ISSN 1116 - 31 6X

Lagos Journal of Science Education

A Journal of the School of Science

ADENIRAN OGUNSANYA COLLEGE OF EDUCATION
OTTO/IJANIKIN

P. M. B 007 FESTAC TOWN
LAGOS.

VOL. 5

SEPT. 2001

PHYSICAL FITNESS PROFILE OF LASU MALE JUDO TEAM TO 1999 WEST AFRICAN UNIVERSITY GAMES

BY

AKEREDOLU, A. 0. AND DANSUANTHONY

ABSTRACT

The study was designed to examine the physical fitness level of male team of Lagos State University Judo Team who participated in the 1999 West African University Games (WAUG '99) at Benin Republic, Eight male members of different weight categories between the range of 25 - 16 (±9) years, with mean height of 179.5cm and body weight 77.19kg served as the subject for the study.

Motor performance characteristics such as power, muscle strength, muscle endurance, speed, agility, and flexibility were measured in subjects to achieve the purpose of the study

Descriptive statistics of mean, standard deviation and range were used for the analysis of the fitness level of the athletes. Result was also compared with the physical fitness level of other athletes as carried out by other researchers. The study revealed that the subjects compared favourably with athletes in other sports who had participated in various competitions of local and intern standard in all the motor performance variables measured except muscle power. It could therefore be concluded that the team were physically fit for the West African University Game.

INTRODUCTION

There are many factors that contribute to brilliant performance in sporting activities of all kinds. Among such factors are physical fitness level of performing individuals, psychological factors, training and other environmental factors. Of all these factors, the contribution or roles of physical fitness in excellent performance cannot be over emphasized.

Physical fitness has been defined by many researchers (Greenberge & Dintman, 1997; Uzowulu, 1988; Bucher & Koeing, 1978; Neilson & Jensen, 1972) as the capacity to carry out reasonably vigorous activities without undue fatigue. It relates to general well being and it involves the ability l withstand pressure and to sustain it under conditions where an unfit person would give up. All living individuals according to Uzowulu (1988) have some degree of fitness but the degree of fitness varies considerably among the people from person to person and in the same person from time to time. This is due to the fact that organically, man is a muscular creature and is also an organism designed for movement and neuromuscular mechanisms, which will produce movement to finite variety and magnitude.

It has been affirmed that physical inspection of successful athletes in any given sport reveals striking intra sport similarities in physique among athletes while several inter sport similarities are observed in successful athletes in different sports. This assertion was corroborated by Greenberge and Dintman (1997) that there is a variety in the degree of physical fitness level required in different physical activities. Every ambitious athlete strives from time to time to acquire and maintain a good physical fitness level. Some physical fitness parameters are more relevant to some sports than others. Since Judo is a sport where much movement is required, energy must be expended to a certain extent since a level of physical fitness is required of the individual participating in the sport. Muscular power, endurance, strength, agility and flexibility are especially of greater importance in Judo.

The purpose of the study therefore is to determine if the male members of Lagos State University Judo team who participated in the 1999 West African University Games held in Benin Republic were physically fit or not. It is also to reveal if the general training programme, which excludes specific skills, could be used in training Judo athletes or if the amount and kind of training they had, were effective in improving the fitness of the athletes.

METHOD AND PROCEDURE

The following physical and motor performance variables were measured; height, power, muscle strength, endurance, speed, agility and flexibility.

Power was measured using the standing long jump, which measures about the same quality as the vertical jump test and required about the same amount of time (Neilson and Jensen, 1972). The best of three jumps was recorded to the nearest centimeter.

Muscle strength was measured using push up and total number of push ups in succession was counted and recorded. Muscle endurance was measured using Burpee test (Neilson and. Jensen, 1972) and the movement were repeated as rapidly as possible and each completed burpee counted and the best of 3 trials was recorded.

Agility was measured using shuttle run and the subjects were allowed three trials with a short rest of one minute between trials, The scoring was done by timing i. e. the time required to complete the run correctly was recorded to the nearest tenth of a second.

The subjects speed was measured using the 50 meter dash and recorded to the nearest tenth of a second.

Trunk flexibility was measured using the trunk extension recorded to the nearest centimetre. The score was multiplied by 100 and the product divided by the length of the trunk measured in centimeters Neilson and Jensen, 1972).

DATA ANALYSIS

The data collected were subjected to descriptive statistics of means, standard deviation and range.

RESULTS AND DISCUSSION

The table below shows the physical and motor performance characteristics of the studied Judo athletes.

