International Journal of Modern Developments in Engineering and Science
Volume 1, Issue 4, April 2022
https://www.ijmdes.com | ISSN (Online): 2583-3138

Effect of 12 Weeks Sand Training on Broad Jump and Agility Performance for Boys Aged 13 to 15 Years

Shreenivas Harikanth[1*], M. Sunil[2]
[1]*Associate Professor, Department of Physical Education, S. S. College of Physical Education, Mandy, Mysore University, Karnataka, India*
[2]*Assistant Professor, Sree Vasavi First Grade College, Kollegal, Karnataka, India*

***Abstract*: Sports training improve physical fitness and psychology confidence of sports persons. Different sports trainings impress sports persons and improve the physical fitness. This study aim effect on sand surface training on broad jump and agility fitness components of athletes. Total sample size 30 different sports persons, age range between 13 to 15 years, were selected as the subjects of the study. Subjects were divided two equal groups (n=15), experimental and control groups were divided. Sand surface training program scientifically designed and given the subject of experimental group duration of training for 6 days per week. Total 12 weeks sand training conducted this study. This study selecting exercise on sand surface, exercise such as skip and jump, side jump, high knee action exercises, double leg hoping and single leg hopping. This study statistic analyzing software SPSS. This study result indicates that Sand surface training for 12 weeks resulted in significant different to post and pre test of agility and broad jump ability variables. *Conclusion:* Our study shows that Sand surface training improves agility and broad jump ability of different sports persons.**

***Keywords*: Sand training, broad jump, agility performance.**

1. Introduction

Sand training improves calf muscles capacity and it generating work at a high rate, body controlling ability (Pavel Kumar 2015). Sand training increases the body capacity and resistant power. Sand Training improves Speed, Explosive strength and Performance in Long Jump (Priyanka & Bhargab Borah 2016). The sand training is improving the physiological effect" **(**Pavel Kumar 2015), so many research result indicate that increase the endurance level and cardiovascular fitness such as decreased heart rate, increased stroke volume of the heart, increased blood plasma, without any major changes in red blood cell count, which reduces blood viscosity and increased cardiac output as well as total mitochondrial volume in the muscle fibers used in the training. A sand workout is also useful for improving an athlete's cutting. Sand training is body to react with a harder knee drive upward and improving the speed Training Program involvement has possible benefits to improve Speed, Explosive strength and performing for different games. Sand training is a simple, low-impact form of resistance training According to Belgian 1998. Polymeric exercises and sand training improves the athletes speed, leg explosive power and agility of university players. Sivamani and Sultana (2014).

2. Material and Method

Present study the "Effect of sand exercise training on broad jump and agility fitness of athletes.

A. Selection subject

Sample the sample consisted of 30 Sub junior different sports players enrolled in the Bhavans Geetha Vidyalaya Kollegal School. Age ranging 13 to 15 years, were selected as the subjects of the study. Subjects were divided randomly in two equal groups (n=15), Group-B (n=15) and control group (n=15). Group - A went for a program selected for sand training, having an average height (158.8 ±0.103) and body weight (46.13 ± 8.58), group -C was the control group having an average body height (139.73± 44.78) and average body weight (40.46±8.72). Group-A followed the sand training program for a period of 12 weeks. Measurement for various variables taken at the beginning (Pre-test) and at the end of experimental period after 12 weeks (Post-test).

B. Training program

The scientifically design sand surface training program was given the subject of experimental group duration of training for 6 days per week was 12 weeks for the subject there went respect to training underwent strictly supervision through out of the study.

C. Statistical procedure

The following statistical used to find the impulse of the 12 weeks and surface training program effect on broad jump and agility fitness variables to test significant for the different between pre and post the period t test was used. This study used software SPSS, measured mean, standard deviation, standard error mean, T test and significance (2-tailed) was found in this study.

3. Result

This section contains detailed information on analysis of

*Corresponding author: h.srinivas052@gmail.com

Table 1
Statistics analyzed of sand training effect on broad jump performance of Male different sports persons

		Mean	N	Std. Deviation	Std. Error Mean	t	Sig. (2-tailed)
Pair 1	**pre test**	1.7127	15	.19367	.05000	-4.361	**.001**
	post test	1.8833	15	.26114	.06743		

Table 2
Statistics analyzed of sand training effect on agility performance of Male different sports persons

		Mean	N	Std. Deviation	Std. Error Mean	t	Sig. (2-tailed)
Pair 1	**pre test**	14.2100	15	.86485	.22330	14.529	.000
	post test	12.1680	15	.98321	.25386		

data, interpretation of results and discussion of findings. Paired t-test was employed to analyze the result as the same subjects were tested before and after the Sand Training.

The table 1, result show that broad jump was significance difference between pre test and post test. Sand training higher effect on broad jump, we have mentioned data, pre test mean was 1.7127 (SD = .19367), after the 12 weeks sand training post test mean level 1.8833 (SD=.26114). The information related to sand surface training effect on broad jump performance graphically depicted in figure 1.

