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BEST PRACTICES IN PHYSICAL EDUCATION IN THE BRICS COUNTRIES – A COMPARATIVE DATA ANALYSIS

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ABSTRACT

This study investigates best practices in physical education according to education experts across Brazil, Russia, India, China and South Africa (BRICS), with the aim of providing recommendations and guidelines for the enhancement of the implementation of quality physical education. Employing qualitative research within Bronfenbrenner's Ecological Systems theoretical framework, data were collected via open-ended questionnaires from 11 purposefully selected physical education educators representing the BRICS nations. Themes identified through inductive content analysis encompassed physical education activities and pedagogy, status and support of physical education teachers, community involvement and governmental policies and initiatives. Participants highlighted the need for diverse, inclusive and autonomy-supportive activities, enhanced teacher recognition and training, community and parental engagement, supportive government policies, and continuous research. Applying Bronfenbrenner's framework, the study explains how factors within microsystems, mesosystems, exosystems and macrosystems influence physical education practices and policies within the BRICS nations, and brings forth recommendations for the elevation of physical education status, equal access to quality physical education resources, supportive learning environments, and learner-centred approaches to foster engagement and promote active lifestyles across diverse contexts within the BRICS nations.

Keywords: Best practices; BRICS; Physical education; Teachers.

INTRODUCTION

Physical education, deemed a basic human right of children by the United Nations (UN, 2024), plays an important role in school learners' physical, cognitive, emotional and social development (Pereira *et al*., 2022). Physical education is often the sole opportunity for many learners to engage in activities such as dance, games and sports, emphasising its vital role in promoting wellbeing (De Jesus *et al*., 2022), with the aim of achieving physical literacy and a healthy active lifestyle (Pereira *et al*., 2022). The World Health Organization (WHO) further suggests that four out of five adolescents do not meet the recommendations for physical activity levels and encourages countries to improve national guidelines, programmes and policies on physical activities, suggesting that learners should at least participate in 60 minutes of physical

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activity per day for optimal health (Araujo *et al*., 2022; Umpierre *et al*., 2022). Furthermore, especially in developing countries, the implementation of physical education faces various challenges, like the low academic status of the subject, disparities in physical education teacher training and a lack of resources (Aubert *et al*., 2022).

The wellness and health of its citizenry is also one of the priorities addressed by BRICS, a consortium consisting of five developing countries (Brazil, Russia, India, China and South Africa), which was established with the aim of jointly examining issues within each member country, exchanging insights, and devising innovative solutions (Chin *et al*., 2019; BRICS Brazil, 2020). The original BRICS is the focus of this study, although new countries, namely Egypt, Ethiopia, Iran, and the United Arab Emirates, joined the organisation (now known as "BRICS+"), in January 2024 (BBC, 2024).

Although the structures and age divisions in school systems differ among the BRICS nations, compulsory primary school starts at 6 years of age in all five countries, with physical education as a mandatory part of the curriculum. In the secondary school phase, starting at age 15, physical education is still a compulsory subject in Russia (MERF, 2015), China (MOEC, 2009) and South Africa (SADBE, 2011). At the same time, however, it is a subject of choice in the Brazilian (BGME, 2018) and Indian (MEI, 2020) secondary school curricula. BRICS curriculum policies all require qualified teachers to present physical education, while the curricula mandate daily physical education in the school timetable in China, 3 hours per week in Russian schools, 2 hours per week in Brazil and India and 1 hour per week in South Africa. However, studies (Silva *et al*., 2022; Liu *et al*., 2023) show challenges in the implementation of the physical education curricula in BRICS countries, which could be related to their centralised (China and Russia) and decentralised (Brazil, India and South Africa) educational governance systems (Vos & De Beer, 2018). In this regard, Vos and De Beer (2018) point out that decentralised governance systems can present discrepancies with regards to the implementation of subjects such as physical education because state, provincial or city governments can adapt aspects such as assessment guidelines and allocation on the school timetable, as well as funding, according to their discretion.

