



ISSN: 2456-0057

IJPNPE 2018; 3(2): 581-583

© 2018 IJPNPE

www.journalofsports.com

Received: 10-05-2018

Accepted: 11-06-2018

Dr. Baljinder Singh Bal

Department of Physical
Education (T), Guru Nanak Dev
University, Amritsar, Punjab,
India

Bhupinder Singh

Department of Physical
Education (T), Guru Nanak Dev
University, Amritsar, Punjab,
India

Meenu Balyan

Department of Sports Sciences
and Medicine (MYAS) Guru
Nanak Dev University,
Amritsar, Punjab, India

An analyses of skill related physical fitness level of kayaking and canoeing inter-university players

Dr. Baljinder Singh Bal, Bhupinder Singh and Meenu Balyan

Abstract

The purpose of this study was to compare Skill related Physical Fitness level of Guru Nanak Dev University, Amritsar male Inter- University Kayaking and Canoeing, Players. To obtain data, the investigators had selected Twenty four (N = 24) male Kayaking Canoeing Player of 18 to 25 years (Mean \pm SD: Age: 19.761 ± 2.488 years; Body Mass: 1.749 ± 7.046 kilograms; Body Height: 65.047 ± 9.286 meters) of age to act as subjects. Components of Physical fitness (i.e., Speed, Agility, Balance, Coordination and Reaction Time) were taken up for the present study. Statistical analysis was performed using the Statistical Package for the Social Sciences for Windows version 16.0 software (SPSS Inc., Chicago, IL). The Student's t-test was employed for between-group comparisons on each variable. The results revealed no significant differences were found in Speed, Agility, Balance, Coordination, and Reaction Time.

Keywords: Physical fitness, kayaking and canoeing

1. Introduction

Kayaking and canoeing are technical sports. These sports put tremendous demand on body [1]. Regular training has been identified with the advancement of certain physical traits along with particular changes in the morphological attributes of competitors [2, 3]. Despite the fact that different factors favours the athletes performance in a given game, there are a few characteristics which appear to be normal in the most prosperous competitors [4] (Leone *et al.*, 2002). Overall status of athletes may be determined by means of general and particular field tests. In many previous studies, it is reported that there is a strong correlation between fitness level and the individual performance [5, 6]. Physical profile of an athlete can be determines by certain test which measures power, strength [7] and many physical fitness components like; speed, aerobic fitness and flexibility [2, 4, 8].

Some sports put extreme physical demand on body's musculoskeletal system [9]. Additionally, it also requires combination of various skills: technical skills, motor coordination, physical fitness; cardiovascular endurance and anaerobic fitness. Adequate level of physical fitness is important for any sportsperson to achieve success [10, 11, 12]. Irrespective to body mass of individual, all athletes posses equal resistance to execute the given task [13]. Eisenmann *et al.*, 2005 specified that fitness is an essential component of health [14]. Strength, power and endurance are significant components of athletic performance. They concentrate their attention on these components during preseason preparing [15]. Kayaking is a type of speed sport. It is most physically demanding sport among all of endurance sports [16, 9]. Canoeing sport requires endurance and strength [17]. The fitness level of athlete's helps in describing their physical fitness profile as well as in identifying the potential successful athlete for sports [2, 4]. In order to achieve high performance, skill-related physical fitness levels is important. Hence, the present study directs the aim to evaluate the skill related physical fitness level of kayaking and canoeing players of university level.

2. Method & Material

2.1 Selection of Subjects

Eighteen (N=24), male Guru Nanak Dev University, Amritsar Inter- University players 12 of each Kayaking and Canoeing between the age group of 18-26 years were recruited as subjects.

Correspondence**Bhupinder Singh**

Department of Physical
Education (T), Guru Nanak Dev
University, Amritsar, Punjab,
India

The objective and protocol was explained to the subjects and their verbal consent to participate in the study was taken. Distribution and demographics of subjects are brought forth in Table 1.

