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A Study to Assess the Effectiveness of Kegel Exercise and Prone Position on Afterpains and Involution of Uterus Among Postnatal Mothers at Selected Hospitals of Moradabad U.P.

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Kegel exercise, Prone position, Postnatal mother, Afterpains, Involution of uterus.

Abstract

Background of the study: The postpartum phase, also called as puerperium and "fourth trimester," is period next to childbirth during which the physiologic changes because of pregnancy revert to the non-pregnant state. In addition to the physiological changes and any potential medical difficulties at this time, healthcare practitioners should be mindful of the postnatal mother's psychological and physiological needs. Most experts agree that the postnatal phase begins with the baby's birth. The end is less clearly defined, but it sometimes regarded as occurring six to eight weeks after delivery since by then, effects of pregnancy on many system, largely returned to their before pregnancy states and the uterus has begun to involute. Involution of the uterus is the process in which pregnant uterus reverts back to the pre- pregnant condition.

Objective: (1) To assess the effectiveness of Kegel exercise on involution of uterus among the postnatal mothers, (2) To assess the effectiveness of prone position on afterpains among the postnatal mothers, (3) To find the association between the level of pain and degree of involution of uterus with selected demographic variables.

Method: This study was carried out in District Hospital of Moradabad, U.P. The Quasi-experimental (time series) design was used in this study. The sample consisted of 40 postnatal mothers, who were chosen through purposive sampling method. Data was collected by administering the numerical pain scale for assessing the level of afterpains and Fundal height assessment sheet for measurement of uterine involution. The collected data was organized in master data sheet and analysed using descriptive and inferential statistics as per objectives of the study, using SPSS version 20.

Results: Data analysis showed in the level of afterpains 3.70 was the post-test mean score of experimental group, lower than the post-test mean score of control group i.e., 5.70. The result of the statistical unpaired 't' test for total responses to pain is determined to be 4.85. P value is 0.00, indicating that it is highly effective and the level of involution of uterus revealed that post-test mean score of experimental group 39.12 was less than control group post-test mean score 41.62. The statistical unpaired 't' test value for overall responses to fundal height is found to be 3.18. it was statistically effective, indicated by P value 0.03.

Conclusion: After the administration of kegel exercise and prone position, this research study revealed that the afterpains got reduced and involution of uterus got increased, hence the intervention was effective in reducing the afterpains and enhancing involution of uterus among postnatal mothers.

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1. Introduction

The postpartum phase, also called as puerperium and "fourth trimester," is period next to childbirth during which the physiologic changes because of pregnancy revert to the non-pregnant state. In addition to the physiological changes and any potential medical difficulties at this time, healthcare practitioners should be mindful of the postnatal mother's psychological and physiological needs. Most experts agree that the postnatal phase begins with the baby's birth. The end is less clearly defined, but it sometimes regarded as occurring six to eight weeks after delivery since by then, effects of pregnancy on many system, largely returned to their before pregnancy states and the uterus has begun to involute. Involution of the uterus is the process in which pregnant uterus reverts back to the pre- pregnant condition. The postnatal phase, according to the World Health Organization (WHO), is the most crucial but also the most ignored stage of a mother's and baby's life. It is also the time when the majority of maternal and infant fatalities take place. The postpartum phase can be split into three separate stages: the acute phase, which begins 8–19 hours after delivering; the subacute postpartum phase, which lasts two–6 weeks; and the delayed postpartum phase, which can last up to 8 months. Therefore, postnatal period is the crucial time to support healthy behaviors, offer life skills education, facilitate breastfeeding, counsel women about family planning options, support good mental health, and prevent and treat childbirth in order to improve both maternal and neonatal health and wellbeing.

The placenta detaches from the uterus wall and is ejected out once the baby is delivered. Afterpains, the spasmodic pain experienced in the lower abdomen for 2-4 days following birth, are caused by the uterus tightening up when the placenta separates from the uterine wall at placental site to shut off exposed arteries. These cramps in the abdomen are brought on by the uterus contracting throughout the postpartum period as it shrinks to return to its non-pregnant state.

2. Need of the Study

According to estimates, 58% of women feel exhaustion, 23% suffers from perineal issues, 42% back pain, 24% hemorrhoids, 13% gastrointestinal problems, 23% issues with sexuality, 20% vaginal bleeding, 46% urine incontinence, and afterpains 43.5%. Hemorrhage,

hypertension, infections, and indirect causes—mostly resulting from the combination of pre-existing medical disorders and pregnancy—are the main causes of death. Every year in the United States, problems during or following pregnancy kill over 700 mothers. The pelvic floor muscles are strengthened by performing Kegel exercises. The pelvic floor muscles are the group of muscles that are used to interrupt the flow of urine while using the lavatory. Increasing the strength of these muscles can help avoid urine leaks and inadvertent. The mother's uterus is constantly under pressure from the prone position, and the pillow adds additional pressure, keeping it constrained and eliminating postpartum pain because there is no uterine relaxation.

