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Original Article

Evaluating the Effect of Exercise on the Postpartum Quality of Life

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Abstract

BACKGROUND: Mothers are potentially susceptible to some complications, postpartum which would affect their wellbeing. So, it is essential to deliver appropriate postpartum care, to improve physical, mental and social wellbeing. The current study was carried out to assess the effect of physical exercise on postpartum maternal physical, mental, social and general wellbeing.

METHODS: This is a semi-experimental, anterograde study which was fulfilled on experiment and control groups. The data was gathered by interviewing and a self-made questionnaire. The data was analyzed using independent t-test by SPSS software.

RESULTS: Findings demonstrated that the experiment group scored higher in all aspects of life quality. Significant statistical difference was noted in general (P= 0.000), social (P= 0.011) and mental wellbeing (P= 0.005); while, the difference between two groups in physical wellbeing was statistically significant.

CONCLUSIONS: Various aspects of life quality would be affected by postpartum physical exercise. So, women should be encouraged to take exercise, postpartum to improve their quality of life.

KEY WORDS: Exercise, postpartum, quality of life

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Pregnancy and delivery would help a woman achieve physical and mental self-actualization. No other phenomena could have such overwhelming effect on physical, emotional and social aspects of her life [1]. Mothers, experience many physiological, mental and social changes at postpartum period, which deserve more attention [2]. Also, women experience behavioral changes that results from adaptation and transition to parental role and also pregnancy physical and emotional stresses [3]. They are susceptible to some disorders and complications, such as fatigue and weakness, anorexia, insomnia, urinary incontinence, constipation, postpartum blues, and depression [4,5].

One of the goals of world health organization (WHO) is to improve health of mothers and decrease their mortality and morbidity, until 2010. According to the WHO statistics, most mortality and morbidity of mothers occur at the postpartum period [6].

The postpartum care starts just after delivery and would be continued to the end of puerperium stage, which would be 6 to 8 weeks after delivery. In this period, the mother should be supported physically and emotionally and take evaluations in this regard [7]. According to the WHO definitions, physical, mental and social wellbeing are the three aspects of life quality. It is essentially a concept that originates from the responses of a person to the physical, mental and social factors [8]. It is evident that delivering proper care to improve the health and life quality of mothers is a must; that needs a regular, evidence-based program for postpartum care [2].

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One of the actions that could influence health and life quality of mothers is to encourage them to take physical exercises at postpartum period [4]. Exercise is an important factor to maintain physical wellbeing, and consequently the mental wellbeing. It reduces the emotional stresses and improves the self-confidence. Meanwhile, it improves the quality of nutrition and sleep, fortifies the muscles and bones and prevents osteoporosis [9]. In addition, taking regular physical exercise is an effective therapy for clinical depression, as well as its positive role in improvement of mental and social health in healthy people [5]. Taking aerobic exercises 6 to 8 weeks postpartum, 4 to 5 times per week, would be a key factor in maintaining the normal and maximum muscle function. A complete exercise program in this period, prevents some future problems such as pelvic floor muscles dysfunction, inappropriate posture, gastric and bowel motility decrease, shoulder and low back pain, fatigue, breastfeeding problems, and impaired self image [8].

In 1999, Sampselle and his colleagues carried a study and concluded that women that take physical exercise at postpartum period enjoy advantages such as less weight retention, and higher delivery adjustment scores. Regarding the useful effects of exercise for general population, it is expected to have good effects at postpartum period, as well [9]. Anyhow, as the woman undergoing delivery has special conditions, different studies are needed to determine the usefulness of exercise at postpartum period. Taking personal experiences into account; the author believes that the mother and family are focusing on the baby after delivery, not the mother. Also, in a pilot study, we concluded that most women are not familiar with postpartum physical exercises. Some of these mothers complain of some postpartum complications, such as fatigue and weakness, sleeping disorders, constipation, and blues and also are unsatisfied with their appearance. In a study, Downs concluded that it is commonly believed that postpartum exercise decreases weight retention and women take more physical exercise before pregnancy that during and after pregnancy. In addition, family of the woman and her husband are the most effective factors on taking exercise during and after pregnancy [10]. The current study was carried out to evaluate the effect of postpartum physical exercise on physical, mental, social and general wellbeing as different aspects of life quality.

