

TO STUDY THE SELECTED PHYSICAL SUITABILITY FACTORS OF CLIMBERS

¹A.D. Prabhu

¹Assoistant Professor, CACP College of Pune, Pune, India
Email: mykarate.org@gmail.com; Phone: +91-9965408000

Abstract: *Mountaineering is an activity gaining popularity in the whole world as this activity has proved to have positive effects on the whole personality (physical, mental, social, ethical, etc.) of the mountaineer. The increase in participation has brought with it some negative effects also. The numbers of accidents, injuries and illness have considerably increased. The beginners are unaware about the needs of this activity. A study with an objective to know the physical fitness (selected factors) was conducted. 270 male mountaineers were tested. Two groups according to age were formed and analysis was done. Descriptive analysis and 't' test was conducted to know the difference between the groups. Results show that there is an increase in physical fitness as the age increase. A detailed study related to topic is essential.*

Key words: *Physical, Metal, Social, Ethical*

Introduction:

Adventure activities have been emerging in India with great pace and are gaining continuous attention by Indian youth. It gives you a totally new thrilling experience and a view point to lead life with new enthusiasm and courage. People having an adventurous approach to life are outgrowing in number and such kind of sports is acting as a new medium to serve and fulfill their desires. Adventure Sports involves activities which are unusual, risky and exciting as well. An adventure sport is bold undertaking which involves hazardous action and whose outcome is uncertain. Adventure Sport comprises a very range of activities. Mountaineering, rock climbing, skiing, river rafting, kayaking, etc, are some popular adventure sports. Adventure Sports are undertaken at various places depending on the nature of the topography and the weather conditions. Activities like mountaineering, trekking, hiking, camping and rock climbing are undertaken in hilly and mountainous areas. India is the ultimate destination for trekking holiday offering from short and easy excursions to long challenges of snowy peaks, invoking visions of the spectacular Himalayas, the lush meadows, green woodlands and fragrant orchards, incomparable diversity of flora and fauna, etc. so India is regarded as "**TREKKING PARADISE**".ⁱ

Basic education is sufficient in order to get into the field of Adventure Sports. "Like competitive games, adventure sports also require a lot of grit and effort. But sadly, everybody does not get the same weightage. Every adventurer goes through the same mental and physical exercises to achieve the goal."ⁱⁱ Due to the efforts of Pt. Jawaharlal Nehru, an ardent mountain lover, mountaineering field strengthened its roots in India. This activity has benefits of its own due to which many individuals are opting for this activity. Mountaineering is an activity where the individual has to face adverse conditions. Cold, hot, rain, snow, wind, strenuous steep walks, scaling heights,

climbing sheer rock faces, inadequate rest, etc are some of the many adverse conditions faced by mountaineers.

Mountaineering is an adventure activity due to which one requires being physically and mainly psychologically fit. Fear, worry, tension, apprehension, anxiety are very common in adventure activities. Considering physical fitness the mountaineer requires endurance, strength, balance, flexibility, and much more. This form of adventure has become a lot popular, but there is scant research done. As this activity is new to many there has been an increase in injuries and accidents. Individuals are unaware about this activity. Factors like physical and mental fitness are not considered while opting for mountaineering; the only thing is the urge and interest. The reasons for injuries and accidents are untrained professionals, insufficient knowledge about mountaineering, decreased physical and mental fitness and most importantly lack of experience. An alive ordinary rock climber is always better than an excellent dead rock climber. To make this activity enjoyable without injury it is necessary to know this activity and its requirements. Due to these reasons the study titled, “**To study the Selected Physical Fitness Factors of Mountaineers**”, was conducted.

Objectives:

1. To conduct physical fitness tests (*selected factors*) on mountaineers.
2. To know the status of fitness.
3. The main objective of the study was to compare the scores of physical fitness (*selected factors*) between two groups of mountaineers.

