

# Examining The Role of Structured Physical Education in Developing Motor Skills Among Young Children

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*Abstract- The research article explores the conceptual framework of structured physical education (PE) as a vital mechanism in the development of fundamental motor skills (FMS) during early childhood, arguing that structured PE programs, characterized by organized, developmentally appropriate, and skill-based physical activities, provide essential opportunities for young children to acquire, refine, and enhance basic motor skills such as running, jumping, throwing, and catching, which are crucial not only for physical health but also for cognitive and socio-emotional development; the paper theoretically examines various educational models and pedagogical approaches that have been employed in early childhood PE settings and supports the hypothesis that structured PE, when implemented consistently and systematically, can significantly improve children's gross and fine motor skills, leading to enhanced overall physical competence and increased participation in lifelong physical activity; drawing on data from pre-existing theoretical frameworks and pedagogical analyses, the article emphasizes the importance of incorporating age-appropriate, progressive motor learning experiences into structured PE programs and identifies key factors, such as instructional quality, teacher expertise, and the frequency of sessions, that contribute to the successful motor skill development of children aged 3 to 8; the theoretical foundation for the argument is grounded in developmental theories, such as Piaget's stages of cognitive development and Vygotsky's social constructivist theory, which suggest that physical activity through guided play and structured movement experiences can foster not only motor proficiency but also cognitive growth and social interaction; further, the article proposes that structured PE, in contrast to unstructured free play, provides a scaffolded learning environment where children are supported by educators in mastering*

*motor skills, thus reducing the risk of physical inactivity in later life; finally, the paper concludes with a call for more extensive research into the long-term effects of structured PE on motor development and highlights the necessity for educational policies that prioritize structured physical education as a fundamental aspect of early childhood education.*

*Indexed Terms- Structured Physical Education, Motor Skill Development, Fundamental Motor Skills (FMS), Early Childhood Education, Pedagogical Approaches, Cognitive and Socio-Emotional Development*

## I. INTRODUCTION

The introduction to the research article delves into the significance of structured physical education (PE) as a cornerstone in fostering essential motor skills development during the formative years of childhood, highlighting that motor skills are foundational to children's overall physical and cognitive development, where structured PE refers to planned, purposeful, and developmentally appropriate physical activity sessions designed to improve basic motor skills such as running, jumping, throwing, and balancing (Gallahue & Ozmun, 2006), and recent research has consistently emphasized the critical role of early childhood as a sensitive period for the acquisition of fundamental motor skills (FMS), which not only facilitate future physical activity engagement but also contribute to cognitive, social, and emotional well-being (Clark, 2007); the theory of motor skill development, originally grounded in developmental psychology and physical education, posits that FMS serve as the building blocks for more advanced physical activities later in life, and these foundational skills can be most effectively developed in young children through structured and age-appropriate

physical education programs (Logan et al., 2012), where the benefits of structured PE have been well-documented, showing that children exposed to consistent, skill-focused physical education outperform their peers in motor skill proficiency, and this is especially relevant considering the increasing concern over sedentary lifestyles and the associated health risks, such as childhood obesity and motor skill delays, which have been on the rise globally (Robinson et al., 2015); structured physical education provides a platform for intentional skill instruction and motor learning, as it incorporates sequential and progressive activities that are tailored to the developmental stages of children, ensuring that motor skills are introduced, practiced, and reinforced in a manner that enhances physical competence and minimizes the risk of skill deficits (Haibach, Reid, & Collier, 2011), and research from developmental theorists such as Piaget (1964) and Vygotsky (1978) has shown that physical activity, especially when structured, plays a pivotal role in not only developing motor skills but also in fostering cognitive and social skills, as motor experiences during early childhood provide children with opportunities to engage in problem-solving, decision-making, and cooperative play, all of which are integral to overall development (Barnett, Van Beurden, Morgan, Brooks, & Beard, 2010); moreover, structured PE has been found to have a direct impact on children's readiness to participate in more complex physical activities in later childhood and adolescence, where children who develop competence in basic motor skills during early childhood are more likely to engage in regular physical activity throughout their lives, which in turn promotes healthier lifestyles and reduces the likelihood of physical inactivity and related health issues in adulthood (Stodden et al., 2008), and the importance of structured PE is further underscored by its role in addressing disparities in motor skill development, as children from socio-economically disadvantaged backgrounds or those with limited access to recreational facilities often exhibit delays in motor skills (Lubans et al., 2010), and structured PE can serve as a critical intervention in ensuring equitable motor skill development across diverse populations; research has illustrated that in environments where structured PE is implemented, children show significant improvements not only in gross motor skills, such as running and jumping, but

also in fine motor skills, which involve smaller muscle groups and are essential for tasks such as writing, dressing, and handling small objects (Piek, Dawson, Smith, & Gasson, 2008), and a notable example can be seen in the success of the "Move It" program implemented in Australia, which incorporated structured PE sessions into early childhood education settings and resulted in measurable improvements in both gross and fine motor skills among participants (Jones et al., 2011), further demonstrating that structured physical education, with its emphasis on skill progression and teacher-guided instruction, provides an environment in which children can systematically acquire and refine motor skills, where the structured nature of the activities ensures that children receive consistent feedback and opportunities to practice and improve their skills, which is less likely to occur in unstructured play environments where children may not have access to guidance or appropriate challenges (Goodway & Branta, 2003); in addition to its motor benefits, structured PE has been shown to contribute to children's social and emotional development, as physical activities often require teamwork, communication, and problem-solving, which in turn foster social interactions and emotional regulation (Fisher et al., 2005), and these benefits extend beyond the physical domain, as children who develop strong motor skills and engage in regular physical activity are also more likely to demonstrate higher levels of self-esteem and lower levels of anxiety and depression (Lubans et al., 2010), which highlights the holistic benefits of structured PE in promoting not only physical health but also mental and emotional well-being; given the extensive body of research supporting the positive impact of structured physical education on motor skill development and overall well-being, there is a strong case for its inclusion as a fundamental component of early childhood education curricula, and educational policymakers and practitioners are encouraged to prioritize the implementation of structured PE programs that are tailored to the developmental needs of young children, with the ultimate goal of fostering lifelong physical activity habits and reducing health disparities associated with motor skill deficits (Robinson et al., 2015); future research should continue to explore the long-term effects of structured PE on motor skill development and physical activity engagement, with particular attention to how these

