

# Effect of Moderate Recreational Intervention on Motor Proficiency among Children with Intellectual Disability

Manikandan<sup>1</sup>, Dr. N. Karthikeyan<sup>2</sup>

<sup>1</sup>Master of Physical Education, Faculty of General & Adapted Physical Education and Yoga, Ramakrishna Mission Vivekananda Educational and Research Institute, Coimbatore, Tamilnadu, India.

<sup>2</sup>Assistant professor, Faculty of General & Adapted Physical Education and Yoga, Ramakrishna Mission Vivekananda Educational and Research Institute, Coimbatore, Tamilnadu, India

**Abstract:** *This study aimed to investigate the impact of moderate recreational intervention on the motor proficiency of children with intellectual disabilities. Forty - two students with intellectual disabilities, having IQs ranging from 51 to 69, were randomly selected from Coimbatore and its vicinity in Tamil Nadu, spanning ages 7 to 15 years. Both groups underwent a pre - test assessment, following which only the experimental group received six weeks of moderate recreational training. Subsequently, a paired t - test was employed to assess the significance of changes observed between the pre and post - tests. The means of the obtained test results were rigorously tested at a 0.05 significance level. The analysis revealed that the moderate recreational intervention significantly improved motor proficiency variables among children with intellectual disabilities. This indicates promising implications for implementing tailored recreational programs to enhance motor skills and overall well - being in this population, highlighting the potential of recreational interventions as integral components of holistic care approaches.*

**Keywords:** Moderate recreational training, Children with intellectual disability, Motor Proficiency

## 1. Introduction

Children with intellectual disabilities (ID) face unique challenges in their physical and cognitive development, often necessitating tailored interventions to support their overall well - being. Among these interventions, recreational activities have emerged as promising avenues for promoting motor proficiency, thereby enhancing their quality of life and functional independence. The integration of moderate recreational interventions represents a holistic approach to addressing the motor needs of children with ID, offering opportunities for enjoyment, engagement, and skill development in inclusive environments.

Motor proficiency plays a crucial role in the daily lives of children with intellectual disabilities, influencing their ability to participate in various activities and interact with their environment. However, children with ID often experience deficits in motor skills, which can impact their physical fitness, social integration, and overall quality of life. Traditional therapeutic approaches to improving motor proficiency, such as physiotherapy and occupational therapy, while beneficial, may lack the element of enjoyment necessary for sustained participation. Hence, there is a growing interest in exploring the potential of moderate recreational interventions in enhancing motor skills among children with intellectual disabilities. This introduction sets the stage for investigating the effect of such interventions on motor proficiency, aiming to contribute to the development of inclusive and effective strategies for supporting the holistic development of children with ID.

## 2. Methodology

The purpose of the present study is to investigate the effect of recreational activity training on physical fitness variables among children with intellectual disabilities. Forty - two boys aged between 7 to 15 years with mild retardation (IQ = 51 - 69), selected from in and around Coimbatore, Tamilnadu, were divided into two groups: an experimental group (n=21) and a control group (n=21). The experimental group underwent six weeks of recreational activity training, aimed at improving selected motor proficiency variables, including speed, balance, and strength. The study aims to assess the impact of the recreational intervention on the motor proficiency of children with intellectual disabilities, providing valuable insights into the efficacy of such interventions in promoting physical fitness and overall well - being in this population.

## 3. Results

**Table I:** Computation with Paired “T” Test between the Pre and Post Tests on Motor Proficiency Variables

Variable	Test	Mean	S. D	D. M	‘t’
Speed	Pre - Test	16.44	5.79	0.27	9.45*
	Post Test	15.89	5.73		
Balance	Pre - Test	9.43	3.36	2.47	2.034*
	Post Test	10.52	3.68		
Strength	Pre - Test	0.61	0.44	0.99	1.110
	Post Test	0.85	1.05		

Table value (1, 41) = 2.021. \*Significant at 0.05 level.

