The study showed difference in level of anxiety between pre test and post test scores. Hence, this intervention is simple, effective, has mind-body approach to reduce anxiety among antenatal mothers with high risk pregnancy

1. Introduction

Most of the time having a baby is a natural process. After a full term pregnancy, a woman goes into labor on or near her due date and gives birth to a healthy baby. A day or two later she leaves the hospital to begin day to day life with her growing family. But not all pregnancies go smoothly. Some women experience what doctors refer to as a high-risk pregnancy. A pregnancy is considered high risk there are potential complications that could affect the mother, the baby or both. High risk pregnancies require management by a specialist to help ensure the best outcome for the mother and baby. [1]

High risk pregnancy is defined as one where pregnancy is complicated by factor or factors that adversely affects the outcome- maternal or perinatal or both. About 20-30% of pregnancies belong to this category, so to improve obstetrics results, this group must be identified and given

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extra care. Even with adequate antenatal and intranatal care, this small group is responsible for 70-80% of perinatal mortality and morbidity. Majority (70-90%) of fetal deaths occur before the onset of labor due to chronic asphyxia (30%), congenital malformation (15%) and with some superimposed complications of pregnancy (30%).[2]

Antenatal anxiety is a very common experience. More than 1 in 10 women experience anxiety at some point during their pregnancy. Activities such as meditation and deep breathing practices can help body release endorphins without working up a sweat. It is recommended to do deep abdominal breathing for 20-30 minutes daily to help with anxiety.[3]

Pregnancy is a time where a mother is going through a lot of changes & stress, both physically & mentally. During such time it is important that she is kept happy & doesn't worry much as it can affect baby and her health too.[4]

Antenatal anxiety disorders have been associated with adverse pregnancy's outcomes, including preterm birth, low birth weight, low apgar scores, postpartum anxiety and depression and adverse child development outcomes including difficult temperament, increased sleep problems, bonding/attachment problems and poor emotional, behavioral and cognitive development.[5]

Afusat Olanike Busari, (2018) conducted a study on prevalence and associated factors of anxiety and depression among pregnant women, Nigeria, with a sample size of 456 pregnant women. Study reveals that 22% of pregnant women were anxious and/or depressed and the strongest associating factor was verbal abuse.[6]

Rubertson C, Helltstrom J, Cross M et al. (2014) conducted a study on anxiety in early pregnancy: prevalence and contributing factors. Study has shown that the prevalence of anxiety symptoms was 15.6% in early pregnancy.[7]

Chris Z T, Surekha A, Suguna A et al. (2015) conducted a study on screening for Anxiety among Antenatal Women Attending a Taluk Hospital in Rural India. Study reveals that 22.6% of women were screened positive for anxiety.[8]

Adity priya.et al, (2018) conducted a study on depression, anxiety and stress among pregnant women: a community–based study. Prevalence of anxiety was found to be 63%.[9]

Benson's relaxation therapy has a positive effect on reducing the level of anxiety during pregnancy. It is based on the observation that relaxation therapy produces a "single relaxation response", characterized by diminished sympathetic arousal. It trains the individual daily to enhance the relaxation by improving the mood, bringing down the blood pressure and stressful events in life. This technique involves paced breathing for 15-20 minutes. The technique can be mastered with few days of practice and comprise of easy steps. Benson relaxation therapy is a powerful technique that can help antenatal women in reducing

anxiety.Dr.Hertbert Benson author of "Wellness Book" describes how relaxation response has reduced the antenatal anxiety.[10]

2. Problem statement

A study to evaluate Benson's Relaxation Therapy on reducing anxiety among antenatal mothers with high risk pregnancy admitted at antenatal ward of GMCH, Guwahati, Assam.