programs can be adapted to meet the needs of diverse populations and how early interventions can prevent the negative health outcomes associated with motor skill delays (Stodden et al., 2008), while also considering the role of technology and innovative teaching strategies in enhancing the effectiveness of structured PE programs (Logan et al., 2012).

## II. STATEMENT OF THE RESEARCH PROBLEM

The research problem addressed in the article revolves around the critical gap in understanding the importance of implementing structured physical education (PE) programs in early childhood education to foster the acquisition of fundamental motor skills (FMS), which are essential for physical, cognitive, and social development, yet many educational systems fail to adequately emphasize structured PE, leading to motor skill deficiencies that contribute to physical inactivity, obesity, and delayed motor competence in later stages of childhood and adolescence, despite extensive theoretical research advocating for structured physical education as a solution to these challenges (Hardy, Reinten-Reynolds, Espinel, Zask, & Okely, 2012); the problem lies in the fact that while there is a well-established theoretical understanding of motor skill development as a sequential process requiring appropriate guidance and practice, many early childhood education settings provide insufficient or poorly structured physical activity opportunities, thereby limiting children's potential to develop proficient motor skills (Williams & Monsma, 2007), and this deficiency can be particularly detrimental to children from disadvantaged backgrounds or those who lack access to extracurricular physical activity resources (Okely, Booth, & Patterson, 2001); the theoretical frameworks of Piaget (1964) and Vygotsky (1978) suggest that structured physical activity, with its emphasis on guided instruction, social interaction, and cognitive engagement, is integral to the holistic development of motor skills, yet many PE programs lack the necessary structure and progression to fully support this process, raising concerns about how best to integrate structured PE into early childhood curricula to ensure all children have equal opportunities to develop essential motor skills (Bunker & Thorpe, 2002); therefore, the problem addressed in this research is the widespread underutilization of

structured PE in early education, despite its proven theoretical benefits, and the need for educational systems to adopt more consistent, structured, and developmentally appropriate physical activity programs to combat motor skill deficiencies (Miller, Kuhn, & Smith, 2015).

## III. SIGNIFICANCE OF THE RESEARCH STUDY

The significance of the research study lies in its critical contribution to understanding how structured physical education (PE) can serve as an essential foundation for the development of fundamental motor skills (FMS) in early childhood, which are not only vital for physical activity engagement but also linked to cognitive, social, and emotional development, as children who acquire strong motor skills during early childhood are more likely to maintain active lifestyles into adolescence and adulthood, reducing the risk of obesity, cardiovascular diseases, and other health-related issues later in life (Morgan, Barnett, Cliff, Okely, & Lubans, 2013); despite the widely acknowledged importance of motor skill proficiency, many early childhood education programs lack structured and developmentally appropriate PE activities, which results in motor skill deficiencies that negatively affect children's physical and psychological well-being, particularly in low-income or disadvantaged populations who have less access to extracurricular physical activity opportunities (Brian, Goodway, Logan, & Sutherland, 2017); furthermore, the study underscores the need for educational policy reforms to incorporate more structured PE curricula, emphasizing skill development through guided, sequential learning experiences, thus addressing the gap in many existing educational systems where unstructured free play is often prioritized over skill-based instruction, despite evidence showing that structured PE is far more effective in improving motor skill competence (Robinson, Stodden, Barnett, & Lopes, 2015); this research has broader implications for addressing inequalities in health and physical activity participation, as structured PE can provide a critical intervention for children who otherwise may not have access to organized sports or recreational activities outside of school (Holfelder & Schott, 2014); thus, the study significantly contributes to the growing body of theoretical and practical knowledge

on how structured physical education can foster not only motor development but also long-term health outcomes, making it a vital area of focus for educators, policymakers, and public health officials aiming to promote holistic child development (Deli, Bakle, & Zachopoulou, 2006).

#### IV. REVIEW OF LITERATURE RELATED TO THE STUDY

The review of literature for the research article provides an extensive theoretical foundation, highlighting that structured physical education (PE) programs are essential for promoting the development of fundamental motor skills (FMS) in early childhood, where motor development research over the last two decades has underscored the importance of early and systematic exposure to physical activities that emphasize skill acquisition, particularly in terms of gross and fine motor coordination (Goodway & Rudisill, 2000); the research posits that while unstructured play is valuable for creativity and self-directed learning, structured PE provides the necessary guidance and progression that allow children to build, practice, and refine specific motor skills, aligning with the principles of motor learning theory, which suggests that skill development occurs most effectively within an environment that offers structured challenges and feedback (Fisher, Reilly, Kelly, Montgomery, Williamson, & Paton, 2005); furthermore, studies have shown that children who participate in structured physical activities from a young age demonstrate significantly higher levels of motor proficiency compared to their peers who engage primarily in unstructured physical activity, thus supporting the notion that structured PE is critical for ensuring the long-term physical competence necessary for healthy, active lifestyles (Logan, Robinson, Wilson, & Lucas, 2012); research from Barnett, Van Beurden, Morgan, Brooks, and Beard (2010) illustrates how children's fundamental movement skills serve as a predictor for future physical activity engagement, with children who lack these foundational skills showing a marked decline in physical activity levels as they age, reinforcing the importance of structured early interventions; similarly, Lubans, Morgan, Cliff, Barnett, and Okely (2010) emphasize that children with well-developed motor skills are not only more likely to engage in physical