TABLE 1: PHYSICAL AND MOTOR PERFORMANCE

CHARACTERISTICS OF JUDO ATHLETES

VARIABLES	MEAN(X)	RANGE	STANDARD DEVIATION
Height(cm)	179.5cm	1.72-1.85	0.04cm
Weight (kg)	77.1kg	54-94.5	12.6kg
Muscle power (m) Standing long jump	25.2cm	2.34.2.80	0.17cm
Muscle Endurance (REP) Burpee	3 1.97 (REP)	23-3 7	4.07 rep
Body Speed (see) to m dash	7.8 sec.	6.8-9.2 sec	0.7 sec
Agility (see) shuttle run	12.36 sec	11.14.3	0.94 sec
Muscle strength (rep) Pushup	47.38(rep)	22.-70	18.34 rep
Flexibility (cm)	24.31cm	54.1-90cm	7.21cm

The mean .height of 179.5 ± 0.04cm for the Judo athletes of this study is higher than the result of other studies on different sports; 175.9cm on University of Ibadan sprinters by Oseni (1986), 176.7cm of male middle distance runner by Ready (1984), 178.5cm of college freshmen by Zutin and Crobin (1977), 166.3cm of male sprinters by Toriola, Salokun and Marthur (1985) and 145.6cm of University of Ibadan Male Judo athletes by Uzowulu (1988). The result shows that

Lagos State University Judo Athletes are taller which could be a factor for better performance or success in Judo competitions. The result confirms the assertion of Carter (1985) that there is overwhelming evidence showing differences between athletes in different sports measured by height. The mean body weight for the subjects of this study was 77.1 ± 12.63kg and a range of 54kg to 24.5kg. This result is higher than the result of 67.0kg for hockey players (Ogunlolu 1989), 68.04kg for University of Ibadan male judo athletes (Uzowulu, 1988) and 70.5kg for volleyball players (Igbanugo and Enoh, 1994). The difference could be due to its importance in the different sports. It has been confirmed by Eric (1985) that weight is of great value in Judo and that placement of athlete into categories in Judo were based on weight especially for tournaments, However, the difference in weight of this study and the University of Ibadan Judo team couldibe the differences in the categories of the athletes involved in the studies. Variety in duration and intensity of training could another factor that contributed to the difference. The subjects for this study may have undergone a better training programme for the increase in their weight since they were slated for an international competition.

The mean power score of 25.2cm obtained in the study is lower than the mean value of other athletes in different sport such as 51.2cm for Hockey players (Ogunlolu, 1998), basketball players (Adesipo, 1988), and 5 5.0cm of volleyball players (Igbanugo and Enoh, 1994). This result may suggest that power is not a factor of excellent performance in Judo. However, it has been confirmed by Eric (1958) and Uzowulu (1988) that explosive power is essential in Judo since it is used in swift carrying and throwing of opponents and for defensive purpose. It could mean that the athletes in this study did not train for power, knowing fully well that they were preparing for an international competition and how important power is to Judo athletes. The result could also mean that the test is not relevant to the sport in the study.

The mean body endurance of the athletes was 31.97 ± 4.07 repetitions which is lower than the mean muscular endurance of 41.18 for track athletes (Akeredolu, 1987) and 54.2 for mid-fielders in soccer game (Amusa, Sohi &‘ Adelabu, 1988). The variance in the means could be as a result of the nature of sport since it has been ascertained by researchers (Greenberge & Dintman, 1972’; Bucher & Koeing, 1987, Neilson & Jesen, 1972) that endurance level of individual depends on the type of activities involved in, meanwhile, Judo is known to be a sport that requires a little endurance level due to its duration. The mean speed of the athletes for this study was 7.8 seconds, which was lower when compared to other athletes in different sports such as 7.3 seconds of non-athletes (Adesipo, 1988), 7.07 seconds of volleyball players (Igbanugo & Enoh, 1994), 6.35 seconds for track athletes (Akeredolu, 1987) and 6.6 seconds for strikers in soccers (Igbanugo & Enoh 1994). The differences could be that body speed is not required for excellent performance in Judo. However, Hockey (1981) recognized that speed of movement and ability to react quickly is of great importance in may different activities including Judo. It is needed to make fast movement close and away from the opponent. Based on this assertion it could be concluded that the Judo athletes did not train for speed for this competition. According to Devries (1975) speed of movement is an important factor in athletes.

The mean score of 12.36 seconds for agility of the subjects of this study is higher than the mean score of 12.5 seconds for goal keepers (Igbanugo & Enoh, 1994), and 12.6 seconds for mid-fielders in the game of soccer (Igbanugo & Enoh, 1994). This suggests that the goalkeepers and the midfielders of soccer in the above stated study are not as agile as the Judo athletes. The ability to dodge an opponent in Judo fighting is one of the things that make one successful in Judo. Anyone who can control his body quickly and efficiently will have the opportunity of saving himself or others in a time of emergency. The high agility score may mean that the athletes for this study did not practise enough for agility for the competitidn.