Researcher observes in Hospital (obstetrics and gynae wards) most of the patients were suffering from the afterpains after the delivery and many women sufferings from the condition of uterine prolapse, especially those who had the history of more than 1 normal vaginal delivery. Kegel exercise can prevent the further gynecological problems as it helps to locate the pelvic organs at their right place and prone position with pillow can helps to reduce the afterpains as it creates pressure on the abdomen which makes the uterus to contract.

PROBLEM STATEMENT

A study to assess the effectiveness of Kegel exercise and prone position on afterpains and involution of uterus among postnatal mothers at selected hospitals Of Moradabad.

OBJECTIVES

1. To assess the effectiveness of Kegel exercise on involution of uterus among the postnatal mothers
2. To assess the effectiveness of prone position on afterpains among the postnatal mothers.
3. To find the association between the level of pain and degree of involution of uterus with selected demographic variables.

3. Materials and Methodology

A quantitative approach was adopted for this study. Quasi experimental (time series) design was chosen in this study. This study was carried out in the District Hospital of Moradabad, UP. on 40 postnatal mothers (20

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in interventional group and 20 in control group) who were selected through the non-probability purposive sampling technique. The data was gathered through utilizing the Numerical pain scale and Fundal height assessment sheet. The subjects were assessed for the afterpains through the numerical pain scale and the subjects were assessed for the uterine involution through the fundal height assessment sheet. Pre - interventional pain score and involution of uterus was assessed among postnatal mothers through numerical pain scale and measuring the fundal height each day in the morning before giving interventions in experimental group. Participants underwent for Kegel exercise three times per day, ten times each, for three days. They were also advised to lie prone for three to five minutes, three times per day, at intervals of thirty minutes, three times each. The same parameters were used each day to calculate the post-intervention pain score and the degree of uterine involution. The control group underwent standard medical care, and measurements of the fundal height and afterpains documented.

The collected data was analysed through the SPSS package version 20. Descriptive analysis was used for the finding the frequency, unpaired t-test was used to assess the effectiveness of kegel exercise and prone position and chi-square was used for the association.

4. Result

Section A: Frequency and Percentage distribution description of Postnatal mother socio demographic parameters.

- Most intervention group subjects 10 (50%) are between the ages of 26 and 30 only one sample (five percent) is >20, seven samples (35%) are between the ages of 21 and 25, two samples (ten percent) are between the ages of 31 and 35 and the majority of respondents in the control group are between the ages of 21 and 25. 12 (60%) belonged to the 21 to 25 year age group, 6 (30%) to 26 to 30 year age group, and 2 (10%) to the 31 to 35 year age group.
- Majority of subjects in interventional group, nine (9%) belonged to the Hindu religion, eight (40%) to the Muslim religion, two (10%) to the Christian religion, and one (5%) to another religion. In contrast, control group most subjects fourteen (70%) belonged to the Hindu religion, five (25%) to

the Muslim religion, and one (5%) to the Christian religion.

- Most of the samples 9 (45%) in experimental group had finished primary education 2 (10%) samples had no formal education, 6 (30%) had completed secondary education, 3 (15%) were graduates and above and majority of respondents 11 (55%) in control group completed primary education 6 (30%) had no formal education, 2 (10%) had finished secondary education, 1 (5%) were graduate and above.
- In experimental group 13 (65%) were homemaker, 2 (10%) were in private job, 5 (25%) were in government job whereas control group 17 (85%) were homemaker, 2 (10%) were in private job, 1 (5%) were in government job.
- Majority of the respondents 14 (70%) in experimental group had monthly income Rs.11000 – 21000, 3 (15%) subjects had monthly income Rs.5000 -10000, 3 (15%) subjects had monthly income Rs.21000-310000 whereas majority of subjects in control group 15 (75%) mothers had monthly income Rs.11000-21000, 3 (15%) Postnatal mothers has monthly income Rs. 5000 - 10000, 2 (10%) has monthly income RS. 21000 – 31000.
- In experimental group most of the samples 13 (65%) were from Nuclear family, 6 (30%) belonged to the joint family, 1 (5%) were from the blended family and majority of samples 11 (55%) in control group had Nuclear family, 9 (45%) had joint family.
- Most of the respondents in experimental group 19 (95%) resided in urban area, 1 (5%) resided in semi-urban area whereas in control group most of the respondents 17 (85%) resided in urban area, 2 (10%) lived in rural area, 1 (5%) resides in semi-urban area.
- 20 (100%) postnatal mothers in both groups i.e., interventional and control group had no complication during pregnancy.
- Most subjects in interventional group were 13 (65%) non-vegetarian, 7 (35%) were vegetarian, while in control group most participants 11 (55%) were vegetarian, 9 (45%) were non-vegetarian.
- In both the experimental and control groups, 20 postnatal mothers (100%) have red-coloured lochia.
- Most of the participants in interventional group 16 (80%) had height 151cm-160 cm, 4 (20%) had

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height 161cm and above and majority of samples in control group 17(85%) Postnatal mothers has height 151cm-160 cm, 3 (15%) had height 161 cm and above.