Similar to those reported in other countries, various challenges in implementing quality physical education exist in individual BRICS nations, ranging from issues in the physical education classroom environment to problematic curriculum requirements (Chin *et al*., 2019). In Brazil (Silva *et al*., 2022), Russia (Kolosnitsyna *et al*., 2018) and China (Liu *et al*., 2023), researchers have reported differences in physical education curriculum implementation among regional governments, while inadequate physical education teacher training and a lack of facilities and equipment have been shown to be challenges in Brazil (Goncalves *et al*., 2022), India (Ahmed & Godiyal, 2021) and South Africa (Van der Westhuizen, 2018). Urban–rural and socioeconomic disparities in physical education policy implementation have also been reported in Russia (Kolosnitsyna *et al*., 2018), India (Ahmed *et al*., 2020) and South Africa (Van der Westhuizen, 2018), as well as low levels of physical activity and fitness among the Brazilian (Barbosa-Filho *et al*., 2018), Indian (Bhawra *et al*., 2023), South African (Draper *et al*., 2019) and Chinese (Liu *et al*., 2023; Yiting *et al*., 2023) youth.

As these implementation difficulties and associated best practices in physical education exist within the different systems of the BRICS countries, this study was conducted within the

theoretical framework of Bronfenbrenner's Ecological Systems Theory (EST), which was pioneered by Urie Bronfenbrenner in the late 1970s (Yang, 2021), and later also called Bronfenbrenner's bio-ecological theory of development (Bronfenbrenner & Morris, 2006). Bronfenbrenner proposed five socially constructed systems that influence a child's development (Bronfenbrenner & Morris, 2006; Ozaki *et al*., 2020). The *microsystem* constitutes the most immediate system, encompassing individuals like parents, teacher and coaches, as well as peers and classmates, in the immediate environment such as the school, neighbourhood or home. These figures and settings have a direct impact on a learner's development (Ozaki *et al*., 2020; Yang, 2021). The *mesosystem* involves the connections and relationships between influencers in the microsystem and other factors. An example is the dynamics between a learner's parents at home, which can shape the learner's attitudes towards and relationships with friends and teachers (Ozaki *et al*., 2020; Yang, 2021). The *exosystem* encompasses systems that do not have a direct impact on the learner but still influence the microsystem, including elements like mass media, the economy and the learner's family finances (Ozaki *et al*., 2020; Yang, 2021). The *macrosystem* represents the influence of cultural elements such as socioeconomic status, wealth, poverty and ethnicity on a child's development (Ben-David & Nel, 2013). Finally, the *chronosystem* reflects changes over time, encompassing alterations in ecological systems or within individuals that lead to new circumstances influencing the learner's development. This could involve growth, maturity or historical events that shift a learner's perspective on various aspects of their life, including participation in physical activities (Ozaki *et al*., 2020; Yang, 2021).

Through the lens of Bronfenbrenner's EST (Bronfenbrenner & Morris, 2006), the national departments of education in each of the BRICS nations constitute part of the macrosystems of these countries, which determine the curricula and policies for physical education.

Best practices in physical education in BRICS

A "best practice" is defined by the Merriam-Webster dictionary as "a procedure that has been shown by research and experience to produce optimal results and that is established or proposed as a standard suitable for widespread adoption" (Merriam-Webster, 2024). In response to challenges facing the implementation of physical education curricula and policies, some best practices in BRICS have been reported in literature. In some Brazilian (Ferraz *et al*., 2020) and South African (Du Toit, 2019; Oelofse, 2019) studies, school–university partnerships in teacher training programmes enhanced teacher training, while providing schools with opportunities to use adequate equipment. In a study involving physical education in Brazil (Da Silva Bandeira *et al*., 2022) and India (Satija *et al*., 2018), the involvement of the community and learners' participation in local activities, such as soccer, dance, yoga and adventure sports, are advocated. Another practice suggested by Tenorio *et al*. (2022), after the release of physical activity guidelines by the Brazilian Ministry of Health to all states in Brazil, was to offer workshops for the public to improve their awareness of the importance of physical activities and physical education.

Despite regional disparities in the implementation of the curriculum due to socioeconomic differences (Botagariyev *et al*., 2021; Zhou *et al*., 2022), the status of physical education in Russia and China is strong due to several recent educational reforms promoting the health and fitness of their youth (SCPRC, 2021; RFC, 2023). Key reforms include increasing the weekly

allocated hours in the school timetable, regular professional training for teachers, upgrading sports facilities, organising various events, and introducing new physical education themes like combat sports, skiing, modernised dance and aerobic classes (Korneichuk, 2020; SCPRC, 2021). Besides, Russian learners' fitness levels are monitored through standardised assessments in their physical education classes (Komova *et al*., 2015), whereas annual fitness testing within physical education forms part of the examinations of Chinese learners at the end of their lower secondary school and grade 12: the latter allows them to gain access to the next phase of learning (Wu *et al*., 2019).

