

# EFFECT OF CIRCUIT RESISTANCE TRAINING ON MENTAL HEALTH AMONG 15 TO 18 YEARS BOYS

<sup>1</sup> Umesh H.J., <sup>2</sup> Dr. R. Muni Reddy

<sup>1</sup> Research Scholar, <sup>2</sup> Director of Physical Education (Retired)

<sup>1</sup> University College of Physical Education

<sup>1</sup> Bangalore University, Jnana Bharathi, Bengaluru 560 056, Karnataka, India

**Abstract:** The reason of the study is to evaluate the effectiveness of circuit resistance training on Mental Health of 15 to 18 years boys studying in secondary and higher secondary schools. For this purpose, thirty eight boys in the age group of 15 to 18 years were selected as subjects. The selected subjects were divided into two equal groups, in which, Group-I: Circuit Resistance Training Group (CRTG) (n=19) underwent circuit based bursts of average intensity work and Group-II: Control Group (CG) (n=19) acted as control which did not participate any training but allowed to take part in their regularly participating in physical activities. The training programme was carried out for five days per week for twelve weeks by adapting average intensity. Prior to and after the training period the subjects were tested for Mental Health and this was assessed by administering Mental Health Inventory developed by Jagdish and Srivastava (1988) and scored according to the manual. The collected data was examined by using dependent 't' test analysis. The Statistical Package for Social Science Version 20.0 and MS Office Excel 2015 was used. The level of significance was fixed at 0.05 and 0.01 levels of significance to identify the significant differences in the mental health of the subjects. After applying the dependent 't' test, it was found that there was a significant improvement in the Mental Health of Circuit Resistance Training Group when compared with Control Group. The study suggested that circuit based resistance training is suitable to maintain and develop mental health of youths.

**Index Terms** - Circuit Resistance, Training Group, School, Mental Health, 15 to 18 years boys

## I. INTRODUCTION

Mental Health implies feeling of solace toward our-self as well as other people, and its measures are achievement, social parity, state of being realistic, social understanding and feeling of significant ability of values. A game gives physical health as well as, is additionally successful for improvement of mental health.

As indicated by World Health Organization (2001), great mental health can be implied as having a craving for being fine and guaranteed about working self-confidence, rival capacity, having a place with an age and thrive mind of abilities. As indicated by Menninger (1930), "it is the modification of human-beings to the world and to one another with a limit of viability and satisfaction. It is the ability to keep up a much temper, a ready intelligence, socially circumspect conduct and happy manner." It is trusted that when an individual is free of anxiety, melancholy, stress and psychological issues he can have healthy relationships, settle on great life decisions, keep up physical health and well-being, handle the common good and bad times of life and find and develop toward his potential. Verma Kavita (2015) contemplated psychological attributes, for example, anxiety, mental toughness, extraversion, neuroticism and so forth of sportspersons based on games accomplishments and she presumes that the said psychological qualities have critical association with games accomplishments.

Young people need to take an interest consistently in an hour or a greater amount of moderate to overwhelming physical activity that is grow mentally proper, agreeable and includes an assortment of exercises. In addition to the fact that regular is physical activity fundamental for typical development and advancement, yet physical activity propensities set up from the get-go in life tend to remainder into adulthood. Albeit physical exercises are upgrade the cardio-respiratory fitness and are for the most part suggested for youth. Research progressively recommends that resistance training can offer one of a kind advantage for young people when suitably prescribed and regulated. Resistance training can effects musculoskeletal strength, body composition, cardiovascular risk factors, psychosocial well-being and mental health.

Circuit training is a type of body conditioning or endurance training or resistance training utilizing high-intensity. It targets strength building or muscular endurance. An activity 'circuit' is one finish of every single prescribed exercise in the programme. When one circuit is finished, one starts the primary exercise again for the following circuit. Customarily, the time between activities in circuit training is short, frequently with quick development to the following activity. Resistance training is

characterized as “a particular type of physical conditioning that is utilized to upgrade the competitor's ability to exert or resist compel.”

Involvement in a resistance training programme furnishes youngsters and teenagers with one more chance to improve their health and life quality. In spite of the fact that inquires about on the health related advantages of resistance practice keep on being clarified, the accessible proof proposes that if proper training rules are pursued, the health of youngsters and teenagers is bound to improve instead of be antagonistically influenced by support in a resistance training programme. Not many examinations estimated impacts of mental health of people and sportspersons. Resistance training, especially circuit resistance training is unique model of training in the readiness of competitors and mental health will be influenced by the intensity of activity and will firmly impact their accomplishment of objectives or accomplishment. Thus, the present investigation is to realize the resistance training as circuits on mental health of 15 to 18 years young men of Tumkur Region.

