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Effect of different intensities of combined training with seed cycling on blood glucose stress and anxiety among pcod affected women

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Abstract

The purpose of the study is to find out the Effect of different intensities of combined training with seed cycling on body weight body mass index and resting metabolic rate among PCOD affected women.

Researches Design: To achieve this purpose, 45 subjects were selected for this study. The selected group consists of home makers and their age group between 25-40 years. They were divided into three groups where each group consist of 15 members were given combined training with seed cycling and the other group acted as a control group.

Selection of variables: The selection of variables was done based on the literature available and with consultation with the experts. The availability of techniques for the purpose of analysis, feasibility, reliability procedure and the outcome were extensively taken care before finalizing the variables. The selected independent and dependent variables are as follows.

Dependent Variables: 1. Blood glucose 2

Psychological variables: 1.Stress 2. Anxiety

Independent Variable: Training with seed cycling.

Conclusions: The following conclusions were arrived as: 1.Experimental groups showed significant reduction in the physiological variable such as body blood glucose and psychological variables like stress and anxiety than the control group. 2. The Experimental group II showed greater reduction on blood glucose and stress and anxiety than the Experimental group I this is due to inclusion of 16 weeks of different intensities of combined training with seed cycling.

Keywords: seed cycling, PCOD, experimental group

Introduction

Polycystic ovary syndrome: is a condition in which the ovaries produce an abnormal amount of androgens, male sex hormones that are usually present in women in small amounts. The name polycystic ovary syndrome describes the numerous small cysts (fluid-filled sacs) that form in the ovaries. However, some women with this disorder do not have cysts, while some women without the disorder do develop cysts.

Ovulation occurs when a mature egg is released from an ovary. This happens so it can be fertilized by a male sperm. If the egg is not fertilized, it is sent out of the body during your period.

In some cases, a woman doesn't make enough of the hormones needed to ovulate. When ovulation doesn't happen, the ovaries can develop many small cysts. These cysts make hormones called androgens. Women with PCOS often have high levels of androgens. This can cause more problems with a woman's menstrual cycle. And it can cause many of the symptoms of PCOS.

Treatment for PCOD

- A change in diet and activity. A healthy diet and more physical activity can help you lose weight and reduce your symptoms. They can also help your body use insulin more efficiently, lower blood glucose levels, and may help you ovulate.
- Exercise to improve your PCOS doesn't have to take hours a week. Studies have found exercise sessions ranging from 30 minutes a day, three times a week, to three total hours

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per week improved metabolic and reproductive symptoms associated with PCOS

The follicular phase of seed cycling:

- Estrogen secretion is high during this period. Hence, it is recommended to eat a combination of pumpkin, flax, and seeds. Phytoestrogens or lignans in flax seeds bind to the excess estrogen and then remove it from the women's body. Thus, seed cycling benefits women with PCOS by keeping estrogen levels under control.
- Zinc in pumpkin seeds promotes progesterone production in the body. Flax seeds and pumpkin seeds maintain estrogen and progesterone levels of the body during the follicular phase. This supports a healthy reproductive system and thus, in turn, helps in the treatment of PCOS by seed cycling.

The luteal phase of seed cycling:

- This is the phase when a woman is most fertile. The follicle releases the egg and awaits sperm for fertilization. Estrogen and progesterone are secreted in high quantities to support the fertilized egg. Consume sesame seeds and sunflower seeds during this luteal phase.
- Sesame seeds block excess estrogen as they are a rich source of Zinc and Selenium. On the other hand, sunflower seeds are rich in Vitamin E and Gamma-Linolenic Acid (GLA). Both of them boost progesterone production. Thus, the level of estrogen and progesterone is maintained in the body.

Statement of the problem

The purpose of the study is to find out the Effect of Different Intensities of Combined Training with Seed Cycling on Selected Physiological and Psychological Variables among PCOD Women.

Hypothesis

It is hypothesized that there will be significant improvement on selected physiological and psychological variables among Polycystic Ovary Disorder women due to Different Intensities of Combined Training with Seed Cycling.

Selection of subjects

To achieve this purpose, 30 subjects were selected for the

study. The selected group consists of home makers and as well as working women between the age group of 25-35 years. They were divided into two groups where one group with 15 members were given specific diet prescriptions with seed cycling and the other group acted as a control group.

Selection of variables

The selection of variables was done based on the literature available and with consultation with the experts. The availability of techniques for the purpose of analysis, feasibility, reliability procedure and the outcome were extensively taken care before finalizing the variables. The selected independent and dependent variables are as follows.