The incidence of challenges and best practices in education in member countries, such as the ones discussed above, creates opportunities to develop effective models for community wellness, which form part of the aims of the BRICS organisation (Chin *et al*., 2019). Against this background, the question emerges as to how these countries can enhance the health and wellness of their youth by identifying and implementing effective approaches for presenting physical education through best practices (Chin *et al*., 2019; BRICS Brazil, 2020).

PURPOSE OF RESEARCH

The purpose of this study was, therefore, to explore best practices in implementing physical education in the BRICS countries, as well as to inform of any evidence-based recommendations that can ultimately enhance the health and wellbeing of learners within these countries.

METHODOLOGY

Research design

In this study, a qualitative research design was used within Bronfenbrenner's EST framework (Maree *et al*., 2016; Yang, 2021). The research was conducted through an interpretive lens, employing an open-ended questionnaire to gather data. The interpretivist paradigm was considered suitable for investigating the experiences and perceptions of the participants, as this approach acknowledges the influence of context, culture and social interactions on individuals' perceptions of the world (Maree *et al*., 2016).

Participants

Purposive sampling involved a BRICSESS management committee member recruiting one education expert per BRICS country, each of whom invited two additional local experts. The 15 invited experts included physical education committee members, tertiary educators and experienced teachers who were familiar with the state and structure of the particular country's physical education system. Although the questionnaire was offered to the participants to be completed anonymously due to the sensitivity of the topic of this study, the majority of the respondents voluntarily named their countries in their answers. From the answers in which the countries were named, there were two respondents from Brazil, one from Russia, one from India, three respondents from China and one from South Africa, while the remaining three answered the questionnaire anonymously.

Data collection

For the purpose of this study, an open-ended questionnaire was used for qualitative data collection. Examples of questions conducted by the researcher were: “How do you think more learners could be attracted to participate in physical education?”, “What in your opinion are best practices in the presentation of physical education in your country?” and “Do you have any recommendations regarding best practices in physical education in the BRICS countries?”. In the questionnaire's initial development, physical education experts who were not involved in the study were invited to assess the questionnaire, and adjustments were made based on their feedback. The letter sent out by the head of BRICCESS South Africa contained a link to the questionnaire that each participant, if willing to participate, could “click” on, giving consent automatically and leading them to the 13 open-ended questionnaires that were then submitted anonymously.

Data analysis

The data analysis involved breaking down the responses into smaller parts (phrases or paragraphs) to identify recurring patterns, concepts and themes, according to the guidelines of Lester *et al*. (2020) and Maree *et al*. (2016). Codes were then assigned to these segments based on their content. Subsequently, codes with similar meanings or characteristics were grouped into larger categories or themes (Maree *et al*., 2016; Lester *et al*., 2020). To maintain anonymity, participants were assigned numerical identifiers (e.g., "Participant 1") based on the order in which they had completed the questionnaires.

Trustworthiness

Trustworthiness in qualitative research is built upon credibility, transferability and dependability (Stahl & King, 2020). Credibility relates to the believability and trustworthiness of a study's findings. To ensure credibility, investigator triangulation was implemented, involving multiple investigators to interpret the data independently and offering their individual analyses (Maree *et al*., 2016; Stahl & King, 2020). These analyses were then compared to enrich the study's insights. To ensure transferability, which assesses the extent to which these findings can be applied to different contexts or populations beyond the original study, an audit trail was established including a documentation process that systematically recorded the study's progress, including its various steps, decisions and modifications (Lester *et al*., 2020). For confirmability and dependability, the method of peer debriefing was applied. This entailed inviting a knowledgeable and unbiased colleague to review and evaluate the transcripts, methodology and findings (Maree *et al*., 2016).

Ethical considerations

This study was approved by the Ethics Committee of the Faculty of Education of North-West University (NWU-01007-21-A2). An informed consent form was signed by all participants agreeing to participate voluntarily in the study. All questions answered on the questionnaire showed only participant numbers and no names, although in some of the participants’ answers, the countries of origin could be identified.

