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THE EFFECT OF MENSTRUAL CYCLE PHASES ON SIT-UPS: A COMPARATIVE STUDY

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ABSTRACT

Objective: To compare the effect of menstrual cycle phases on flexibility among women volleyball athletes and non-sports athletes. **Methodology:** A total of 20 female subjects were selected. Out of which10 were taken from the game of Athletes and the other ten from the women who were living a sedentary lifestyle from Lucknow city, U.P, by using the purposive sampling technique. The age of the subjects ranged from 24 to 29 years. Mensuration phases have opted as I.V (Independent variable)for the study whereas sit-ups as D.V (Dependent Variable). Subjects were acknowledged well before the test took place**. Conclusion**- From the evaluation of the test results on SPSS 25 by descriptive statistics and independent t-test, It was found that women of athletic showed a significant difference in all four phases of menstruation. Hence the result significantly differed at a 0.05 level of significance.

INTRODUCTION

However, the menstrual cycle could have an influence on one's ability to exercise for an extended period of time. Despite the fact that the majority of research suggests that oxygen consumption, heart rate, and rating of perceived exertion responses to sub-maximal steady-state exercise are not affected by the menstrual cycle, several studies report a higher cardiovascular strain during moderate exercise when the woman is in the mid-luteal phase. Despite this, there is no variation in the amount of time it takes to reach fatigue while exercising at intensities below maximum levels. As a result of the limited repeatability of the time to exhaustion test, the relevance of this conclusion needs to be called into doubt. In the middle of the luteal phase, when the body temperature is at its highest, there is a reduction in the amount of time it takes for an individual to get exhausted after extended activity in hot settings. Therefore, the mid-luteal phase may have a potentially unfavorable influence on the ability to undertake extended activity due to a rise in core body temperature and maybe an increase in the amount of strain placed on the cardiovascular system. Adjusting competition timetables for female endurance athletes to accommodate their menstrual cycles may have important practical repercussions, particularly when taking place in hot and humid environments. The limited breadth of the present study as well as its methodological shortcomings call for more exploration into the influence that the menstrual cycle has on the ability to do extended exercise.

Given the new expansion in the quantity of ladies taking part in practice and the absence of agreement in regards with the impacts of the MC on practice execution, there is a developing need to decide the impacts of the variances in estrogen and progesterone across the MC on practice execution.

As far as anyone is concerned, this is the first meta-examination to fundamentally analyze existing investigations researching changes in practice execution across the MC, in eumenorrheic ladies. Moreover, this survey is the first of its sort to evaluate the nature of past investigations utilizing strong affirmation instruments. The data given by this meta-examination can be utilized to illuminate reasonable suggestions for competitors, experts, and specialists keen on overseeing exercise execution across the MC.

This given study has produced an effort to explore the findings of the effect of the menstrual cycle's 4 phases on sit-ups among volleyball sports athletes and non-sports athletes.

METHODOLOGY

The purpose of the research was to conduct a comparative evaluation to analyze the effect of menstruation cycle phases on the sit-ups of women in Athletic sports and Non-sports athletes. A total of 20 female subjects were selected from the above-mentioned sports from lucknow, U.P.by using the purposive sampling technique. All the players of the volleyball sports were participants of All India University and West Zone Inter-university and other groups were following a sedentary lifestyle. The age of the subjects ranged from 24 to 29 years and all were regular players with a good and sound level of skill. Mensuration phases have opted as I.V (Independent variable)for the study whereas flexibility as D.V (Dependent Variable).

ANALYSIS OF THE DATA

For the analysis of data descriptive statistics were applied which were mean, standard deviation, skewness, and kurtosis. Furthermore, the Independent T-test was applied to analyze the result. For this study, the level of significance was set at α 0.05.

RESULTS AND DISCUSSION

If a skewness value is greater than twice its standard error, this may indicate that there is a departure from symmetry. Since the skewness of the variables is less than twice the size of the standard error, this indicates that all of the variables have a symmetrical distribution. Similarly, the value of kurtosis for the data was normal for the variable and is less than twice its standard error of kurtosis. This indicates that the value of kurtosis is not significantly different from zero. To put it another way, the distribution of each and every variable is of the Meso-Kurtic type.

The below-mentioned table-1 shows the Mean and Standard deviation scores on the effect of menstruation phases on situps of women volleyball athletes and non-sports athletes.

Group Statistics

	SITUPS	N	Mean	Std. Deviation	Std. Error Mean
MENSTRUAL	WSP	10	22.7000	9.03143	2.85599
	NWSP	10	5.3000	4.02906	1.27410
FOLLICULAR	WSP	10	36.4000	6.00370	1.89854
	NWSP	10	5.7000	3.86005	1.22066
OVULATION	WSP	10	35.0000	6.51494	2.06020
	NWSP	10	6.5000	3.65908	1.15710
LUTEAL	WSP	10	37.5000	7.09068	2.24227
	NWSP	10	7.3000	3.52924	1.11604

TABLE – 2

The below-mentioned table 2 shows the result of the independent t-test

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
MENSTURAL	6.845	.017	5.564	18	.000	17.40000	3.12730	10.82979	23.97021
			5.564	12.446	.000	17.40000	3.12730	10.61317	24.18683
FOLLICULAR	2.098	.165	13.602	18	.000	30.70000	2.25709	25.95803	35.44197
			13.602	15.355	.000	30.70000	2.25709	25.89880	35.50120
OVULATION	3.065	.097	12.061	18	.000	28.50000	2.36291	23.53571	33.46429
			12.061	14.164	.000	28.50000	2.36291	23.43757	33.56243
LUTEAL	3.634	.073	12.058	18	.000	30.20000	2.50466	24.93790	35.46210
			12.058	13.201	.000	30.20000	2.50466	24.79738	35.60262

CONCLUSION

The purpose of the study was to compare the two groups which were women athletic and non-sports athletes. Which were examined on the basis of the effect of the menstruation phase on the flexibility of the above two mentioned groups. For analyzing the results descriptive statistics and as there were only two groups independent t-test was used to analyze the mean difference between the groups. From the evaluation of the test results, it was found the women in Athletic sport showed a significant difference at a 0.05 Level of significance. As a consequence of the findings, it is clear that one of the primary advantages of volleyball female Athletes was the sheer will and adaptation to load in different mensuration phases throughout the training period.

RECOMMENDATIONS

1. A similar kind of study can be done using the elite level of athletes in different age categories.
2. Further study can be done with a different research approach i.e. cross-sectional as well as longitudinal.

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