Dependent variables: 1.blood glucose

Psychological variables: 1. Stress 2. Anxiety

Independent variable: Specific diet with seed cycling.

Experimental design

To achieve the purpose of our study, 45 subjects with evidence like ultrasound imaging, or gynecologist reports are selected. They are divided into two groups as Group I with combined training with seed cycling and Group II, the control group without any training. The pretest was taken for all the groups at the beginning. After sixteen weeks, the post test was taken for all the groups. The pretest and post test scores will be subjected to statistical analysis to find out the significance among the mean differences.

Statistical Techniques: Analysis of covariance statistical technique was used, to test the significant difference among the treatment groups. Scheffes Post Hoc Test used to find out the significance of intergroup variables.

Training Schedules: The treatment durations lasts for 16 weeks of different intensities of combined training and seed cycling was monitored Experimental Group-I moderate intensities with seed cycling, Experimental Group-II received high intensities with seed cycling and Control Group did not receive any treatment.

Results of glucose

The results on Physiological parameter of Glucose were measured and the results on the effect of different intensities of combined training with seed cycling among polycystic ovary affected female were presented in the table

Table1: Analysis of covariance on glucose of experimental group and control group

Test	Exp-1	Exp-2	Cont. Group	SV	SS	DF	MS	OF	TF
Pre Test	114.53	115.27	115.60	B	8.93	2	4.46	0.01	3.1
				W	16704.27	42	397.72		
Post Test	88.06	80.13	115.60	B	10394.53	2	5197.27	30.47	3.1
				W	7164.27	42	170.58		
Adjusted	88.30	80.08	115.42	B	10255.66	2	5127.83	45.65	3.1
				W	4605.67	41	112.33		

Table shows analyzed data on BMI. The pretest means of glucose were 114.53, 115.27 and 115.60 for the Experimental Group- I, Experimental Group- II and the Control Group. The obtained 'F' ratio 0.01 was lesser than the table 'F' ratio 3.1. Hence, the pretest was not significant at .05 level of confidence for degrees of freedom 2 and 28.

The post test means were 88.06 for Experimental Group - I, 80.13 for Experimental Group - II and 115.60 for Control Group. The obtained 'F' ratio 30.47 was higher than the table

'F' ratio 3.1. Hence, post test was significant at .05 level of confidence for the degrees of freedom 2 and 28.

The adjusted post test means were 88.30 for Experimental Group - I, 80.08 for Experimental Group - II and 115.60 for Control Group. The obtained 'F' ratio 45.65 was higher than the table 'F' ratio 3.1. Hence, the adjusted post test was significant at .05 level for the degrees of freedom 2 and 27.

Discussion on the findings of glucose

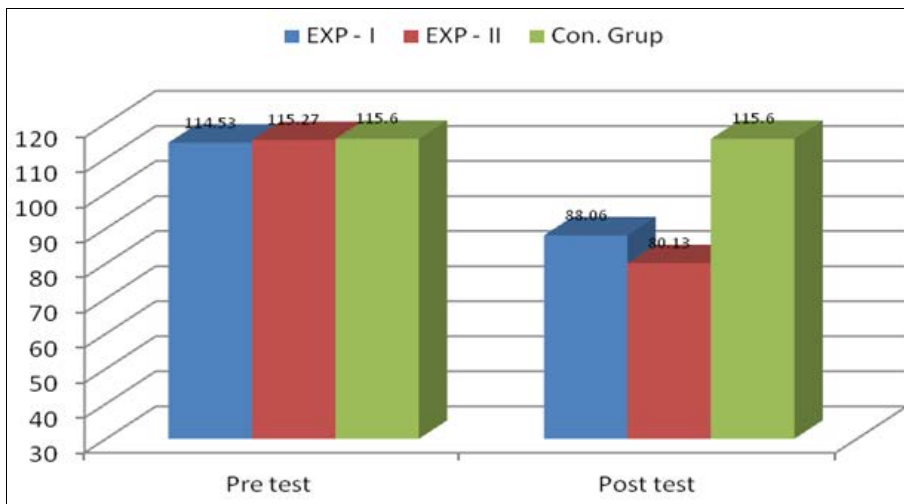


Fig 1: Analysis of covariance on glucose of experimental group and control group

In this work, the analysis of covariance of glucose was carried out in Experimental groups with the inclusion of seed cycling with different intensities of combined training. The same analysis was carried out in another group called the Control Group without inclusion of seed cycling with different intensities of combined training. From these analyses, it was found that the results obtained from the Experimental Groups had significant decreases in the glucose from higher level to moderate when compared with one from the Control Group.

