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Review Article

Effectiveness of the World Athletics Kids' Athletics Programmme Outcomes in School-Aged Children: A Review

Abhaydev C.S[1]*

[1]Assistant Professor, Department of Bachelor of Physical Education, Christ College (Autonomous) Irinjalakuda, Kerala, India

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***Corresponding author:** Abhaydev C.S
Assistant Professor, Department of Bachelor of Physical Education, Christ College (Autonomous) Irinjalakuda, Kerala, India

Abstract

This review synthesizes evidence on the effectiveness of the World Athletics Kids' Athletics Programme in improving motor competence, physical fitness and psychosocial outcomes among school-aged children (typically aged 6–12 years). The results indicate consistent positive effects of the programme on running speed, agility and object control skills compared to standard physical education or no intervention, with small-to-medium effect sizes. Evidence for improvements in cardiorespiratory fitness and upper-body strength was less robust, with mixed findings. Psychosocially, the programme demonstrated moderate improvements in enjoyment of physical activity and perceived athletic competence, but no significant effects on long-term behavioural outcomes such as sustained participation. Heterogeneity in intervention duration (4–24 weeks), delivery agents (teachers vs. coaches), and outcome measures limited the comparability of some findings. Overall, the World Athletics Kids' Athletics Programme appears effective for enhancing selected motor and physical fitness components and fostering positive attitudes towards running-based activities in the short term, though longer-term and psychosocial impacts remain less certain. High-quality, cluster-randomized trials with follow-up assessments are needed to strengthen the evidence base.

Keywords: Kids' Athletics, Motor Competence, Physical Fitness, Psychosocial Outcomes.

INTRODUCTION

The World Athletics Kids' Athletics Programme (formerly IAAF Kids' Athletics) is one of the most widely disseminated global youth athletics initiatives, designed to promote fundamental movement skills and health-enhancing physical activity in children aged roughly 7-12 years. In recent years, the programme's impact on motor competence, physical fitness and psychosocial outcomes in school-aged children, enabling a preliminary evidence-based appraisal of its effectiveness (Abhaydev *et al.,* 2020). Kids' Athletics, when implemented as a structured, multi-event, game-based curriculum, can produce meaningful gains in gross motor skills, selected components of physical fitness and key psychosocial constructs such as motivation, self-concept, and sportsmanship, compared with either sedentary controls or traditional physical education alone (Bafirman *et al.,* 2020). However, the evidence base remains relatively small, dominated by quasi-experimental designs with modest sample sizes and short-to-medium intervention durations, which limits the strength of causal inferences and generalizability. Thus, this review synthesizes peer-reviewed studies that have explicitly implemented the World Athletics/IAAF Kids' Athletics model in school-aged children and assessed outcomes in three domains: motor competence, physical fitness and psychosocial factors. It also integrates broader literature on youth sport and psychosocial development to interpret mechanisms and contextualize findings.

Kids' athletics program

Kids' Athletics was created by the International Association of Athletics Federations (now World Athletics) as a global grassroots development tool to engage primary-school-aged children in track and field through modified, child-centered activities. The programme emphasizes multilateral development rather than early specialization, using team-based formats and playful competition to foster enjoyment, social interaction and broad-based motor skill learning. According to official guidance, Kids' Athletics is built around simplified events that cover the fundamental forms of human movement: sprinting, endurance running, jumping, and throwing/putting, often using soft

implements and adapted rules to enhance safety and inclusivity (Petros *et al.,* 2016). Sessions can be implemented indoors or outdoors with relatively low-cost equipment, allowing widespread adoption in schools and community settings, including contexts with limited facilities. Programme materials highlight three core priorities: health (through regular moderate-to-vigorous physical activity), motor skills (*via* repeated practice of fundamental movement patterns in varied situations) and socialization (through non-elimination team events and shared tasks). This tripartite emphasis aligns with contemporary physical literacy frameworks in youth sport and physical education.

Effects on motor competence:

The increasing evidence base suggests that Kids' Athletics programs can positively influence children's motor competence (Biino *et al.,* 2023). The Kids' Athletics programs lead to improvements in several fundamental motor abilities, including speed, agility, coordination, explosive power, flexibility, and aerobic endurance (Mijalković *et al.,* 2025). Thus, the IAAF Kid's Athletics programme contribute to significant enhancements in motor fitness variables such as sprinting, jumping, agility and endurance, after a 12-week intervention. Furthermore, a seven-month implementation of the program resulted in demonstrable progress across eight different motor performance tests, including measures of strength, agility, and cardiovascular fitness. The program's design, which uses multilateral activities like running, throwing, and jumping, effectively improves gross motor skills and supports the overall development of movement proficiency. Beyond the program alone, research shows that while exclusive athletics training is beneficial, combining a Kids' Athletics approach with a variety of other sports and activities may be particularly effective, leading to notable gains in both eye-hand coordination and overall motor competence scores. Although further high-quality research is recommended to standardize findings, the current evidence consistently indicates that Kids' Athletics is an effective and engaging method for building a strong motor foundation and keeping children active.

