WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Abdominal Strength as a Result of Core Exercise

S. Senthil Kumaran[1], Dr. V. Vallimurugan[2], N. Kodeeswaran[3]

[1]Director, Unicorn Fitness, Madurai, Tamilnadu, India.
[2]Assistant professor, Department of Physical Education, Bharathiar University, Coimbatore, Tamilnadu, India.
[3]PhD, Research Scholar, Department of Physical Education, Bharathiar University, Coimbatore, Tamilnadu.

ABSTRACT

Aim: In this study how for core exercise is manipulate abdominal strength to middle aged women.

Selection of Subjects: For this study totally 12 middle aged women were selected from Madurai district, Tamilnadu and their age level is minimum 40 and maximum 45 years.

Methods: The researcher discussed the study and why it is essential to middle-aged women to a group of volunteers. Then, for the next eight weeks, selected core exercises were changed for a select group on a weekly basis, three non-consecutive days per day, and one evening session lasting at least 45 minutes. Data was obtained from selected subjects before and after evaluation, and the acquired data was statistically analyzed using the paired 't' test to discover significant variance with degrees of freedom 1 and 11 and a 0.05 level of significant confidence.

Results: In this investigation, a group of middle-aged women showed a considerable difference in muscular endurance after completing the prescribed core workout..

Keywords: Core Training, Muscular Endurance, Middle Aged Women.

1. INTRODUCTION

Since the early 1980s, core strengthening has been the subject of much research. Coaching has been shown to help people with back pain and complete routine tasks, according to research. There has been less study done on the benefits of core training for athletes in particular. An additional confounding factor is that research conducted in the rehabilitation sector cannot be applied to the sporting environment due to the differences in demands on the core musculature during everyday activities (low load, slow movements) and sporting activities (high load, resisted, dynamic movement) [5]. As a result, data on core training programs and their effectiveness on sporting performance are lacking.

The center core of the body is thought to be crucial for effective biomechanics, maximal force generation, and joint load attenuation in a variety of activities ranging from throwing to running. It enables optimal force and motion production, transfer, and control to the terminal section in integrated athletic activities. The preprogrammed combination of local, single joint muscles and multi joint muscles to supply stability and produce motion is best described as core muscle activity. This results in proximal stability for distal movement, proximal to distal force patterning, and the production of interacting moments that move and protect distal joints [6].

2. HYPOTHESIS

Between before and after trial application in muscular endurance among middle-aged women at weekly 3 non-consecutive days each day one evening session minimum 45-90 minutes, there would be a favorable influence due to selected core training exercises

3. METHODOLOGY

The following procedure was used to collect data from selected subjects before and after they were provided investigative training in this study. Twelve middle-aged women from the Madurai district were chosen as subjects for this investigation. Because this examination included characteristics such as muscle endurance. The age of the participants ranged from 40 to 45 years old. Over the course of eight weeks, the patients were subjected to CORE training exercises such as [plank, side plank, bridge and side lying hip abduction, oblique crunch straight leg raise, cycling, and laying wind screen wipers with varying intensities]. The experiment was carried out three times a week, with one session lasting 45-90 minutes and no warm-up or cool-down during the nighttime session. The data was obtained from middle-aged women in the experimental group for factors such as muscular endurance

(bend knee sit-up test) before and after CORE training. For analyzing the efficacy of an eight-week CORE training experiment on middle-aged women, the obtained data were analyzed using the paired't' test, with the significance level set at 0.05 confidences with degrees of freedom 1&11.

4. RESULTS

Table 1: Pre and Post- Test Mean, Standard Deviation, Standard Error Mean and't' ratio on the Variable of Muscular Endurance

Test	Mean	S.D	SEM	N	't' ratio	df
Pre	25.17	3.21	0.93	12	12.95	11
post	29.33	3.70	1.06	12		

*Significant difference degrees of freedom 1 & 11 table value is 2.20.

The statistics on muscular endurance performance is shown in the table above. The pre-test mean value is 25.17, which is lower than the post-test value of 29.33, indicating positive changes, while the standard deviation values are 3.21 and 3.70, respectively. With degrees of freedom 1 and 11, the calculated't' ratio is 12.95, which is larger than the needed table value of 2.20. The threshold of significance is 0.05. As a result, this finding indicates that eight weeks of core training had a positive impact on middle-aged women's muscular endurance.