- In experimental group most of the subjects 16 (80%) had weight 51 kg – 60 kg, 3 (15%) has weight 40 kg-50 kg, 1 (5%) has weight 61 kg and above and most of the subjects in control group 18 (90%) had weight 51 kg-60 kg, 1 (5%) had weight 40 kg – 50 kg, 1 (5%) had weight 61 kg and above.
- In interventional group most of the subjects 16 (80%) postnatal mothers had 18-23 BMI, 1 (5%) Postnatal mother had below 18 BMI, 3 (15%) postnatal mothers had 24-27 BMI and majority of samples in control group 19 (95%) Postnatal mothers had 18-23 BMI, 1 (5%) Postnatal mother had below18 BMI.

Section B: Assess the level of afterpains in interventional and control group.

According to this study, the experimental group's mean score of posttest was 3.70, which was below the post-test mean score of control group 5.70., statistical unpaired "t" test, discovered that the afterpains average response was 4.85. It was extremely effective, as evidenced by the P value of 0.000.

Section C: Analyse the level of uterine involution in the interventional and control groups.

Post-test mean score of interventional group was 39.12, which was lower to the posttest mean score of control group i.e., 41.62. The total responses to the fundal height question produced a statistical unpaired 't' test score of 3.18. It was statistically significant because of the P value of 0.003.

Section D: Association between the uterine involution and afterpains level with selected demographic characteristics.

Afterpains Level

Results show that there was a significant relationship between the level of pain in the intervention group and the occupation, so the H2 was accepted with one demographic variable, while in control group there was no relationship between the afterpains level and any demographic variable, so the H2 was rejected.

Level of Uterine Involution

In the interventional group, results revealed degree of uterine involution was highly correlated with weight in, leading to the acceptance of H2 with one demographic variable, whereas significant correlation existed between the degree of uterine involution and monthly income in the control group, leading to the acceptance of H2 with one demographic variable.

5. Conclusion

The administration of the Kegel exercise and the prone posture were found to be useful in this study for uterine involution and afterpains.

RECOMMENDATIONS

- Similar study can carried out on the large number of samples.
- Similar study needs more than a week for data collection.
- A study can be done to assess the knowledge regarding Kegel exercise for the involution of the uterus.
- To compare the Kegel exercise intervention with other natural cures, comparative research can be done.

References

- [1] <https://my.clevelandclinic.org/health/articles/14611-kegel-exercises.\>
- [2] <https://parenting.firstcry.com/articles/kegel-pelvic-floor-exercise-after-birth/>
- [3] K. Latha, Grace T., A Study to Assess the Effectiveness of Prone Position on Afterpains among Postnatal Mothers at Selected Hospital, Chennai, *Journal of Nurse Midwifery and Maternal Health*, 2017, DOI: <http://dx.doi.org/10.21088/jnmmh.2454.7506.3117.1>.
- [4] Sahoo Radharani, Mohanty Patitapaban, Effect of Interferential Therapy and Kegel Exercise in Management of Stress Urinary Incontinence-A Comparative Study, *Investigations in Gynecology Research & Womens Health*, 2020, 3 (4), 270-275. DOI: 10.31031/IGRWH.2020.03.000569.
- [5] MS. Pratima Nirmal, A study to assess the effectiveness Of kegel exercise on level of pain Among the post-natal mothers at Deepak hospital jalna, Maharashtra state, 2022, *Journal of Emerging*

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Technologies and Innovative Research (JETIR), 9 (7), 564-571, www.jetir.org.

- [6] Mrs.S.Vimala, B.Jayalakshmi, Effectiveness of prone position on reduction of afterpain among postnatal mothers who had normal vaginal delivery at Government Headquaters General Hospital, Thiruvallur, 2019, *International Journal of Engineering Research and General Science*, 7 (5), 46-47, www.ijergs.org.
- [7] Monalisa M, Pravati T, et.al., Effect of selected nursing interventions in the reduction of after-pains and involution of uterus among post-natal mothers in selected hospitals, 2019, *Journal of Biomedical Sciences*, 6(3), 10, DOI <https://doi.org/10.3126/jbs.v6i3.26842>.
- [8] Antra Sahu, Abhilekha Biswal, et, al., A Quasi-Experimental Study to Assess the Effectiveness of Kegel Exercise and Prone Position on Involution of Uterus Among Post Natal Mothers Admitted in Selected Hospital, Bhilai (C.G.), 2023,
- [9] Dhiramani Baishya, Sorokhaibam Nandarani Dev, A Study to Assess the Effectiveness of Selected Nursing Interventions on Reduction of After Birth Pain among Postnatal Mothers in a Selected Hospital, Guwahati, Assam, 2021, *International Journal of Science and Research (IJSR)*, 10 (3), 1130-1133, DOI: 10.21275/SR21314210403.
- [10] Yuni Purwati, The Effect of Postpartum Exercise to Uterine Involution, 2019, *Social Science Research network*, 8, <http://dx.doi.org/10.2139/ssrn.3494312>.
- [11] Appammal, Kurusamy, A study to assess the effectiveness of kegel exercise and prone position on afterpains and involution of uterus among post natal mothers at the Institute of Obstetrics and Gynecology, Government Hospital for Women and Children, Egmore, Chennai, 2014, 1-72, <http://repository-tnmgrmu.ac.in/id/eprint/9548>.