Methods

This is a semi-experimental anterograde study of multifactorial, two stage cohort type. Participants were 62 women undergoing delivery for the first, second or third time. Cases were admitted for delivery at Beheshti, Sa'adi, and Sadoughi hospitals of Isfahan and all underwent normal vaginal delivery. In spring 1384, cases were randomly allocated to experiment and control groups. At the day of delivery, the experiment group watched a film on postpartum exercises and on discharged they were given an educational booklet and compact disk on postpartum exercise. They were advised to take the exercise from the second to forth postpartum day, twice daily, for 10-15 minutes. The exercises were selected according to the physical conditions of a postpartum woman.

To assess the postpartum wellbeing in areas of physical, mental and social wellbeing a questionnaire was designed based on the SF-36 life quality questionnaire [11], Ladderman questionnaire [9] and also, the specific postpartum life quality questionnaire [12]. The validity and reliability of the questionnaire was approved by content and face validity and alpha Kronbach coefficient of 0.73. The physical, mental, social and general wellbeing are evaluated by the questionnaire.

In the second stage, on fortieth postpartum day, the participants attend an interview and the questionnaire is filled again. Some problems that happened during the study were not taking the exercises completely or correctly, not attending the interview. As results of these cases could interfere with the result of the study, they were excluded from the study.

Finally, the data was analyzed using independent t-test by SPSS software.

Results

Analyzing the results, it was shown that most cases were at the age range of 21- 30 with mean of 24.5 and 25.3 years for experiment and control group, respectively. Husbands of the participants were mostly at the age range of 21 -30 with mean of 31.96 and 29.64 years for experiment and control group, respectively. Most participants of the study were educated to the high school level. All the experiment group participants and 96.8% of the control group were household. Most participants belong to median income class of the society with one or two children. There were no significant statistical differences between the two groups' personal characteristics.

The mean score and standard deviation (SD) of general health was 3.5806 and 0.6843 for experiment group and 4460.9677 and 0.2 for control group, respectively; which are significantly different using independent t-test (P=0.000). Regarding the physical wellbeing, the mean and SD was measured 0.7258 and 0.2099 for experiment group and 2.6048 and 0.3169 for control group, respectively, which were not significantly different. In social health, the experiment and control group scored respectively 3.5108, 0.4258 and 3.1989, 0.5081 as mean and SD. In this regard, there was significant statistical difference between the two groups (P= 0.011). Regarding the mental wellbeing, the mean and SD was measured 4.9774 and 0.5823 for experiment group and 4.5194 and 0.6635 for control group, respectively, which were significantly different (Table 1).

Table 1. Comparing mother's wellbeing aspects in experiment and control group

Life quality aspect	Experiment		control		P value	Result
	Mean	SD*	Mean	SD		
General wellbeing	3.5806	0.6843	2.9677	0.4460	0.000	Significant
Physical wellbeing	2.7258	0.2099	2.6048	0.3169	0.082	Not significant
Social wellbeing	3.5108	0.2099	3.1989	0.5081	0.011	Significant
Mental wellbeing	4.9774	0.5823	4.5194	0.6635	0.005	Significant

Discussion

As the results indicate, mothers taking postpartum exercise, have better general wellbeing. Sampselle and his colleagues showed that the women that are more active physically, experience less weight retention. Also, they got higher marks on postpartum adjustment and take part in more recreational activities [12]. The two groups were significantly different from social wellbeing point of view. In other words, the experiment group had better relationship with their husbands, other family members and friends, comparing the control group. Torkan, in a study demonstrated that the mean score of social performance of the group underwent normal vaginal delivery is higher than the cesarean group. The difference was explained to originate from the earlier restart and possibility of more physical activity [12].

Comparing the mothers' mental wellbeing in two groups revealed significant difference. It was shown that those women which took postpartum exercise had higher level of mental wellbeing, comparing the control group.

In a study, Morkved stated that taking severe exercise after delivery is more associated with the social and mental wellbeing. He, also, concluded that taking severe exercise, in the six following postpartum weeks have significant statistical correlation with mental and social wellbeing. These women participate in more recreational activities and have better relationship with others [13]. In the current study, the experiment group got higher marks on physical wellbeing, but the difference was not significant. Perhaps, if the exercises were done in complete accordance with the guidelines, or the study evaluated the role of exercise in a longer period, a significant difference could be noted. However, Otoole and his colleagues demonstrated that taking regular postpartum physical activity is effective in preventing weight retention [14]. Also,

Downine, in a review article declares that regular postpartum activity has various us valuable effects on health. As exercise causes a balance in cholesterol and HDL level and increases the insulin sensitivity, it would improve the physical wellbeing [15].

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