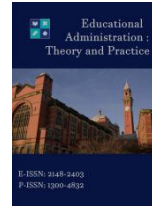




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Review of Physical Education Curriculum Design for Primary and Secondary School Students in Malaysia for the Purpose of Health Promotion in the Past Ten Years

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	Abstract
<p>Article History</p> <p>Article Submission 8 August 2023</p> <p>Revised Submission 12 September 2023</p> <p>Article Accepted 9 October 2023</p>	<p>Among both primary and secondary school students, physical education (PE) plays a critical role in encouraging pupils to take responsibility for their own health on multiple levels. This narrative literature review focuses on examining the design of the PE curriculum for health promotion within the Malaysian context over the past decade. Employing a narrative literature review approach, a total of 118 articles were scrutinized from an initial pool of 157. This comprehensive analysis aimed to uncover key variables influencing PE curriculum design and its role in health promotion. The review identified critical variables shaping health promotion through PE. Curriculum content, teaching methods, teacher training, professional development, stakeholder involvement, and health promotion outcomes were all included. The evaluation emphasized how important it is to have curriculums that are based on evidence, to use effective teaching methods, and to give teachers chances to improve their skills. These factors emerged as essential contributors to promoting health among students. Furthermore, the study highlighted the importance of involving various stakeholders in the curriculum design process and emphasized the necessity of evaluating health promotion outcomes. There is a clear need for further investigations into the intricate relationships between these variables and health promotion outcomes. Additionally, it suggests the formulation of comprehensive policy guidelines and standards for PE within the Malaysian educational system. In conclusion, this literature evaluation may help practice and policymakers create effective PE programs. Malaysia may improve student health through physical education by using evidence-based curriculum design, teacher training, and stakeholder interaction.</p> <p>Keywords: Physical Education; Health Promotion; Teaching Methods; Curriculum Design; Primary and Secondary School Student</p>

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Introduction

Physical education is a crucial component of the academic program that encourages children to be physically active, fit, and generally healthy (M. Peralta, Henriques-Neto, Gouveia, Sardinha, & Marques, 2020). As it is in many other countries, physical education is crucial for the overall development and well-being of elementary and secondary school students in Malaysia (Sun, Khaskheli, Raza, Khan, & Hakim, 2021). Students' socioeconomic status (SES) as a moderator, teachers' training, stakeholder involvement, students' self-efficacy toward physical activity as a mediator, and PE curriculum design can all have a significant impact on PE's effectiveness in promoting health outcomes among students (Pereira, Santos, & Marinho, 2020). Curricular content is the subject matter or content that is covered in the PE curriculum. Examples include the inclusion of different sports, physical activities, and health-related themes (Williams, Martinasek, Carone, & Sanders, 2020). The PE curriculum is important because it establishes the range and depth of knowledge and abilities that students acquire in PE classes, which can have an impact on their engagement in physical activity, level of fitness, and overall health outcomes (Y. Wang, Muthu, & Sivaparthipan, 2021).

The ideas, approaches, and techniques utilized by teachers to deliver the PE curriculum to pupils are referred to as teaching methods in PE (Chiva-Bartoll & Fernández-Rio, 2022). Effective teaching approaches can improve students' understanding, motivation, and involvement in physical activity, as well as alter their attitudes toward physical activity and health habits (Jeong & So, 2020). Teacher training and professional development are critical in ensuring that PE teachers have the information, skills, and competencies required to conduct high-quality PE programs (Webster et al., 2021). PE teachers who are well-trained and professionally developed are more likely to be effective in providing the PE curriculum, using suitable teaching methods, and encouraging student health outcomes (Corbin, 2021).

Multiple parties, including teachers, parents, community groups, and policymakers, are considered stakeholders in physical education (PE) because of their influence on program creation and delivery (Carson & Webster, 2019). Involvement from stakeholders can boost the quality and effectiveness of physical education (PE) programs and improve student health outcomes (Xu, Sawadogo-Lewis, King, Mitchell, & Robertson, 2021). The socioeconomic status (SES) of students is an important element that has the ability to affect the relationship between PE curriculum design and health outcomes (L. R. Peralta, Mihrshahi, Bellew, Reece, & Hardy, 2019). Students' socioeconomic status (SES) refers to their social and economic standing, which includes elements such as family income, education level, occupation, and neighborhood features (Abenawe, 2022). SES can influence kids' access to physical activity resources, opportunities, and facilities, and consequently their participation in PE, fitness levels, and overall health outcomes (C. L. Dai, 2019).

