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Literature Review of Studies on the Effects of Short Tennis on Fundamental Movement Skills of Primary School Students

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Abstracts

Against the background of the current gradual emphasis on physical education, short tennis has been promoted in Chinese primary school physical education programmes because of its child-friendly characteristics. The adaptability of venues and equipment of short tennis makes it ideal for primary school students, which can not only improve their fundamental movement skills, but also increase the fun and participation of physical activities. Through an extensive review and analysis of national and international literature, this paper examines the practical effects of short tennis in enhancing the fundamental movement skills of primary school students. It is found that this physical activity not only improves students' motor skills, but also helps to enhance their social skills and mental health. China's education policy also provides strong support for the promotion of short tennis, using physical activity as a means to enhance students' overall fitness and motor skills. Through a comprehensive literature review and analysis, this paper highlights the potential and educational value of short tennis in promoting the development of fundamental movement skills among primary school students, providing new perspectives and practical guidance for future educational practice and academic research.

Keywords: Short Tennis, Fundamental Movement Skills, Primary School Students, Physical Education, China

Introduction

With the rapid development of society and the remarkable rise in living standards, people have attached increasing importance to physical education and health, and physical education for young people and children, in particular, has received widespread attention.In 2007, China placed a high priority on the health quality of its students, which is used as an indicator of overall healthy development (Zheng, Fang, et al., 2009)。 In 2022, the Chinese Ministry of Education issued the 'Compulsory Education Physical Education and Health Curriculum Standard (2022)', which states that the main content of the compulsory education physical education and health curriculum includes fundamental movement skills, and points

out that fundamental movement skills include mobility skills, non-mobility skills, and manipulative skills, and points out that fundamental movement skills are one of the level 1 and core teaching contents(Ministry of Education, 2022).Research shows that the improvement of fundamental movement skills can promote the physical and mental health development of children and adolescents to a certain extent (Carson, Lee, Hewitt, et al., 2017)(Rasmussen & Laumann, 2013), so it is especially important to pay attention to the development of fundamental movement skills of children and adolescents. In 1995, the International Tennis Federation (ITF) released the short tennis Promotion Programme, a move that marked the importance and promotion of short tennis worldwide (Tao, 2023). In China, the government has similarly seen the potential of short tennis and its value in national fitness activities, and has therefore included it in the promotion programme for a healthy lifestyle for all people (Yang, 2001).In 2017, the General Office of China's Ministry of Education released the Notice on the Pilot Work of National Youth School Tennis (Office of the Ministry of Education, 2017), and more and more schools have begun to introduce short tennis programmes.

Due to the examination-based education system, against this background, on the one hand, education in China is examination-based, and teachers and parents attach extreme importance to cultural subjects. Because of this, many teachers will take up the time of physical education classes to teach cultural subjects, resulting in a serious lack of exercise among students. On the other hand, with the support of the state, the proportion of physical education scores in primary, junior high school and high school entrance exams is getting heavier and heavier, and in order to improve the students physical education scores, many schools turn physical education classes into training classes for the physical education plus exams, and conduct boring training in every class, which extremely affects the students motivation to participate in the classroom and after-school exercise, so physical education in primary schools in China is still faced with multiple challenges. Chinese students physical health survey shows that students' health and fitness has improved, but overall it is not optimistic, and the obesity rate of children and adolescents is still rising (Ministry of Education, 2021). School sports is an important way for young people to obtain strong physical fitness and promote the development of physical and mental health, and the physical education curriculum is the centre of school sports. As a kind of simplified tennis, short tennis reduces the difficulty of traditional tennis by reducing the size of the court and using lightweight equipment, and is more likely to be introduced into the physical education classroom because of its low requirements for court facilities, easy to learn, easy to start, and more interesting characteristics (Yang, 2001). However, in recent years, most of the studies on short tennis are limited to physical quality and training contents and means, and there are almost no studies on short tennis that can promote the development of students' fundamental movement skills.

In this context, this study aims to explore the potential of short tennis as an innovative tool in physical education to enhance the fundamental movement skills of primary school students, addressing a significant gap in current research and practice.