## II. PURPOSE OF THE STUDY

The purpose of the study is to find out the effect of circuit resistance training on Mental Health of 15 to 18 years boys.

## III. STATEMENT OF HYPOTHESIS

It was hypothesized that there would be a significant difference in the Mental Health of 15 to 18 years boys by practicing of circuit resistance training.

## IV. METHODOLOGY

For this purpose, Thirty eight boys in the age group of 15 to 18 years were selected as subjects. The selected subjects were divided into two equal groups, in which, Group-I: Circuit Resistance Training Group (CRTG) (n=19) underwent circuit based bursts of average intensity work and Group-II: Control Group (CG) (n=19) acted as control which did not participate any training but allowed to take part in their regularly participating in physical activities. The training programme was carried out for five days per week for twelve weeks. Prior to and after the training period the subjects were tested for Mental Health and this was assessed by administering Mental Health Inventory by developed Jagdish and Srivastava (1988) and scored according to the manual. The collected data was examined by using dependent ‘t’ test analysis. The Statistical Package for Social Science Version 20.0 and MS Office Excel 2015 was used. The stated hypothesis is tested at 0.05 and 0.01 levels of significance to identify the significant differences in mental health of 15 to 18 years boys.

## V. ANALYSIS OF DATA

The data collected prior to and after the experimental period on Mental Health from Circuit Resistance Training Group (CRTG) and Control Group (CG) were analyzed and presented in the following table by utilizing dependent ‘t’ test.

**Table-1:** Table shows ‘t’ test analysis between pre test and post test scores of Mental Health from Circuit Resistance Training (CRTG) and Control Group (CG) (N=19 Each group; df=18).

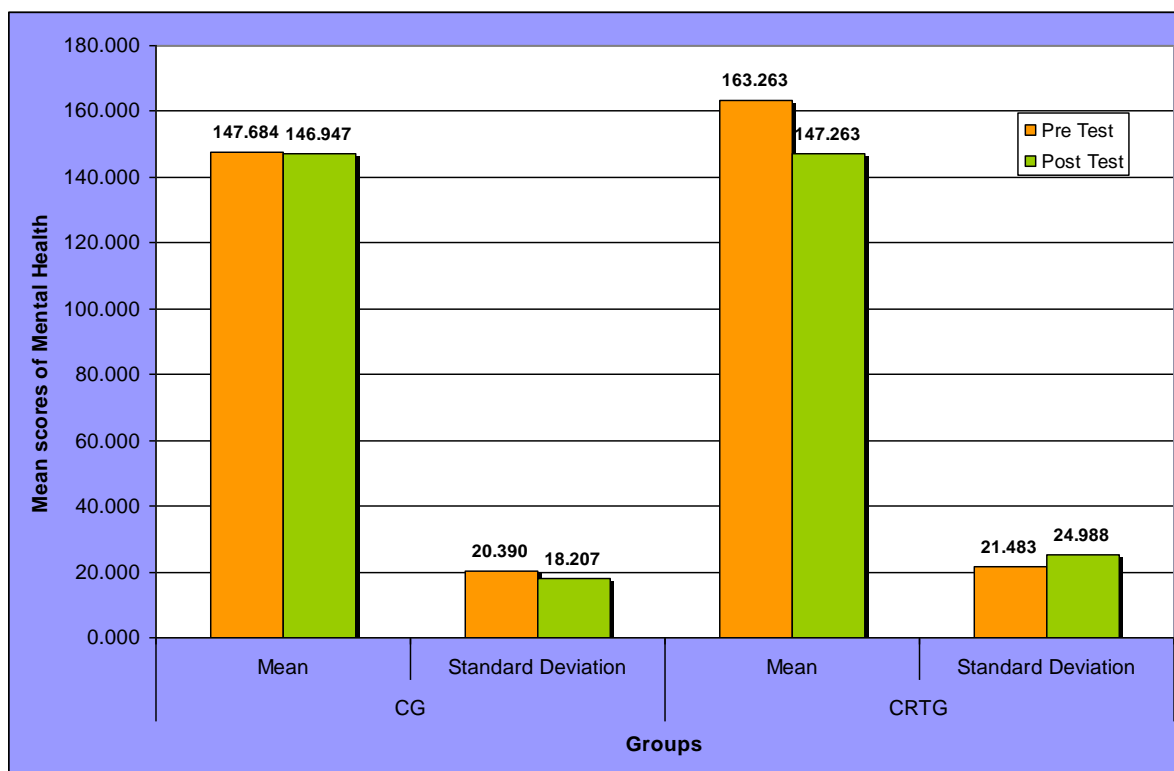
Psychological Variable	Tests	CG			CRTG		
		Mean	SD	‘t’ Value	Mean	SD	‘t’ Value
Mental Health	Pre Test	147.684	20.390	0.28 <sup>NS</sup>	163.263	21.483	3.98**
	Post Test	146.947	18.207		147.263	24.988	