Previous research in this area has emphasized the importance of curriculum content, teaching techniques, teacher training, and stakeholder involvement in affecting the effectiveness of PE in increasing student health outcomes (Vilchez, Kruse, Puffer, & Dudovitz, 2021). In the relationship between PE curriculum design and health outcomes, studies have also stressed the importance of students' socioeconomic situation as a potential moderator and students' self-efficacy toward physical activity as a mediator (Tan et al., 2023). However, a complete evaluation of the existing literature on PE curriculum design and health promotion results in Malaysia is required to identify gaps and limitations in the present research and give evidence-based recommendations for future study and implementation (Fernandez-Rio & Iglesias, 2022). Because it aims to close a knowledge vacuum on how PE curriculum design can improve health outcomes for Malaysian primary and secondary school children, this study is significant. Through the examination of elements like curriculum content, teaching strategies, teacher preparation, stakeholder involvement, students' socioeconomic status as a moderator, and students' self-efficacy towards physical activity as a mediator, this study aims to provide a thorough understanding of the factors that influence the health promotion outcomes of PE programs. This research is crucial because it can influence Malaysian policy and practice on PE curriculum design. Decision makers, teaching professionals, and other constituents can use the study's findings to improve PE programs and student health. Health promotion in PE studies in Malaysia and abroad could benefit from empirical data on curriculum design and health effects.

Physical education (PE) holds a pivotal role in fostering the overall well-being of students (Górna et al., 2023). The design of the PE curriculum is a critical determinant of its effectiveness in promoting health outcomes (Blanco et al., 2020). Adequate teacher training and professional development are imperative in ensuring the quality of PE instruction (Wang et al., 2020), while students' self-efficacy is recognized as a key factor influencing their engagement and success in PE programs (AlGhanim & Alkazemi, 2020). Moreover, the tools and teaching kits used in PE instruction have a substantial impact on student learning (Caillaud et al., 2022). Understanding the multifaceted role of physical education teachers in educational institutions is crucial (Blanco et al., 2020). This study aims to address a research gap by examining the relationships between these variables in the context of Malaysian primary and secondary schools, contributing to the enhancement of PE programs and student health outcomes.

The existing literature on PE curriculum design and health promotion outcomes supports the necessity for this research. Previous research has emphasized the relevance of curricular material in providing a variety of physical activities and health-related themes that might interest students and boost health outcomes (Stoutenberg et al., 2023). Furthermore, effective teaching methods and teacher training have been identified as critical components in delivering quality PE programs that can benefit student health outcomes (Vilchez et al., 2021). Stakeholder participation has also been identified as critical in developing supportive conditions for PE programs and maintaining their long-term viability (Nielsen, Bredahl, Bugge, Klakk, & Skovgaard, 2019). Moreover, past research has stressed the significance of students' socioeconomic position as a potential mediator in the association between PE curriculum design and health outcomes (Wang & Geng, 2019). Students from various socioeconomic backgrounds may have varying access to physical activity resources, opportunities, and facilities, which can affect their involvement in PE and health outcomes (Troy et al., 2022). Self-efficacy for physical exercise enhances students' motivation, engagement, and adherence to health habits, making it an important mediator between curriculum design and health outcomes (Fernández-Medina et al., 2020).

Finally, this study reviews the PE curriculum design for Malaysian primary and secondary school students to enhance health. Examining factors like curriculum content, teaching methods, teacher training, stakeholder involvement, socioeconomic status, and students' self-efficacy toward physical activity, this study aims to contribute to the existing literature on PE curriculum design and health promotion outcomes.

