Original Research Paper

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Physiotherapy

A COMPARATIVE STUDY TO ASSESS THE EFFECTIVENESS OF JACOBSON'S PROGRESSIVE RELAXATION TECHNIQUE VERSUS DIAPHRAGMATIC BREATHING RELAXATION TECHNIQUE ON MATERNITY BLUES IN PRIMI GRAVID WOMEN AFTER CESAREAN DELIVERY.

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ABSTRACT

Background: A lot of women experience emotional changes called as maternity blues in early post natal period which is considered as mild form of depressive condition commencing from around 2-3 days after delivery peaking at 4th to 5th day lasting for about 2 weeks. Women may experience mood swings, crying spells, irritability, anxiety, insomnia and restlessness. Sometimes this condition can turn into post natal depression if unmanaged.

Objective: To compare and determine the effectiveness of Jacobson's progressive relaxation technique and diaphragmatic breathing relaxation technique in reducing maternity blues in primi gravid women after cesarean delivery .

Methodology: 50 subjects 25 in each group were randomly divided into 2 groups. Group A and Group B. Post partum women who were experiencing maternity blues with age between 18-30 years were chosen for the study. Group A was given Jacobson's progressive relaxation technique and group B was given diaphragmatic breathing relaxation exercises.

Result: Results showed that in Group A there was a significant decrease in rating score of maternity blues compared to Group B for diaphragmatic breathing relaxation exercises.

Conclusion: Jacobson's progressive relaxation technique is more effective than diaphragmatic breathing relaxation exercise in reducing the symptoms of maternity blues.

KEYWORDS : Maternity blues, Jacobson's progressive relaxation technique Diaphragmatic breathing relaxation technique

INTRODUCTION:

Pregnancy and the postpartum period are the most dynamic events in a woman's life cycle and affects both her body and mind. The first month after delivery is the most critical time for mothers with psychiatric symptoms, as this period is associated with three fold increased risk of depression.[1]

"Post Partum blues" (Maternity blues) is characterized by transient mood and is a transient affective syndrome. Postpartum blues are extremely common, with up to every postnatal mothers experiencing transient emotional liability in the first week post-delivery. Postpartum blues are characterized by tearfulness, irritability and anxiety, crying, sadness, mood swings, fatigue, insomnia, negative thinking, low mood. These symptoms tends to peak at three to five days of post-delivery and can continue for ten to fourteen day of puerperium .[2]

The causes of postpartum blues is after the placenta is delivered the placental "hormone factory" shuts down causing radical changes in hormone levels and the woman can suffer due to withdrawal from the high pregnancy levels of estrogen, progesterone and endorphins combined with shift in hormone levels is the physical , mental and emotional exhaustion as well as sleep deprivation.[3]

Maternity blues questionnaire is a valid 28 point questionnaire designed by Helen Kennerley and Dennis Gath for detecting and measuring brief psychological disturbances occurring in first few days after childbirth. [4]

Jacobson's Progressive muscle relaxation was developed by Chicago physician Jacobson in the 1920's. It is systematic technique to reduce stress and obtain a deep state of relaxation. The technique is inexpensive, self induced and free from side effects .[5]

Jacobson theorized that anxiety and stress lead to muscle tension which in turn increases feelings of anxiety. When the body is in a relaxed state however, there is little muscle tension leading to decreased anxious feelings. Jacobson believed that one's body is relaxed; one's mind cannot be in a state of anxiety. Jacobson's muscle relaxation is simple non invasive and cost effective, method that can be used for promotion of quality of life .[6]

Diaphragmatic breathing or abdominal breathing is marked by expansion of abdomen contributing to physiologic response characterized by increased parasympathetic activity accompanied by experience of alertness.[7]

Breathing practice also known as "diaphragmatic breathing" or "deep breathing," is defined as An efficient integrative body -mind training for dealing with stress and psychosomatic condition .[5].

OBJECTIVES:

1 To assess the existing level of maternity blues among primi-mothers with cesarean delivery at Aurbindo Hospital Indore.
2 To determine the effectiveness of Jacobson's progressive relaxation technique in reducing maternity blues among primi gravid with cesarean delivery at Aurbindo hospital.
3. To find out the effectiveness of Diaphragmatic breathing relaxation technique in reducing maternity blues among primi gravid mothers with cesarean delivery at Aurbindo hospital.

