



## The Effect Of Home Athletics Training On Children In Enhancing Interest And Talent Since Early Age

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### ABSTRACT

The development of children's interests and talents from an early age is a crucial aspect of optimizing their physical, psychological, and social potential. However, limited access to formal sports facilities and structured training programs often hinders children from participating in regular physical activities. Therefore, alternative approaches that are flexible, accessible, and developmentally appropriate are needed. This study aimed to analyze the effectiveness of home-based athletics training in enhancing children's interest and talent from an early age. The study employed a quantitative approach with a quasi-experimental design using a one-group pretest-posttest model. The participants consisted of 30 children aged 7-12 years who participated in an eight-week home-based athletics training program conducted three to four times per week. Data were collected using interest questionnaires, observation sheets, and athletic skill tests. The data were analyzed using descriptive statistics and paired-sample t-tests. The findings revealed a significant improvement in both children's interest and athletic talent following the intervention. The mean interest score increased from 65.40 in the pretest to 82.75 in the posttest, while the mean athletic talent score improved from 60.20 to 80.10. Statistical analysis showed significant differences between pretest and posttest scores, with significance values below 0.05 ( $p = 0.000$ ). These results indicate that home-based athletics training effectively enhances children's interest and athletic talent. The success of the program was supported by enjoyable and varied training methods, active parental involvement, a supportive home environment, and the integration of digital media. In conclusion, home-based athletics training is an effective strategy for promoting children's potential development and encouraging lifelong engagement in physical activity from an early age.

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### AUTHORS' CONTRIBUTION

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## INTRODUCTION

Early childhood is widely recognized as a critical period for developing cognitive, emotional, social, and motor competencies that influence an individual's future potential. During this developmental stage, children experience rapid neurological and physical growth, making them highly responsive to environmental stimulation and



educational interventions. Research consistently demonstrates that structured stimulation during childhood significantly contributes to the development of interests, talents, self-confidence, and long-term achievement (Lee & Park, 2022; Santoso, 2021). Consequently, efforts to identify and nurture children's talents from an early age have become a major concern in educational and sports development programs worldwide.

Sports activities represent one of the most effective approaches for fostering children's interests and talents because they simultaneously promote physical, psychological, and social development. Participation in sports provides opportunities for children to develop discipline, perseverance, teamwork, leadership, and self-regulation skills while improving their physical fitness and motor competence (World Health Organization, 2021; Rahman, 2020). Previous studies have shown that children who engage regularly in sports activities tend to demonstrate higher levels of self-esteem, motivation, and social adaptability than their less active peers (Rodriguez et al., 2021; Miller & Scott, 2023). Furthermore, sports participation during childhood is associated with healthier lifestyles and reduced risks of chronic diseases later in life.

Among various sports disciplines, athletics occupies a unique position because it encompasses fundamental movement skills such as running, jumping, and throwing. These basic movement patterns constitute the foundation of most sports activities and are essential components of children's motor development (Putra & Wijaya, 2022; Smith et al., 2023). Mastery of fundamental movement skills during childhood has been linked to improved physical literacy, sports participation, and athletic performance throughout adolescence and adulthood (Barnett et al., 2021). Consequently, athletics has considerable potential as a medium for identifying and developing children's sporting talents from an early age. Despite its recognized importance, many children face barriers to accessing organized athletics programs. Limited sports facilities, economic constraints, geographical disparities, and inadequate coaching opportunities frequently restrict children's participation in structured sports activities (Hidayat, 2018; UNICEF, 2022). These challenges became even more evident following the COVID-19 pandemic, which disrupted conventional sports training systems and reduced opportunities for outdoor physical activity. As a result, innovative and accessible approaches are needed to ensure that children continue to receive adequate physical activity and talent development opportunities regardless of environmental constraints.

Home-based athletics training has emerged as a promising alternative for addressing limitations in conventional sports participation. This approach enables children to engage in structured physical activities within their home environment while maintaining flexibility in terms of time, accessibility, and parental involvement (Brown & Taylor, 2023; Kurniawan, 2022). Recent technological developments have further facilitated home-based training through digital learning platforms, instructional videos, mobile applications, and virtual coaching systems that support children's learning experiences (Kim & Park, 2024).