Its interestingly noted that experimental group II had greater reduction on glucose when compared with experimental I. This was due to the influence of 16 weeks of seed cycling with different intensities of combined training.

Results of stress: The results on psychological parameter of Stress were measured and the results on the effect of different intensities of combined training with seed cycling among polycystic ovary affected female were presented in the table

Table 2: Analysis of covariance on stress of experimental group and control group

Test	Exp-1	Exp-2	Cont. Group	SV	SS	DF	MS	OF	TF
Pre Test	4.33	4.67	4.80	B	1.73	2	0.867	2.42	3.1
				W	15.07	42	0.36		
Post Test	2.53	1.00	3.33	B	42.18	2	21.09	80.04	3.1
				W	11.07	42	0.26		
Adjusted	2.54	1.00	3.33	B	42.10	2	21.05	78.04	3.1
				W	11.059	41	0.27		

Table shows analyzed data on Stress. The pretest means of stress were 4.33, 4.67 and 115.60 for the Experimental Group- I, Experimental Group- II and the Control Group. The obtained 'F' ratio 2.42 was lesser than the table 'F' ratio 3.1. Hence, the pretest was not significant at .05 level of confidence for degrees of freedom 2 and 42.

The post test means were 2.53 for Experimental Group - I, 1.00 for Experimental Group - II and 3.33 for Control Group. The obtained 'F' ratio 80.04 was higher than the table 'F' ratio 3.1. Hence, post test was significant at .05 level of confidence

for degrees of freedom 2 and 42.

The adjusted post test means were 2.54 for Experimental Group - I, 1.00 for Experimental Group - II and 3.33 for Control Group. The obtained 'F' ratio 78.04 was higher than the table 'F' ratio 3.1. Hence, the adjusted post test was significant at .05 level of confidence for degrees of freedom 2 and 41.

Discussion on the findings of stress

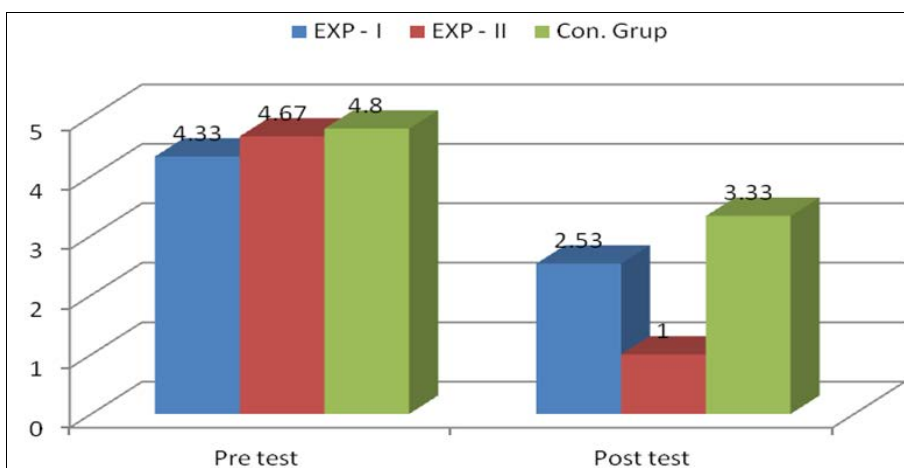


Fig 2: Analysis of covariance on stress of experimental group and control group

In this work, the analysis of covariance of stress was carried out in Experimental groups with the inclusion of seed cycling with different intensities of combined training. The same analysis was carried out in another group called the Control Group without inclusion of seed cycling with different intensities of combined training. From these analyses, it was found that the results obtained from the Experimental Groups had significant decreases in the Stress from higher level to moderate when compared with one from the Control Group. Its interestingly noted that experimental group II had greater reduction on Stress when compared with experimental I. This was due to the influence of 16 weeks of seed cycling with different intensities of combined training. These results were found to be in a good agreement with the earlier work of Chetna Sharma, *et al.*, (2019) [10] who

analyzed the Food and stress management, combating stress with a balanced nutritional diet. They concluded that Nutrition/food education is an essential part of improving dietary habits, food choices and plays an excellent role in stress reduction and management. Thus, the effect of of seed cycling with specific diet prescription has made significant impact on the perceived stress levels of the women with PCOD.