RESULTS AND DISCUSSION

The themes identified in the data analysis included *physical education activities and pedagogy, status and support of physical education teachers, community involvement, and governmental policies and initiatives* (Figure 1). These themes are contextualised, presented and discussed within the different systems of Bronfenbrenner's EST (Bronfenbrenner & Morris, 2006), as follows.

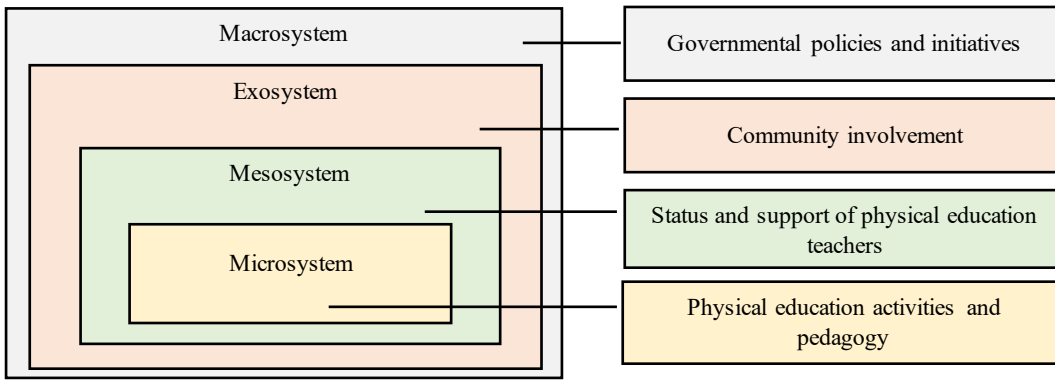

Figure 1. **THEMES OF THE STUDY CONTEXTUALISED WITHIN THE SYSTEMS OF THE ECOLOGICAL SYSTEMS THEORY**

Microsystem: Physical education activities and pedagogy

Various participants referred to types of activities and pedagogical principles applied within the physical education class to develop not only the physical, but also the "*affective, cognitive and socio-cultural dimensions of students*" (Participant 7). Two participants pointed out that best practices included choosing activities in the physical education class that would equip learners to be physically active outside of the school and make autonomous decisions about their fitness and health: "*Run, play popular games typical and activities from childhood, i.e., encourage physical activity during leisure time in everyday life, enjoying public spaces for carrying out activities aimed at children*" (Participant 7); "*Teaching pupils and students to be independent during physical activities and be able to choose and build training programmes which are suitable for them*" (Participant 11).

One respondent suggested that allowing student-led programme design can foster engagement and promote lifelong fitness habits: "*Student teams can build their own programmes from scratch and transform the way they look at fitness with groups and activities that appeal to them...*" (Participant 6). Enhancing the autonomy of learners in being physically active, was further supported by another participant:

> "*Ask students what they want to do. Whilst you might get some ridiculous answers if you ask students what they would like to do in physical education lessons, you might also get some valuable insight into what will appeal to them more.*" (Participant 5)

Several participants mentioned best practices to enhance the motivation of learners to participate fully in physical education activities. In this regard, one participant proposed that a good practice entails integrating "*information about the importance of physical activity for health and wellbeing*" (Participant 10); at the same time another's opinion supported this statement: "*If educators can help children understand the benefits of regular movement and offer interesting ways for them to get active, they'll be more likely to try it…*" (Participant 6).

Other best practices to motivate learners to participate in physical activities involved variety and fun in physical education activities, competition, and learning new skills and sports, as some participants put it: "*At the micro level, the teaching mode of physical education in our country is a four-in-one teaching mode, which means learning, competition, practice and evaluation should be mixed to stimulate students' interest in sports*" (Participant 1).