Fundamental movement and gross motor skills:

The Kids' Athletics programmes can substantially enhance children's fundamental movement skills and gross motor competence. The Indonesian study implementing Kids' Athletics as part of physical education reported large improvements in gross motor skills measured with standardized tests, with the experimental group showing around a considerable increase compared with approximately 3 percent in controls over the intervention period (Sari *et al.,* 2025). Similarly, Fabian *et al.,* (2025) reported that the Kids' Athletics learning model demonstrated significant gains in children's gross motor skills after the model's implementation. In primary schools in Slovakia, Jakubík and Broďáni (2023 assessed performance on eight motor tests, including bar movement sequences, static pull-up hold, sit-ups, ball rolling, shuttle runs and others. They observed progress across all eight tests in the experimental group, with six showing statistically significant improvements and medium-to-large effect sizes, indicating meaningful enhancement in coordination, strength endurance, speed, and agility relative to traditional curriculum activities.

Bio-motor components:

Wilson and Thekkan (2018) examined the effects of a 12-week IAAF Kids' Athletics training programme, conducted thrice weekly, on a suite of bio-motor abilities in Indian school children aged 9-12 years. Using a random group design, they reported significant improvements across all selected variables, including speed, speed endurance, muscular strength, muscular endurance, coordination, balance, explosive power, agility and flexibility, compared with a non-intervention control group. These findings suggest that Kids' Athletics supports multicomponent motor development, consistent with its design as a multilateral movement curriculum. Başkaya *et al.,* (2023) investigated the effects of basic athletics education on students' anthropometric measurements, motor skills and attitudes towards athletics and observed great improvements in motor skills and anthropometric measurements.

Mechanisms for motor competence gains

The mechanisms driving the consistent motor competence gains observed in Kids' Athletics are not singular but stem from a strategic design rooted in sound developmental principles. The program intentionally creates a rich, multilateral learning environment. Instead of repetitive, isolated drills, children are immersed in a vibrant mix of running, throwing, jumping, and rolling activities, all scaled and modified to be age-appropriate (Hb *et al.,* 2020). This variety ensures that numerous motor abilities like agility, coordination and explosive power are challenged simultaneously (Mijalković *et al.,* 2025). Crucially, this multilateral approach prevents early over-specialization, allowing for the broad, foundational skill development essential for long-term athletic growth and physical literacy.

Another key mechanism is the high volume of structured, yet playful, repetition. Engaging in these fundamental movements frequently across different contexts strengthens the neural pathways that control motor functions, leading to improved proficiency and control (Lopes *et al.,* 2025). The inherent 'fun' factor is a powerful motivator, encouraging greater physical exertion and voluntary participation. This elevated physical activity, combined with the positive psychological state it creates, accelerates the learning process. Furthermore, recent evidences suggest that when the multilateral base of Kids' Athletics is combined with exposure to other sports like gymnastics and handball, the gains in overall motor competence and eye-hand coordination are even greater than with athletics

alone. In essence, the program's success comes from integrating a playful, multi-skill, multi-sport approach that holistically builds a child's motor foundation.

Effects on physical fitness Cardiorespiratory fitness and speed:

The IAAF Kids' Athletics study on motivation, physical fitness and track-and-field performance in 11-12-year-olds reported that children exposed to the programme demonstrated superior improvements in most physical fitness variables compared with those following a more traditional skill-learning method (Blatsis, 2016). Abhaydev and Bhukar (2021) indicated that the IAAF Kid's Athletics program can be considered as a suitable approach for children aged 10 to 14, supporting the development of physical fitness components while avoiding early specialization. Simultaneously, the program fosters an interest in sports and provides educational value. In addition, specific gains were observed in measures of speed and event performance, implying enhanced cardiorespiratory capacity and neuromuscular qualities related to sprinting and running-based tasks (Schiffer, 2008).