3. Objectives

1. To determine the level of anxiety before intervention among antenatal mothers with high risk pregnancy admitted at antenatal ward of GMCH, Guwahati, Assam.
2. To determine the level of anxiety on 5th day among antenatal mothers with high risk pregnancy admitted at antenatal ward of GMCH, Guwahati, Assam.
3. To evaluate the effect of Benson's Relaxation Therapy on reducing anxiety level among antenatal mothers with high risk pregnancy admitted at antenatal ward of GMCH, Guwahati, Assam

4. Hypothesis

Hypotheses was tested at 0.05% level of significance

H_1: There is significant difference in anxiety level before and after application of Benson's

Relaxation Therapy among antenatal mothers with high risk pregnancy

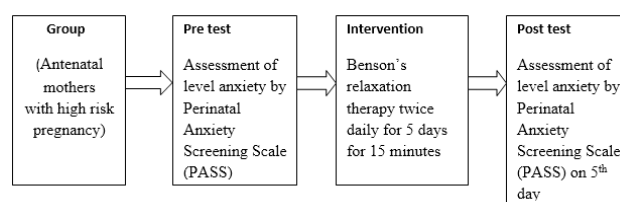## 5. Material and Method

5.1. Research Design

Fig. 1: A pre-experimentalresearch design (one-group pretest-post-test design) was selected for the study.

Table 1: Recommendedseverity ranges

Anxiety severity	Range of scores
Asymptomatic	0-20
Mild-Moderate symptoms	21-41
Severe symptoms	42-93

5.2. Setting

The study was carried out in Antenatal ward of Guwahati Medical College Hospital (GMCH), Assam.

5.3. Population

Antenatal mothers with high risk pregnancy

5.4. Sample

Antenatal mothers with high risk pregnancy who are admitted at antenatal ward for a minimum of 5 days.

5.5. Sample size

30 antenatal mothers with high risk pregnancy

5.6. Sampling technique

Convenient sampling technique was adopted to select the sample for the present study

5.7. Sampling criteria

5.7.1. Inclusion criteria
1. Antenatal mothers both primigravida and multigravida with high risk pregnancy in the 3rd trimester admitted at antenatal ward of GMCH, Guwahati, Assam.
2. Antenatal mothers with high risk pregnancy who are admitted for a minimum of 5 days.
3. Antenatal mothers with high risk pregnancy who can read and write Assamese.

5.7.2. Exclusion criteria
Antenatal mothers with high risk pregnancy who are having cognitive impairment.

5.7.3. Description of the tool
The tool used for data collection for the present study has been organized as follow-

5.9.1.Section I: Self-administered structured questionnaire on socio-demographic variables It contains socio-demographic variables like Age, education, occupation, duration of marriage, type of family, monthly family income and number of children.

5.7.4. Section II: Self-administered structured
questionnaire on clinical profile
It contains clinical profile like Gravida, mode of conception, mode of previous delivery, presence of bad obstetrical history and history of anxiety.

5.7.5. Section III: Perinatal Anxiety Screening Scale
(PASS to assess the level of anxiety
The PASS is a valid and reliable 31-item self-report instrument designed to screen for problematic anxiety in antenatal and postpartum women. It differentiates between high and low risk for presenting with an anxiety disorder by measuring four domains that address specific symptoms of anxiety as they present in perinatal women. These domains form subscales which include: 1) Excessive worry and specific fears, 2) Perfectionism, Control and Trauma, 3) Social Anxiety and 4) Acute Anxiety and Adjustment. The PASS was validated for perinatal (i.e., pregnant or less than 1 year postpartum) women who are English speaking, literate and aged 18 years and older. The average time taken for respondents to complete the PASS is 6 minutes.

5.8. Administration and Scoring

The Pass is suitable for use by researchers and clinicians in a variety of settings to screen for problematic perinatal anxiety. Respondents self rate each of the four clusters of anxiety symptoms, indicating the frequency of the symptoms over the previous month. The items are on a scale ranging from 0 (not at all) to 3 (almost always).[11]

5.9. Content validity of the tool

The content was validated by seven experts, two Obstetrics and Gynecological Nursing experts, one Obstetrician and Gynecologist consultant, one Psychiatrist consultant, two Mental Health Nursing experts and one clinical psychologist and they were requested to evaluate and suggest on the basis of given criteria checklist (relevant, accurate and appropriate). Further according to the suggestion of the experts and guide the content was modified and finalized to use for the main study.