Results of anxiety

The results on psychological parameter of Anxiety were measured and the results on the effect of different intensities of combined training with seed cycling among polycystic ovary affected female were presented in the table

Table 3: Analysis of covariance on anxiety of experimental group and control group

Test	Exp-1	Exp-2	Cont. Group	SV	SS	DF	MS	OF	TF
Pre Test	4.53	4.67	4.93	B	1.24	2	0.622	1.87	3.1
				W	14.00	42	0.33		
Post Test	2.86	1.00	5.00	B	120.18	2	60.09	1456.00	3.1
				W	1.73	42	0.04		
Adjusted	2.88	1.00	4.98	B	114.44	2	57.22	1420.00	3.1
				W	1.652	41	0.04		

Table shows analyzed data on Anxiety. The pretest means of stress were 4.53, 4.67 and 4.93 for the Experimental Group- I, Experimental Group- II and the Control Group. The obtained 'F' ratio 2.42 was lesser than the table 'F' ratio 3.1. Hence, the pre test was not significant at .05 level of confidence for degrees of freedom 2 and 42. The post test means were 2.86 for Experimental Group - I, 1.00 for Experimental Group - II and 5.00 for Control Group. The obtained 'F' ratio 1456.00 was higher than the table 'F'

ratio 3.1. Hence, post test was significant at .05 level of confidence for degrees of freedom 2 and 42. The adjusted post test means were 2.88 for Experimental Group - I, 1.00 for Experimental Group - II and 4.98 for Control Group. The obtained 'F' ratio 1420.00 was higher than the table 'F' ratio 3.1. Hence, the adjusted post test was significant at .05 level of confidence for degrees of freedom 2 and 41.

Discussion on the findings of anxiety

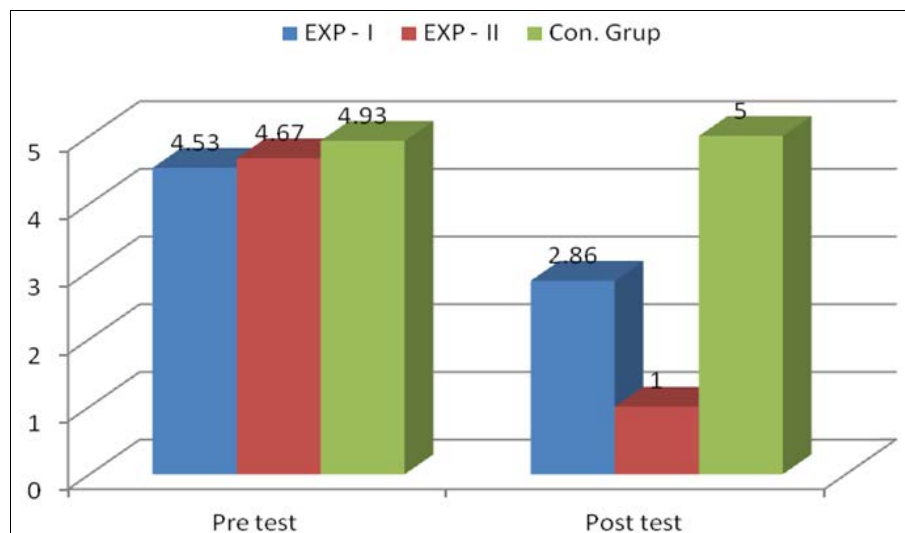


Fig 3: Analysis of covariance on anxiety of experimental group and control group

In this work, the analysis of covariance of Anxiety was carried out in an Experimental group with the inclusion of seed cycling with different intensities of combined training. The same analysis was carried out in another group called the Control Group without inclusion of with the inclusion of seed cycling with different intensities of combined training. From these analyses, it was found that the results obtained from the Experimental Group had significant decrease in the Depression levels from higher level to moderate when

compared with one from the Control Group. This was due to the influence of diet intervention. Its interestingly noted that experimental group II had greater reduction on Stress when compared with experimental I. This was due to the influence of 16 weeks of seed cycling with different intensities of combined training.

Conclusions

Within the limitation of the study, the following conclusions

were drawn as:

1. Experimental groups showed significant reduction in the physiological variable such as body blood glucose and psychological variables like stress and anxiety than the control group.
2. The Experimental group II showed greater reduction on blood glucose and stress and anxiety than the Experimental group I this is due to inclusion of 16 weeks of different intensities of combined training with seed cycling.

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