The analysis reveals that the mean of the 50 - meter dash for the pre - test of the subjects is 16.44 with a standard deviation of 5.79, while for the post - test, it is 15.89 with a

standard deviation of 5.73. The mean difference between the pre and post - test is 0.27, resulting in an obtained ratio of 10.69, which exceeds the required table value of 2.021 at a 0.05 level. This indicates a significant difference in speed.

Similarly, the mean of balance for the pre - test of the subjects is 9.43 with a standard deviation of 3.35517, and for the post - test, it is 10.5238 with a standard deviation of 3.68. The standard error of the mean is calculated to be 2.086, and the mean difference between the pre and post - test is 2.47, resulting in an obtained ratio of - 2.034, which

exceeds the required table value of 2.086 at a 0.05 level, indicating a significant difference in balance.

Moreover, the mean of strength for the pre - test of the subjects is 0.61 with a standard deviation of 0.44, whereas for the post - test, it is 0.85 with a standard deviation of 1.05. The standard error of the mean is determined to be 0.286, and the mean difference between the pre and post - test is 0.99, resulting in an obtained ratio of 1.110, which is lower than the required table value of 2.086 at a 0.05 level, suggesting a significant difference in strength.

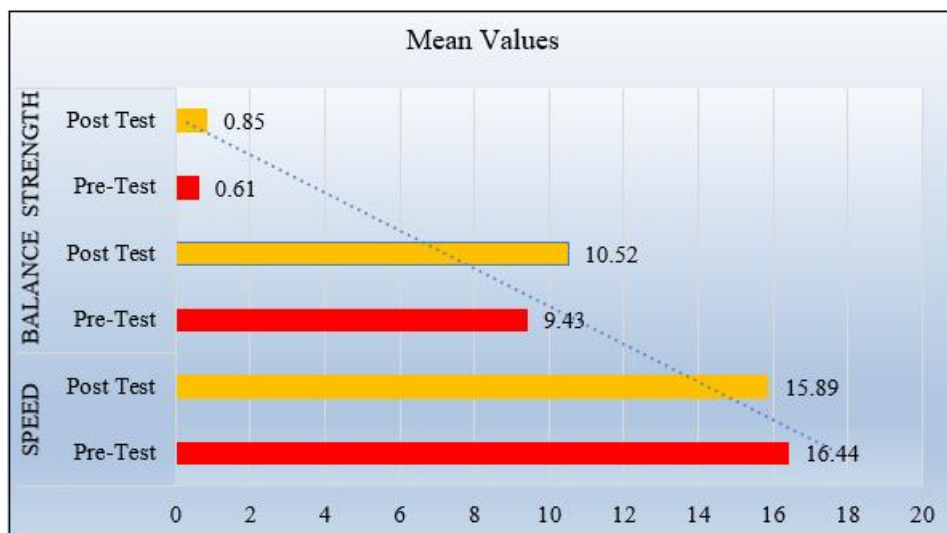


Figure 1: Bar Diagram Showing the Mean Values of Pre and Post Tests of Motor Proficiency Variables

#### 4. Discussion on Findings

The study's findings suggest that moderate recreational intervention has a positive effect on motor proficiency among children with intellectual disabilities. Analysis of all motor proficiency measures revealed a significant increase in motor fitness within the experimental training group compared to the control group after the experimental period. Consequently, the null hypothesis was rejected, and the research hypothesis was accepted with a significance level of 0.05.

Additionally, significant improvements in specific motor proficiency components, such as speed and balance, were observed following recreational intervention among children with intellectual disabilities. As a result, the null hypothesis was rejected, and the research hypothesis was accepted with a significance level of 0.05.

#### 5. Conclusions

The findings of this study suggest that the implementation of a moderated recreational training program significantly improves motor proficiency among children with intellectual disabilities in the experimental group. Through six weeks of dedicated engagement in recreational activities, participants demonstrated notable enhancements in various aspects of motor skills, indicating the efficacy of such interventions in addressing the unique needs of this population. Specifically, the study observed a pronounced impact on key components of motor proficiency, particularly in speed and balance, underscoring the importance of structured recreational

interventions in fostering comprehensive skill development among children with intellectual disabilities.