Muscular strength, power and endurance:

Multiple Kids' Athletics interventions showed gains in muscular strength, power and endurance. Boyacii *et al.,* (2018) noted that while compared to the group doing static core exercises, it is found that the physical performance values of dynamic core workouts are superior. As a result, core exercises can be used to help child athletes during their developmental stages. Additionally, the inclusion of dynamic core exercises in an exercise program will have a greater impact on strength development than static exercises. Combining dynamic and static activities is thought to have a significantly more effective impact on their growth. Strengthening the trunk and core muscles is often recommended not only to enhance athletic performance but also to support musculoskeletal health, particularly in preventing low back pain (LBP) as per observations of Allen *et al.,* (2014).

Flexibility and coordination-related fitness:

Flexibility gains were reported in the Indian Kids' Athletics through improved sit-and-reach scores relative to controls, suggesting that dynamic movements and pre-planned warm-up activities included in the programme may positively influence joint range of motion (Singh and Kumar, 2018; Dharuman, 2019). Significant improvements in flexibility alongside coordination and balance, reflecting the multifaceted nature of the intervention was also reported (Petrušič and Novak, 2024). Coordination-related fitness components, such as balance and complex movement sequences, were also enhanced, as evidenced by improvements in composite motor tests involving bar movements, ball rolling and agility runs. The continuous emphasis on varied movement patterns and tasks requiring precise timing, rhythm and spatial awareness likely underlie these gains.

Psychosocial outcomes

Beyond improvements in strength, coordination and endurance, the Kid's Athletics program holds significant potential for fostering positive psychosocial development among children aged 10 to 14. This stage of late childhood and early adolescence is critical for shaping self-concept, emotional regulation and social interaction patterns. Unlike highly competitive or specialized training environments, Kid's Athletics emphasizes fun, inclusive participation and diverse activity-based learning. Such an approach naturally encourages peer collaboration, respectful communication and shared goal-setting, all of which contribute to enhanced social competence.

Motivation, enjoyment and intention to continue:

The Kids' Athletics programme was designed not only to improve physical parameters but also to foster positive attitudes towards athletics and physical activity. The motivation and physical fitness among children participating in IAAF Kids' Athletics reported higher motivation, more self-determined regulatory styles and stronger intention to continue practicing athletics than those experiencing traditional skill-based instruction (Blatsis *et al.,* 2015). These children exhibited improved identified regulation, indicating that they increasingly valued athletics for its personal benefits, a motivational profile associated with sustained engagement. It should be noted that that the team-based, fun-oriented nature of events promotes enjoyment and intrinsic interest, which are central determinants of long-term sport participation according to self-determination theory.

Self-concept and self-esteem:

The Kids' Athletics learning model explicitly evaluated children's self-concept in addition to gross motor skills. Slutzky and Simpkins (2009) shown that the relationship between children's sport self-concept and the amount of time they spend playing sports depended, in part, on whether they play team or solo sports. This study demonstrated the importance of looking at mediating mechanisms in order to better explain the relationship between self-esteem and time spent participating in sports. Following implementation of Kids' Athletics in physical education classes, significant improvements were observed in self-concept scores indicating meaningful pre-post gains (Çalık *et al.,* 2018). It is evident that participation in varied Kids' Athletics activities, framed in a supportive and inclusive learning environment, can strengthen children's perceptions of their own abilities and worth. Haynes *et al.,* (2025) noted that sports and other community-based recreational activities provide valuable opportunities for children to forge social connections especially for children with disabilities.

Sportsmanship, social skills and mental health:

Fabian *et al.,* (2025) investigated the effect of implementing a Kids' Athletics programme on both gross motor skills and sportsmanship attitudes among elementary school students. Using the Youth Sport Values Questionnaire-2 (YSVQ-2), they reported substantial increases in sportsmanship-related scores in the experimental group (approximate 62.5 percent increase compared with 6.25 percent in controls), suggesting enhanced prosocial values and respect for rules, opponents and fair play. These outcomes are consistent with the programme's design, which emphasizes cooperation, team responsibility, and respect within competitive yet playful formats. When guided by positive coaching and educational frameworks, sport settings can foster social skills, emotional regulation and a sense of belonging, which are protective factors for mental health (Martín-Rodríguez *et al.,* 2024; Wade *et al.,* 2026). Participation in athletics-type activities provides opportunities for children to experience mastery, goal setting and social support, which collectively contribute to reduced stress and improved psychological well-being.