5.10. Reliability of the tool

The reliability was established by using Spearman Brown Phrophecy formula with split half method. The reliability of the Perinatal Anxiety Screening Scale (PASS) was 0.9 which indicate the tool was reliable.

5.11. Ethical Consideration

1. Ethical clearance was obtained from the Institutional Ethical Committee, Army Institute of Nursing, C/O 151 Base Hospital, Guwahati.
2. Ethical clearance was obtained from the Guwahati Medical College and Hospital Ethical Committee.
3. Formal permission was taken from Principal, Medical Superintendent GMCH and head of the department Obstetrics & Gynecology GMCH, Assam
4. nformed consent were obtained from all the participants
5. Confidentiality and anonymity of data collected was maintained

6. Organization and interpretation of data

The obtained data were analyzed, tabulated and interpreted by employing descriptive and inferential statistics. The data were organized under the following sections:

Section I: Findings related to socio-demographic variables and clinical profile of antenatal mothers

Section II: Findings related to level of anxiety before and after intervention among antenatal mothers with high risk pregnancy.

Section III: Findings related to effect of Benson's Relaxation Therapy on reducing anxiety level among antenatal mothers with high risk pregnancy.

7. Result

The result showed that majority 12(40%) were in ≤ 20 years, 10(33.3%) were in 21-30 years and 8(26.7%) were in 31 years and above, 14(46.7%) had high school education, 13(43.3%) had middle school education and 3(10%) had higher secondary school education. All antenatal mothers 30(100%) were housewife. 14(46.7%) had duration of marriage of 6-10 years, 11(36.7%) had duration of marriage of ≤ 5 years and 5(16.6%) had duration of marriage of 11-15 years. 21(70%) were living in nuclear family, 6(20%) were living in joint family and 3(10%) were living in extended family. 15(50%) had family income of Rs. 5001-10000, 11(36.7%) had income of Rs.10001-15000 and 4(13.3%) had income of Rs.15001 and above. 12(40%) had no child, 8(26.7%) had one child, 7(23.3%) had 2 children and 3(10%) had 3 children, 18(60%) were multigravida and 12(40%) were primigravida.30(100%) had spontaneous mode of conception. 9(30%) had spontaneous normal vaginal delivery, 3(10%) had elective caesarean section, 3(10%) had emergency caesarean section and 3(10%) had instrumental vaginal delivery. 23(76.7%) had no bad obstetric history, 3(10%) had preterm labor, 2(6.7%) had 1st trimester miscarriage, 1(3.3%) had still birth and 1(3.3%) had PPH. All antenatal mothers 30(100%) reported no history of anxiety.

he result showed that before intervention majority 19(63.3%) of antenatal mothers had severe symptoms of anxiety, 6(20%) had mild to moderate symptoms of anxiety and 5(16.7%) of antenatal mothers were asymptomatic whereas after intervention majority 16(53.3%) were asymptomatic, 9(30%) had severe symptoms of anxiety and 5(16.7%) had mild to moderate symptoms of anxiety.

The result showed that Mean score before intervention was 46.96±18.64 and after intervention was 32.06±18.53 with mean difference of 14.90. Mean scores before and after intervention was compared using paired t test with calculated value (t=4.656, df =29, p=0.001) indicates statistically highly significant.

Hence it is concluded that there is significant difference in anxiety level before and after application of Benson's Relaxation Therapy among antenatal mothers with high risk pregnancy research hypothesis H1 is accepted.

8. Discussion

The present study reveals that before intervention majority 19(63.3%) of antenatal mothers had severe symptoms of anxiety, 6(20%) had mild to moderate symptoms of anxiety and 5(16.7%) of antenatal mothers were asymptomatic.