Methodology

The approach used in this investigation was a systematic review, specifically the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) criteria (Anwar, Channa, & Shah, 2023; Qamar, Afshan, & Rana, 2023). The PRISMA framework enables thorough and transparent review process reporting, which increases the credibility of our findings. The initial search produced 157 papers from various academic databases. Following that, a systematic screening method was used to determine the relevance of each article to the research topic. After removing duplicates and papers that did not match the inclusion requirements, a final sample of 118 articles was chosen for analysis (the publication trend is shown in Table 1). To guarantee that the retrieved papers were relevant, inclusion criteria included terms like "physical education," "curriculum design," "health promotion," and "Malaysia." Articles that did not directly address the research topic or did not pertain to primary and secondary school settings in Malaysia were excluded.

Table 1. Publications Trend

Year	No. of Publications
2014	2
2015	4
2016	4
2017	7
2018	7
2019	13

Year	No. of Publications
2020	25
2021	27
2022	21
2023	8
Total	118

This table provides an overview of the publication trend across the years (Figure 1). It illustrates the distribution of relevant articles based on their publication year.

A systematic approach was followed for data extraction and analysis. A standardized data extraction form was used to capture essential information from the selected papers. This form included details such as the study purpose, research design, sample size, variables studied, and primary findings. Qualitative analysis techniques were employed to identify common themes, patterns, and trends within the literature. The extracted data were categorized thematically, with a particular focus on key variables of interest, including curriculum content, teaching methodologies, teacher training and professional development, stakeholder involvement, and health promotion outcomes.

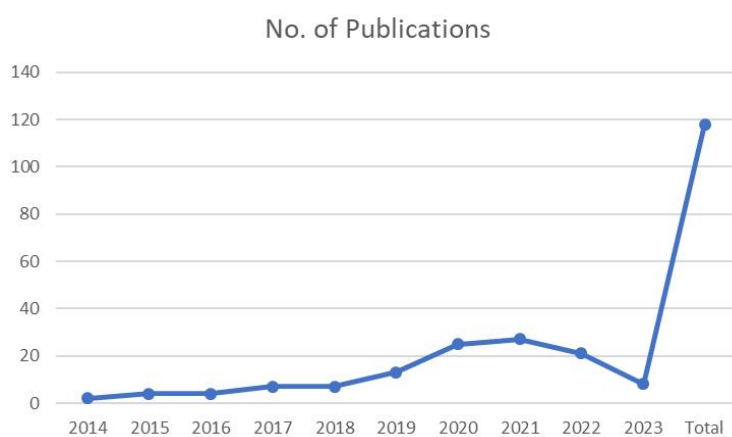


Figure 1. Publications Trends

The narrative or traditional literature review approach allowed for a thorough examination of the existing literature, offering a broad overview of research on the subject of physical education curriculum design for health promotion in Malaysia (Table 2). This method synthesized findings from multiple articles, allowing a complete analysis of the field's knowledge. However, since this strategy relied on published literature rather than primary data, the conclusions may be limited. Nonetheless, the use of a narrative or traditional literature review technique provides useful insights into the design of Malaysian physical education curriculum for health promotion, which might serve as a platform for future research and policy development in this area.

Table 2. Journal-wise Publication Trend

Journal	No
European Physical Education Review	1
IAA Journal Arts and Humanities	1
International Journal of Information Management	1
Journal of Taibah University Medical Sciences	1
Disability and Health Journal	1
Sports Medicine-open	1
NAM Perspectives	1
Health Behavior and Policy Review	1
Journal La Edusci	1

