**Effectiveness of practicing pelvic and abdominal muscles exercises on early postpartum recovery**

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**Abstract**

**Aim:** The present study aimed to evaluate effectiveness of practicing pelvic and abdominal muscles exercises on early postpartum recovery. **Setting**: the postpartum unit at Benha University Hospital. **Design**: An intervention **(**quasi-experimental**)** study design was used. **Sample**: simple random sample included size of 101 women divided into 52women study (intervention) group & 49 women as control groups. **Tools of data collection**: two tools were used as: (1) Interviewing questionnaire included demographic and obstetrics data, (2) Observation checklist for evaluating effect of postpartum exercises on pelvic and abdominal muscle strength.

- A supportive instructional pamphlet about postpartum exercises and activities that helping in early postpartum recovery. **Result**: statistically significant differences between the two groups (study & control group), p<0.001. The majority of women in the study group had strong muscle tone and stretch. **Conclusion**: Practicing of postpartum exercise affect positively on strength of pelvic & abdominal muscles. **Recommendation**: Developing program to enhance mother retained knowledge, practices and attitude regarding postpartum exercises.

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Key words: puerperium pelvic and abdominal muscles exercises

**INTRODUCTION**

The postpartum period, or puerperium, is the time of major adjustments and adaptations not just for the mother, but for members of the family. Hence the relationship between the mother and the newborn begins, with subsequent profound effects on the child's growth and development ***(Williams and Wilkins, 2009)***. During the puerperium mothers experience numerous physiologic and psychosocial changes to reverse the changes that occurred in body systems during pregnancy ***(Murray and McKinney, 2008)***. These changes include shrinkage and descent of the uterus into its pre-pregnancy

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position in the pelvis and recovery of vaginal and pelvic floor muscle tone ***(Auvilio et al., 2010)***.

The muscles of the pelvic floor stretch and thin greatly during the second stage of labor, when the fetal head applies pressure as it descends, rotates, and then extends to be delivered. ***(Blackburn, 2011)***.

In the first 1 to 2 days after childbirth, many women experience muscle fatigue and aches because of exertion during labor. The levels of the hormone relaxin gradually subside; ligaments and cartilage of the pelvis begin to return to their pre-pregnancy positions. These changes can cause hip and joint pain that interferes with ambulation and exercise. ***(Scoggin, 2009)***

Good body mechanics and correct posture are extremely important during the perineum to help prevent low back pain and injury to the joints. The stretched abdominal muscles benefit from gentle strengthening exercises of the abdominal wall to return to normal position by six weeks after birth ***(Scoggin, 2009)***.

Exercising after having a baby is beneficial both physically and psychologically for most new mothers during the postpartum period. It helps work off the extra pounds gained during the pregnancy while increasing energy levels and improving self-esteem ***(Murray and Ashwill, 2010)***. The benefits also include relieving minor aches that occur after labor, strengthening back and abdominal muscles, and preparing the new mother for other physical activities ***(Gray, 2009)***. Moreover, regular exercise improves immune function and increases the production of antioxidant substances in the body. It helps to sleep better at night and feel more energetic during the day ***(James, 2011)***. Furthermore, by exercising the abdominal muscles, woman will be able to flatten the stomach and strengthen the spine and pelvis, which in turn improves her posture and mobility ***(Patricia et al., 2010)****.*

Mild exercises can be started soon after childbirth. At first, each exercise should be repeated five times, twice each day. Gradually the number of exercises is increased as the mother

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**Statistical analysis**

Data entry and statistical analysis were done using SPSS 14.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables. Quantitative continuous data were compared using Student t-test. Categorical variables were compared using chi-square test. Whenever the expected values 11

in one or more of the cells in a 2x2 tables was less than 5, Fisher exact test was used instead. Statistical significance was considered at p-value <0.05. **DISCUSSION**

The aim of this study was to evaluate effectiveness of practicing pelvic and abdominal muscles exercises on early postpartum recovery.

This aim was significantly approved through the hypothesis of the present study because the results indicate that the intervention was effective in better postpartum recovery of muscles.

The study comprised two groups which were similar regarding their demographic characteristics, which indicates unbiased sampling. This was essential for comparability of the groups, and for decreasing any confounding effects of differential demographic factors. The only exception was related to job status, where more women in the control group were working. This difference could have an effect on the evaluation of the intervention. However, the higher percentage of working women in the control group would give more favor to this group, and thus could not lead to ever-estimation of the effect of the intervention.

The beneficial effect of the exercises taught to women in the present study intervention was evaluated in two ways. These were firstly by comparing the outcome in the intervention and control groups, and secondly by relating the outcome to the compliance of women in performing the exercises regularly and correctly, with complete endurance.

When women in the intervention and control groups were compared regarding postpartum pelvic and abdominal muscles

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recovery, significant differences were revealed between them p<0.05. While the majority of the women in the intervention group had strong muscle tone and stretch, as indicators of good recovery, only few of those in the control group had strong tone and stretch. These results indicate that the intervention was effective in better postpartum recovery of muscles.

The foregoing present study findings are in agreement with ***Morkved (2011*)** who compared a training group who 14

week special pelvic floor muscle exercise -attended an eightcourse with a control group. The improvement in the training group was significantly greater, compared to the control group.