Table 1: Distribution and demographics of subjects

Variables	Total (N=24)	Kayaking (N=12)	Canoeing (N=12)
Age	21.87	22.16	21.58
Height	174.62	175.16	174.08
Weight	72.75	72.83	72.66

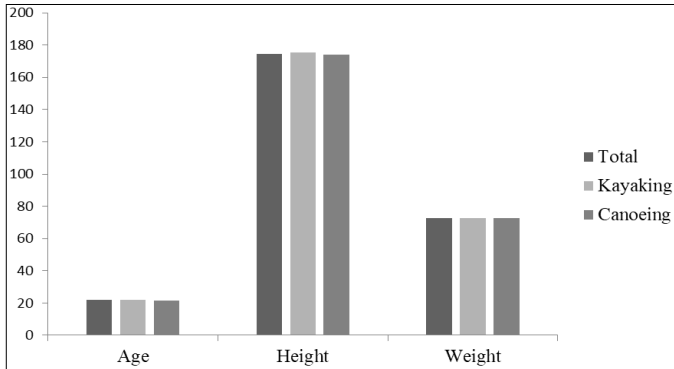


Fig 1: Distribution and demographics of subjects

2.2 Selection of Variables

The following components of Skill related Physical fitness were taken up for the present study:

- Speed
- Agility
- Balance
- Coordination
- Reaction Time

3. Statistical Procedure

Statistical analysis was done using IBM SPSS statistics data editor version-21. Data were expressed as means and standard deviations. The Student’s independent t-test was employed for comparing the groups statistically. The hypotheses were tested at 0.05 significance level

4. Results

For each of the chosen variable, the result pertaining to components of skill related Physical fitness of Kayaking and Canoeing Player from Guru Nanak Dev University, Amritsar are brought in the following tables:

Table 2: Descriptive and Inferential statistics of Skill related Physical Fitness Parameters of Kayakers and Canoeing paddlers

Variables	Simple Size (N=24)				p-value
	Kayaking (N=12)		Canoeing (N=12)		
	Mean	SD	Mean	SD	
Speed	7.735	.4360	7.905	.5446	.310
Agility	16.541	.5071	16.316	.5166	.933
Balance	47.250	2.5271	47.083	2.5030	1.000
Coordination	26.333	1.9694	26.166	1.9924	1.000
Reaction Time	8.166	.7177	8.883	.2752	.580

Degree of freedom = 22

4.1 Speed

The Mean and Standard Deviation of the variable Speed of Kayaking and Rowing groups were 7.735 ±.4360 and 7.905 ± .5446 respectively. The results of t-test (t=0.644, p>0.05) depicts that differences between the two groups were insignificant.

4.2 Agility

The Mean and Standard Deviation of the variable Speed of Kayaking and Rowing groups were 16.541 ±.5071 and 16.316 ± .5166 respectively. The results of t-test (t=0.644, p>0.05) depicts that differences between the two groups were insignificant.

4.3 Balance

The Mean and Standard Deviation of the variable Speed of Kayaking and Rowing groups were 47.250±2.5271 and 47.083 ± 2.5030 respectively. The results of t-test (t=0.162, p>0.05) depicts that differences between the two groups were insignificant.

4.4 Coordination

The Mean and Standard Deviation of the variable Speed of Kayaking and Rowing groups were 26.333 ±1.9694 and 26.166 ± 1.9924 respectively. The results of t-test (t=.206, p>0.05) depicts that differences between the two groups were insignificant.

4.5 Reaction Time

The Mean and Standard Deviation of the variable Speed of Kayaking and Rowing groups were 8.166 ±.7177and 8.883 ± .2752 respectively. The results of t-test (t=-.208, p>0.05) depicts that differences between the two groups were insignificant.

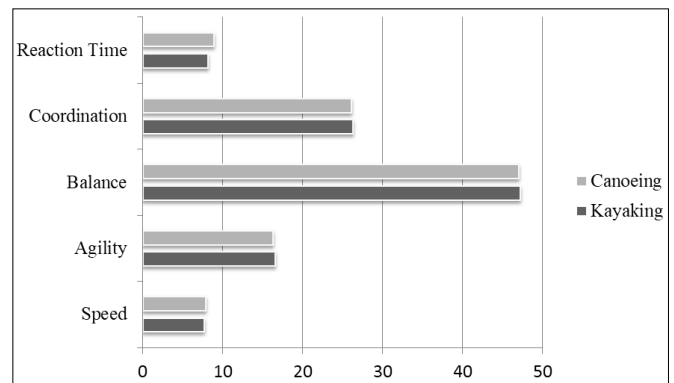


Fig 2: Graphical representation of means of Skill related Physical Fitness Parameters of Kayaking and Canoeing paddlers

5. Discussion

The present study was designed to determine the difference in various components of Physical Fitness in male Kayaking and Canoeing players of Guru Nanak Dev University, Amritsar. This study concluded insignificant results for Physical Fitness in Kayaking and Canoeing players. Physical Fitness have been seen very important for achieving high performance. The findings of present study revealed that there are no mean differences between kayaking and canoeing players with regard to the variable speed, agility, balance and coordination. These results are supported by a another study done by Bal and Singh 2017, which concluded the same [18]. Further, the results are also favoured by the study done by Kumar, 2016 on basketball and handball players and on kabaddi and kho-kho players [19, 20]. However, in present study there is significant difference for reaction time between both.