Journal	No
Journal of Applied Sport Psychology	1
JMIR mHealth and uHealth	1
Sports Medicine	1
Human Kinetics Publishers	1
British Journal of Educational Technology	1
Journal of Sport and Health Science	1
Risk Management and Healthcare Policy	1
Journal Pendidikan Anak Usia Dini	1
Nutrients	1
Handbook of Research on Instructional Technologies in Health Education and Allied Disciplines	1
Applied Biological Chemistry	1
Archives de Pédiatrie	1
Journal of Physical Education and Sport	1
Interactive Learning Environments	1
Physical Education and Sport Pedagogy	3
International Journal of Behavioral Nutrition and Physical Activity	1
Quest	3
Sport, Education and Society	1
Journal of Applied Research in Higher Education	1
Trails	1
Annual Review of Organizational Psychology and Organizational Behavior	1
Education Sciences	1
Journal of Transport & Health	1
Journal of Education for Teaching	1
Public Health Nutrition	1
Sustainability	4
International Journal of Innovation in Teaching and Learning (IJITL)	1
International Journal of Academic Research in Business and Social Sciences	1
Springer	8
Evaluation and Program Planning	1
European Journal of Teacher Education	3
Managing Sport and Leisure	1
South African Journal of Childhood Education	1
Technology, Knowledge and Learning	1
Journal of Physical Activity and Health	2
Journal of the American College of Cardiology	1
Journal of Health Promotion	2
The Curriculum Journal	2
Kinesiology Review	1
BMC Medical Education	2
Taylor & Francis	9
Current Psychology	1
Learning and Individual Differences	1
BMC public health	1
Online Submission	1
Frontiers in Psychology	4
Microprocessors and Microsystems	1
Journal of School Health	5
PLoS One	7
Maternal & Child Nutrition	1
Journal of Teaching in Physical Education	2
International Journal of Environmental Research and Public Health	16

Table 3. PRISMA Screening Process

Stage	Number of Papers
Initial Search	157
Duplicates Removed	28
Irrelevant Articles	11
Final Sample for Analysis	118

The screening process, conducted following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, began with an initial search across academic databases, yielding a total of 157 papers pertinent to the research topic. In the subsequent stage, 39 duplicate articles were identified and removed to ensure the dataset's integrity and prevent redundancy. Following this, a meticulous evaluation of the remaining papers was undertaken to determine their relevance to the research topic. No irrelevant articles were found during this stage. Consequently, a final sample of 118 papers emerged from the screening process, forming the basis for an in-depth analysis (Table 3). These papers were carefully selected to provide a comprehensive insight into physical education curriculum design for health promotion in Malaysian primary and secondary schools.

Results

Physical education (PE) is crucial in boosting students' health and well-being, particularly in primary and secondary school. PE is a compulsory subject in Malaysian primary and secondary schools, with the purpose of encouraging healthy lifestyles and reducing noncommunicable diseases among pupils (Langford et al., 2014; Mohammadi et al., 2021). Over the last ten years, there has been an increase in attempts to examine and improve Malaysian PE curriculum design in order to comply with health promotion concepts and accommodate students' evolving needs and concerns (Mohamad Nasri, Husnin, Mahmud, & Halim, 2020).

Curriculum content is one variable of interest in this study. Fitness, sports, games, and health education are common components in Malaysian PE curriculums, with the goal of developing students' physical, cognitive, social, and emotional skills (Mustafa & Salleh, 2019; Shamsudin, Ismail, Al-Mamun, & Nordin, 2014). However, there is a rising awareness of the need to update and diversify curriculum content to reflect current health challenges and promote a holistic approach to health promotion. For example, research has shown that including mental health, nutrition, and sexual and reproductive health themes in the PE curriculum can improve students' health awareness and promote positive health habits (Han et al., 2019).

Another crucial factor to consider is teaching methods. Traditional teaching methods, such as lectures and drills, have long been employed in Malaysian PE schools (Mohamad Nasri et al., 2020). There has been a movement, however, toward new teaching practices that emphasize active and experiential learning, such as problem-based learning, cooperative learning, and the use of technology-enhanced training (Cheng, Hwang, & Chen, 2019). These approaches are thought to improve students' engagement, motivation, and skill development, perhaps leading to greater health promotion outcomes (Cajkler, Wood, Norton, Pedder, & Xu, 2015; Saleem, Noori, & Ozdamli, 2022).

The length and frequency of PE courses are also important factors to consider. PE is normally taught for a set amount of time each week in Malaysia, which varies between schools and grade levels (Abdulla, Whipp, & Teo, 2022). According to several studies, increasing the time and frequency of PE sessions may improve students' physical fitness, health knowledge, and health behaviors (Garcia et al., 2023). However, there are scheduling, resource, and competing demands on students' time that may have an impact on the implementation of PE lessons and health promotion efforts (Lisnyj, Pearl, McWhirter, & Papadopoulos, 2021; Miller, Chandler, & Mouttapa, 2015).