> "*We can very well attract young children for physical activities. The school sports day, District, State, and National level inter school's sports competitions are the perfect time for teachers, administrators and parents to encourage students to take charge of their own healthy habits*." (Participant 6)
>
> "*Experience the fun of sports, establish sports concepts and form sports habits*." (Participant 2)
>
> "*When the class is more interesting and has meanings to the students. It is important not to repeat contents*." (Participant 8)
>
> "*Offer a greater variety of activities …The more fun that you can bring into physical education lessons, the more students will enjoy them*." (Participant 9)

A participant from Russia alluded to inclusivity in physical education classes: "*Adapt physical education classes for students with different levels of training. There is such a division in Russia, but it is rarely carried out in practice*" (Participant 9). Another participant added the suggestion to incorporate sports role models in physical education: "*Promote positive role models. This could be by showing videos, or it could be by inviting guests into the school to talk to students*" (Participant 5).

Educating and encouraging learners to take control of their own health and fitness habits is indicated as a best practice in physical education by participants in this study. In the work of Da Silva Bandeira *et al.* (2022) and Ramires *et al.* (2023), as well as in the "Appropriate Instructional Practice Guidelines" of the Society of Health and Physical Educators (SHAPE) America (SHAPE America, 2009), strategies to achieve the outcome of learners taking control of their own health include the following: teachers' emphasis on physical education's health benefits and related concepts; encouraging learners to get involved in physical activities and sport outside of the physical education setting, and involving parents and communities. Furthermore, seeking learner input regarding activities in the physical education class is an autonomy support strategy that has been found to make a motivational contribution to the participation levels of learners in the studies of Huhtiniemi *et al.* (2019) and Pallace *et al.* (2024). Among Spanish high school learners, Pallace *et al*. (2024) implemented an intervention programme that included the practice of allowing learners to make decisions and take

responsibility with regards to physical education activities, finding positive effects on the levels of learners' motivation and life satisfaction.

More strategies to enhance motivation to participate in physical education, as highlighted by participants, include offering a greater variety of activities, and making lessons enjoyable by including interesting and "fun" activities. This then would ensure an inclusive physical education programme, promoting positive role models and leveraging sports competitions at different levels. Providing diverse activities and adapting classes for learners with different levels of training are approaches to enhance participation and are also supported in physical education literature (De Bruijn *et al*., 2021; Pallace *et al*., 2024). In Brazil, Pereira *et al*. (2022) proposed adapting the Brazilian physical education curriculum for more innovating physical activities and adapting these activities for learners with disabilities.

Mesosystem: Status and support of physical education teachers

When asked about practices in schools that enable the effective implementation of physical education programmes, several of the participants alluded to the status and support of physical education teachers among co-staff members, parents and the community. The view that the status of physical education teachers was connected to their social recognition and positive working relationships with co-teachers, was implied in several responses. For example, two participants mentioned that best practices were to "*...improve the status of physical education teachers and social recognition in the school*" (Participant 3), and to "*inculcate cooperative relationships between all the core teachers and physical education teachers and that will be a valuable resource for every school of the whole country*" (Participant 5).

Subsequently, in making suggestions for ways to improve the status and support of physical education teachers, two participants further mentioned that physical education teachers should be engaged by the members of school management when making decisions that affect the subject: "*Educators, especially the teachers, must be comprehensively consulted on key decisions that affect PE, as their views carry influence on the delivery of physical education in schools*" (Participant 4); "*...physical education success depends on the quality of interaction between the teacher and the leadership of the educational institution*" (Participant 10).

The status and support of teachers in the community was also connected to the protection of their rights as teachers with equal status and salaries in comparison to that of other subject teachers, as reflected in the opinions of two participants: "*Some suggestion: protect teacher's rights...*" (Participant 1); "*If China's physical education is to be reformed well, it must completely free the frontline teachers and continuously improve their remuneration and status*" (Participant 2).

Furthermore, the training of physical education teachers was thought to have an effect on their status in their schools, as participants in the study believed that physical education teachers of high status would be "…adequately trained teaching personnel who has the capacity of dealing with difficult situations in PE [physical education]". Additionally, some participants considered quality teacher training to be part of the support expected to be provided by schools and local governments, as reflected in the words of one education expert: "Government and stakeholders should explore ways in which educators can be equipped to innovatively improve PE delivery."

