Original Article

EFFECTIVENESS OF PERINATAL SERVICE PACKAGE INCLUDING RELAXATION TECHNIQUES ON STRESS LEVEL AMONG PRIMI GRAVIDA MOTHERS

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Abstract

Introduction: Care during antenatal period is important for ensuring a healthy mother and baby . Antenatal period stress results in low-birth-weight babies, preterm babies. In mothers found anxiety and depression during pregnancy and puerperium. **Aim:** To evaluate effect of perinatal service package including relaxation techniques on level of stress among primigravida mothers during first and last trimester. **Materials and Methods:** An experimental study conducted ,One group pre test-post test with control group Research Design used to assess stress level among 144 Primigravida mothers,(72 in Experimental group and 72 in control group). Assessment of stress level done by administering structured stress scale in first and last trimester i.e.before and after relaxation techniques programme. For control group routine care provided and perinatal service package containing relaxation techniques programme provided to experimental group during antenatal period in each month till delivery. **Results:**Before intervention, at first antenatal check up in first trimester among control group mother stress level was found namely, 23(31.9%)mother had mild stress, 39(54.2%) mother had moderate stress and 10(13.9%) mother had severe stress level whereas among experimental group mother 8(11.1%)mother had mild stress, 59(81.9%) mother had moderate stress and 5(6.9%) mother had severe stress level. After intervention, in last trimester among control group mother stress level was found namely 4(5.6%)mother had mild stress, 26(36.1%) mother had moderate stress and 42(58.3%) mother had severe stress level whereas among experimental group mother 71(98.6%)mother had mild stress, 1(1.4%) mother had moderate stress and nobody had had severe stress level.In last trimester,there was significantly difference found between stress score of control group and experimental group mothers($p<0.001$). There was no association found between level of stress in first trimester with demographic variables. **Conclusion:** Study findings concludes that perinatal service package including relaxation techniques programme was really helpful in reducing stress level of primigravida mothers in experimental group.

Keywords: effectiveness , perinatal service package, stress level, primi gravida.

INTRODUCTION

Antenatal care (ANC)—the services offered to mother and unborn child during pregnancy is an essential part of basic primary healthcare during pregnancy, and offers a mosaic of services that can prevent, detect and treat risk factors early in the pregnancy.[1]

Care during antenatal period is important for ensuring a healthy mother and baby . The antenatal period is a time of physical and psychological preparation of birth and parenthood. High quality antenatal care is a fundamental right of all women to safeguard their health and that of their infants, providing opportunities for risk factor intervention.[2]

The World Health Organization estimates that globally 150 million pregnancies occur annually. India being the second populated country in the world contributes to 20% of global birth. Approximately 20 to 25 million women in India experience pregnancy annually.[3]

In absolute numbers, nearly 45,000 mothers die due to causes related to childbirth every year that accounts for 17% of such deaths globally. For 2015,India's MMR was estimated at 174 maternal deaths per 100,000 live births and in Maharashtra 68 maternal deaths per 100,000 live births. [4]

Antenatal care (ANC) among pregnant women is one of the important factors in reducing maternal morbidity and mortality, reducing stress & minimizing fear of child birth. It helps to reduce proportion of low birth weight babies, neonatal sepsis, birth asphyxia and thus lowers NICU admissions. [5]

Maternal stress which may include emotional, social, health and economy may have impact on newborn. Risks factors predisposing to maternal stress are preventable by taking appropriate measures at right time and hence may have a better outcome of newborn. [6]

A cross-sectional prospective observational study was conducted among the pregnant women attending Antenatal Checkup at Patan Hospital to assess stress. Data was collected by using self-structured questionnaire using General Health Questionnaire (GHQ-12) and 21 item modified life events inventory during the late first trimester and early third trimester.Result showed that most of the respondents were among the age group of 20-29 years with mean age of 25 years. Prevalence of stress during pregnancy was 35% in the first trimester and 34.2% in the third trimester. Study concludes that there was high prevalence of stress among the women attending ANC clinic.[7]

As per WHO guideline ,Group antenatal care education provided by qualified health-care professionals may be offered as an alternative to individual antenatal care for pregnant women in the context of rigorous research, depending on a woman's preferences and provided that the infrastructure and resources for delivery of group antenatal care are available. [8]

A cross-sectional prospective observational study conducted by Sandesh Pantha among 275 antenatal mothers during the late first trimester and early third trimester found prevalence of stress during pregnancy was 35% in the first trimester and 34.2% in the third trimester.Study finding concludes that there was high prevalence of stress among the women attending ANC clinic at Patan Hospital. 9

A study conducted by Sukrane to examine the effect of stress management training on 202 pregnant women (experimental group: 103; control group: 99) pregnant women's depression, stress and methods for coping with stress. The experimental group received stress management training and standard care; the control group received standard care. Data were collected using a Personal Information Form, the Beck Depression Inventory (BDI), Perceived Stress Scale (PSS) and ways of coping inventory (WCI). Both groups showed a decrease in average BDI score during the study; the decrease was greater in the experimental group ($p < 0.05$). In the two assessments carried out after training the experimental group had lower average PSS scores than the control group ($p < 0.05$). At the second and third assessments the experimental group had higher scores than the control group on the self-confident approach and search for social support approach WCI subscales ($ps < 0.05$).[10]

After observing psychological ,emotional and human support needs of antenatal mothers in outpatient department and maternity ward researcher developed Perinatal service package including the relaxation techniques to reduce stress of antenatal mothers.