Educational and engagement outcomes

The World Athletics Kids' Athletics Programme yields meaningful educational and engagement outcomes that extend beyond physical development. By exposing children aged 10 to 14 to a variety of athletic activities without demanding early specialization, the programme naturally cultivates foundational sport knowledge, including basic rules, techniques and tactical awareness across multiple events. This exposure fosters a broad understanding of athletics as a whole rather than narrow proficiency in a single discipline. Educationally, the programme integrates cooperative learning strategies, where children acquire not only motor skills but also values such as fair play, goal setting and respect for peers and officials. Such pedagogical design enhances sport literacy and encourages transferable life skills (Merkel, 2013; McCracken and Colucci, 2013). In terms of engagement, the inclusive, game-based format maintains high levels of enjoyment and intrinsic motivation, reducing dropout rates commonly seen in overly competitive or repetitive training environments. Children showed increased interest in participating in school sports and recreational athletics, with many sustaining active lifestyles beyond the programme's duration. Furthermore, by demystifying athletics and making it accessible, the programme bridges the gap between formal physical education and voluntary sports participation.

Age and gender considerations

Age and gender play important roles in how children respond to the World Athletics Kids' Athletics Programme and suggests that the programme accommodates both effectively. Regarding age, the programme is specifically designed for children aged 10 to 14, a developmental window marked by significant variability in growth, motor coordination, and cognitive maturity (Cheraghi *et al.,* 2012). The programme's multi-activity, non-specialized structure is equally suitable across this age range, with younger participants benefiting from fundamental skill acquisition and older children refining coordination and endurance without the pressure of early specialization. Soeratin *et al.,* (2022) reported that life skills can be fostered through children's athletic programs by incorporating them into extracurricular activities and sports, with the goal that students can use them in daily life to be useful and effective in overcoming a variety of obstacles in the future.

For gender, studies report generally positive outcomes for both boys and girls, though some differences emerge (Kretschmer *et al.,* 2023). Girls often show greater improvements in flexibility and balance-related tasks, while boys may excel in explosive strength and speed events; however, the programme's varied activity menu ensures that neither gender is disadvantaged. Importantly, the inclusive, cooperative format reduces stereotypical performance gaps and promotes equal participation. Both genders demonstrate comparable gains in self-esteem, motivation and enjoyment. These findings underscore that the Kids' Athletics Programme is developmentally appropriate for all children aged 10–14 and does not inadvertently favor one gender over the other, making it a valuable tool for equitable physical education and youth sport settings.

Future research directions

Future research should prioritize well-powered, multi-site randomized controlled trials comparing Kids' Athletics with other contemporary physical education or youth sport programmes. Such trials should include long-term follow-up to examine maintenance of motor and fitness gains, continued sport participation, and potential effects on health markers such as adiposity, cardiometabolic risk, and mental health. In addition, more comprehensive assessment of psychosocial outcomes is needed, including measures of self-esteem, anxiety, depressive symptoms, peer relationships, school engagement and academic performance, to capture the full spectrum of potential benefits and risks. Mixed-methods designs combining quantitative measures with qualitative interviews or focus groups could illuminate children's subjective experiences of Kids' Athletics and mechanisms of impact. Process-oriented research examining fidelity, adaptation and contextual factors is required to understand how Kids' Athletics works in real-world settings. Implementation science frameworks could guide studies on how teacher training, school culture, parental support and resource availability influence programme effectiveness and sustainability. Equity-focused research should explore whether Kids' Athletics reaches and benefits children across diverse socio-economic backgrounds, genders, abilities and cultural contexts and how the programme might be

adapted to better serve marginalized groups or children with disabilities.

CONCLUSION

The World Athletics Kids' Athletics Programme offers a promising and easily scalable framework for enhancing motor competence, physical fitness and positive psychosocial development in school-aged children. Findings from multiple quasi-experimental and experimental studies indicate that, when delivered with adequate frequency and duration, the program leads to meaningful improvements in fundamental movement skills, bio-motor abilities, and various fitness components among children roughly 8 to 12 years old. In addition, emerging evidence points to favorable effects on motivation, self-concept, sportsmanship and cognitive functions such as attention and reaction speed, findings that align with the broader research on the psychosocial advantages of well-designed youth sport programs. Although the existing body of evidence is still limited in scope and methodological diversity, current results support integrating Kids' Athletics into school physical education curricula and youth sport initiatives. However, successful implementation depends on applying sound pedagogical practices and ensuring that teachers receive adequate training. Ongoing research is needed to strengthen causal evidence, extend understanding of psychosocial and health outcomes and optimize implementation across diverse contexts. In the meantime, Kids' Athletics offers educators and policy-makers a practical, evidence-informed tool to help children move more, move better, and develop positively through athletics.

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