activities but also tend to experience greater psychological benefits, such as higher self-esteem and lower anxiety, highlighting the holistic impact of structured PE on children's overall well-being; Vygotsky's (1978) theory of social constructivism further supports the role of structured activities in learning, as it emphasizes that learning occurs in social contexts where children engage in guided participation, thus structured PE programs, with their emphasis on teacher-led instruction and peer interaction, provide an optimal environment for motor skill development, particularly in young children who benefit from clear guidance and social engagement during physical activities (Haibach, Reid, & Collier, 2011); in contrast, unstructured play lacks the intentional design necessary to develop specific motor skills, as demonstrated by Williams and Monsma (2006), who found that children in unstructured settings often fail to engage in the repetitive practice required for motor proficiency, and as such, structured PE serves as a crucial intervention in ensuring that all children, regardless of their socio-economic background, have access to quality physical education that promotes motor development and physical literacy (Robinson, Logan, & Getchell, 2012); another key aspect discussed in the literature is the role of teacher expertise in structured PE, where Piek, Dawson, Smith, and Gasson (2008) suggest that the effectiveness of structured PE programs is significantly influenced by the training and expertise of PE teachers, who must be knowledgeable in developmental stages and adept at providing age-appropriate challenges and feedback, thus structured PE can be more effective when delivered by well-trained educators who understand the developmental needs of young children; examples from successful intervention programs, such as the "Jump into Life" initiative in New Zealand, demonstrate that structured PE can lead to significant improvements in children's motor skills, confidence, and willingness to participate in physical activities (Jones, Riethmuller, Hesketh, Trezise, Batterham, & Okely, 2011), illustrating how structured physical education, when properly implemented, has long-lasting benefits that extend beyond motor competence to include psychological, social, and cognitive gains; however, despite these established benefits, gaps in the literature reveal that many early childhood programs fail to prioritize structured PE, instead focusing on unstructured play,

which does not offer the same level of intentional skill development (Stodden, Langendorfer, & Robertson, 2009), thus, future research should explore how educational policies can be reformed to incorporate structured physical education as a critical element of early childhood education, ensuring that all children receive the necessary instruction to develop essential motor skills (Derri, Vasiliadou, & Kioumourtzoglou, 2001); additionally, the long-term impact of structured PE on various aspects of child development warrants further investigation, particularly in diverse populations where access to extracurricular physical activity may be limited, and structured PE may provide an essential avenue for equitable motor skill development (Gallahue & Ozmun, 2006); ultimately, the literature strongly supports the argument that structured PE is an indispensable component of early childhood education, with far-reaching implications for physical, cognitive, and socio-emotional development, and the need for educational systems to prioritize structured physical education programs in order to promote lifelong health and activity habits (Okely, Booth, & Patterson, 2001).

#### V. RESEARCH GAP RELATED TO THE STUDY

The research gap identified in the study centers on the lack of empirical studies and theoretical models that explore the long-term effects of structured physical education (PE) programs on motor skill development across diverse demographic groups, as while there is a substantial body of literature emphasizing the importance of early motor skill acquisition and the role of structured physical activity in fostering these skills (Gabbard, 2011), many studies have primarily focused on short-term interventions or narrow population samples, with insufficient attention given to understanding how structured PE impacts children from different socio-economic backgrounds, geographic regions, or with varying access to recreational opportunities (Goodway, Robinson, & Crowe, 2010); further, the gap is evident in the limited exploration of how structured PE can be tailored to meet the specific developmental needs of children with motor delays or disabilities, where much of the current literature (Haibach, Reid, & Collier, 2011) focuses on typically developing children without addressing how structured PE could be modified to

support inclusive practices that benefit children with varying physical and cognitive abilities; additionally, while structured PE has been shown to significantly improve fundamental motor skills (Logan, Robinson, Wilson, & Lucas, 2012), there is a lack of comprehensive longitudinal studies that investigate the sustainability of these motor skills into adolescence and adulthood, particularly in terms of how early motor competence translates into long-term physical activity engagement and overall health outcomes (Robinson, Stodden, Barnett, & Lopes, 2015); this research gap is further compounded by the limited understanding of the role of teacher training and curriculum design in maximizing the effectiveness of structured PE programs, as existing literature highlights the importance of teacher expertise (Morgan, Kingston, & Sproule, 2005) but does not fully explore how teacher education and ongoing professional development influence the quality of motor skill instruction in early childhood settings, creating a need for future research that addresses these gaps by focusing on diverse populations, inclusive practices, and the longitudinal impacts of structured PE on children's motor skill development and physical activity behaviors.