HYPOTHESIS OF THE STUDY

H_1 - There will be a significant reduction in the level of maternity blues symptoms after Jacobson's progressive relaxation technique.

H_2 - There will be significant reduction in maternity blues symptoms after diaphragmatic breathing exercise technique.

H_3- There will be significant reduction in maternity blues symptoms after Jacobson's relaxation technique compared to diaphragmatic relaxation technique.

VARIABLES UNDER THE STUDY:

Dependent Variable

1 .Maternity blues

Independent Variable

1 .Jacobson's Progressive Relaxation technique
2. Diaphragmatic breathing relaxation technique

MATERIALS AND METHODS:

1. Kennerley and Gath blue questionnaire
2. Pen/pencil

METHODOLOGY :

Research design:

Comparative study design

SETTING:

The study was conducted at Indore, for post natal mothers admitted in postnatal ward at Aurbindo hospital.

SAMPLING:

Primi mothers having maternity blues and admitted in postnatal ward in Aurbindo hospital age group 18-30yrs.

SAMPLE SIZE;

The sample size in this study is 50 primi gravid mother with maternity

blues symptoms 25 in each group.

SAMPLING TECHNIQUE:
Random sampling technique was used for the study.

SAMPLING CRITERIA;
Inclusion criteria
1. Primi mother who are willing to participate in study .
2. Postnatal mothers who can read and write English or Hindi.
3. Primi mothers with maternity blues after full term normal delivery.
4 Primi mother who are between age group 18-30yrs.
5 . Primi mother hospital stay at least 5 days.

Exclusion Criteria
1. Multipara women.
2. Mother having the previous psychiatry illness
3. Mother who delivered a dead fetus.
4. Having any type of complicated delivery.

METHOD OF DATA COLLECTION:
The official permission was obtained from the hospital who had cesarean section and simple random sampling technique was used to select the samples. A total of 50 subjects were divided into two groups Group A (n=25) and Group B (n=25). Maternity blues levels were measured by using a standardized Kennerley and Gath blue questionnaire and the samples were allotted to both group. The purpose of the study was explained to primi mothers and consent was obtained from them.
- Pre-test assessment was given to both group and were assessed on 2nd post natal day.
- Jacobson relaxation technique was be given as an intervention to Group A
- Diaphragmatic breathing exercise technique was given to other Group B
- Post-test both group were re-assessed on 5th post natal day.

PROCEDURE:
Group A the subjects were given JPRT technique for a session of 20-30 min.

Tense-relax:
This technique involved testing a set of muscles, noting the tension and then releasing the muscle work and noting the absence of tension. Each movement was repeated for three times and relax for five counts for about 15 minutes.

The woman was positioned in a fully supported position, she was asked to flex her toes and feel tension and it's site , then she switches off activity and feels the difference or feels the absence of tension, then extend her toes and feel tension and it's site , then she switches off activity and feels the absence of tension for 2 minutes.

The same movement was repeated with the ankle, she was asked to dorsi flex her ankle and feel the tension then relax, then planter flex her ankle and feel the tension then relax for 2 minutes.

Then the woman was asked to make inversion to the subtalar joint and feel the tension and it's site, then relax for five counts then make eversion to the subtler joint and feels the tension then relax for 2 minutes.

She was the asked to lightly contract abdominal muscles , hold for 5 sec and relax for 2 min. For the upper limb, the woman was asked to flex the fingers and feels tension and its site then she switches off and extend her fingers and feel the tension for 2 minutes and relax for 2 min.

Then she was asked to flex her wrist and feels tension then relax and extend her wrist and feels the tension then relax for 2 minutes.

Finally she was asked to make ulnar deviation her wrist and feel the tension then switches off and radial deviation and feel the tension then switches off for 2 minutes.

Diaphragmatic breathing relaxation technique:
This technique was performed for group (B) for 10-15 minutes about 10 repetitions each set and asked to relax 2 min in between. The woman was asked to assume a relaxed comfortable position e.g crook lying position. She should breathe in slowly and deeply, keeping her shoulders relaxed and upper chest quite.

She was asked to take deep inspiration from her nose, make her abdomen like a balloon then expire the air from her mouth with a sigh.

