

# Effectiveness of Video-Assisted Demonstration of Postnatal Exercises on Postnatal Well-being among Postnatal Women

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**Abstract:** ***Background:** The postnatal period is the time during which women's body adjusts physically to childbearing process and reverts back to its prepregnant state. Exercise after delivery plays a crucial role in improving physical well-being among postnatal women. **Objective:** To assess the effectiveness of postnatal exercises on postnatal well-being among postnatal women. **Material and Methods:** Quantitative approach with Quasi-experimental research design (time series design) was used in this study. A total of 60 postnatal women (30 in experimental group and 30 in control group) were selected by convenience sampling technique. Modified Urogenital Distress Inventory and Modified Quebec back pain disability scale were used to assess the postnatal well-being. Video-assisted Demonstration of postnatal exercise was given to experimental group and women performed exercise twice a day (morning and evening) for 3 weeks. The control group received only routine care. Post test was conducted for both groups on 7<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> day. **Findings:** The study findings showed that there was a statistically significant difference between the experimental and control group at 7<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> day after intervention with regard to Modified Quebec back pain disability scale [p-value = 0.0001, 0.0001 and 0.0001 respectively]. In relation to Modified Urogenital Distress Inventory, there was a statistically significant difference between the experimental and control group at 14<sup>th</sup> and 21<sup>st</sup> day after intervention [p-value = 0.0001 and 0.0001 respectively]. **Conclusion:** This study concludes that video-assisted demonstration of postnatal exercises is an effective method to improve the postnatal well-being among postnatal women.*

**Keywords:** Postnatal well-being, Modified Quebec back pain disability scale, Modified Urogenital Distress Inventory, Postnatal women, Postnatal Exercises

## 1. Introduction

Becoming a mother is an important part of every woman's life. Most different phase for women is their growth into parenthood and is precisely the postnatal period [1]. Postnatal period is the period following childbirth during which the body tissues, especially the pelvic organs revert back approximately to the pre-pregnant state both anatomically and physiologically [2].

Postnatal period can affect both the physical and mental health of a new mother. Various complications can arise during this period such as bladder and bowel incontinence, sleep deprivation, postnatal backache, postnatal depression and other psychological disorders. Most of the complications after birth can be prevented by adequate care, health education, proper diet and postnatal exercise regimen [3] [4]. One of the actions that could influence the health and life quality of mothers is to encourage them to perform physical exercises during the postnatal period. It reduces back pain, emotional stress and improves self-confidence. Meanwhile, it improves the quality of sleep and nutrition, reduces urinary incontinence, fortifies the muscles and bones and prevents osteoporosis [5]. In addition, performing regular physical exercise is an effective therapy for clinical depression, as well as it has a positive role in the improvement of mental and social health of people [6].

Postnatal exercises are practiced soon after childbirth which helps the pelvic organs to return in pre-pregnancy shape,

promotes better sleep, relieves stress, boosts energy, strengthen and tone abdominal and pelvic floor muscles, reduce back pain, improve bowel and bladder function, help in reducing urinary incontinence and may help prevent postnatal depression [7].

## 2. Material and Methods

### 2.1 Study design

The study was conducted at Govt. Doon Medical College Hospital, Dehradun (Uttarakhand) in the month of October and November, 2021. Quantitative Research Approach with Quasi-experimental research design (time series design) was used. Non-probability convenience sampling technique was used for collecting sample which comprised of 60 postnatal women (30 in the experimental group and 30 in control group).

#### Inclusion criteria:

- 1) Postnatal women who delivered normally.
- 2) Postnatal women who are willing to participate.

#### Exclusion criteria:

- 1) Postnatal women who are at risk of developing complications.
- 2) Postnatal women who had undergone Caesarean Section.

## 2.2 Tool Description

The tools used were- **Tool 1:** Socio-Demographic variables. It includes age, religion, type of family, educational status, occupation, parity, family income and knowledge about postnatal exercise.

**Tool 2:** Modified Urogenital Distress Inventory and **Tool 3:** Modified Quebec back pain disability scale was used to assess the postnatal well-being of postnatal women in selected hospital of Dehradun.