Methodology

This study employs a literature review approach, aiming to explore the impact of short tennis on the fundamental movement skills of primary school students in China. To ensure the breadth and depth of the research, the literature primarily comes from renowned domestic

and international databases, including CNKI (China National Knowledge Infrastructure), PubMed, Web of Science, and Google Scholar. Through these platforms, we can access the latest research findings on short tennis and its impact on children's fundamental movement skills. The literature selection is limited to the years 2000 to 2023 to ensure the timeliness and relevance of the information. The keywords used for the search include "short tennis," "fundamental movement skills," "primary school students," "physical education," and "China." By using these keywords in combination searches, we ensure that the collected literature is closely related to the research topic. Preliminary literature collection involves screening through titles and abstracts to exclude documents not related to the research theme. Subsequently, full texts of the eligible documents are read, and further selection is based on the depth and breadth of the literature. From each relevant document, the following data are extracted: author, year of publication, location of the study, research design, sample size, intervention measures, main results, and the conclusions of the authors. This information allows for a more accurate assessment of the specific impact of short tennis on fundamental movement skills and identifies trends and differences in the research.

Policy and Practice Support

In 1996, short tennis was identified by the China Tennis Association as the ‘Hope Project of Chinese Tennis’. With the frequent holding of domestic and international matches and the popularity of TV broadcasting, more and more Chinese people began to pay attention to and love tennis, a sport that is both competitive and ornamental. Especially the success of Li Na has given great encouragement to Chinese young people, and many parents are willing to send their children to the tennis court, hoping that they can cultivate an interest in tennis from childhood.In 2017, the General Office of China's Ministry of Education issued the Notice on the Pilot Work of the National Youth Campus Tennis (Office of the Ministry of Education, 2017) and formulated the Basic Standards of the National Youth Campus Tennis Schools with Characteristic Features (Trial) (Liang,2020) as a way to promote the development of campus tennis, thus further exploring the value of tennis in parenting.

Characteristics and functions of short tennis

short tennis is a small tennis sport that is innovative on the basis of following the rules of tennis and reducing the venue and equipment of tennis by a certain proportion (Yang, 2001). short tennis has the characteristics of small court, slow ball speed, short racket, small initiation, and easy rules (China Junior Tennis Development Alliance, 2016). Chichi-Hyuk Choi's team believes that short tennis is the initiation of tennis, and that short tennis, which can be practiced to reduce the difficulty of tennis initiation, can enable children and young people and novice players to smoothly transition to standard tennis, enhance the experience of the sport, and stimulate the interest in learning (Cui, Zhao, & Wang, 2021).

short tennis, as a fast-paced, high-intensity variant of tennis. It is not just a recreational sporting activity, but also serves multiple purposes. A large number of scholars' studies have found that short tennis has a positive impact on people's physical and mental health. For example, Qin Jing pointed out in her study that primary school students who participated in short tennis showed significant improvement in coordination, speed, endurance and explosive power (Qin, 2006). Tang Kangkang pointed out that short tennis can effectively improve children's physical health (Tang, 2022). Sun Baobing pointed out that short tennis has a significant effect on the psychological quality of primary school students (Sun, 2020).

An Intervention Study of fundamental movement skills

fundamental movement skills, also known as Fundamental Movement Skill (FMS) refers to the unnaturally occurring pattern of basic motor learning in the human body, which is the foundation of physical activity and sport in the human body(Crane, Naylor, Cook, & Temple, 2015).

Xu Xiaoxiao studied children's basic motor skill intervention from the perspective of basketball, and found that basketball can effectively promote the development of gross motor skills in children aged 5-6 years old(Xu, 2019).Logan and Ross's study focused on children from special groups, especially those with Down syndrome, and through the results, it showed that baseball training helped to improve such children's fundamental movement skills in running, catching and throwing levels and also increased their interest and self-confidence in participating in physical activities (Logan & Ross, 2008).Faigenbaum et al. concluded that jumping rope can be used as a way to improve children's explosiveness, coordination, and cardiorespiratory fitness and to improve children's physical fitness (Faigenbaum & Myer, 2012) . Intervention research in fundamental movement skills occupies an important place in sports science. The intervention of fundamental movement skills in sports such as football, basketball, baseball, jumping rope and balance bike not only has a profound impact on the development of individual fundamental movement skills, but also provides important guidance for physical education and training in China(Li, 2021). It also gives some help to this paper in exploring the effects of short tennis on fundamental movement skills.