6. Conclusions

The present study compared the skill related Physical Fitness level among the Kayaking and Canoeing players of university level. We observed no difference in speed, agility, balance

and coordination, components of Physical Fitness between the two disciplines. However, our findings suggested significant difference in reaction time for the both disciplines.

7. References

1. Shephard RJ. Science and medicine of Canoeing and Kayaking. *Sports Medicine* 1987; 4(1):19-33.
2. Gabbett T, Georgieff B. Physiological and anthropometric characteristics of Australian junior national, state and novice volleyball players. *J Strength Cond Res.* 2007; 21:902-908.
3. Ross WD, Marfell-Jones M. Kinanthropometry In: *Physiological testing of the high performance athlete* (2nd ed.), edited by MacDougal J, Wenger H and Green H. Champaign, IL: Human Kinetics, 1991, 223-308.
4. Leone M, Lariviere G, Comtois AS. Discriminant analysis of anthropometric and bio motor variables among elite adolescent female athletes in four sports. *J Sports Sci.* 2002; 20:443-449.
5. Pyne DB, Duthie GM, Saunders PU, Petersen CA, Portus MR. Anthropometric and strength correlates of fast bowling speed in junior and senior cricketers. *J Strength Cond Res.* 2006; 20:620-626.
6. Van Someren KA, Howatson G. Prediction of flat water kayaking performance. *Int J Sports Physiology Perform.* 2008; 3:207-218.
7. Cronin JB, Hansen KT. Strength and power predictors of sports speed. *J Strength Cond Res.* 2005; 19:349-357.
8. Simoneau G. The impact of various anthropometric and flexibility measurements on the sit-and-reach test. *J Strength Cond Res.* 1998; 12:232-237.
9. Tesch PA, Lindeberg S. Blood lactate accumulation during progressive arm exercise in world class kayak paddlers. *Eur. J Appl. Physiol*, 1983.
10. Singh B. A study of flow state in Kayaking and Rowing players. *International Journal of Sports Science, Physical Fitness and Leisure Industry.* 2014; 1(3):335-339.
11. Singh H, Singh S. Prevalence, Patterns and associated factors of Physical Activity in Indian university students. *European journal of Physical Education and Sport Science.* 2017; 3(10):76-87. doi: 10.5281/zenodo.886613.
12. Singh B. A comparative analysis of Physical Fitness components of Kayaking and Rowing players. *International Journal of Sports Science, Physical Fitness and Leisure Industry.* 2014; 1(4):299-301.
13. Bishop D. Physiological predictors of flat-water kayak performance in women. *European Journal of Applied Physiology.* 2000; 82:91-97.
14. Eisenmann JC, Wickel EE, Welk GJ, Blair SN. Relationship between adolescent fitness and fatness and cardiovascular disease risk factors in adulthood: the Aerobics Center Longitudinal Study (ACLS). *American Heart Journal*, 2005; 149:146-153.
15. Fleck SG, Kraemer WJ. *Designing Resistance Training Programs* (2nd ed.). Champaign, IL: Human Kinetics, 1997.
16. Bal SB, Singh B. A cross-sectional analysis of skill related physical fitness components of kayaking and rowing players. *European Journal of Physical Education and Sport Science.* 2017; 3(10). ISSN: 2501-1235
17. Bal SB, Singh B, Singh G, Singh L. Physical fitness levels among 200, 500 and 1000 meter canoeing players: a comparative study. *European Journal Of Physical Education And Sport Science.* 2018; 4(1):2018-185.
18. Bal SB, Singh B. A cross-sectional analysis of skill related physical fitness components of kayaking and rowing players; *European Journal of Physical Education and Sport Science.* 2017; 3:10.
19. Kumar V. Comparative study of physical and physiological profile of basketball and handball players; *International Journal of Physiology, Nutrition and Physical Education.* 2016; 1(2): 136-139.