## 2.3 Statistical Analysis

Data was analyzed by using descriptive statistics (frequency and percentage, mean and standard deviation) and Inferential statistics (Unpaired t-test). MS Excel and SPSS were used for statistical analysis.

## 3. Results of the Study

### 3.1. Description of sample characteristics

The study included a total of 60 postnatal women (30 in experimental group and 30 in control group). Frequency and percentage distribution of demographic variables of postnatal women is shown in Table 1.

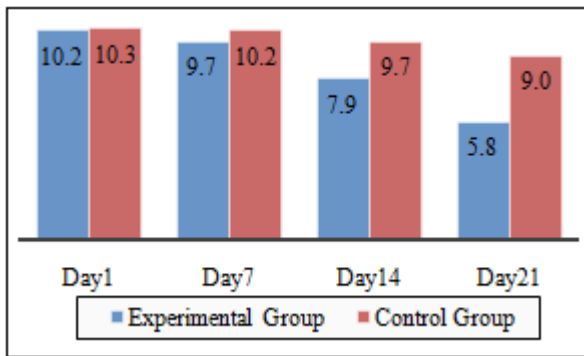
**Table 1:** Frequency and percentage distribution of socio-demographic data of postnatal women

S.No.	Socio-demographic variable	Experimental Group (n <sub>1</sub> =30)		Control Group (n <sub>2</sub> =30)	
		Frequency	Percentage (%)	Frequency	Percentage (%)
1.	<b>Age (in years)</b>				
	20-24 year	14	47	14	47
	25-29 year	16	53	16	53
2.	<b>Religion</b>				
	Hindu	23	77	23	77
	Muslim	5	17	4	13
	Sikh	2	7	3	10
3.	<b>Type of Family</b>				
	Joint	23	77	16	53
	Nuclear	7	23	14	47
4.	<b>Educational Status</b>				
	No Formal Education	2	7	0	0
	I- VIII	8	27	4	13
	IX-XII	11	37	17	57
	Graduation and Above	9	30	9	30
5.	<b>Occupation</b>				
	Housewife	29	97	30	100
	Govt. Employee	1	3	0	0
6.	<b>Parity</b>				
	Multipara	15	50	11	37
	Primipara	15	50	19	63
7.	<b>Family income</b>				
	5000-15000	19	63	21	70
	15001-25000	11	37	9	30
8.	<b>Knowledge about postnatal exercise</b>				
	Yes	2	7	0	0
	No	28	93	30	100

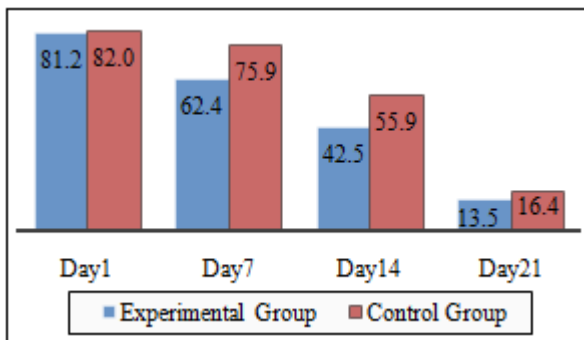
Table 1 show that 53 % of postnatal women were in the age group of 25-29 years. Majority (77%) of subjects in both group were Hindu. In the experimental group, 77% of sample and in the control group, 53% of the sample belonged to joint family. 37% in experimental group had IX-XII education whereas in the control 57% had IX-XII education. 97% of them were housewives in the experimental group, whereas in the control group, 100% of the postnatal women were housewives. 50% in experimental group and 63% in control group were primiparous. In relation to family income, 63% in the experimental group and 70% in the control group had income of Rs.5000-15000 per month. In relation to knowledge, 93% of respondents in the experimental group had no knowledge. In the control group, none of the postnatal women knew about postnatal exercise.

### 3.2. Description of Postnatal well-being scores among postnatal women in the experimental and control group

Figure No. 1 shows the mean score of postnatal well-being as assessed by Modified Urogenital Distress Inventory. The mean of experimental and control group on day 1 was 10.2 and 10.3. On day 7, the mean of experimental and control group was 9.7 and 10.2. On day 14, the mean of experimental and control group was 7.9 and 9.7. On day 21, the mean of experimental and control group was 5.8 and 9.0.