In the context of the EST (Bronfenbrenner & Morris, 2006), the status and support of physical education teachers within the mesosystem can have a significant effect on their delivery of the subject, and thus on the development of the learner in the microsystem. Concurrent with the often-low academic status of physical education in school communities, the status and support of its teachers are often seen as inferior to that of teachers of other academic subjects (Richards *et al*., 2018; Stroebel *et al*., 2019; Goncalves *et al*., 2022). Best practices regarding the improvement of these aspects within the mesosystem as viewed by participants in the current study – including social recognition and cooperative relationships, together with involvement in relevant management processes in the school community – are supported in literature (Goncalves *et al*., 2022; McNamara *et al*., 2023). Coherent with the recognition of the work and importance of physical education teachers in the school, quality teacher training contributes to the uplifting of the status and support systems of these teachers. In this regard, Goncalves *et al*. (2022) and Letseleha *et al.* (2024) recommend that pre-service physical education teacher training should not only equip teachers with knowledge and teaching strategies to deliver quality physical education in difficult contexts but should also overcome the marginilisation of physical education by advocating and promoting the value of the subject to the school community. Moreso, researchers (Zeller *et al*., 2018; Ferraz *et al*., 2020; Ahmed & Godiyal, 2021) recommend continuous physical education teacher training in all BRICS countries, which can also contribute to the uplifting of the status of teachers. The Brazilian Ministry of Education (BMGE, 2018), the Russian Federation Council (RFC, 2023) and the State Council of the People's Republic of China (SCPRC, 2020) mandate the regular professional development of physical education teachers, while such continuous education is still lacking in India (Ahmed & Godiyal, 2021) and South Africa (Zeller *et al*., 2018).

Exosystem: Community involvement

Most participants emphasised the critical role of community engagement in enhancing awareness and support for quality physical education. Engaging with parents by means of school information letters or school parental meetings was mentioned, and one participant suggested the practice of involving parents by arranging social meetings and having conversations about physical education: "*Week-end lunch and discussion with the parents on physical education classes and its activities*" (Participant 4).

Two participants emphasised that activities in the physical education class should correlate with those practised in local communities, so that learners would be equipped with movement and sport skills to get involved in community clubs and recreational activities, as stated by one:

> "*Physical education class linked to local communities: A variety of activities can be offered in the physical education class, linking it with the practices from the local culture, like soccer, capoeira, dance, adventure sports, etc. Professionals should promote the practice of recreational activities that stimulate physical activity in the family field, nursery, school and community.*" (Participant 6)

Some participants noted the practice of using local activities and sports, as well as global-scale sport events, to prompt school management discussions regarding physical education time allocation and content. In the words of one participant:

> "*...physical education class in its relation to Mega Events: Events on a global scale, such as the Olympics and Soccer World Cup, could be useful to stimulate new modalities of sports and to connect physical education class into relevant discussions at the school, like the role of public policies in the leisure field*". (Participant 6)

Besides obtaining sponsors from the community for physical education and sport classes in schools, an often-cited practice that is set on relieving the lack of facilities and equipment in poorly resourced schools entails the sharing of facilities and resources in the community to improve quality physical education participation: "*The formation of educator partnerships between schools and other institutions that are well-resourced and schools that are ill-equipped to facilitate the sharing of resources*" (Participant 7); *"...improve physical education delivery through improvisation, strategic school–community partnerships and resource mobilisation*" (Participant 5).

For best practices in community involvement, as alluded to by participants in this study, included not only engaging parents and advancing learners to participate in local sport and recreational activities, but also using community events and resources to improve the delivery of physical education in the school. The active involvement of parents and facilitation of community partnerships are recognised by various researchers (Bassi *et al*., 2019; Paulson *et al*., 2022; Sumarjono *et al*., 2024) as some of the essential elements for effective physical education. In the study of Paulson *et al.* (2022) among middle school learners and their parents in the south-western United States of America (USA), physical education teachers engaged parents using regular newsletters, e-mails, family homework assignments and physical activities. The findings showed that the participating parents were more positive about physical education and being role models and instigators for physically active lifestyles. Similarly, Fernandez-Rio and Bernabe-Martin (2019) report that parents became actively engaged in their children's physical activities and learning after becoming involved through social media (Facebook).