MATERIAL AND METHODS:

Present Study was conducted at Krishna Hospital and Medical Research Centre, Karad, at antenatal OPD. One group pre test-post test with control group Research Design used to assess stress level among 144 Primigravida mothers,(72 in Experimental group and 72 in control group). Random sampling with lottery method used to select samples.Assessment of stress level done by administering structured stress scale .

Tool: Section I included interview schedule to collect demographic information of the samples such as Age, Residence, Religion, Diet, Education, Occupation, Weeks of gestation, Caregivers education, Caregivers occupation, Monthly Income, Type of Family, source of information, etc. Section II included Stress assessment scale.

Data collection done after Permission obtained from the ethical committee, Krishna Institute of Medical Sciences, Karad.Data collected from August 2019 to May 2019. The purpose of the study explained and informed consent obtained from antenatal mothers. Samples grouped into experimental group and control group by Random sampling technique with lottery method. On

first antenatal visit Structured interview conducted to collect demographic data in experimental group and control group. Assessment of stress level done by administering stress scale.

For control group Primigravida mothers routine care provided. For experimental group perinatal service package including relaxation techniques provided, total 10-12 Primigravida mothers along with their female care taker given antenatal care education including relaxation techniques such as Yoga, Meditation, simple exercises (demos), breathing techniques in labour, expectation during delivery. One session of 90 minutes conducted in first trimester followed by other sessions of 30 minutes were conducted in each month till delivery. Along with continuous emotional support provided to the mother with care takers. After all relaxation technique sessions in each month ,assessment of stress level done at time of admission for delivery in last trimester.

RESULTS:

Majority number of primigravida mothers i.e. 24(33.1%) were in the age group of >25 years in control group and 26(36.1%) were in the age group of 21-23 years from experimental group.

Majority number of primigravida mothers i.e. 57(79.2%) were from control group and 62(86.1%) primigravida mothers from experimental group were from rural area.

Maximum study population i.e.68(94.4%) primigravida mothers from control group and 70(97.2%) primigravida mothers from experimental group were Hindu.

Majority primigravida mothers i.e. 52(72.2%) from control group and 55(76.4%) primigravida mothers from experimental group were consuming mixed diet.

Higher number of primigravida mothers i.e. 30(41.7%) from control group and 32(44.4%) primigravida mothers from experimental group were graduates.Maximum number of primigravida mothers i.e. 62(86.1%) from control group and b59(81.9%) primigravida mothers from experimental group were house wives.

Majority number of primigravida mothers i.e. 20(27.8%) from control group and 21(29.2%) primigravida mothers from experimental group belonged to monthly income of upper lower class (Rs. 5000 - Rs.10000)

Maximum number of primigravida mothers i.e. 58(80.6%) primigravida mothers from control group and 64(88.9%) primigravida mothers from experimental group were living in joint family.Majority number of primigravida mothers i.e. 39(54.2%) from control group had mothers as their caretakers and 38(52.8%) primigravida mothers from experimental group had mother in law as their caretakers.Similar number of primigravida mothers i.e. 31(43.1%) from both control and experimental group had care givers who have completed primary education.Maximum care givers of primigravida mothers were house wives i.e.67(93.1%) from control group and 61(84.7%) from experimental group.

Higher number of primigravida mothers i.e. 28(38.9%) from control group and 29(40.3%) primigravida mothers from experimental group were reported that their source of knowledge were health team members.Majority number of primigravida mothers i.e. 55(76.4%) from control group and 51(70.8%) primigravida mothers from experimental group replied that foetal growth could be affected due to emotional disturbances of antenatal mother.

Table No.1: Stress score of primigravida mothers in first trimester before intervention

(n = 72+72)

Stress score (First trimester)	Control group		Experimental group	
	F	%	F	%
Mild	23	31.9	8	11.1
Moderate	39	54.2	59	81.9
Severe	10	13.9	5	6.9

Above table depicts that before intervention, at first antenatal check up in first trimester among control group mother stress level was found namely, 23(31.9%)mother had mild stress, 39(54.2%) mother had moderate stress and 10(13.9%) mother had severe stress level whereas among experimental group mother 8(11.1%)mother had mild stress, 59(81.9%) mother had moderate stress and 5(6.9%) mother had severe stress level. Maximum number mother had moderate stress among control and experimental group before intervention and lesser number of mother had severe stress in both groups.