An Intervention Study of Short Tennis on Fundamental Movement Skills

In recent years, scholars from various countries have been exploring the effects of short tennis on fundamental movement skills and how short tennis can improve individuals' physical abilities and health. Chinese scholars, Shi Binming, found that short tennis affected children's controlled movement development to a greater extent than mobile movement skill development (Shi, 2014). Li Yangyang et al. found that children's strength, whole-body co-ordination, agility, reaction and displacement skills improved after short tennis training (Li, Guo, & Wang, 2020). Xiao Zhenxiang concluded that short tennis significantly improved children's coordination, agility, speed and upper and lower limb strength, among other fundamental movement skills (Xiao, 2022) .Garcia found that short tennis training significantly improved agility and flexibility as well as foot movement skills in young athletes (Garcia, 2019).Brown suggested that short tennis could improve the motor skills of the special populations, promote physical rehabilitation, and return to independent living (Brown, 2018).Chen believes that short tennis promotes fundamental movement skills of balance and coordination. In his study, older adults regressed in their physical fitness qualities and were very prone to falls, greatly reducing their quality of life. Then with short tennis, older people gradually improved their balance and coordination (Chen, 2020).

Research has shown that short tennis has a positive impact on fundamental movement skills in all age groups including children, adolescents, adults and the elderly, including fundamental movement skills such as reaction speed, movement accuracy, co-ordination, flexibility and agility, endurance, power control, displacement skills and balance and co-ordination. Not only is it valuable for athletes to improve their personal abilities, but also in other sports and in life, and it can even be used to promote health recovery, short tennis has a multidirectional

positive impact on fundamental movement skills. Therefore, it is crucial to further explore in depth how short tennis can contribute to the fundamental movement skills of primary school students.

Research and Development Trends

Although research has demonstrated the positive effects of short tennis on the physical fitness and social adjustment of children and adolescents, research on its specific effects on the development of fundamental movement skills is still relatively limited. Current research has focused on the physical effects of physical activity, while its psychological and social effects have been under-explored. In addition, most studies have used cross-sectional research designs and lack longitudinal studies on the long-term effects of short tennis.

As a suitable physical activity for children, short tennis has a broad development prospect in Chinese primary school physical education. With the promotion of the Ministry of Education's policy and the improvement of school sports facilities, it is expected that short tennis will be promoted in more schools. Future research could explore the effects of short tennis on children of different ages, which would help educators to tailor more inclusive and targeted lesson plans. Considering the differences in the acceptance of physical activity across cultures, future research should also explore the adaptation and effectiveness of short tennis in different cultural environments across the globe. Understanding of the role of short tennis in different education systems can be enhanced through comparative research and case study methodologies.

Conclusions & Suggestions

Conclusions

This paper reviews the impact of short tennis on the development of children's fundamental movement skills, highlighting the significant role this physical activity plays in promoting children's physical and mental health. The specific conclusions are as follows:

First, Physical Skill Enhancement.short tennis significantly improves children's coordination, balance, reaction time, and overall physical fitness.
This activity effectively enhances children's speed, sensitivity, and coordination.

Second, Mental and Social Skills.Through its gamification and teamwork nature, short tennis not only improves children's motor skills but also promotes their social interaction skills and mental toughness.
This activity is crucial for enhancing children's mental health and social skills.

Finally, Educational Value.short tennis is vital in children's physical education, providing a safe, fun, and effective learning environment.Its innovative format and multifaceted benefits make it an important means of enhancing the fundamental movement skills of Chinese primary school children.

Suggestions

It is recommended that educational authorities continue to support and promote the integration of short tennis in schools. Research should be conducted on how educational policies can effectively incorporate short tennis into school physical education curricula. Special consideration should be given to how policy support, teacher training, and resource

allocation can ensure the successful implementation of this goal. Furthermore, more specific implementation guidelines and teaching standards should be established.

Additionally, researchers are encouraged to conduct more empirical studies to verify the effectiveness of short tennis teaching methods and explore its adaptability across different regions and types of schools. These efforts can help maximize the educational benefits of short tennis and ensure its sustainable integration into physical education programs.

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