Research in the USA and Scotland (Turner *et al*., 2018) highlights the benefits of collaborative community approaches in sharing facilities and equipment, sponsorships, and school fundraising in promoting physical education. While challenges like liability concerns, staffing costs and facility expenses exist, developing these partnerships can strengthen physical education implementation. Turner *et al*. (2018) suggests that strategies like facilities-sharing can sustainably boost physical activity among children. Similarly, a study in Delhi, India (Bassi *et al*., 2019) emphasises the importance of cooperation between families, communities and local sports clubs to provide opportunities for physical activity among learners. Studies on the collaboration between schools and universities have also yielded positive results in sharing materials, equipment and knowledge benefitting the implementation of physical education (Du Toit, 2019; Ferraz *et al*., 2020).

Macrosystem: Governmental policies and initiatives

Physical education needs the support of governmental policies and initiatives for implementing best practices in the subject in schools. All the participants confirmed that national curricula in their countries mandated physical education in schools, although it was pointed out that it is only a compulsory subject in the primary school in Brazil, and not mandated by all educational

boards in the secondary school in India. In this regard, a participant from India contended: "*All schools of India need to embrace one uniform national standard curriculum to help plan out the school year*" (Participant 6).

Furthermore, another participant commented that, although physical education is a mandatory subject in the South African curriculum, it forms only one of six topics of the subject "Life Orientation" and is allocated only 1 hour per week in the school timetable. This participant advocated to "*press policy-makers to adapt the curriculum, demanding the re-instatement of PE as a stand-alone subject and the increase of time allocated to 2 hours per week*" (Participant 5).

Another policy requirement which, according to a South African participant, would contribute to the elevation of the status of physical education, is that it should be assessed by means of a national examination. Related to this, two participants from China cited the national examinations that learners are required to write at the end of middle and secondary school in China, as best practices. For example, one declared:

> "*Physical education has become a compulsory course of school education in our country, mainly through the entrance examination for high school and college entrance examination physical education, which makes more and more students, parents and schools pay more attention to physical education.*" (Participant 4)

Besides sufficient time allocation, other curricular policy requisites for physical education that were noted as best practices by participants (some of which have already been mentioned), included regular professional teacher training, reasonable salaries for physical education teachers and low learner-to-teacher ratios.

Participants from Russia, China and Brazil reported recent national educational reforms that included improvements in physical education curricula, while some participants referred to "whole-school programmes that provide opportunities for physical activity across the school day" (Participant 6), and school initiatives implemented by national governments: "In Brazil, the Ministry of Health has proposed actions to stimulate discussion about the determinants of health and their relationship with physical activity levels in school through the programme 'Saúde na Escola – Health at School'" (Participant 7). "Students Taking Charge" is the Action for Healthy Kids framework in India that allows high school students to find ways to create and lead their own projects for nutrition and physical activity initiatives with help from adults and teachers" (Participant 6).

The instatement of national days and events related to physical education and sport was further recommended as practice, as reflected in the words of a participant from India and substantiated by a participant from China: "*Conduct a yearly sport and physical education fair*" (Participant 6); "*Collective events and competitions in physical exercise can cultivate people's spirit of unity, cooperation and collectivism*" (Participant 2).

Finally, participants agreed that continuing research is necessary to improve physical education programmes and policies: "*To improve the physical education in schools all over the country, there has to be constant research in other things which are highly related with physical*

education" (Participant 5). In this context, a participant from Brazil expressed concern that "*...epidemiological studies that present data on issues such as overweight, obesity and physical activity levels in children and young people are concentrated in the South and Southeast of Brazil. There is a worrying lack of studies in other regions*" (Participant 8), while a participant from China confirmed that "*in our country, there is a lot of research on the purpose and essence of physical education*" (Participant 1).

The value of sharing these research findings among BRICS nations was emphasised by a participant from Russia: "*I think it is important [to acquire] knowledges [sic] about differences and common points of PE among BRICS countries. It is important [that] we share knowledge and look for solutions*" (Participant 9).

Although physical education is mandatory in BRICS countries, differences in time allocation and exam requirements impact its implementation and status. Meng *et al*. (2021) contend that the status of physical education is high in China due to the national curriculum requirement that learners must pass the high school entrance examinations. Similarly, Botagariyev *et al*. (2021) relate the strong status of physical education in Russia to the mandatory annual fitness tests as part of the national curriculum. In India, the Central Board of Secondary Education (CBSE) demands a health and physical education examination paper as part of the final national secondary school exams, which is a requisite to progress to tertiary studies (CBSE, 2020). Burnett (2020) and Whittle *et al*. (2017) agree that a national examination in physical education would elevate its status to equal that of other "academic" subjects. Additionally, in view of the status of physical education in the other BRICS curricula, Meier (2021) and Burnett (2020) advocate awarding a "stand-alone" subject status to physical education in the South African national curriculum, together with more time allocation and smaller numbers of learners in classes.