Previous studies have reported that home-based physical activity programs can effectively improve children's physical fitness, motor competence, and exercise

adherence when appropriately designed and supervised (Chen et al., 2022; Sari & Nugroho, 2021). Play-based learning approaches, gamification strategies, and activity variations have been identified as effective methods for increasing children's engagement and enjoyment during training sessions. Such approaches are particularly important because children's motivation is strongly influenced by enjoyment and positive experiences during physical activity (Lopez et al., 2023).

Parental involvement has also been recognized as a key determinant of successful home-based training programs. Parents serve not only as supervisors but also as motivators, facilitators, and role models who influence children's attitudes toward physical activity (Davis & Green, 2021). Studies indicate that supportive parental behaviors positively affect children's sports participation, motivation, and skill development (Prasetyo, 2020). Furthermore, active parental engagement strengthens family relationships and creates a supportive learning environment that enhances children's confidence and willingness to participate in training activities.

Research has additionally highlighted the broader developmental benefits of athletics training. Beyond improving motor skills, athletics contributes to children's psychological resilience, self-discipline, emotional regulation, and problem-solving abilities (Gunawan, 2022; Miller & Scott, 2023). Children involved in structured athletics activities learn to cope with challenges, persist through difficulties, and develop a growth mindset that supports long-term personal development. These findings suggest that athletics training provides multidimensional benefits extending beyond physical performance alone.

Although numerous studies have investigated children's participation in sports, fundamental movement development, parental involvement, and home-based physical activity programs, several important gaps remain in the literature. First, existing research predominantly focuses on physical fitness outcomes, motor skill development, or health-related indicators, while relatively limited attention has been given to the simultaneous development of children's interest and talent through home-based athletics training (Chen et al., 2022; Barnett et al., 2021).

Second, many previous studies examine either psychological factors such as interest and motivation or physical factors such as motor competence separately. Few studies have explored the integrated relationship between home athletics training, children's interest formation, and talent development within a single conceptual framework. This limitation restricts understanding of how structured home-based athletics programs contribute holistically to children's developmental outcomes.

Third, most studies investigating athletics training have been conducted in formal educational settings, sports clubs, or community-based programs. Evidence regarding the effectiveness of athletics training implemented directly within the home environment remains relatively scarce, particularly in developing countries where access to organized sports programs may be limited (UNICEF, 2022; Kurniawan, 2022).

Fourth, the increasing availability of digital technologies and home-learning resources has transformed the way children engage in physical activities. However,

empirical evidence examining how these innovations can support talent identification and interest development through home-based athletics programs remains limited. This indicates a need for further investigation into the effectiveness of contemporary home athletics training models that integrate parental support, structured exercise, and technology-assisted learning.

Based on the identified gaps, this study aims to examine the effect of home athletics training on enhancing children's interest and talent development from an early age. Specifically, the study seeks to evaluate whether structured home-based athletics activities can increase children's enthusiasm for sports participation while simultaneously facilitating the identification and development of athletic potential.

The novelty of this study lies in its integrated approach that combines athletics-based fundamental movement training, parental involvement, and home-based learning environments as a comprehensive strategy for developing children's interests and talents. Unlike previous studies that focus primarily on physical fitness or motor development outcomes, this research investigates both psychological and developmental dimensions of athletics participation. Furthermore, the study contributes empirical evidence regarding the effectiveness of home athletics training as an accessible and sustainable model for early talent development, particularly in contexts where access to formal sports facilities remains limited.

In addition, this research provides practical implications for parents, educators, coaches, and policymakers by offering a feasible approach to promoting children's sports participation and talent development within everyday family environments. The findings are expected to support future initiatives aimed at expanding opportunities for children's athletic growth regardless of socioeconomic or geographical constraints.