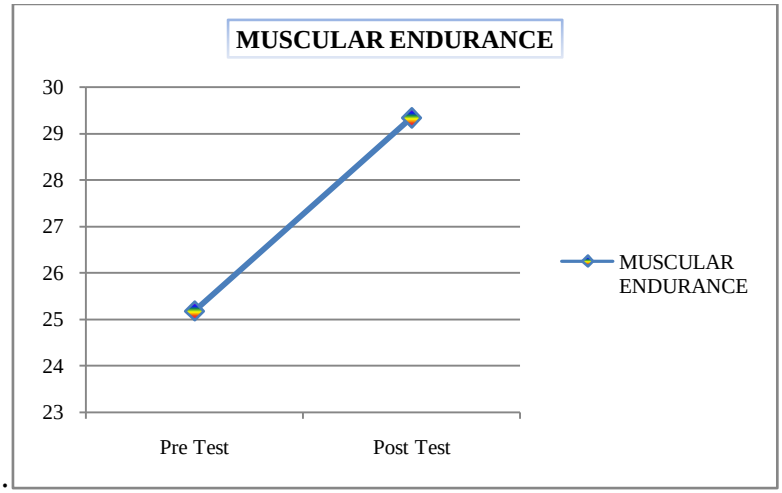

Diagram-1

In this figure depicting pre- and post-test data for muscular endurance, it can be seen that the post-test data shows superior performance than the pre-test data. As a result, this result implies that the middle-aged women who participated in the core training experiment were favourably influenced. As a result, researchers have suggested that middle-aged women benefit from core exercise to improve muscle endurance. Since the study's findings show that given core training can be adapted to men and all other games and sports involving muscular endurance.

5. CONCLUSIONS

Based on the above findings, the following conclusions have been drawn: in this study, the given core training was positively affected to enhance muscular endurance, as seen by the better post-test data on the muscular endurance variable than the pre-test data. As a result, this result declares that this type of exercise should be used to increase endurance strength, as well as abdominal and core muscular strength. As a result, the researcher in this investigation accepted the framed hypothesis. Selected core training routines have been discovered to help initiate or strengthen Muscular strength phenomenon in all games and sports.

REFERENCES

1. Akuthota V, Nadler SF. Core strengthening. Archives of physical medicine and rehabilitation. 2004; 85:86-92.
2. Ali A, Gardiner R, Foskett A, Gant N. Fluid balance, thermoregulation and sprint and passing skill performance in female soccer players. Scandinavian journal of medicine & science in sports. 2011; 21(3):437- 445.
3. Bliss LS, Teeple P. Core stability: the centre piece of any training program. Current sports medicine reports. 2005; 4(3):179-183.
4. Christou M, Smilios I, Sotiropoulos K, Volaklis K, Pilianidis T, Tokmakidis SP. Effects of resistance training on the physical capacities of adolescent soccer players. The Journal of Strength & Conditioning Research. 2006; 20(4):783-791.
5. Ekstrom RA, Donatelli RA, Carp KC. Electromyographic analysis of core trunk, hip, and thigh muscles during 9 rehabilitation exercises. Journal of orthopaedic & sports physical therapy. 2007; 37(12):754-762.
6. Hibbs AE, Thompson KG, French D, Wrigley A, Spears I. Optimizing performance by improving core stability and core strength. Sports medicine. 2008; 38(12):995- 1008.

7. Kibler Ben W. The role of core stability in athletic function. Sports medicine 2006;36(3):189-198.
8. Kloubec JA. Pilates for improvement of muscle endurance, flexibility, balance, and posture. The Journal of Strength & Conditioning Research. 2010; 24(3):661- 667.
9. Lyons M, Al-Nakeeb Y, Nevill A. Performance of soccer passing skills under moderate and high-intensity localized muscle fatigue. The Journal of Strength & Conditioning Research. 2006; 20(1):197-202.
10. McGill S. Core training: Evidence translating to better performance and injury prevention. Strength & Conditioning Journal. 2010; 32(3):33-46.
11. Sekendiz B, Cug M, Korkusuz F. Effects of Swiss-ball core strength training on strength, endurance, flexibility, and balance in sedentary women. The Journal of Strength & Conditioning Research. 2010; 24(11):3032-3040.
12. Tse MA, McManus AM, Masters RS. Development and validation of a core endurance intervention program: implications for performance in college-age rowers. The Journal of Strength & Conditioning Research. 2005; 19(3):547-552.
13. Willardson JM. Core stability training: applications to sports conditioning programs. The Journal of Strength & Conditioning Research. 2007; 21(3):979-985.