



EFFECT OF 15 DAYS ADVENTURE SPORTS PROGRAMME ON VITAL CAPACITY AND RESTING PULSE RATE

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Abstract:

The main purpose of this study was to determine the effect of Adventure Sports Programme on vital capacity and resting pulse rate. Total thirteen (N=13) subjects were taken from Bachelor of physical education students of Dibrugarh University with ages ranging between 20 to 25 years. The training programme was organised by Dibrugarh University in collaboration with Manipur Mountaineering & Trekking Association, Manipur at Lamdan, Manipur, India at 1250 metre height above sea level. For the study, the pre-test post-test single group design was employed. The experimental treatment was given to the subjects through the selected adventure sports programme i.e. Morning 45 minutes regular conditioning, Bouldering, Rock climbing and Rappelling, Obstacle training, Jungle survival, Trekking, River crossing, Paragliding, Boating, Camping and Social works. To analyse the collected data t-test statistical technique was employed and the level of significant was kept at 0.05 level of confidence. On the basis of the statistical technique, it was concluded that there was not significant improvement of vital capacity (tabulated $t_{0.05(24)} = 1.711 > 0.74$) and resting pulse rate (tabulated $t_{0.05(24)} = 1.711 > 0.30$).

Keywords: adventure sports, vital capacity, resting pulse rate, sport medicine

1. Introduction

Adventure sports (AS) are also known as extreme sports. These adventure sports can be competitive or non-competitive, in nature and often involve individual participants, rather than teams. Adventure sports comprise of a very wide range of physical activities. Generally, Adventure sports are outdoor sports or activities which involve intense and sometimes life-threatening actions which create an adventurous

atmosphere. These sports are not only source of '*thrill and joy*', but also provide a valuable opportunity for developing such qualities so as to prepare one individual for facing challenges confidently and efficiently against all odds situation created by nature. To perform various activities of these sports are required physical fitness as well as a strong mental attitude. Hence, these sports are helpful in leading one's life in a better way and obtain the courage to face the obstacles during daily life.

Many years ago, teachers began working with sports and adventure activities in physical education at school, teaching orientation, climbing and hiking, which evolved to form what is now known as Adventure sports (AS). One of the most important aspects of AS programmes is that the focus of the activities emphasises challenge and adventure. Its main aim is to make students face different problems, feeling that the resolution of that activity involves some risk (subjective), so that they have to bring into play all their mental and physical abilities (Granero-Gallegos & Baena-Extremera, 2011).

The proper design and development of the sessions should gradually increase the difficulty of the tasks and the effort that students must make and carrying out these activities and overcoming the challenge posed will bring about personal growth in the students, both psychologically and physically (Iso-Ahola & Graefe, 1988; Witman, 1995). In this regard, several studies (Gass, 1995; Luckner & Nadler, 1997) indicate that performing various learning units followed by challenging and adventurous activities can lead to positive psychological and physical improvements.

Adventure sports are conducted in all elements i.e. on land (Terrestrial sports), in water (Aqua sports) and in air (Aero sports). Mountaineering, Rock climbing, Trekking, River rafting, Kayaking, Canoeing, Base jumping, Skiing, Hang gliding, Paragliding, Wind surfing, Sky diving, Scuba diving etc. are some popular adventure sports. Adventure sports are undertaken at various places depending on the natural environment and weather conditions. Most of the adventure sports are undertaken in hilly and mountain areas.

2. Material and Methods

For the purpose of the study 13 male students of bachelor of Physical education of Dibrugarh University were randomly selected as subjects. The age of the subjects were ranging from 20 to 25 years. For the study the pre-test post-test single group design was adopted. The experimental treatment was given to the subjects through the selected adventure sports programme i.e. morning 45 minutes regular conditioning, Bouldering, Rock Climbing and Rappelling, Obstacle training, Jungle survival,

Trekking, River crossing, Paragliding, Boating and Social works. The training session start from 6:30 AM to 4:00 PM whole day programme as per schedule. The pre-test and post-test data were collected before administering the programme and immediately after the completion of the training programme by using water spirometer to measure vital capacity and to measure resting pulse rate, the pulses taken at sleeping position in the bed early in the morning. To analyse the collected data t-test statistical technique was employed and the level of significant was kept at 0.05 level of confidence.

3. Results

Table 1: Comparison of Pre-Test and Post-Test Mean of Vital capacity and Resting pulse rate
Test Mean SD MD SE t-value

Variable	Test	Mean	SD	MD	SE	T value
Vital capacity	Pre-test	3230.76	681.45	192.31	257.20	0.74
	Post-test	3423.07	628.98			
Resting pulse rate	Pre-test	58.23	5.52	0.62	2.03	0.30
	Post-test	57.61	4.81			

Not Significant at 0.05 level

Tabulated $t_{0.05}(24) = 1.711$

From the above Table 1 it was revealed that there was not significant improvement of Vital capacity and Resting pulse rate after 15 days training programme of Adventure sports activities as the $t_{0.05}(24) = 1.711 > 0.74$ and $t_{0.05}(24) = 1.711 > 0.30$ respectively at 0.05 level of confidence.