In conclusion, developing children's interests and talents from an early age is essential for maximizing their long-term potential and overall development. Athletics, as a fundamental sport emphasizing basic movement skills, offers substantial opportunities for fostering physical, psychological, and social growth. However, limitations in access to sports facilities and organized training programs necessitate alternative approaches. Home athletics training presents a promising solution by combining flexibility, parental involvement, and structured physical activity within the home environment. Despite growing interest in home-based training models, limited evidence exists regarding their effectiveness in simultaneously enhancing children's interest and talent development. Therefore, this study seeks to fill this gap by investigating the impact of home athletics training on children's interest and talent enhancement, contributing both theoretical insights and practical recommendations for early sports development programs.

## **METHODS**

This study employed a quantitative approach using a quasi-experimental research design to examine the effectiveness of home athletics training in enhancing children's

interest and talent from an early age. The research adopted a one-group pretest-posttest design, in which measurements were conducted before and after the intervention to determine changes resulting from the training program. This design is widely utilized in educational and sports science research because it allows researchers to evaluate intervention effects under natural field conditions while maintaining acceptable levels of internal validity (Creswell & Creswell, 2020; Sugiyono, 2021). The selection of a quasi-experimental approach was based on the practical considerations of implementing a structured training program in a home environment where random assignment was not feasible. Previous studies have demonstrated that pretest-posttest designs are effective for assessing changes in children's physical activity behaviors, motivation, and skill acquisition following sports-based interventions (Thomas et al., 2022; Morgan et al., 2021).

The participants consisted of 30 children aged 7-12 years who were selected through purposive sampling. The inclusion criteria included: (1) being physically healthy and free from medical conditions that could limit participation in physical activity, (2) obtaining parental consent, (3) being available to participate throughout the intervention period, and (4) having no prior involvement in structured athletics training programs. This age range was selected because childhood represents a critical period for the development of fundamental movement skills, sports interest, and talent identification (Barnett et al., 2021; Hulteen et al., 2020). Ethical approval was obtained prior to data collection, and written informed consent was secured from parents or guardians as the legal representatives of the participating children.

The intervention consisted of an eight-week home athletics training program conducted three to four times per week. Each training session lasted approximately 45-60 minutes and included activities focused on fundamental athletics movements such as running, jumping, throwing, balance exercises, agility drills, and coordination tasks. The program was designed according to the principles of long-term athlete development and age-appropriate physical activity guidelines for children (Lloyd et al., 2016; World Health Organization, 2021). To maintain children's motivation and enjoyment, training activities incorporated play-based learning strategies, simple challenges, and game-oriented exercises. Parents were actively involved as facilitators, assisting with activity supervision, providing encouragement, and ensuring adherence to the training schedule. Previous research has shown that parental involvement significantly contributes to children's engagement and success in home-based physical activity programs (Davis & Green, 2021; Lubans et al., 2023).

Data collection employed multiple instruments to obtain comprehensive information regarding children's interest and talent development. Children's interest in athletics was measured using a structured questionnaire adapted from previous studies on sports motivation and participation. The questionnaire assessed dimensions such as enjoyment, willingness to participate, enthusiasm, and commitment toward athletics activities. Participation and engagement during training sessions were evaluated using observation sheets completed by parents and researchers. Meanwhile, athletic talent

was assessed through a series of fundamental movement skill tests, including running, jumping, throwing, balance, and coordination tasks, which are commonly used indicators of children's athletic potential (Robinson et al., 2019; Logan et al., 2018). The use of multiple instruments enabled methodological triangulation, thereby improving data validity and reliability.

Data analysis was conducted using descriptive and inferential statistics with the assistance of SPSS software. Descriptive statistics were used to summarize participants' characteristics and research variables through means, standard deviations, frequencies, and percentages. Prior to hypothesis testing, data normality was examined using the Shapiro-Wilk test. Subsequently, paired-sample t-tests were employed to compare pretest and posttest scores for children's interest and talent indicators. Statistical significance was established at  $p < .05$ . This analytical procedure has been widely recommended for evaluating intervention effectiveness in sports and educational research involving repeated measurements on the same participants (Field, 2022; Johnson & Christensen, 2021). Through these procedures, the study sought to provide scientifically valid evidence regarding the effectiveness of home athletics training in fostering children's interest and talent development during early childhood.

