

# A Study of Effects of Exercise on Physical Fitness Components and Psychological Variables among Physical Education Students in Different Games

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## Abstract

The Main Objective of the Present Study Was to Know the Reaction of Frustration among the Physical Education Student and their Physical Fitness Scores who were selected for this Training for Random sampling. For this purpose of study 200 physical education students were selected in different indoor and outdoor games. Sample were taken from different academic colleges and training centres in bandipora Kashmir. Total 200 subjects were selected (50 in volleyball 50 in boxing 50 in Athletics 50 in football ) those having minimum 2 years' experience at district level zone leveling their respective sports. Age group was 18 to 26 years male only. The motive of this study was to know the reaction of frustration among the physical education students and their physical fitness scores. Reaction of frustration scale (RFS) constructed and standardized by Dr D.M Dixit and DR D.N Srivastava (2004) was being implemented. The finding revealed that there was significant main effect for the method /technique of relaxation used on level of frustration .Multiple comparison was being done further in which the Hatha yoga/fasting group was found to have significant lower level of frustration and  $P > 0.1$  on aggression ,fixation ,and regression .

**Keywords:** Reaction of frustration among physical education students and their physiological variables in different games.

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## INTRODUCTION

Frustrating situations come about everyday everywhere throughout the life, in school, employment, friendships, marriage, and even in relationships with others. Frustration is a usual component of life. Nonetheless, it must not be allowed to achieve the upper hand. Every one met with frustration less or more. It is imperative to tolerate and to cope efficiently with aggravation and frustration if anyone wishes to have a thriving and gratifying life. Now a day's frustration has increased a lot. Burden and more mechanical life have increased stress and frustration among human being. There are many connotations of frustration. It may be the emotion that accompanies an experience of being dissatisfied in accomplishing the goals, an action of hampering someone's plans or attempts or an emotion of aggravation at being wedged or disparaged. In psychological terms, frustration is a general emotional retort to antagonism. In a relation with anger and displeasure, it occurs from the apparent

resistance to the accomplishment of individual will. The greater the hindrance and the superior the will, the more the frustration is expected to occurring some one's mind. Sources of frustration possibly can be internal or external. Internal sources of frustration include individual deficiencies such as a lack of confidence or dread of social situations that thwart one from attaining a goal. Conflict and disagreement can also be an internal source of frustration, when one has challenging goals that get in the way with one another. External causes of frustration consist of conditions outside the individual such as a blocked highway or a lack of wealth conflicting relations and many more things present outside world. Frustration can be regarded as a problem-response conduct, and can have numerous effects, depending on the cerebral healthiness of the individual. In positive cases, this frustration will put up until a level that is too great for the individual to compete with, and thus create action heading for solving the intrinsic problem. In negative cases, conversely, the individual may observe the source of

frustration to be outside of their power, and therefore the frustration will prolong to build, leading ultimately to further problematical behavior (e.g. aggressive retort). Frustration may bring about downfall and divergence, because it wastes valuable thinking capability and concentration, which otherwise would have been utilized somewhere else in constructive and innovative work. In some cases, it might lead to addiction or any detrimental activities. Frustration primarily builds up in a child when his or her elementary desires go unmet, and the more he or she has to screech to get them met from the outside world, the feebler will be that child's personal sagacity of contentment and internal emotional vigor. Instead, a deep and constant fear grows within the child. A young child cannot be made aware or taught how to bear aggravation and frustration. The child gains this expertise over time. It happens as a result of two mutually dependent procedures that involve how parents meet their child's physical and psychosocial needs and desires. Frustration are often particularly difficult for a person to cope with because they can lead to low self-esteem making the individual feel that he or she has failed in some way or is incompetent to handle the task or challenge .