<sup>NS</sup>Not Significant; \*Significant at 0.05 level [Table Value = 2.10]; \*\* Significant at 0.01 level [Table Value = 2.88]

The table-1 shows that the obtained ‘t’ value 0.28 for Mental Health scores for control group which is less than the table value 2.10, hence, it was not significant even at 0.05 level of confidence. It is concluded that the changes made from pre-test to post test was statistically not significant among the control group.

The table also shows that, the obtained ‘t’ value of 3.98 for Mental Health scores for CRTG group which is greater than the table value 2.88 at 0.01 level, hence, it is found significant. It is concluded that the CRTG group was significantly improved

mental health of 15 to 18 years boys due to intervention of circuit resistance training. This may be due to the subjects of training group participated in resistance training in the form of circuits based exercises bursts of average intensity.



**Fig.1:** Bar graph shows the comparison of mental health scores between pre test and post test scores of CRTG and CG groups.

## VI. DISCUSSION ON FINDINGS

From the 't' test it was proved that Circuit Resistance Training Group (CRTG) programme improved the mental health of 15 to 18 years boys. The researcher has made an attempt to discuss the findings based on the obtained results. The researcher found that the 12 weeks of specific exercises of circuit resistance training improved the mental health of 15 to 18 years boys. This may be due to subjects participated in circuit based resistance training was to specifically target the improvement of mental health. The Circuit Resistance training programmes involved in the specific exercises along with stretching exercises that had to be executed over a period of 12 weeks. This might be the reason for the significant improvement of mental health among 15 to 18 years boys.

## VII. CONCLUSION

This study confirmed that the circuit based resistance training group was significantly improved the Mental Health of 15 to 18 years boys when compared to control group. The circuit based resistance training programme could be used to improve the mental health of the 15 to 18 years boys. Circuit training is one of the best form of exercise which will provides with a great amount of health benefits such as better health of heart, reducing back pain, stress reduces worries, gain confidence and to more social interaction and cope in a healthy way to manage depression and also anxiety. It also promotes health competition.

**REFERENCES**

- [1] Collins, Helen; Fawkner, Samantha; Booth, Josephine N.; and Duncan, Audrey (2018). The Effect of Resistance Training Interventions on Weight Status in Youth: A Meta-Analysis. *Sports Med Open*, 4, 41.
- [2] Jagdish and Srivastava, A.K. (1988). *Manual for Mental Health Inventory*. Varanasi : Manovaigyanic Parikshan Sansthan
- [3] Kumar, V. Senthil and Maniazhagu D. (2014). Effects of Circuit Resistance Training On Selected Motor Fitness Variables *Journal of Physical Education Sports Management and Yogic Sciences*, 4(1), 37-40.
- [4] Meninger, K.A. (1930): *The human mind*. Alfred A. Knopf, New York.
- [5] Senthil Kumar V. and D. Maniazhagu (2014). Effects of Circuit Resistance Training On Selected Motor Fitness Variables. *Journal of Physical Education Sports Management and Yogic Sciences*, 4(1), 37-40.
- [6] Velusamy P. (2013). Effect of Varied Methods of Resistance Training on Selected Physical Fitness Components of Inter Collegiate Male Volley Ball Players. *International Journal of Science and Research*, 2(7), 112-114. [www.ijsr.net](http://www.ijsr.net)
- [7] Verma Kavita (2015). Competitive Anxiety of Female Judokas at Different Achievement Groups: A Comparative Study. *Asian Journal of Multidisciplinary Studies*, Volume 3, Issue 3.
- [8] World Health Organization (2001). *The world health report. Health system: Geneva, Life style for Health, fitness, and Wellness*.p:76.