Methodology:

Population & Sample:

A total of **270 Male Mountaineers** aged between 17 to 40 years undergoing various Upgradation courses at Nehru Institute of Mountaineering, Uttarkashi were chosen as sample for the study. Two groups were formed according to age, i.e. Group 1 is from the age 17-24 years and Group 2 is from 25 to 40 years. Analysis was done according to these groups.

Tools of study:

The researcher conducted the following tests:

Table 1
Physical Fitness Tests

Sr. No.	Test Item	To Measure	Equipment	Scoring
1	Push-Up test ^{III}	Muscular Endurance	Mat	No. of Reps
2	V-Sit test ^{IV}	Flexibility	Measuring tape	Centimeters
3	Standing Stork Test ^V	Balance	Stopwatch	Seconds

Analysis:

Descriptive statistics^{vi} was used to know the mean and std. deviation of the Push-up test, V- Sit Test, and Standing Stork Test. To compare the scores of both the groups the **independent sample ‘t’ test** was used. The outliers were found out through SPSS (Boxplots) and normality of scores was found. The detailed analysis is given below.

**Table 2
Descriptive Analysis**

Tests	Group	N	Mean	Std. Deviation
Push-Ups Test	1.00	143	31.9580	11.49946
	2.00	127	33.7953	14.47786
V- Sit Test	1.00	131	39.6649	5.95638
	2.00	99	40.7667	3.18158
Standing Stork Test	1.00	122	38.3197	29.17949
	2.00	127	57.6220	49.55804

**Table 3
Independent Samples Test**

		F	Sig.	t	df	Sig. (2-tailed)
Muscular Endurance	Equal variances assumed	7.49	.007	-1.16	268	.247
	Equal variances not assumed			-1.15	239.92	.253
Flexibility	Equal variances assumed	12.61	.000	-1.67	228	.097
	Equal variances not assumed			-1.80	207.46	.073
Balance	Equal variances assumed	37.27	.000	-3.73	247	.000
	Equal variances not assumed			-3.76	205.49	.000

Grading:

**Table 4
The Grading Scale of Push-ups, V-Sit and Standing Stork balance**

Grading	Push-ups (Repetitions)		V-Sit (Centimeters)		Standing Stork Balance (Seconds)	
	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2
Excellent	42 & above	47 & above	44 & above	45 & above	63 & above	105 & above
Good	36 to 41	41 to 46	41 to 43	41 to 44	62	104
Average	31 to 35	33 to 40	40	40	44	69
Poor	30 & below	32 & below	Below 40	Below 40	28 & below	40 & below

Results:

1. There is significant difference between the scores of balance of both groups.
2. There is no significant difference between the scores of Muscular Endurance and flexibility in both groups.
3. Considering the mean scores of both the groups it can be seen that there is development in the performances in group 2 (*even though not significant*) in all the tests.
4. The grading gives the beginners a general idea about the fitness they require to perform this activity in a better way.

Conclusion:

1. It can be seen from the scores that even when there is increase in age there is an increase in performances in all the tests.
2. The study has challenged the various researches which have found that there is decrease in flexibility, balance and muscular endurance as the age increases.
3. The reasons behind the following scores and results are to be studied in detail.

References:

- 1) Hiking (n.d.). *Wikipedia Home page*. Retrieved, December 2, 2007, from <http://en.wikipedia.org/wiki/hiking/>
- 2) Bachendri Pal (n.d.). *Zeenews Homepage*. Retrieved, April 5, 2009 from <http://www.zeenews.com/sports/index.html>
- 3) Topendsports.com. (2007). *Fitness testing homepage*. Retrieved June 6, 2007, from <http://www.topendsports.com/testing/tests/pushup.htm>
- 4) Sports-db.com. (2007). *Flexibility testing: Flexibility tests*. Retrieved June 6, 2007, from <http://www.sports-db.com/home/fitnesstests/flexibility.html#11>
- 5) Topendsports.com. (2007). *Fitness testing homepage*. Retrieved June 6, 2007, from <http://www.topendsports.com/testing/tests/balance-stork.htm>
- 6) V. J. Prakash (2000). *Sports Statistics*. Gwalior: Venus Publication.