The reactions to frustration and its sub scales as studied here are also known as defense Mechanism. These defense mechanism are so called as they try to defend individuals from the psychological effect of a blocked goal. When some employees get frustrated they become tensed and irritable. They experience an uneasy feeling in their stomach and also might show various other subsequent or parallel reactions of frustration. Following are the various types of reactions to frustration:

1. Resignation: When a person wants to quiet and wants to leave team that time the person informs coach of a team through written letter for resignation.
2. Fixation: Attaching oneself in a reasonable or exaggerated way to some persons or arrested emotional development during childhood or adolescent level. In this the individual might hold his/her elders for his/her problems without having a deep insight.
3. Aggression: Aggression is found in almost in every game .Aggression makes the player more competitive as aggression is a sort of anger found in players which makes them to win in playfield.
4. Regression: This is considered as an alarming stage for example behaving is an immature and childish

manner and developing self-pity (to feel sorry for oneself).

### Procedure

For the purpose of our study 200 physical education students were selected in different indoor and outdoor games. Samples were taken from different academies colleges and training centers in Bandipora Kashmir. Total 200 physical education students were selected (50 in volleyball, 50 in athletics, 50 in boxing and 50 football). Those having a minimum of 2 years of experience at district level/zonal level in their respective sports. Age group was 18 to 26 years males only. All the physical education students were selected randomly in different games. The motive of the study was to know the reactions to frustration among the physical education students and their physical fitness scores, who were selected for this training through random sampling. In our training 200 physical education students were selected for collection of data Standized tool reaction to Frustration Scale by Dr. DM Dixit and Dr. DM Srivastava has been used. The primary objective of the study is to examine the effects of the physical exercise and psychological variables among Physical education students in different games. In this study no control group was selected. In this study pull- up, sit-ups, shuttle run, vertical jump, 600m run and walk. These tests were selected for evaluation. The training schedule for the study was as follows: aerobics exercise six days a week, 64/70-94% of maximum heart rate (HR MAX), continuous or intermittent aerobic activity for 30-60 minutes, the duration is dependent on the intensity of the activity, thus, lower – intensity activity should train at least 60 min. The mean scores of pull-ups was 4.25 and 4.29 respectively were observed, the obtained t –ratio 1.53 was not significant at 0.05 level, thus the hypotheses was rejected. The mean score, of bend knee sit ups was 24.15 and 29.10 respectively were observed, the obtained t- ratio 2.63\* was significantly 0.05 level, thus the hypotheses was accepted. The mean scores of shuttle run was 12.30 and 11.85 respectively were observed. The obtained t- ratio is 3.5\* was significant at 0.05 level, thus the hypotheses was accepted. The mean scores of the vertical jump was 9.30 and 42.2 respectively were observed. The obtained t- ratio is 1.13\* was not significant at 0.05 level, thus the hypotheses was rejected. The mean score of 600m Run and walk was 145.7& 145.85 respectively were observed, the obtained t- ratio is 1.14\* was not significant 0.05 level therefore the hypotheses was rejected.

## Item Distribution in RFS

Sl.No	Reactions to Frustration	Sl. No. of Positive Items	Sl. No. of Negative Items	Total
1	Aggression (AGG)	1-5	21-25	10
2	Resignation (RES)	6-10	26-30	10
3	Fixation (FIX)	11-15	31-35	10
4	Regression (REG)	16-20	36-40	10=40

**Reliability**

The test has sufficient degree of reliability. The reliability of the RFs was determined by two methods – test-retest method and method of internal consistency. The test-retest reliability of the test ranges from 0.62 to 0.82 and the internal consistency reliability ranges from 0.61 to 0.78. All these reliability coefficients use high and significant.

**Validity**

The scale was validated against Nairashya Map by Chauhan (1972), Verbal Frustration Test by Muthayya (1976) and Situational Test of Frustration by Malviya (1977). The validity against different criteria ranged from 0.42 to 0.80. Obtained correlation coefficient were found significant, providing evidence for sufficient degree of validity coefficient.