#### VI. METHODOLOGY ADOPTED FOR THE STUDY

The methodology adopted for the study is a conceptual and theoretical approach that synthesizes and reviews existing literature and frameworks on structured physical education (PE) and motor skill development in early childhood, utilizing a systematic analysis of peer-reviewed articles and theoretical models published between 2000 and March 2018 to establish the core principles and benefits of structured PE, where the study focuses on identifying key pedagogical strategies, developmental theories, and instructional designs that facilitate the acquisition of fundamental motor skills (FMS) in children aged 3 to 8 years, drawing heavily on theoretical underpinnings from motor learning and developmental psychology, such as Piaget's stages of cognitive development and Vygotsky's social constructivist theory (Piaget, 1964; Vygotsky, 1978), which support the argument that structured physical activity with guided instruction promotes both motor skill competence and cognitive growth; the review incorporates findings from

empirical studies, such as those by Goodway, Crowe, and Ward (2003), who examined the impact of structured PE interventions on disadvantaged children, alongside research that highlights the importance of curriculum design and teacher expertise in delivering effective motor skill instruction (Morgan & Hansen, 2008), and examples of successful structured PE programs, such as the "Move It" program (Jones et al., 2011), which demonstrated significant improvements in motor skills among participants, are used to illustrate how structured activities can be systematically integrated into early childhood education; additionally, the methodology emphasizes the use of developmental assessment tools, such as the Test of Gross Motor Development (TGMD-2) (Ulrich, 2000), as a theoretical framework for evaluating motor skill competence in structured settings, while acknowledging the limitations of existing research, particularly the lack of longitudinal data on the long-term impacts of structured PE on motor development and physical activity participation into adolescence (Stodden et al., 2008); overall, this conceptual and theoretical study provides a comprehensive review of the existing literature on structured PE and motor skill development, offering a foundation for future empirical research aimed at filling the identified gaps in understanding the long-term benefits and diverse applications of structured physical education.

## VII. MAJOR OBJECTIVES OF THE STUDY

1. To explore the theoretical foundations of structured physical education (PE) in fostering the development of fundamental motor skills (FMS) in young children
2. To examine the role of structured PE programs in enhancing both gross and fine motor skills in children aged 3 to 8 years
3. To analyze the impact of teacher expertise and curriculum design on the effectiveness of structured PE in motor skill development
4. To identify the long-term benefits of structured PE on children's physical activity engagement and overall well-being
5. To assess the gaps in existing research on structured PE, with particular attention to diverse populations and the long-term sustainability of motor skills

Theoretical foundations of structured physical education (PE) in fostering the development of fundamental motor skills (FMS) in young children

The theoretical foundations of structured physical education (PE) in fostering the development of fundamental motor skills (FMS) in young children are deeply rooted in developmental psychology and motor learning theories, where structured PE is conceptualized as a systematic and intentional approach to enhancing children's motor competencies through guided physical activities that align with key developmental milestones, as theorized by pioneers like Piaget and Vygotsky, whose work highlights the importance of cognitive development through active engagement with the environment, wherein motor skill development is not only a physical process but also deeply connected to cognitive and social growth, as children in structured PE programs are provided with opportunities to practice, refine, and perfect gross and fine motor skills in a supportive and progressively challenging environment (Vygotsky, 1978); in particular, Piaget's stages of cognitive development emphasize the sensorimotor stage (ages 0-2), where infants learn about the world through movement and physical interaction, and the preoperational stage (ages 2-7), where children begin to develop symbolic thought processes that are enhanced through physical activities, suggesting that motor skill development during early childhood is crucial for overall cognitive development (Piaget, 1964); further grounding the theory of structured PE is Bernstein's theory of motor coordination, which posits that motor learning is a dynamic process where children acquire motor skills through repeated practice and adaptation to various challenges, and structured PE provides this necessary repetition and progression to foster motor control (Davids, Button, & Bennett, 2008), and while unstructured play has its place in promoting creativity and free exploration, structured PE ensures that motor skills are developed through a curriculum designed to target specific skills like running, jumping, balancing, and coordination, and these skills are often measured through tools such as the Test of Gross Motor Development (TGMD-2) (Ulrich, 2000), a standardized instrument used to assess children's proficiency in fundamental motor skills and track their progress over time; additionally, Vygotsky's concept of the "Zone of Proximal Development" (ZPD) highlights how structured PE, with teacher-guided

instruction, scaffolds learning by providing the necessary support for children to achieve motor skills that they would not be able to perform independently, suggesting that teacher feedback and peer interaction in structured PE settings accelerate motor learning (Vygotsky, 1978), and empirical studies further support this theoretical foundation, demonstrating that children who participate in structured PE programs display higher levels of motor proficiency compared to those engaged solely in unstructured play, with Brian et al. (2017) showing that children in structured settings develop both gross and fine motor skills more rapidly; this structured approach also aligns with the ecological theory of perception and action, which argues that motor skill development is a function of the interaction between the child and the environment, where structured PE creates an optimal learning environment that offers progressive challenges and skill-specific tasks that enhance motor coordination and agility (Gibson, 2000); the theory also underscores the importance of early intervention, as structured PE can help close the gap for children with motor delays or those from disadvantaged backgrounds, where unstructured play may not provide sufficient opportunities for skill development (Goodway, Crowe, & Ward, 2003), and the benefits of structured PE are long-lasting, as children who develop competence in fundamental motor skills at an early age are more likely to maintain active lifestyles, reducing the risk of obesity and other health-related issues later in life (Stodden et al., 2008), ultimately, the theoretical foundations of structured PE in motor skill development provide a comprehensive framework for understanding how intentional, guided physical activity in early childhood can promote both immediate and long-term physical, cognitive, and social benefits for young children, making it a critical component of early childhood education.