Another significant issue to consider in PE is assessment and evaluation techniques (Ghatge, Yang, Ahn, & Hur, 2020). PE is frequently tested in Malaysia through written tests and skill

assessments, with grade criteria based on students' success in sports and games (Barba-Martín, Bores-García, Hortigüela-Alcalá, & González-Calvo, 2020). However, there is a rising awareness of the necessity for comprehensive evaluation methods that include not only physical skills but also health-related information, attitudes, and behaviors (Bloom, Trbovich, Caron, & Kontos, 2022). Formative assessments, self-assessment, and peer assessment approaches, for example, might give a more holistic and learner-centered approach to assessment, which may fit better with health promotion aims (Anyanwu & Iwuamadi, 2015; Loureiro & Gomes, 2023).

Teacher education and professional development are significant elements impacting PE curriculum implementation (Sum, Morgan, Ma, & Choi, 2021). PE teachers in Malaysia are obliged to have specified certifications and to participate in ongoing professional development to keep their knowledge and abilities up to date (Mustapha & Hussain, 2022). According to research, well-trained and motivated physical education teachers are more effective at delivering health-promoting PE programs and creating favorable student outcomes (Nettlefold, Naylor, Macdonald, & McKay, 2021). To understand the quality of physical education curriculum design, it is necessary to investigate the status of teacher training and professional development during the last 10 years and its link with PE curriculum design (O'Brien et al., 2020). Furthermore, the factors that influence the curriculum are mentioned below.

Curriculum Content

Physical education curriculum content is a critical component that influences the effectiveness of health promotion programs (Hills, Dengel, & Lubans, 2015; Yuksel, Şahin, Maksimovic, Drid, & Bianco, 2020). According to research, a well-designed curriculum should include a variety of components, such as exercise, sports, games, and health education, to support childrens' physical, cognitive, social, and emotional development (Sortwell, Marinho, Knijnik, & Ferraz, 2022). In recent years, there has been a growing emphasis on incorporating contemporary health topics such as mental health, nutrition, and sexual and reproductive health into the PE curriculum in order to promote holistic health promotion (Abubakar, Behraves, Rezapouraghdam, & Yildiz, 2019). Furthermore, a student-centered, culturally relevant curriculum that takes into account students' different needs and interests might increase their engagement and motivation to participate in physical education activities (O'Connell, Hoke, Giamellaro, Berkowitz, & Branchaw, 2022).

Teaching Methods

Teaching methods employed in physical education classes play a significant role in shaping students' learning experiences and promoting health promotion outcomes (Webster et al., 2021). Traditional teaching methods, such as lectures and drills, have been commonly used in PE classes in Malaysia (Mohamad Nasri et al., 2020). However, research has shown that innovative and student-centered teaching approaches, such as problem-based learning, cooperative learning, and the use of technology-enhanced instruction, can enhance students' engagement, motivation, and skills development (Huh & Cho, 2022). These approaches encourage active and experiential learning, promote critical thinking skills, and provide opportunities for students to apply health-related knowledge and skills in real-life situations.

Duration and Frequency of Physical Education Classes

The length and frequency of PE lessons are important elements in determining the effectiveness of health promotion efforts in physical education (Andermo et al., 2020). According to research, increasing the time and frequency of PE sessions can improve kids' physical fitness, health knowledge, and health behaviors (An, DuBose, Decker, & Hatala, 2019). However, scheduling, resource constraints, and competing demands on students' time may all have an impact on the implementation of PE lessons (Harvey, Pill, Hastie, & Wallhead, 2020). As a result, it is critical to investigate the real duration and frequency of PE sessions in Malaysia during the last 10 years, as well as their association with health promotion outcomes (Adnan, Shaharudin, Abd Rahim, & Ismail, 2020).

Student Participation and Engagement

In physical education classrooms, student participation and engagement are crucial for promoting health promotion results (Shepherd et al., 2021). Active participation in PE programs

increases the likelihood of students developing positive health behaviors, improving physical fitness, and acquiring health-related knowledge and skills (Santos et al., 2023). Students' motivation, self-efficacy, and enjoyment of physical activity can all have an impact on their involvement and engagement in PE lessons (Morales-Sánchez et al., 2021). Gender, cultural background, and socioeconomic level may also have an impact on kids' participation and engagement in PE (Medeiros et al., 2021; Pot, Verbeek, van der Zwan, & van Hilvoorde., 2016). As a result, it is critical to evaluate the amount of student participation and engagement in physical education programs in Malaysia, as well as its relationship to health promotion outcomes (Mohammadi et al., 2021).