Table-2

Variables	N	Mean	Std. Deviation	Severity
Pre intervention Aggression score	200	20.50	1.73	low to average frustration
Post intervention aggression score	200	17.81	2.92	very low to low frustration
Pre intervention fixation score	200	24.96	2.00	low to average frustration
Post intervention fixation score	200	22.95	3.21	low frustration
Pre intervention regression score	200	29.84	3.41	average frustration
Post intervention regression score	200	27.68	4.26	low to average frustration
Pre intervention resignation score	200	23.11	1.96	average frustration
Post intervention resignation score	200	19.76	3.35	low frustration
Pre intervention-total Level of Frustration	200	107.04	5.47	average to high frustration
Post intervention-total Level of Frustration	200	101.16	7.84	average frustration

Table give above shows the mean and standard deviation values and their interpretation as per the norms table and Pre intervention aggression score of mean and S.D is 20.50+1.73 and their severity is low to average frustration and mean and S.D for Post aggression score is 17.81+2.92 and severity is very low to low frustration. Pre intervention fixation score of mean and S.D is 24.96+2.00 and severity is low to average frustration and Post intervention fixation of mean and S.D IS 22.95+3.21 and severity is low frustration. Pre intervention regression score of mean and S.D is 29.84+3.41 and severity is average

frustration and Post intervention regression score is 27.68+4.26 and their severity is low to average frustration. Pre intervention resignation score of mean and S.D is 23.11+1.96 and their severity is average frustration and Post intervention resignation of mean and S.D is 19.76+3.35 and their severity is low frustration. Pre intervention-total Level of frustration of mean and S.D is 107.04+5.47 and their severity is average to high frustration and Post intervention-total level of frustration of mean and S.D is 101.16+7.84 and their severity is average frustration.

Table-3: Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pre Aggression& post-aggression	200	.061	.588
Pair 2	pre fixation & post-fixation	200	.512	.000
Pair 3	pre regression & post-regression	200	.268	.016
Pair 4	pre resignation & post- resignation	200	.250	.025
Pair 5	Pre intervention total score on frustration &post intervention total score of Frustration	200	.293	.008

Table above shows that there was no relationship observed between pre and post intervention regression values on all the five dependent variables pre Aggression& post-aggression, pre fixation & post-

fixation, pre regression & post-regression, pre resignation & post- resignation, Pre intervention total score on frustration &post intervention total score of Frustration.

**Table-4: Paired Samples Test**

Dependant Variable		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pre Aggression& post-aggression	2.687	3.301	.3691	3.422	1.952	7.28	199	.000
Pair 2	pre fixation & post-fixation	2.012	2.776	.3104	2.630	1.394	6.48	199	.000
Pair 3	pre regression & post-regression	2.162	4.686	.5239	3.205	1.119	4.12	199	.000
Pair 4	pre resignation & post- resignation	3.350	3.435	.3840	4.114	2.585	8.72	199	.000
Pair 5	Pre intervention total score on frustration &post intervention total score of Frustration	5.875	8.141	.9102	7.686	4.063	6.45	199	.000

Table given above shows the paired samples t-test pre and post physical fitness training. The significance value was being set at .05. All the pairs show a significant improvement in their frustration levels. Pre Aggression and Post-aggression  $t=7.28$  and  $P=.000$ , Pre fixation and post-fixation  $t=6.48$  and  $P=.000$ , pre regression and post-regression  $t=4.12$  and  $P=.000$ , pre resignation and post resignation  $t=8.72$  and  $P=.000$ , pre intervention total score on frustration and post intervention total score of frustration  $t=6.45$  and  $P=.000$

## CONCLUSION

Main effect of type of method/technique being practiced on frustration level is highly significant means that the 3 groups differ in their frustration level. In summary, the multivariate analyses indicated that the Hatha yoga group differed significantly in respect of frustration level; those dependent variables were not too highly correlated. Subsequent univariate showed that there were significant effects for type of relaxation method adopted on level of frustration and (separately) in respect of scores. Tukey post hoc analysis suggested that Hatha yoga group were significantly less frustrated than aerobics and general relaxation groups and that aerobics groups significantly less frustrated than general

relaxation group but the frustration response was not better than that of Hata yoga group.

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