Table No.2: Level of Stress among primigravida mothers in third trimester in control group and experimental group
(n = 72+72)

Stress score (Third trimester)	**Control group**		**Experimental group**		**Chi square test**	**p value**
	F	**%**	**F**	**%**		
Mild	4	5.6	71	98.6	125	<0.001
Moderate	26	36.1	1	1.4		
Severe	42	58.3	0	0.0		

Above table shows that majority of primigravida mothers had mild stress 71 (98.6%) was significantly higher in experimental group than in control group i.e . 4(5.6%).

Majority of primigravida mothers26(36.1%) from control group having moderate stress whereas only 1(1.4%) primigravida mothers from experimental group having moderate stress. Also, nobody from experimental group having severe stress whereas 42 (58.3%) primigravida mothers from control group having severe stress. In experimental group mother stress level was reduced compaird to first trimester. There was significantly difference found between stress score of primigravida mothers from experimental group and control group ($p<0.001$).

Table No. 3: Comparison of stress of primigravida mothers in control group

(n = 72+72)

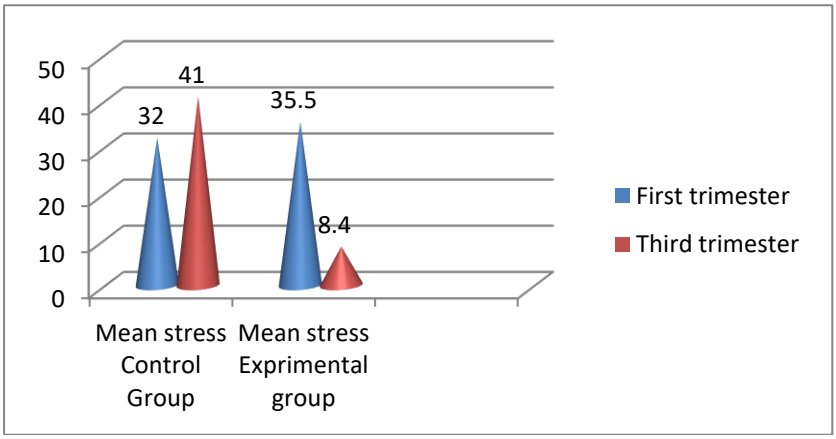
Stress in Control group	Mean	±S.D	Paired 't' test	p value
First trimester	32.0	12.0	8.99	<0.001
Third trimester	41.0	11.8		

Above Table reveals that, at first trimester, mean stress of control group was 32±12.0 and in third trimester, it was significantly higher 41.0 ± 11.8 ($p<0.001$).

Table No.4: Comparison of stress of primigravida mothers in Experimental group (n = 72)

Stress in Expt. Group	Mean	±S.D.	Paired 't' test	p value
First trimester	35.5	10.2	21.91	<0.001
Third trimester	8.4	4.2		

The above Table reveals that at third trimester mean stress of experimental group was 8.4 ± 4.2 significantly lower than mean stress at first trimester, 35.5 ± 10.2 .



There was significant difference was found in mean stress score of primigravida mother from experimental group than in control group. ($p<0.001$)

DISCUSSION

In Present study , majority of primigravida mothers 59 (81.9%) from experimental group and 39(54.2%) mothers from control group having moderate stress.

Total 5 (6.9%) mothers from experimental group and 10 (13.9%) from control group having severe stress and 8(11.1%) from experimental group and 23(31.9 %) from control group primigravida mothers having mild stress during first trimester.

Above findings of the study were supported by study conducted by Maria to investigate stress among 165 antenatal women. She found mild stress level among 107(66.9%) antenatal women and moderate to severe stress in 53(33.3%) mothers.[11]

In present study, third trimester mean stress of experimental group was 8.4 ± 4.2 significantly lower than mean stress at first trimester, 35.5 ± 10.2 whereas mean stress scoreof control group was 32±12.0 and in third trimester, it was significantly higher 41.0 ± 11.8 ($p<0.001$)

Above findings of the study were supported by a study conducted by Azam, to evaluate effectiveness of relaxation training sessions among primigravida mothers,30 in experimental group and 30 in control group. The mean difference of anxiety experimental group before and after intervention was obtained as 10.53 ± 2.71 and 5.77±3.30, whereas it was 8.60± 2.97 and 7.30± 2.96 in the control group, and paired *t*-test showed a significant difference on comparing this mean difference ($P < 0.001$)[12]

There was no association found between level of stress in first trimester and demographic variables.

SUMMARY & CONCLUSION:

It was found that in experimental group stress score was significantly lower in last trimester than control group. So, this proves that perinatal service package is really helpful in reducing stress of primigravida mothers.

Perinatal service package can be use in all antenatal care OPDs to ensure safe perinatal outcome including psychosocial wellbeing of mother.

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CONFLICTS OF INTEREST

There was no conflicts of interest.

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