These results highlight the potential of recreational activities not only to promote physical fitness but also to target specific areas of motor function crucial for daily functioning and overall quality of life in this demographic. Such insights contribute to the growing body of literature supporting the integration of recreational interventions as integral components of holistic care approaches for individuals with intellectual disabilities, emphasizing the significance of tailored and inclusive strategies in optimizing developmental outcomes and promoting lifelong well - being.

#### References

- [1] Tasse, M. J. (2021) Schalock, R. L., Luckasson, R., & An overview of intellectual disability: Definition, diagnosis, classification, and systems of supports. American journal on intellectual and developmental disabilities, 126 (6), 439 - 442.
- [2] Luckasson, R., (2021) Schalock, R. Land overview of intellectual disability: Definition, diagnosis, classification, and systems of supports. American journal on intellectual and developmental disabilities, 126 (6), 439 - 442.
- [3] Hansen, A. S. (2021) Understanding recreational landscapes—a review and discussion. Landscape Research, 46 (1), 128 - 141
- [4] Kelly Pryor, B. (2020) Leon, M., Outlay, C., March banks, M., & A review of recreation requirements in

US juvenile justice facilities. *Criminal Justice Policy Review*, 31 (5), 763 - 782.

- [5] **Arbour - Nicitopoulos, K. P. (2020)** Orr, K., Evans, M. B., Tammie, K. A., & A scoping review of recreational sport programs for disabled emerging adults. *Research Quarterly for Exercise and Sport*, 91 (1), 142 - 157.
- [6] **Monz, C. (2018)** Thomsen, J. M., Powell, R. B., & A systematic review of the physical and mental health benefits of wild land recreation. *Journal of Park and Recreation Administration*, 36 (1).
- [7] **Akkal, A. (2018)** Patel, D. R., Apple, R., Kananga, S., &. Narrative review of intellectual disability: definitions, evaluation and principles of treatment. *Pediatr Med*, 1, 11.
- [8] **Veltman, J. A. (2016)** Vissers, L. E., Gilissen, C., & Genetic studies in intellectual disability and related disorders. *Nature Reviews Genetics*, 17 (1), 9 - 18.
- [9] **Crooks, K. R. (2016)** Larson, C. L., Reed, S. E., Mere lender, A. M., & Effects of recreation on animals revealed as widespread through a global systematic review. *Plops one*, 11 (12), e0167259
- [10] **Veltman, J. A. (2016)** Vissers, L. E., Gilissen, C., & Genetic studies in intellectual disability and related disorders. *Nature Reviews Genetics*, 17 (1), 9 - 18.
- [11] **Emerson, E. (2011)** Einfeld, S. L., Ellis, L. A., & Comorbidity of intellectual disability and mental disorder in children and adolescents: A systematic review. *Journal of Intellectual and Developmental Disability*, 36 (2), 137 - 143.
- [12] **Scior, K. (2011)** Public awareness, attitudes and beliefs regarding intellectual disability: A systematic review. *Research in developmental disabilities*, 32 (6), 2164 - 2182.
- [13] **Henderson, K. A. (2007)** Kaczynski, A. T., & Environmental correlates of physical activity: a review of evidence about parks and recreation. *Leisure sciences*, 29 (4), 315 - 354.
- [14] **kondilis (2006)** Rimmer, J. H., & Obesity and intellectual disability. *Mental retardation and developmental disabilities research reviews*, 12 (1), 22 - 27.
- [15] **Lamber E V (2006)** Rimmer, J. H., & Obesity and intellectual disability. *Mental retardation and developmental disabilities research reviews*, 12 (1), 22 - 27.
- [16] **Post, D. (2004)** Jansen, D. E., Krol, B., Groothoff, J. W., & People with intellectual disability and their health problems: a review of comparative studies. *Journal of Intellectual Disability Research*, 48 (2), 93 - 102.