The mean muscle strength score of 47.38 for the athletes of this study is not comparable with the mean score of 119.36 and 96.7 for track athletes and swimmers (Akeredolu, 1987) and 55.08 for soccer players (Adesipo, 1988). The variance in the mean could be as a result of the different test used and the instrument used for the test. This study made use of push up while other researchers made use of hand dynamometer. However, using the same test instrument and scoring method the mean muscle strength of 44.12 for male Judo athletes of University of Ibadan (Uzowulu, 1988) was found to be lower than the means score for this study. This could mean that the athletes for this study trained more for strength since according to Baumgartner & Jackson (1975), a certain strength level is necessary for the execution of all motor skills.

The mean flexibility level of the subjects of this study 24.3 1cm is higher than the mean score of 16.1cm for hockey players (Ogunlolu, 1988), 7.3cm for basketball players (Adesipo, 1988) and 16.10cm for swimmers (Akeredolu, 1987). The higher trunk flexibility in the Judo athletes may be attributable to the higher importance of the variable in the judo athletes than other athletes. The result is however lower than 3 2.4cm score for goalkeepers and 25.2cm for defenders by Amusa, Sohi & Adelabu (1988). Although the difference in the mean score of this study and that of defenders in the study of Amusa, Sohi & Adelabu (1988) jg slightly higher. The wider gap of the mean score could mean that the flexibility level required by goal keepers is more than the requirement in judo, however, Eric (1958) confirmed that flexibility is essential in judo.

CONCLUSION

It could be concluded that the LASU Judo Athletes for the 1999 West African University Games were physically fit and compared favourably with other athletes in other sports in flexibility, muscle strength, height, weight, muscle endurance and body speed even though each sport has its unique energy demands and skills. However, they need to train more for power and agililty since both are needed for better performance in Judo.

REFERENCES

Adesipo, T. A. (1988): Comparison of Selected Physiological Motor Performance Characteristics of University of Ibadan Male Basketball and Soccer Players, Ibadan Unpublished M. Ed. Project University of Ibadan, Ibadan.

Akeredolu, 0. A. (1987): A Comparison of Selected Physical, Physiological and Motor Performance Characteristic of Male Swimmers and Track Athletes: Ibadan, Unpublished Masters Project, University of Ibadan.

Amusa, L. 0.; Sohi, A. S. & Adelabu, A. (1988): Physical, Physiological and Performance Measure of Division on league soccer players. Journal of Nigeria Association of Sports Science and Medicine, 11, pp. 177-186.

Baumgartner, T. A. & Jackson, A. S. (1975): Measurement for Evaluation in Physical Education, Boston: Houghton Mifflin Company.

Bucher, C. A. & Koeing (1978): Methods and Materialsfor Secondary School Physical Education (5th ed.) St. Louis, The C. V. Mosby Co.

Carter, J. E. L. (1984): Physical Structure of Olympic Athletes Part II: Kinanthropomentry of Olympic Athletes. Bases: Karger.

Devries, H. (1980): Physiology of Exercise for Physical Education and Athletes. 2nd Ed. Dubugue Iowa, W. C. Brown and Co.

Eric, D. (1958): Judo: Basic Principles. New York, Dell Pub. Co. Inc.

Igbanugo, V. C. & Enoh, E. E. (1994): Performance Characteristics of Elite soccer players by their positions. In A.S. Sohi, Igbanugo & A.P. Agbonjinmi (eds.) Journal of Nigeria Association of Sports Science and Medicine, 6, vi, pp -6.

Neilson, N.P. & Jensen, C.R. (1972): Me asurement and Statistics in Physical Education. California, Wedsworth Publishing Co. Inc.

Ogunlolu, B.O. (1988): Comparative Study of Physical and Motor Performance Characteristics of University of Ibadan Male Hockey and Volley Ball Players. Ibadan, Unpublished M.Ed. Thesis, University of Ibadan.

Oseni, A.O. (1986): A Comparative Study of Selected Physical and Physiological Characteristics of University of Ibadan Male Runners. Unpublished Masters Project, University of Ibadan.

Ready, A.E. (1984): Physiological Characteristics of Male and Female Middle distance runners. Can I Appl. Spt. Sd. 9 (2), 70 - 77.

Toriola, A.L. Salakun, S.0. & Matthew, D.N. (1985): “Somatotype characteristics of Male Sprinters, Basketball, Soccer, and Field Hockey players” mt. I. Sports Med 6 (6): 344 - 346.

Uzowulu, C.H. (1988): Physical Fitness Level of Male Members of the Judo Team of University of Ibadan. Unpublished B.Ed. Project, University of Ibadan.

Zuti, W.B. & Corbin, L.B. (1977): “Physical Fitness Norms for College Freshmen”. Research Quarterly 48 (2): 499 - 503.