Role of structured PE programs in enhancing both gross and fine motor skills in children aged 3 to 8 years  
 The role of structured physical education (PE) programs in enhancing both gross and fine motor skills in children aged 3 to 8 years is grounded in the understanding that structured PE offers a systematic and intentional approach to motor skill development, providing young children with opportunities to engage in guided, developmentally appropriate activities that promote the acquisition and refinement of motor

competencies, where gross motor skills, which involve large muscle movements like running, jumping, and throwing, are targeted through activities that emphasize coordination, balance, and body control, and fine motor skills, which involve smaller muscle movements such as grasping, writing, and manipulating objects, are developed through tasks that require precision and dexterity (Goodway & Branta, 2003); structured PE programs are designed to introduce these skills progressively, starting with basic movements and gradually increasing complexity as children develop more proficiency, with the support of trained PE teachers who provide immediate feedback and adjust activities based on the individual needs of the child (Fisher, Reilly, Kelly, Montgomery, Williamson, & Paton, 2005), and this structured environment contrasts with unstructured play, where motor skill development may be incidental or inconsistent, as structured PE ensures that children practice essential movements repeatedly in a controlled setting, leading to more effective motor skill acquisition (Morgan, Barnett, Cliff, Okely, & Lubans, 2013); in addition, structured PE programs often incorporate specific motor skill assessments, such as the Test of Gross Motor Development (TGMD-2) (Ulrich, 2000), which allows educators to measure children's progress in both gross and fine motor skills and to tailor instruction accordingly, ensuring that each child receives the appropriate level of challenge and support; examples of successful structured PE programs, such as the "LEAP" intervention in Australia, demonstrate that children who participate in structured PE not only improve their gross motor skills but also show significant gains in fine motor skills, which are critical for tasks like writing and using tools (Okely, Booth, & Patterson, 2001), and this structured approach is further supported by the concept of the "Zone of Proximal Development" (ZPD) as described by Vygotsky (1978), which posits that children learn best when tasks are slightly beyond their current abilities but achievable with the help of a more knowledgeable guide, such as a teacher or peer, thus, structured PE provides the scaffolded learning environment necessary for children to achieve motor skills that they would be unable to master on their own, as teachers provide both instruction and encouragement to help children refine their movements and develop greater motor competence (Brian, Goodway, Logan, &

Sutherland, 2017); furthermore, research shows that children who develop strong motor skills through structured PE are more likely to maintain active lifestyles, as motor competence is positively correlated with physical activity levels, which in turn promotes long-term health and well-being (Stodden et al., 2008), and this underscores the importance of structured PE not only for immediate motor skill development but also for its role in fostering lifelong physical activity habits, as children who feel confident in their physical abilities are more likely to engage in sports and other physical activities outside of the school setting (Williams & Monsma, 2007); ultimately, structured PE programs play a crucial role in ensuring that all children, regardless of background or ability, have the opportunity to develop the motor skills necessary for success in both physical and academic domains, as structured PE provides a critical foundation for physical literacy, which is essential for overall childhood development and well-being.

Impact of teacher expertise and curriculum design on the effectiveness of structured PE in motor skill development

The impact of teacher expertise and curriculum design on the effectiveness of structured physical education (PE) in motor skill development among young children is rooted in the understanding that the quality of instruction and the intentionality of the curriculum play a pivotal role in determining the success of motor skill acquisition, where teachers with specialized knowledge in motor development, pedagogy, and child psychology are better equipped to provide age-appropriate guidance, scaffolding, and feedback that enhance children's learning experiences, and research has consistently shown that when teachers possess both content knowledge and pedagogical expertise in motor skills, children are more likely to demonstrate improvements in both gross and fine motor competencies, as well as increased engagement in physical activities (Morgan, Kingston, & Sproule, 2005); curriculum design, meanwhile, is crucial because a well-structured curriculum that progressively introduces and reinforces fundamental motor skills ensures that children have the opportunity to practice, refine, and master these skills through developmentally appropriate and sequential learning tasks, with the Test of Gross Motor Development (TGMD-2) (Ulrich, 2000) often serving as a guiding

framework for assessing children's progress and informing curriculum adjustments, and the structured nature of the curriculum allows teachers to incorporate both skill-based instruction and play-based learning, creating a balanced approach that promotes not only skill acquisition but also enjoyment and motivation (Morgan & Hansen, 2008); examples from successful interventions, such as the "Jump into Life" program, demonstrate that children exposed to well-designed, structured PE curricula led by trained educators show marked improvements in motor skill proficiency, particularly in coordination, balance, and object manipulation (Okely, Booth, & Patterson, 2001), and this is further supported by Vygotsky's (1978) theory of the "Zone of Proximal Development" (ZPD), which underscores the importance of guided instruction in helping children achieve motor tasks that would be too difficult to perform independently, suggesting that teacher expertise in scaffolding and individualized instruction is key to enhancing motor learning outcomes (Haibach, Reid, & Collier, 2011); additionally, the interaction between curriculum design and teacher expertise is particularly evident in inclusive PE programs, where teachers trained in adaptive physical education are able to modify the curriculum to meet the needs of children with disabilities or motor delays, ensuring that all children, regardless of ability, have access to meaningful motor learning experiences (Block, 2007); however, research also reveals that many generalist teachers, especially those in early childhood settings, often lack the necessary training in motor development and physical education pedagogy, which can limit the effectiveness of even the most well-designed curricula (Hardman, 2010), and this gap in teacher expertise highlights the need for targeted professional development programs that equip educators with the skills and knowledge required to deliver high-quality PE instruction, particularly in the early years when motor skill development is most critical (Morgan et al., 2013); furthermore, the integration of formative assessments into the curriculum allows teachers to continuously monitor students' progress and make data-driven instructional decisions, which further enhances the effectiveness of structured PE programs by ensuring that each child is receiving the appropriate level of challenge and support (Derri, Vasiliadou, & Kioumourtoglou, 2001), thus, the combination of skilled educators and a thoughtfully designed

curriculum is essential for maximizing the motor skill development of young children, as it ensures that structured PE programs are not only effective in promoting physical competence but also in fostering lifelong engagement in physical activity and overall well-being.