The present study supports the study conducted by Sapkota B, Mali N S, Singh R D et al, (2019) on prenatal anxiety among pregnant women. PASS was administered to assess the level of anxiety. The researcher concluded that 40.9% had minimal anxiety, 42.1% had mild to moderate level of anxiety and 16.9% had severe anxiety before intervention.

. The findings revealed that 16(53.3%) were asymptomatic, 9(30%) had severe symptoms of anxiety and 5(16.7%) had mild to moderate symptoms of anxiety after intervention.

Devi S K, Panigrahi B (2015) conducted a study to assess the effectiveness video assisted teaching programmed (VATM) on Benson's Relaxation Therapy to reduce anxiety among antenatal mothers. The result shows that in pre test 54% of antenatal mothers had severe level of anxiety and 23% had moderate anxiety. Where as in post test majority 76% had no anxiety and 2% had moderate anxiety.

Mean scores before and after intervention was compared using paired 't' test with calculated value (t=4.656, df =29, p=0.001) indicates statistically highly significant, thus research hypothesis H1 is accepted.

The findings of the present study is supported by a study conducted by Neethu MP and G.Sumathi (2014) to assess the effectiveness of Benson's relaxation therapy on anxiety and coping among mothers with high risk pregnancy, with a sample size of 30 mothers with high risk pregnancy. The results shows that during pre test 23(76.7%) had moderate level of anxiety and 7(23.3%) had severe level of anxiety, while in post test 23(76.7) had mild symptoms of anxiety and 7(23.3%) had moderate level of anxiety. The findings of the study depicted the evidence of significant difference between pre and post test values of anxiety and coping. When anxiety decreases coping among mothers with high risk pregnancy increases.This highlight the effectiveness of Benson's relaxation therapy in reducing the level of anxiety and enhancing coping among mothers with high risk pregnancy.

The study was limited to sample size of the study was decreased due to fewer patients admitted at antenatal ward and antenatal mothers with high risk pregnancy

9. Conclusion

In the study, it was found that there was significant difference in the level of anxiety between pre test and

Table 2: Frequency and percentage distributionof antenatal mothers related to socio-demographic variables N= 30

Socio-demographic variables	Frequency (N=30)	Percentage (100%)
Age (years)		
≤ 20 years	12	40
21-30 years	10	33.3
31 years and above	8	26.7
Educational Qualification		
a. Illiterate	0	0
b. Primary School	0	0
c. Middle School	13	43.3
d. High School	14	46.7
e. Higher Secondary School	3	10
f. Graduate	0	0
g. Postgraduate and above	0	0
Occupation		
a. Housewife	30	100
b. Daily wages	0	0
c. Government Service	0	0
d. Private job	0	0
e. Self employed	0	0
f. Any other	0	0
Duration of marriage		
≤ 5 years	11	36.7
5-10 years	14	46.7
11-15 years	5	16.6
Type of family		
a. Nuclear family	21	70
b. Joint family	6	20
c. Extended family	3	10
Monthly family income in rupees		
≤ 5001 to 10000	15	50
10001 to 15000	11	36.7
15001 and above	4	13.3
Number of children		
0	12	40
1	8	26.7
2	7	23.3
3	3	10
Clinical profile		
Parity		
a. Primigravida	12	40
b. Multigravida	18	60
Mode of conception		
a. Spontaneous	30	100
b. Intra-uterine insemination	0	0
c. In-vitro fertilization	0	0
Mode of previous delivery		
a. Spontaneous normal vaginal delivery	9	30
b. Elective caesarean section	3	10
Emergency caesarean section	3	10
Instrumental vaginal delivery	3	10
Presence of bad obstetrical history		
No bad obstetrical history	23	76.7
Preterm labor	3	10
1st Trimester miscarriage	2	6.7
PPH	1	3.3
Still birth	1	3.3
Any history of anxiety		
No	30	100
Yes	0	0

Table 3: Level of anxiety before and after intervention among antenatal mothers with high risk pregnancy N=30

Anxiety severity	Before		After	
	f	%	F	%
Asymptomatic (0-20)	5	16.7	16	53.3
Mild–Moderate symptoms(21-41)	6	20	5	16.7
Severe symptoms (42-93)	19	63.3	9	30

Table 4: Effect of Benson's Relaxation Therapy onreducing anxiety level among antenatal mothers with high risk pregnancy.