**Figure 1:** Comparison of Modified Urogenital Distress Inventory mean score on different days



**Figure 2:** Comparison of Modified Quebec back pain disability scale mean score on different days

Figure No. 2 shows the mean score of postnatal well-being as assessed by Modified Quebec back pain disability scale. On day 1, the mean score was 81.2 and 82.6 for experimental and control group. On day 7, the mean score of experimental and control group was 62.4 and 15.9. On day 14, the mean score of experimental and control group was 42.5 and 55.9. On day 21, the mean score of experimental and control group was 13.5 and 16.4.

### 3.3. Comparison of the postnatal well-being score of postnatal women in experimental and control group

The study revealed no statistically significant difference between the experimental and control group on day 1 regarding to Modified Quebec back pain disability scale scores [  $81.2 \pm 2.7$  and  $82.0 \pm 2.6$  ] respectively at  $p$ -value = 0.334. But there was a statistically significant difference between the experimental and control group at 7<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> day after intervention [ $p$ -value= 0.0001, 0.0001 and 0.0001 respectively].

Concerning Modified Urogenital Distress Inventory scores, there was no significant difference between the experimental and control group on day 1 (pre-intervention) and 7<sup>th</sup> day (after the intervention). While there was a statistically significant difference at 14<sup>th</sup> and 21<sup>st</sup> day after intervention [ $p$ -value= 0.0001 and 0.0001 respectively]. Hence, the null hypothesis was rejected and it shows that postnatal exercise is effective in improving postnatal well-being among women.

## 4. Discussion

The main aim of the study was to determine the effectiveness of postnatal exercise on postnatal wellbeing. Result showed improvement in postnatal well-being as there was a statistically significant difference between the experimental and control group at 7<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> day in relation to Modified Quebec back pain disability scale [ $p$ -value= 0.0001, 0.0001 and 0.0001 respectively]. Concerning Modified Urogenital Distress Inventory scores, there was a statistically significant difference at 14<sup>th</sup> and 21<sup>st</sup> day [ $p$ -value= 0.0001 and 0.0001 respectively].

A study conducted to assess the effectiveness of exercise programme on postpartum wellbeing among 60 postnatal mothers, Jalandhar, Punjab was found consistent with the current study. The study showed the pre-interventional and post interventional mean  $\pm$  SD of postpartum wellbeing as assessed by Modified Quebec back pain disability scale was  $16.23 \pm 4.54$  and  $12.50 \pm 2.45$ . The value of paired t-test was 8.48 which was significant at  $p < 0.001$  level. In relation to Modified Urogenital Distress Inventory, the pre-interventional and post interventional mean  $\pm$  SD was  $9.23 \pm 2.83$  and  $7.6 \pm 2.09$ . The value of paired t-test was 2.95 which was significant at  $p < 0.01$  level. The study revealed that exercise program was effective in improving postpartum well-being among postnatal mothers [8].

A quasi-experimental study conducted to assess the effect of postnatal exercises and education on low back pain in early postnatal mother in Chennai, was found consistent with the current study. The result showed that there was significant reduction in the low back pain in the mothers of intervention group ( $p = 0.008$ ). It concluded that exercises along with postural care and education reduce the functional disability in the postnatal period [9].

A quasi-experimental study carried out to assess the effectiveness of pelvic floor exercise for the management of urinary incontinence among women in Pune. The results show faster decrease in mean and SD of experimental group who were receiving pelvic floor exercise intervention. The findings revealed statistically significant difference in level of urinary incontinence between the two groups ( $p=0.02$ ). The study proved that pelvic floor exercise was highly effective in the management of urinary incontinence among women [10].

## 5. Conclusion

The result of present study highlights that practicing postnatal exercises was effective in improving postnatal well-being among postnatal women. It is therefore recommended that measures should be taken to create awareness about postnatal exercises and promote practice of postnatal exercises among women. Appropriate exercise programmes should be carried out to aware women about the benefits of postnatal exercises

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