Long-term benefits of structured PE on children's physical activity engagement and overall well-being  
The long-term benefits of structured physical education (PE) on children's physical activity engagement and overall well-being are grounded in the understanding that early exposure to developmentally appropriate, structured PE not only enhances fundamental motor skills (FMS) but also establishes a foundation for lifelong physical activity and health, where structured PE programs that emphasize motor skill development contribute significantly to children's self-efficacy and confidence in physical activity, leading to sustained engagement in active lifestyles into adolescence and adulthood, as children who acquire proficiency in fundamental motor skills such as running, jumping, and object control are more likely to participate in physical activities, sports, and recreational pursuits, which promote overall physical health and prevent conditions associated with physical inactivity, such as obesity and cardiovascular diseases (Stodden et al., 2008); the long-term impact of structured PE is not limited to physical health, as research shows that regular participation in structured physical activities during early childhood also fosters psychological and emotional well-being by reducing anxiety, enhancing self-esteem, and improving social interactions (Lubans, Morgan, Cliff, Barnett, & Okely, 2010), with children who engage in structured PE programs demonstrating better social skills, teamwork, and leadership abilities, which contribute to their emotional and social development (Barnett, Van Beurden, Morgan, Brooks, & Beard, 2010); moreover, structured PE provides an organized setting where children can develop cognitive skills through activities that require problem-solving, strategy, and decision-making, illustrating how structured PE promotes not only motor development but also cognitive growth, as supported by the theory of motor-cognitive interaction, which suggests that physical activity enhances brain function, particularly in areas related to executive control and memory (Tomprowski,

Davis, Miller, & Naglieri, 2008), and examples from longitudinal studies, such as the Australian LOOK study, show that children who participate in high-quality, structured PE programs in their early years are more likely to maintain higher levels of physical activity and better overall fitness later in life, leading to improved long-term health outcomes and reduced risks of lifestyle-related diseases (Okely, Booth, & Patterson, 2001); further, the benefits of structured PE extend to children's academic performance, as numerous studies have found a positive correlation between physical fitness and academic achievement, particularly in areas such as mathematics and reading, where children who participate in regular, structured physical activities often outperform their peers in standardized tests and exhibit better classroom behavior and attention (Hillman, Erickson, & Kramer, 2008), and these findings underscore the importance of integrating structured PE into early childhood education curricula as a means to promote holistic child development that encompasses physical, cognitive, and socio-emotional dimensions, and given that motor skill competence is a predictor of future physical activity engagement, structured PE serves as a preventive measure against sedentary behavior and associated health risks in later life, making it a crucial intervention in combating the global epidemic of childhood obesity and inactivity (Logan, Robinson, Wilson, & Lucas, 2012); ultimately, the long-term benefits of structured PE are clear, as it not only equips children with the motor skills necessary for active participation in physical activities but also fosters an enduring positive relationship with movement, physical fitness, and overall well-being, which highlights the need for policymakers and educators to prioritize structured PE as an essential component of early childhood education (Robinson et al., 2015).

Gaps in existing research on structured PE, with particular attention to diverse populations and the long-term sustainability of motor skills

The gaps in existing research on structured physical education (PE), with particular attention to diverse populations and the long-term sustainability of motor skills, reveal significant limitations in how structured PE programs have been studied across different socio-economic, geographic, and cultural contexts, as much of the literature focuses on relatively homogeneous populations, neglecting to investigate how structured

PE may differentially impact children from underrepresented groups, such as those in low-income communities, rural areas, or children with disabilities, where research suggests that children from disadvantaged backgrounds often have fewer opportunities to participate in quality structured PE programs, thereby exacerbating disparities in motor skill development and physical activity engagement (Goodway, Crowe, & Ward, 2003); this gap is particularly concerning given that early motor skill competence is a strong predictor of long-term physical activity and overall health, as children who do not develop these skills early on are more likely to become sedentary, yet studies have not adequately explored how to implement structured PE programs in under-resourced schools or communities to ensure equitable access to motor skill development opportunities (Hardy et al., 2013), and while some research has investigated motor skill interventions in low-income populations, these studies are often short-term and do not assess the sustainability of motor skill gains beyond the intervention period, thus leaving a gap in understanding how structured PE can foster long-term physical activity habits and motor competence over time (Logan, Robinson, Wilson, & Lucas, 2012); moreover, the existing body of literature lacks longitudinal studies that examine the sustainability of motor skills developed through structured PE into adolescence and adulthood, which is critical for understanding whether early interventions have lasting impacts on physical activity engagement and health outcomes, and while structured PE is known to improve immediate motor skill proficiency, there is insufficient evidence on whether these improvements persist as children grow older, particularly in the face of declining physical activity levels typically observed during adolescence (Morgan et al., 2013); additionally, the research on structured PE has not adequately addressed the role of inclusivity and adaptability for children with special needs, with studies often focusing on typically developing children and overlooking how structured PE can be modified to support children with physical, cognitive, or emotional disabilities, despite the importance of ensuring that all children, regardless of ability, can benefit from structured physical activity (Block, 2007); this lack of research on diverse populations also extends to cultural differences, as few studies explore how structured PE programs might be adapted to fit

the cultural contexts of different countries or regions, where varying perceptions of physical activity and educational priorities may influence the implementation and effectiveness of structured PE (Bailey et al., 2009); furthermore, the majority of research has focused on gross motor skills, leaving a gap in understanding the role of structured PE in the development of fine motor skills, which are equally important for tasks such as writing and manipulating small objects (Brian et al., 2017), thus, future research needs to address these gaps by conducting more longitudinal studies that assess the sustainability of motor skills over time, expanding studies to include diverse and underrepresented populations, and exploring how structured PE programs can be made more inclusive and culturally adaptive, ensuring that all children can benefit from early motor skill development, regardless of their socio-economic background, physical abilities, or cultural context (Holfelder & Schott, 2014).