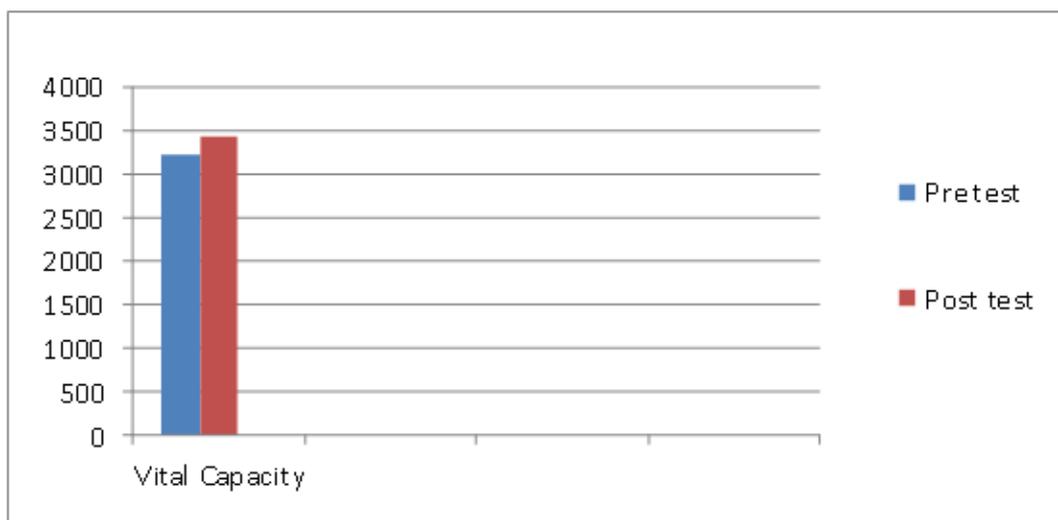


Figure 1: Graphical representation of Pre-Test and Post-Test Mean of Vital capacity

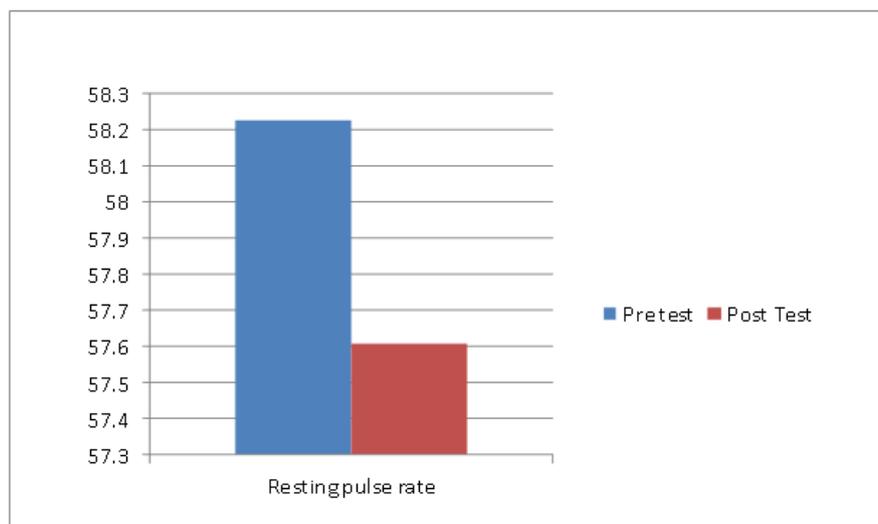


Figure 2: Graphical representation of Pre-Test and Post-Test Mean of resting pulse rate

4. Discussion on Findings

The finding of Table 1 revealed that there was not significant improvement of Vital capacity and Resting pulse rate of selected 15 days adventure sports programme. The result of the study was attributed the training might affect positively on physiological and psychological variables but the result showed statistically not significant difference between pre-test and post-test values. But when compared the mean values of the pre-test and post-test, it has been observed that have improved on Vital capacity Mean and SD values as 3230.76 and 681.45, 3423.07 and 628.98 respectively.

On the other hand, on resting pulse rate Mean and SD values as 58.23 and 5.52, 57.61 and 4.81 respectively, was found statistically not significant at 0.05 level of confident α . A study by Vogel (1989) concluded that by participating in outdoor adventure activities, people gain a better understanding of themselves and even came to realise that their potential was greater than they thought. Adventure sport programmes have also been studied in relation to physical condition. Gehris et al. (2010) in their survey identified that the majority of students expressed the intention of improving their physical condition after an adventure programme, with greater strength and overall physical condition, but they felt that endurance might decrease. Fersch and Smith (1978) also found that AS programme participants scored significantly higher on tests such as abdominals, 300-yard races, press-ups and so on, thus demonstrating the progress in their overall physical condition.

5. Conclusion

On the basis of statistical finding of the study it was concluded that there was not significant improvement of Vital capacity (tabulated $t_{0.05}(24) = 1.711 > 0.74$) and Resting pulse rate (tabulated $t_{0.05}(24) = 1.711 > 0.30$) of 15 days selected adventure sports programme.

References

1. Antonio Baena-Extremera, Antonio Granero-Gallegos & Maríadel Mar Ortiz-Camacho, Quasi-experimental study of the effect of an adventure education programme on class room satisfaction, physical self-concept and social goals in physical education, *Psychologica Belgica*, 2012;52(4): 369-386
2. Camille J. Bunting, Mildred Little, Homer Tolson and George Jessup, Physical fitness and Eustress in the adventure activities of Rock climbing and Rappelling, *The journal of Sports Medicine and Physical Fitness*, 1986;26(1):11-20
3. Hafizullah Dar, Potentials and problems of adventure tourism: a study of Kashmir valley, *Abhinav International Monthly Refereed Journal of Research in Management & Technology*, 2014; 3(9):77-84
4. https://en.wikipedia.org/wiki/Extreme_sport
<http://www.livestrong.com>
6. Meetei Romeo, Sports climbing, National seminar proceeding on new challenges on physical education and sports sciences in the 21st Century held at Department of Physical education and sports, Manipur University (2015) pp 27-30
7. Mildred Little, Camille J Bunting and Emma. Heart rate responses to high ropes course events, *Texas Association for Health, Physical Education, recreation and Dance Journal*, 1985;55(1):28-29
8. Sharma V K, *Health and physical education* (New Delhi: Saraswati House Pvt Ltd, 2008), pp 23-25