TOOLS USED:
Consists of standardized blue questionnaires –developed by Kennerley and Gath (1986), the tool consist of 28 blue questionnaires items which focus on maternity blue symptoms.

Total study duration: 2 months
Study duration : 4 days

DATA ANALYSIS:
The collected data was tabulated and analyzed for both the groups using--- t test to measure the changes between pre and post values of both the groups. Standardization was done by mean and standard deviation. The results shows the following:

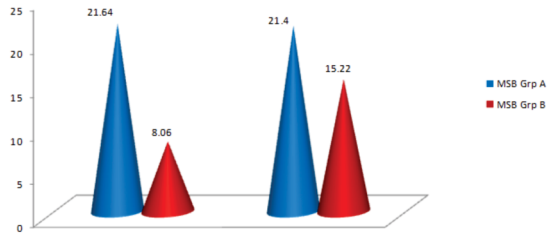
Table I Computation of 't' ratio for the difference between the mean values of group on MBS group a and MBS group b among JPRT And DBRT

Variables	Group	N	Df	Mean	Standard Deviation	Standard error	't'
MB GRP A	PRE	50	49	21.6400	1.96666	.27813	94.889*
	POST			8.0600	1.69525	.23974	
MB GRP B	PRE	50	49	21.4000	1.98977	.28140	20.023*
	POST			15.2200	2.80153	.39620	

*Significant at 0.05 level of confidence (1, 49), 2.01

Table I indicate that the mean values of experimental group on MBS Group A, and MBS Group B as a result of the study. The mean value of pretest on MBS Group A was 21.64 and means value of post test on MBS Group A was 80.06, and the mean value of pretest on MBS Group B was 21.40 and means value of post test on MBS Group B was 15.22. The obtained 't' ratio is 94.89 for MBS Group A and 20.02 for MBS Group B and the table 't' ratio is 2.01, it was significant at 0.05 level confidence for the degrees of freedom 1 and 49. This clearly indicated that compared, significant differences on MBS Group A, of group among JPRT for reducing maternity blues than Group B.

Figure 1 Bar Diagram Shows That The Mean Differences Between Group On MBS Group A And MBS Group B Among JPRT and DBRT



LIMITATIONS:
1. The study is limited to 50 samples.
2. The duration of the study is short.
3. The study is limited to selected hospital at Indore district.
4. Demographic variables could also be taken for the study.
5. Normal delivery patients could also be taken in research.

DISCUSSION:
The present study was undertaken on 'A comparative study to assess the effectiveness of Jacobson's Progressive relaxation technique versus Diaphragmatic breathing relaxation technique in maternity blues during post natal period among primi gravid women after cesarean delivery. It was conducted in department of physiotherapy at Aurbindo hospital. The subjects were divided into two groups . Both the groups were analyzed for Maternity Blue Scale pre and post treatment.

It was found that in group A who were given Jacobson's progressive relaxation technique had a significant improvement in scores compared to group B who were administered diaphragmatic breathing relaxation technique.

JPRT can reduce stress symptoms by decreasing activity of stress hormones, rising of blood flow to major muscles ,decreasing muscle tension and chronic pain, improving concentration and mood reducing fatigue ,decreasing anger and frustration ,enhancing confidence to deal with problems .[9,10]

According to Jacobson (1941) complete relaxation leads to loss of ergo tropic tone of hypothalamus an reduction in hypothalamic discharge. This eventually leads to parasympathetic activation[11]} According to Rhoads CJ relaxation of muscles releases neurotransmitters like dopamine, serotonin, adrenaline , acetylcholine, GABA , endorphins.[12]

The results support the studies as by Khyada Sayed Abd El-Aziz,Ahmad Mohamed Mamdoudh on effects of relaxation exercise on postpartum depression. They did a study to assess effects of relaxation exercise on postpartum depression. The results showed a statistically significant decrease in depression symptoms in group which received relaxation exercises and concluded that relaxation exercise are easy to perform and elevate female mood and enhance coping skills for stressful conditions. [7]

CONCLUSION:

Based on the result of the present study it is concluded that Jacobson's progressive relaxation technique is more effective and a better option for managing maternity blues after cesarean delivery compared to Diaphragmatic breathing relaxation technique.

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