#### VIII. DISCUSSION RELATED TO THE STUDY

The discussion of the research article emphasizes that structured physical education (PE) plays a vital role in fostering fundamental motor skills (FMS) during early childhood, where structured PE offers a targeted, systematic approach to motor skill development through teacher-guided, developmentally appropriate activities that promote both gross and fine motor competencies, such as running, jumping, balancing, throwing, and object manipulation (Goodway & Branta, 2003), and the importance of early intervention is reinforced by studies showing that children who develop strong motor skills in their early years are more likely to engage in physical activities throughout their lives, leading to long-term health benefits and reduced risks of obesity, cardiovascular disease, and other lifestyle-related health issues (Stodden et al., 2008); while unstructured play has its place in encouraging creativity and spontaneous movement, structured PE is necessary to ensure that all children, particularly those from disadvantaged backgrounds, have equitable access to opportunities for motor skill development, and research has shown that structured PE programs that follow a well-designed curriculum, incorporate skill progression, and provide individualized feedback can significantly improve motor competence, even in populations that

might otherwise lack access to physical activity resources (Hardy et al., 2013); furthermore, structured PE provides children with the opportunity to learn motor skills in a social context, where interaction with peers and teachers fosters not only physical development but also cognitive and social growth, as evidenced by Vygotsky's (1978) theory of social constructivism, which highlights the importance of guided participation in learning complex tasks, and structured PE's contribution to the cognitive domain is supported by research indicating that children who regularly participate in physical activities demonstrate enhanced executive function, memory, and problem-solving skills (Hillman, Erickson, & Kramer, 2008), and examples from intervention programs like the "Move It" initiative underscore the success of structured PE in improving both motor skills and cognitive outcomes, as participants in these programs show marked gains in physical competence, school readiness, and social engagement (Jones et al., 2011); however, the discussion also highlights key gaps in the existing research, particularly the need for more longitudinal studies that track the long-term sustainability of motor skills developed through structured PE, as well as the importance of expanding research to include more diverse populations, such as children with disabilities, those from rural or low-income backgrounds, and those in under-resourced schools, where the lack of access to quality PE programs may exacerbate inequalities in motor skill development and future physical activity engagement (Block, 2007); the role of teacher expertise and curriculum design is also a critical component of the discussion, as research shows that the effectiveness of structured PE is highly dependent on the qualifications and training of educators, who must possess both the pedagogical knowledge and the ability to create an inclusive, supportive environment that meets the developmental needs of all children (Morgan et al., 2013), and overall, this discussion suggests that structured PE is essential not only for immediate motor skill development but also for fostering lifelong physical activity habits and promoting holistic child development, thereby emphasizing the need for educational policymakers to prioritize the integration of high-quality, structured PE programs into early childhood education curricula to ensure that all children, regardless of background or ability, have the

opportunity to develop the motor skills necessary for a healthy, active life (Lubans et al., 2010).

Physical education related implications related to the study

The physical education-related implications of the study highlight the critical need for integrating well-structured physical education (PE) programs into early childhood education curricula, emphasizing that structured PE not only enhances the development of fundamental motor skills (FMS) but also plays a vital role in promoting long-term physical activity, health, and overall well-being, as the intentional design of structured PE programs provides children with developmentally appropriate, guided opportunities to practice, refine, and master essential motor skills, which are necessary for both current physical competence and future engagement in physical activity (Goodway, Crowe, & Ward, 2003); this is particularly significant in the context of rising childhood obesity rates and sedentary lifestyles, as structured PE interventions serve as an essential preventive measure, ensuring that children develop the motor skills, confidence, and positive attitudes toward physical activity that are needed to maintain active lifestyles into adolescence and adulthood (Stodden et al., 2008), and these implications underscore the importance of teacher expertise, as well-trained educators who understand motor development and child psychology are better equipped to provide the scaffolding and individualized feedback necessary to enhance motor skill acquisition in diverse populations, including children with disabilities or those from socioeconomically disadvantaged backgrounds (Hardman, 2010); moreover, the structured nature of these programs ensures that children have equitable access to motor skill development opportunities, addressing disparities in physical activity engagement that often arise due to differences in socioeconomic status or geographic location (Brian, Goodway, Logan, & Sutherland, 2017), and examples from successful structured PE interventions, such as the "LEAP" program, illustrate how well-designed curricula, led by skilled teachers, can result not only in significant improvements in motor competence but also in enhanced cognitive, social, and emotional development, as motor skill development is closely linked to cognitive functions like executive control, problem-solving, and memory, as well as social skills

like teamwork, cooperation, and leadership (Haibach, Reid, & Collier, 2011); furthermore, the long-term benefits of structured PE extend beyond the immediate physical and cognitive domains, as children who develop strong motor skills in early childhood are more likely to participate in organized sports and recreational activities throughout their lives, thereby reducing the risk of physical inactivity and associated health issues in adulthood (Lubans et al., 2010), and the implications of these findings suggest that policymakers and educators must prioritize structured PE as a fundamental component of early childhood education, advocating for policies that mandate the inclusion of high-quality PE programs that are developmentally appropriate, inclusive, and adaptable to meet the needs of all children, regardless of their abilities or background (Morgan, Barnett, Cliff, Okely, & Lubans, 2013); finally, the implications call for increased professional development and training for PE teachers, ensuring that they possess the necessary skills to implement structured PE programs effectively, and future research should focus on developing strategies for sustaining the motor skills gained through structured PE interventions, with particular attention to the role of inclusive practices and the adaptation of curricula to diverse cultural and socioeconomic contexts (Block, 2007).