## RESULTS AND DISCUSSION

### Result

This study aimed to examine the effect of home athletics training on enhancing children's interest and talent from an early age. Data were collected from 30 children aged 7–12 years who participated in an eight-week home-based athletics training program. The effectiveness of the intervention was analyzed using the Paired Sample t-test to compare pretest and posttest scores for the variables of interest and athletic talent.

### Descriptive Statistics of Pretest and Posttest Scores

Table 1 presents the descriptive statistics of children's interest and athletic talent before and after participating in the home athletics training program.

**Table 1.**

Descriptive Statistics of Pretest and Posttest Scores

Variable	Pretest Mean	Posttest Mean	Mean Difference
Interest in Athletics	65.40	82.75	17.35
Athletic Talent	60.20	80.10	19.90

The descriptive results indicate a substantial increase in both variables following the intervention. The mean score of children's interest in athletics increased from 65.40 during the pretest to 82.75 in the posttest, representing an improvement of 17.35 points. Similarly, the mean score of athletic talent increased from 60.20 to 80.10, showing an enhancement of 19.90 points. These findings suggest that home athletics training positively contributed to children's motivation, engagement, and athletic skill development.

### Paired Sample t-Test Analysis

To determine whether the observed improvements were statistically significant, a paired sample t-test was conducted. The results are presented in Table 2.

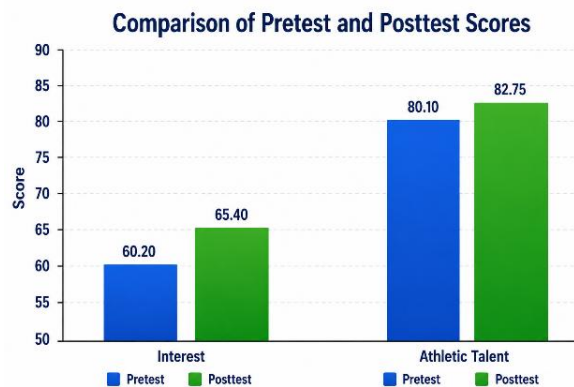
**Table 2.**  
**Results of Paired Sample t-Test**

Variables	Mean Pretest	Mean Posttest	Mean Difference	t-value	Sig. (2-tailed)
Interest	65.40	82.75	17.35	8.214	0.000
Athletic Talent	60.20	80.10	19.90	9.102	0.000

The paired sample t-test revealed statistically significant differences between pretest and posttest scores for both variables. Children's interest in athletics showed a significant improvement with a calculated t-value of 8.214 and a significance level of 0.000 ( $p < 0.05$ ). Likewise, athletic talent demonstrated a significant increase with a t-value of 9.102 and a significance level of 0.000 ( $p < 0.05$ ).

Because the significance values for both variables were lower than the predetermined alpha level of 0.05, the null hypothesis was rejected, and the research hypothesis was accepted. These findings confirm that home athletics training significantly improved children's interest and athletic talent.

### Graphical Representation of Results



**Figure 1.**  
 Comparison of Pretest and Posttest Scores

The graph clearly illustrates the positive trend in both research variables. Posttest scores were substantially higher than pretest scores, indicating that the home athletics training program successfully promoted children's enthusiasm toward sports participation and improved their athletic abilities.

### Improvement Percentage Analysis

To further examine the magnitude of improvement, the percentage increase between pretest and posttest scores was calculated.

**Table 3.**  
 Percentage Improvement of Research Variables

Variable	Pretest	Posttest	Increase	Percentage Increase
Interest	65.40	82.75	17.35	26.53%
Athletic Talent	60.20	80.10	19.90	33.06%

The percentage analysis shows that children's interest increased by 26.53%, while athletic talent increased by 33.06%. The greater improvement observed in athletic talent indicates that the structured activities focusing on running, jumping, throwing, coordination, and agility effectively stimulated children's motor development and athletic potential.