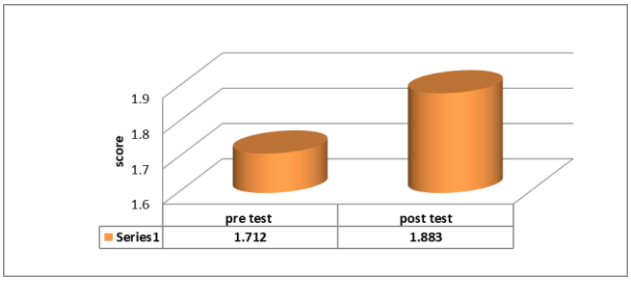

Fig. 1. Graphical illustration of sand training effect on broad jump

The table 2, result show that agility was significance difference between pre test and post test. Sand training higher effect on agility performance, we have mentioned data, pre test mean was 14.2100 (SD = .86485), after the 12week sand training post test mean level 12.1680 (SD=.98321). The information related to sand surface training effect agility performance graphically depicted in figure 2.

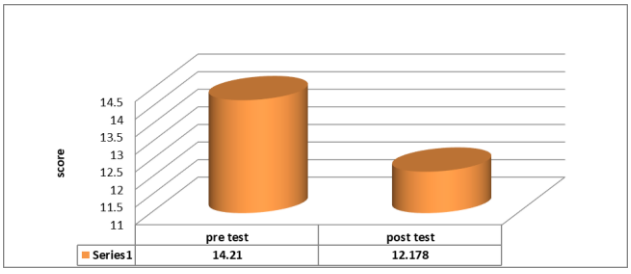

Fig. 2. Graphical illustration of sand training effect on agility performance

4. Discussion

This study indicates that sand training higher effect on broad jump and agility performance of 13-15 years boys. some relevant studies were mentioned such as, Polymeric training on sand improved both jumping and sprinting performance and induced less muscle soreness. Study show that sand training higher improves to squat jump (Impellizzeri, F et. al. 2008) six-week sand training program effects jump performance, such as explosive type strength of the leg muscles, which in turn leads to an increase in the vertical jump of a block, spike and the long jump. (*Sharma and Chaubey (2013)* Sand Polymeric trainings improving vertical jump ability and leg strength that were significantly greater performance in compare with the land and control group. Sand Polymeric drills improving vertical jumping ability and explosive performance in general (Mankar. 2020). Agility is one of the most important components for the basketball players to perform well. Basketball players need to change their direction swiftly and sprint quickly. sand surface training effect on agility and improving passing skills in prepubescent female volleyball players (Gortsila et al., 2013). Wooden or sand surface plyometric training programme significantly improved jumping, agility and 30m sprint performance for both groups. This study indicates that no difference between wooden and sand surface training Ozen G. et. al. (2019).

5. Conclusion

Sports persons needs to fitness, this study result indicate that 12 week sand training higher effect on agility and broad jump performance. Sand surface training is best training method for physical fitness and maintaining to sports performance of sports persons.

References

[1] P. Kumar, "Impact of Sand Training for Endurance Development among Athletes," in *International Journal of Applied Research*, vol. 1, no. 7, pp. 503-506, 2015.

[2] Priyanka and B. Borah, "Effect of eight weeks sand training on motor fitness components and performance in long jump for boys aged 14 to 16 years," in *International Journal of Multidisciplinary Research and Modern Education*, vol. 2, no. 2, pp. 148-150, 2016.

[3] G. Ozen, O. Atar, and H. Koc, "The Effects of A 6-Week Plyometric Training Programme on Sand Versus Wooden Parquet Surfaces on the Physical Performance Parameters of Well-Trained Young Basketball Players," in *Monten. J. Sports Sci. Med.*, vol. 9, no. 1, pp. 1-6, 2020.

[4] E. Gortsila, A. Theos, G. Nesic, and M. Maridaki, "Effect of Training Surface on Agility and Passing Skills of Prepubescent Female Volleyball Players," in *J. Sports Med. Doping Stud.*, vol. 3, no. 3, pp. 2-5, 2013.

[5] S. S. Mankar, "A comparative study of effect of sand and land plyometric training on speed and explosive power among basketball players," in *Journal of Sports Science and Nutrition*, vol. 1, no. 2, pp. 37-39, 2020.

[6] R. Sharma and D. Chaubey, "Effect of Sand Training on Jumping Abilities of Junior Volleyball Players," in *Journals of education and practice*, vol. 4, no. 3, pp. 101-106, 2013.

[7] F. Impellizzeri, E. I. Rampinin, C. Castagna, F. Martino, S. Fiorini and U, Wisloff, "Effect of plyometric training on sand versus grass on muscle soreness and jumping and sprinting ability in soccer players," in *Br. J. Sports Med.*, vol. 1, no. 2, pp. 42–46, 2008.