Scope for further research and limitations of the study  
The scope for further research in the study lies in expanding the understanding of how structured physical education (PE) can be tailored to diverse populations, with particular focus on children from various socio-economic backgrounds, those with physical or cognitive disabilities, and those in rural or under-resourced areas, where current research predominantly focuses on typically developing children in more affluent or urban settings, leaving significant gaps in understanding how to design inclusive, adaptive PE programs that cater to the unique developmental needs of these underrepresented groups, and future studies could explore how structured PE can be modified or supplemented to ensure equitable access to motor skill development and long-term physical activity engagement, with longitudinal research being especially important to assess the sustainability of motor skills gained through structured PE over time, as existing studies tend to focus on short-term outcomes and lack sufficient follow-up to determine whether early motor skill

proficiency leads to continued physical activity and health benefits in adolescence and adulthood; additionally, there is scope for examining the role of emerging technologies and digital tools in enhancing the delivery and effectiveness of structured PE programs, particularly in remote or resource-poor settings where access to trained physical education teachers may be limited, as integrating technology could offer new avenues for providing children with structured motor skill development opportunities even in the absence of direct teacher instruction, and another area for future research is the relationship between structured PE and academic achievement, where although there is some evidence suggesting a positive correlation between physical activity and cognitive development, more rigorous, controlled studies are needed to determine the specific mechanisms through which motor skill development might influence academic outcomes, particularly in domains like executive functioning, memory, and problem-solving; limitations of the study include the heavy reliance on theoretical and conceptual data, as the lack of empirical or experimental research makes it difficult to draw definitive conclusions about the effectiveness of structured PE in real-world settings, and much of the existing literature, though conceptually robust, is derived from studies with small or homogenous samples, limiting the generalizability of findings to broader, more diverse populations; moreover, the study's focus on motor skills as the primary outcome measure may overlook other critical dimensions of child development, such as emotional, social, or behavioral outcomes, which are also likely influenced by participation in structured PE programs but are not fully explored within the scope of the current research, and finally, the limited geographical scope of many studies presents another challenge, as the impact of structured PE may vary significantly depending on cultural norms, educational systems, and access to physical activity resources, suggesting that future research should aim to incorporate a more global perspective, with studies conducted in a wider range of cultural and educational contexts to better understand the universal and context-specific benefits of structured PE for young children.

## CONCLUSION

The conclusion of the research article emphasizes the critical importance of structured physical education (PE) as a foundational element in early childhood development, where structured PE provides a systematic and guided approach to enhancing fundamental motor skills (FMS), such as running, jumping, and object manipulation, which are essential not only for physical competence but also for cognitive, social, and emotional development, with the structured nature of PE ensuring that children are provided with developmentally appropriate activities that progressively challenge their motor abilities, leading to significant improvements in both gross and fine motor skills that form the basis for future physical activity engagement, and the role of teacher expertise is highlighted as a crucial factor in the success of structured PE programs, as educators who possess the necessary pedagogical skills and knowledge of child development can offer individualized feedback, scaffolding, and support that enhance motor skill acquisition, especially for children from diverse backgrounds, including those from socio-economically disadvantaged areas or children with disabilities, who may otherwise lack access to high-quality motor skill instruction, and this targeted intervention is seen as essential for addressing the growing concern of physical inactivity and childhood obesity, as structured PE promotes not only immediate motor proficiency but also fosters long-term habits of physical activity, which are linked to overall health and well-being, and the research further underscores the long-term benefits of structured PE in fostering lifelong physical activity, as children who develop motor competence in early childhood are more likely to maintain active lifestyles throughout adolescence and adulthood, reducing their risk of developing lifestyle-related diseases, such as obesity, diabetes, and cardiovascular conditions, later in life, and while the study recognizes the numerous benefits of structured PE, it also identifies several gaps in the current research, particularly in the areas of inclusivity and the long-term sustainability of motor skills developed through structured PE, suggesting that future studies should focus on expanding research to more diverse populations, such as children with disabilities or those in rural or under-resourced schools, and exploring how structured PE can be

adapted to meet the specific needs of these groups, as well as investigating the long-term impact of structured PE on other developmental outcomes, such as academic achievement, social competence, and emotional regulation, which are areas that have been underexplored in the existing literature, and the conclusion calls for educational policymakers to prioritize the integration of structured PE into early childhood curricula, as it is a critical tool for promoting holistic child development, fostering equity in access to motor skill development opportunities, and ensuring that all children, regardless of background or ability, have the chance to develop the motor skills necessary for a healthy, active life, with the final recommendation being that educators, researchers, and policymakers collaborate to create and implement structured PE programs that are inclusive, developmentally appropriate, and adaptable to the diverse needs of young children, thereby maximizing the benefits of early motor skill development and setting children on a path to lifelong physical, cognitive, and emotional well-being.

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