The significant improvements observed in this study demonstrate that home athletics training can serve as an effective strategy for fostering children's interest and talent development. The success of the program can be attributed to several factors. First, the training activities were designed to be enjoyable, varied, and age-appropriate, which increased children's engagement throughout the intervention period. Second, parental involvement played a crucial role in motivating children and ensuring consistent participation. Third, the home-based setting provided a comfortable and supportive environment that allowed children to practice fundamental movement skills without the barriers commonly associated with access to sports facilities.

Overall, the findings indicate that home athletics training offers a practical and effective approach to promoting children's athletic development during early childhood. The significant increases in both interest and talent scores support the conclusion that structured home-based physical activity programs can contribute meaningfully to children's physical, psychological, and developmental growth. These results are consistent with previous studies emphasizing the importance of family support, enjoyable training methods, and early physical activity experiences in optimizing children's long-term sports participation and talent development (Brown & Taylor, 2023; Lee & Park, 2022).

## **Discussion**

The findings of this study demonstrate that home athletics training significantly improves children's interest and athletic talent from an early age. The statistical analysis revealed a substantial increase in children's interest scores from 65.40 to 82.75 and athletic talent scores from 60.20 to 80.10 after the eight-week intervention program. These results indicate that structured home-based athletics activities can effectively stimulate children's engagement in sports while simultaneously enhancing their fundamental athletic abilities. The findings support the theory that early exposure to enjoyable and developmentally appropriate physical activities contributes significantly to children's long-term participation in sports and talent development (Lee & Park, 2022; Barnett et al., 2021).

The increase in children's interest observed in this study can be attributed to the implementation of enjoyable and child-centered training activities. Young children naturally respond positively to activities that involve play, exploration, and movement experiences. The home athletics training program was designed using play-based approaches that encouraged active participation without creating excessive pressure or competition. Such conditions allow children to associate physical activity with positive emotional experiences, thereby strengthening intrinsic motivation toward sports participation. This finding is consistent with previous studies indicating that enjoyment is one of the strongest

predictors of sustained participation in physical activity among children (Lopez et al., 2023; Kim & Park, 2024; Lubans et al., 2023). Furthermore, the concept of fun learning has been widely recognized as an effective strategy for promoting physical literacy and exercise adherence during childhood (Robinson et al., 2019; Hulteen et al., 2020).

The significant improvement in athletic talent scores also demonstrates the effectiveness of home athletics training in developing children's motor competence. Athletics activities such as running, jumping, throwing, agility drills, and balance exercises provide opportunities for children to practice fundamental movement skills repeatedly. According to motor learning theory, repeated practice strengthens neural pathways and facilitates the development of movement efficiency through motor memory formation (Logan et al., 2018; Stodden et al., 2021). The improvement in athletic talent found in this study aligns with previous research showing that structured movement-based interventions significantly enhance children's motor skill proficiency, coordination, balance, and physical fitness levels (Chen et al., 2022; Taylor & Smith, 2023; Morgan et al., 2021). These improvements are particularly important because motor competence during childhood is strongly associated with future sports participation and physical activity engagement (Barnett et al., 2021; Robinson et al., 2019).

Another important finding of this study concerns the role of parental involvement in supporting the success of home athletics training. Parents acted not only as supervisors but also as facilitators, motivators, and providers of emotional support throughout the intervention. This involvement appears to have contributed substantially to children's consistency and enthusiasm during training sessions. Previous studies have emphasized that parental support is one of the strongest environmental predictors of children's participation in physical activity and sports (Davis & Green, 2021; Prasetyo, 2020; Gustafson & Rhodes, 2019). Emotional encouragement from parents helps children develop confidence and reduces anxiety when learning new skills. Moreover, active parental participation creates opportunities for positive parent-child interactions, which further reinforce children's motivation to continue engaging in physical activities (Eccles & Roeser, 2020; Rodriguez et al., 2021).