Level of anxiety	Mean	SD	Mean D	't'value	df	'p'value
Before	46.96	18.64	14.90	4.656	29	0.001*
After	32.06	18.53				

*p<0.05 level of significance

post test scores after application of Benson's Relaxation Therapy. This shows that Benson's Relaxation Therapy if effective in reducing the anxiety among antenatal mothers with high risk pregnancy. Hence, the researcher concludes that this intervention is simple, effective, has mind-body and spirit approach to reduce anxiety among antenatal mothers with high risk pregnancy

References

1. Traci C, Johnson MD. Managing a High-Risk Pregnancy. *Grow wedmd*. 2020;p. 1–2. Available from: https://www.webmd.com/baby/managing-a-high-risk-pregnancy.
2. Konar H. DC Dutta's Textbook of Gynecology. Jaypee; 2020. p. 716. Available from: https://www.jaypeebrothers.com/pgDetails.aspx?cat=s&book_id=9789389587883.
3. Lifespan Multidisciplinary Obstetric Medicine Service (MOMS). *Isuog*. 2020;Available from: https://www.isuog.org/clinical-resources/resource-library-search.html?type=journal-highlights.
4. Teenage pregnancy increases. Available from: https://www.who.int>topics>pregnancy.in/.
5. Selina N, Elizabeth GR, Kylee T.   Prevalence and identification of anxiety disorders in pregnancy: the diagnostic accuracy of the two-item Generalised Anxiety Disorder scale (GAD-2). *BMJ open*. 2018;8:1–10. Available from: https://bmjopen.bmj.com/contenpst/8/9/e023766.
6. Afusat O.   Prevalence and Associated Factors of Anxiety and Depression among Pregnant woman. *J Neurol Neurosurg*. 2018;9:1–3. Available from: https://juniperpublishers.com/oajnn/pdf/OAJNN.MS.ID.555758.pdf.
7. Rubertson C, Helltstrom J, Cross M.   prevalence and contributing factors. Arch Women's Mental Health. . *Arch Women's Mental Health*. 2014;17:221–44.   Available from: https://www.ncbi.nlm.nih.gov/m/pubmed/24442712&ved=2ahUKEwj93YPBhd_iAhUIsI8KHVzXD5YQFjAAegQIBRAB&usg=AOvVaw1mJEIFIv3n7G44YwrNUc-x.
8. Chris ZT, Surekha A, Suguna A.   Screening for Anxiety among Antenatal Women Attending a Taluk Hospital in Rural India. *Natl J Community Med*. 2015;6(3):313–17. Available from: https://www.bibliomed.org/?mno=218495.
9. Priya A, Chaturvedi S, Bhasin SK, Bhatia MS, Radhakrishnan G. Depression, anxiety and stress among pregnant women: A community-based study.   *Indian J Psychiatry*. 2018;60(1):151–2.   Available from: https://www.indianjpsychiatry.org/article.asp?issn=0019-5545;year=2018;volume=60;issue=1;spage=151;epage=152;aulast=Priya.
10. Benson H. Learn to counteract the physiological effects of stress.; 2013. Available from: https''//www.psychologytoday.com/us/blog/heart-and-soul-healing/201303/dr-herbert-benson-s-relaxation-response.
11. Polit DF, Hungler BP.   Nursing research : principles and methods; 1999.   Available from: https://www.worldcat.org/title/nursing-research-principles-and-methods/oclc/607122097.

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