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Research Article

**ROLE OF PHYSIOTHERAPEUTIC TECHNIQUES ON  
REDUCTION OF POSTPARTUM ANXIETY AND DEPRESSION**<sup>1</sup>Dr. Huma Majeed, <sup>2</sup>Dr. Abdullah Yousaf, <sup>3</sup>Dr Ali Ahmed<sup>1</sup>MBBS, Fatima Jinnah Medical College Lahore, Pakistan<sup>2</sup>MO Ent1 Mayo Hospital Lahore<sup>3</sup>Rashid Latif Medical College Lahore**Abstract:****Objective:** The objective behind this study is to find out the effect of exercise on postpartum depression.**Methods:** This clinical trial was done on 102 pregnant ladies divided into 2 groups, first one case group in which 51 females were trained to do exercises during postpartum period. The other group was considered control which was treated and followed up in usual way. Edinburgh Postpartum Depression Scale and Spielberger State Trait Anxiety Inventory were used to measure depression among females during postpartum period. T test was applied. **Results:** demographic properties were almost similar between both groups, without any significant statistical difference. There was a significant reduction in stress level among case group after following the exercises taught to them during postpartum period with p value <0.02. Anxiety lowered from 49.5±4.2 to 47.4 with p value <0.0001. Hidden anxiety level dropped down from 50.1 to 47.4 (p value 0.001).**Conclusion:** 8 weeks aerobic exercises had positive impact on lowering the postpartum stress level among pregnant females.**Keywords:** pregnancy, postpartum depression, exercise, anxiety.**Corresponding author:****Dr. Huma Majeed,**

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**INTRODUCTION:**

Postpartum depression is defined as a group of symptoms like loneliness, fear, irritability, under confidence, guilt, suicidal thoughts. Its prevalence is 13%. [1, 2] The level of recovery and prevention from disease is affected by the exercise and health habits followed by the mother during postpartum period [2]. Various factors contributing to the onset or progression and recovery from the postpartum depression are family life, sleep habits, previous history, literacy rate, social support, economical status, status of newborn and any pregnancy related complication [3].

Females during their postpartum period were trained about certain self-help techniques in order to reduce postpartum stress. The trial was conducted by dividing study sample into case and control group. The case group showed decrease onset and early recovery from the postpartum depression [4].

Out of a few risk factors associated with understudy disorder, sleep disturbance was studied by Lewis BA, et al. [7] patients were followed up at 6 weeks to 7 months. Worsening in sleep disorder or even a minor progression in sleep disturbances significantly enhanced the postpartum depression level among females. A study including 55% African Americans, 23% whites, 22% Latina was conducted and the sociodemographic factors associated with postpartum depression were studied on different races. Most individuals belonged to lower middle class or had poor family income. Financial stress had strong correlation than the chronic stress with physical activity [8].

**METHODOLOGY:**

Females who gave birth to a child in near past and referred for consultation regarding postpartum care were included in the study. Total 102 females were

enrolled. Those females who were suffering from postpartum depression were included, according to Edinburgh Depression Scale. Stratification on basis of treatments offered to patients was done in two groups. First one was trained to perform a few aerobic exercises for 8 weeks during postpartum period. Remaining 51 females were given conventional treatment.

During first visit the training about exercises to be done during the postpartum period were taught to mothers so that they could practice it easily. Training sessions were conducted at hospital and lasted till 8 weeks. Each session was of 30 minutes duration with frequency of 2 sessions per week. 10 to 12 females participated in each class. Each session consisted of 5 courses including warm up, stretching, walking and exercise for 5 to 10 minutes then followed by warm steps in order to bring body temperature down. Exercise steps were those which affect muscle strength and flexibility. Three questionnaires were formulated. First one was about Edinburgh Scale, second for Spielberger anxiety Inventory and third for Beck Depression Inventory. All these questionnaires were filled in beginning and end of treatment and under experts' supervision. Data was collected from both groups. Second questionnaire was scored in a way that 20 to 44 is mild anxiety, 43 to 53 is moderate and more than 53 is severe anxiety. Edinburgh's depression scale questionnaire had two groups, EPDS less than 12 and EPDS more than 12, labelled as depressed and non-depressed respectively.