The national initiatives to increase school health and fitness mentioned by participants in this study, the "Health at School" programme in Brazil (Silva *et al.,* 2017) and the "Active Healthy Kids India" (AHKI) framework in India (AHKI, 2022) have shown positive effects on the physical activity levels of teenagers in both countries. Both programmes utilised the presentation of sport and physical activity sessions in schools, as well as workshops for teachers and parents, which can be seen as best practices. Other examples of successful nationwide governmental programmes in BRICS countries include the Russian "Ready for Labour and Defence" (GTO) programme, which incorporates fitness exercises, tests and awards for citizens of all ages, and which is also integrated in the physical education curriculum in Russia (MSRF, 2015). The "Let's Play Physical Education Challenge" in South Africa, which brings national sporting heroes and coaches to primary schools to present workshops and courses in different sports, has been implemented in 1650 schools in the country by UNICEF South Africa, in collaboration with two national departments of government (UNICEF South Africa, 2018). Webster (2023), in a review of the "Comprehensive School Physical Activity Programs" (CPAP), considered to be the national framework for school physical education and physical activity in the USA, points out that school physical activity programmes require the training of teachers and the commitment of parents and community members to be successful. Another example is the "Fit India" movement, a nationwide movement encouraging people of all ages to include physical activities and sports in their daily lives, which also includes a National

Sports Day celebrated all over India (MOEI, 2023), further supporting the mentioned practice of national sport and physical education events.

To enhance physical education in schools, constant research is advocated for best practices addressing areas such as programme and policy strengthening, in order to introduce lifelong physical activity habits and reduce academic pressure,

CONCLUSION

The best practices in the BRICS countries, within the context of Bronfenbrenner's theoretical framework, involve considering and assessing the impact of different environmental systems on learners' engagement in physical education. At the microsystem level, pedagogy incorporating a variety of enjoyable and inclusive activities to increase knowledge of the health benefits of physical activity and equip learners with movement and sport skills will enhance learners' interest in physical education and sports. The enjoyment of physical education, through the establishment of sports concepts, integration of sport role models, and building autonomy in forming physically active habits, thus contributes to the development of a positive microsystem. Social recognition and remuneration, support from colleagues, involvement in subject management, and quality teacher training are elements of the mesosystem that potentially affect physical education teachers' motivation and wellbeing. Strategies to engage parents and the community in the indirect advancement of physical education address the exosystem, while government policies, national curricula, and nationwide health initiatives operate at the macrosystem level, shaping the overall context for physical education. Effective practices, such as integrating learning elements, improving teacher status and forming partnerships, thus operate at both microsystem and exosystem levels, influencing the immediate learning environment and the broader school and community contexts. Overall, the importance of ongoing research and the dissemination of knowledge in this field is underscored by the findings of this study, which aim to foster best practices in presenting physical education in the BRICS countries.

Limitations of the study

Despite the contributions of this study, several limitations should be acknowledged. The COVID-19 pandemic posed significant challenges, notably delaying the timely response to emerging results and limiting opportunities for follow-up engagement. Furthermore, the international scope of the research, focusing on BRICS countries, introduced linguistic challenges, as some key policy documents and curricula were only available in native languages with the risk of some nuances being lost in translation. Additionally, the inability to conduct in-person interviews constrained the collection of rich, contextual data that could have enhanced the interpretation of findings.

RECOMMENDATIONS

Enhancing physical education involves a wide spectrum of approaches, from advocating for policy changes to increase class time for physical education, to calls for comprehensive teacher training and relevant qualifications. Participants emphasise the importance of involving parents and communities in supporting physical education initiatives. They highlight the need for an environment where every learner can benefit from high-quality physical education, ultimately

leading to healthier, more active generations. This comprehensive understanding will serve as a valuable foundation for future initiatives and best practices aimed at elevating the standards of physical education across BRICS nations.

Conflict of interest

The authors declare no conflict of interest.

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