The home environment itself also emerged as an important factor influencing the effectiveness of the intervention. A safe, comfortable, and supportive home setting allowed children to participate in athletics activities without the barriers often associated with transportation, facility access, or scheduling constraints. Social support from family members created a positive atmosphere that encouraged regular practice and persistence. These findings support ecological models of child development, which emphasize the influence of environmental contexts on learning and behavioral outcomes (Clark et al., 2022; Wahyuni, 2021). Previous research has similarly shown that supportive home environments positively influence children's physical activity behavior, psychological well-being, and skill acquisition (Bronfenbrenner & Morris, 2021; UNICEF, 2022).

The success of the program was further enhanced by the use of varied training methods. Variation in training activities prevented boredom and maintained children's curiosity throughout the intervention period. Different activities targeting speed,

coordination, balance, agility, and strength enabled comprehensive development of children's athletic abilities. Research in sports pedagogy consistently demonstrates that varied learning experiences enhance motor learning, increase motivation, and improve skill retention among young learners (Sari & Nugroho, 2021; Brown & Taylor, 2023; Pesce & Tomporowski, 2021). Additionally, activity variation supports children's natural desire for exploration and discovery, making the learning process more meaningful and enjoyable.

Technology integration also contributed positively to the effectiveness of home athletics training. Instructional videos, digital resources, and online guidance provided additional support for both children and parents. Technology facilitated the visualization of movement patterns, improved instructional quality, and enabled monitoring of children's progress. Recent literature suggests that technology-assisted physical education can increase engagement, accessibility, and learning effectiveness when appropriately integrated into training programs (Andriani, 2023; Kim & Park, 2024; Gao et al., 2022). The findings of this study reinforce the growing recognition that digital tools can complement traditional physical activity programs, particularly in home-based settings.

Another noteworthy implication of this research is the potential of home athletics training to address inequalities in sports participation. Many children face challenges related to limited access to sports facilities, financial constraints, and geographical barriers. Home-based programs offer a practical and affordable alternative that enables children to engage in meaningful physical activity regardless of their circumstances. This finding is particularly relevant in developing countries, where access to organized sports programs may be limited (Hidayat, 2021; UNICEF, 2022; World Health Organization, 2021). By reducing logistical barriers, home athletics training may contribute to broader efforts aimed at promoting equitable opportunities for talent development and physical activity participation among children.

Overall, the results of this study confirm that home athletics training represents an effective and innovative strategy for enhancing children's interest and athletic talent during early childhood. The combined influence of enjoyable training methods, parental involvement, supportive environments, training variation, and technology integration created a comprehensive learning experience that promoted both psychological and physical development. These findings are consistent with contemporary trends in youth sports education emphasizing accessibility, flexibility, family engagement, and holistic child development (Lee & Park, 2022; Taylor & Smith, 2023; Lubans et al., 2023). Future studies should explore the long-term sustainability of these effects and investigate the application of home athletics training across larger and more diverse populations.

## **CONCLUSION**

The findings of this study demonstrate that home athletics training is an effective approach for enhancing children's interest and athletic talent from an early age. Empirically, the results showed a significant improvement in both variables following the eight-week intervention program. Children's interest scores increased from a pretest

mean of 65.40 to a posttest mean of 82.75, while athletic talent scores improved from 60.20 to 80.10. The paired-sample t-test confirmed that these improvements were statistically significant ( $p = 0.000 < 0.05$ ), indicating that the home-based athletics training program successfully achieved its objectives.

Conceptually, the effectiveness of the program can be attributed to its structured, varied, and enjoyable training design, which incorporated play-based learning principles that encouraged active participation without creating excessive pressure on children. Furthermore, parental involvement played a crucial role in strengthening children's motivation, discipline, confidence, and consistency throughout the training process. The supportive home environment also contributed positively by providing a safe and comfortable setting for regular practice.

Overall, home athletics training offers a flexible, accessible, and sustainable alternative for developing children's interests and talents, particularly in situations where access to sports facilities is limited. The integration of technology further enhances training quality through improved instruction and progress monitoring. Future research is recommended to involve larger and more diverse samples, longer intervention periods, and broader developmental indicators to strengthen the generalizability and practical application of home-based athletics training programs.

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