



ANALYSIS OF ENDURANCE AMONG DIFFERENT LEVELS OF SCHOOL HANDBALL PLAYERS

N. Akilan^a and B. Chittibabu^{a,*}

^aAssistant Professor, Department of Physical Education and Sports Sciences, Annamalai University, Chidambaram – 608002, Tamilnadu, India

*Corresponding Author Ph: 09443531508; Email: b.chitti@hotmail.com

DOI: 10.26524/1445

ABSTRACT: The purpose of the study was to analysis endurance among different levels of school handball players. Sixty (60) male players were selected they were divided into three groups (20) twenty in each. They were classified into junior, senior and super senior these boys were selected from AGM Higher secondary school, Thuraiyur. The subjects age range between 10 to 17 years was selected. Endurance was selected as criterion variable and tested by 600 yard run. ANOVA test was used to compare the mean differences between the three groups. The result showed that there was no significant difference existing among these groups on endurance ($F = 3.78, p > 0.05$). It is concluded that endurance among different levels of handball players remain similar.

Keywords: Endurance, 600 yard run, handball, school

Introduction

Physical fitness is the ability to perform vigorous physical activity. It is not measured in terms of achieving specific motor skills, but rather it is assessed in terms of muscle strength, endurance, and flexibility. The circulatory and respiratory systems are also involved because of their role in supplying muscles with blood and oxygen. The players possess greater aerobic capacity which enables them to perform maximum during the competition. Speed endurance is the ability of an athlete to sustain effort at a near maximum speed for as long as possible without fatigue.

The body will adapt to a regular exercise program by improving the function of the cardiac and respiratory systems. The blood will have a greater capacity to carry oxygen, which in turn will improve the body's ability to work. The heart and respiratory systems will be more efficient during rest and exercise, and the resting heart rate is usually reduced. These changes take place when a person participates in a rhythmic endurance activity such as walking, running,



and cycling, or continuous sports activities such as basketball or tennis.

Physical Preparation is the level of development of the motor possibilities of the player, obtained through the systematic repetition of the physical exercises. It means the improvement of the motor qualities, the domain of a wide variety of abilities and the development of the morphologic and functional indices of the organism in compliance with the requirements of the game. Team handball has proved and established itself as one of the most popular team sports [1,2]. It has been established that maximal oxygen uptake ($VO_2\text{max}$), has been considered to be a fundamental basis for team handball on the international level [3,4]. It has been clear that intermittent nature of game demands higher aerobic metabolism [5-7]. The purpose of the study was to analysis endurance among different levels of school handball players.

Method

Subjects

The purpose of the study was to analysis of motor ability among different levels of handball players. To achieve these purpose 60 male players were selected they were divided into three groups (20) twenty in each. They were classified into junior, senior and super senior these boys were selected from AGM Higher secondary school, Thuraiyur. The subjects age range between 10 to 17 years was selected.

Variable and test

Endurance was selected as criterion variable and tested by 600 yard run. To measure 600 yard run a stop watch was required and players were made to run in the standard 400 meter track. The student could run individual or in group of a dozen or more. When students ran in groups, they were paired. While 9 students ran the partners listen for the time to call out his partners time when he crossed the finish line, then relay this time to the scorer. Students entered space running with period of walking and were encouraged to pace themselves. When a group was running, the time was called out as each students crossed the finish line. The score was the time elapsed recorded minutes and seconds.

Statistical Techniques

ANOVA test was used to compare the mean differences between the three groups. If F is found to be significant Scheffé s post hoc test was applied. Level of significance was fixed at 0.05. This was considered adequate for the purpose of this study.

Result

The mean and standard deviation values of junior, senior and super senior players were 1.61 ± 0.27 , 1.43 ± 0.17 and 1.47 ± 0.17 respectively. The obtained 'F' ratio of 3.78 on endurance was less than the required table value 5.01 for significance with df of (2,57) at .05 level of confidence. The results of the study showed that there was no significant difference existing



among these groups on endurance. Since F ratio is not significant scheffe post hoc test was not applied.

Discussion

The result of the study showed that there is no significant difference in endurance among junior, senior and super senior boys. These results are likely in part related to sports specificity of the exercise mode used in tests. This point must be taken into consideration by physical trainer who has to prescribe exercise intensities during athletic season for difference groups of athletes [8,9]. The result may indicate that endurance level of players remains same and physiological difference may not observe among these handball players this might have influenced on endurance of the players.

Conclusions

The result of the study showed that there was no difference in endurance among different levels of school male handball players.

References

1. R. Clanton, M. P. Dwight (1997) Steps to success: Team handball, Champaign, IL: Human Kinetics.
2. Z. Marczinka (1993) Playing handball: A comprehensive study of the game, Budapest, Hungary: Trio Budapest, International Handball Federation.
3. P. Platen, Die aerobe Ausdauerleistungsfähigkeit im Verlaufeiner Saison. Hand ball training, 1(1989) 13-14.
4. N. M. Stone, A. E. Kilding, Aerobic conditioning for team sport athletes, *Sports Medicine*, 39 (2009) 615-642.
5. E. L. Fox, R. L. Bartels, C. E. Billings, R. O'Brien, R. Bason, D. K. Mathews, Frequency and duration of interval training programs and changes in aerobic power, *Journal of Applied Physiology*, 38 (1975) 481-484.
6. S. Green, B. T. Dawson, The Y-intercept of the maximal work-duration regression and field tests of anaerobic capacity in cyclists, *International Journal of Sports Medicine*, 17 (1996) 41-47.
7. S. Green, B. T. Dawson, C. Gogman, M. F. Carey, Y-intercept of the maximal work-duration relationship and anaerobic capacity in cyclists, *European Journal of Applied Physiology and Occupational Physiology*, 69 (1994) 550-556.
8. T. J. Gabbett, Physiological characteristics of junior and senior rugby league players, *British Journal of Sports Medicine*, 36 (2002) 334-339.
9. M. Garcin, L. Mille-Hamard, S. Devillers, E. Delattre, S. Dufour, V. Billat, Influence of the type of training sport practised on psychological and physiological parameters during exhausting endurance exercises, *Perceptual and Motor Skills*, 97(3 Pt 2) (2003) 1150-62.