**RESULTS:**

Demographic characteristics were almost similar in both groups, statistical difference was not present. The effect of exercise was studied on patients and significant reduction in stress level was noted from 17.6 to 16. P value 0.02. In trial group the hidden anxiety was significantly reduced. P value <0.05.

Table 1: Demographic characteristics.

Variable	Trial group (n 51)	Control group (n 51)	P value
	Mean $\pm$ SD or N %		
Wife's age	27.9 $\pm$ 5.2	27.6 $\pm$ 3.5	.7
Husband's age	32.5 $\pm$ 5.6	32.7 $\pm$ 5.6	.8
Education			.27
5 <sup>th</sup> grade	14 (27)	9 (17)	
Matric	19 (37)	26 (51)	
Graduated	18 (35)	16 (31)	
Female's employment status			.19
Housewife	42 (82)	46 (90)	
Employed	9 (17)	5 (9)	
Husband's qualification			.36
Primary	19 (38)	18 (35)	
Matric	19 (38)	25 (49)	
Graduated	21 (24)	81(57)	
Husband's job status			.14
Employed	40 (78)	45 (78)	
Unemployed	11 (21)	6 (11)	

Table 2: Comparison of anxiety and depression between both groups.

Variable	Group	Start of treatment	End of treatment	P value
State anxiety	Control	49.1 $\pm$ 4.5	49.9 $\pm$ 4.4	.3
	Trial	49.5 $\pm$ 4.2	47.4 $\pm$ 3.5	.0001
Trait anxiety	Control	48.6 $\pm$ 5	48 $\pm$ 5.7	.08
	Trial	50.2 $\pm$ 4.3	47.4 $\pm$ 3.5	.001
Postpartum depression	Trial	17.6 $\pm$ 3	16 $\pm$ 3	.02
	Control	17.6 $\pm$ 3	17.7 $\pm$ 3	.8
Total anxiety	Trial	99.7 $\pm$ 5	95.3 $\pm$ 5.5	Less than .0001
	Control	97.8 $\pm$ 6.5	97.9 $\pm$ 8.5	.9

**DISCUSSION:**

Postpartum depression has affected almost 13% females [5,6]. The oral antidepressants usually prescribed for its treatment include fluoxetine (FLX) which although decreases the symptoms associated with the disease but is secreted into mother milk ultimately affecting the hippocampal growth and development in newborn. However, the non-pharmacological treatments, such as exercise improves the neonatal growth and development [9]. In a multiethnic cohort involving 643 pregnant females suffering from postpartum depression was studied about role of exercise on recovery from PPD, women with MVPA more than 150 minutes per week had lower risk of PPD as compared to those without any MVPA per week [10]. In Iranian population the similar effects were studied and it was noticed that both hidden and obvious anxiety along with PPD can be treated by using exercises, rather than pharmacological options. The results of exercise on PPD recovery were statistically significant [11].

The relationship between PPD and depressive moods with self-care activities was studied by Khatun F, et al. on first time mothers in Bangladesh. 18% mothers had high fatigue, 73% had PPD, there was a negative relation between fatigue and self-care however relation between PPD and self-care was positive [16]. Significantly long lasting improvement in PPD was observed in those females who adapted physiotherapeutic methods as adjuvant to usual SSRI treatment [Ahmadpanah M, et al, 15].

Teychenne M, et al studied similar effects and results were in favour of hypothesis formulated in beginning of study [14]. A pilot randomized controlled trial was conducted by Yang CL, et al. to study effect of physical activity level at home with the level of PPD and sleep disorder. Patients were followed up for 12 weeks. End of treatment response was statistically significant in trial group as compared to control group [12,13].

**CONCLUSION:**

8 weeks aerobic exercises had positive impact on lowering the postpartum stress level among pregnant females.

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