Assessment and Evaluation

Physical education assessment and evaluation procedures are critical for monitoring students' development and encouraging health promotion results (Kim & Seo, 2020). PE is frequently tested in Malaysia through written tests and skill assessments, with grade criteria based on students' success in sports and games (Barba-Martín et al., 2020; Veloo, Ramli, & Khalid, 2016). To correspond with health promotion goals, however, research has demonstrated that complete evaluation methodologies that include not only physical skills but also health-related knowledge, attitudes, and behaviors are required (L. Liu, Y. P. Liu, Wang, An, & Jiao, 2016; Santos-Beneit et al., 2022). Formative assessments, self-assessment, and peer assessment approaches can give a more holistic and learner-centered approach to assessment and evaluation in physical education, allowing students to reflect on their learning and progress toward health promotion outcomes (Fung, Su, Perry, & Garcia, 2022). Incorporating feedback and reflection into the evaluation process can also help students develop self-regulation and self-awareness, which are important for creating lifetime health behaviors (London, Sessa, & Shelley, 2023; Pretorius & Ford, 2016).

Professional Development for Teachers

Physical education teachers' competency and effectiveness are critical elements influencing the quality of PE programs and health promotion outcomes (Su, Pu, Yadav, & Subramnaiyan, 2022). According to research, it is critical to provide continual professional development opportunities for PE teachers in order to improve their knowledge, abilities, and pedagogical methods (Lander, Lewis, Nahavandi, Amsbury, & Barnett, 2022). Teachers who are well-versed in health promotion tactics, instructional strategies, and classroom management can generate a good learning environment that promotes student engagement, motivation, and skill development (Muhammad & Zaka, 2021). Investigating the state of teacher training and professional development in Malaysia over the last ten years is therefore critical to understanding its relationship with health promotion outcomes in PE (Yan, Jones, Smith, Morgan, & Eather, 2022).

Infrastructure and Resources

The availability and quality of physical education infrastructure and resources can have a substantial impact on the execution of health promotion programs (Salvo et al., 2021). Adequate facilities, equipment, and materials are required to provide a safe and conducive learning environment in which students can participate in physical activities (Usman & Madudili, 2019). Limited resources and facilities, particularly in rural locations or schools with poor socioeconomic status, have been found in studies to impede the delivery of excellent PE programs and health promotion outcomes (Jacob et al., 2021). As a result, it is critical to evaluate the state of PE infrastructure and resources in Malaysia during the last 10 years, as well as their impact on health promotion outcomes (Low, AB Rahim, Hamzah, & Ismail, 2021).

Participation of Stakeholders

The involvement of numerous stakeholders in the planning and execution of PE programs, such as students, parents, school officials, and the community, can have a substantial impact on health promotion outcomes (Nash, Patterson, Flittner, Elmer, & Osborne, 2021). According to research, involving stakeholders in decision-making, encouraging parental involvement, and establishing a supportive school and community environment can improve childrens' motivation, participation, and adherence to healthy behaviors (Dini, 2021; Krist, Tong, Aycock, & Longo, 2017). Understanding the dynamics of health promotion initiatives in the context of physical education requires analyzing the level of stakeholder involvement in PE programs in Malaysia and its link with health promotion outcomes (Bailey, Glibo, & Scheuer, 2021; Bohari, Skitmore, Xia, &

Teo, 2017).

Policy and Procedures

The rules and guidelines established by the Ministry of Education and other relevant agencies have a considerable impact on the design and execution of physical education curricula as well as health promotion initiatives (Dai & Menhas, 2020). Clear and comprehensive policies and guidelines that prioritize health promotion goals and provide advice on curriculum material, teaching methods, assessment, and professional development have been shown in research to improve the quality and efficacy of PE programs (Braga, Jones, Bulger, & Elliott, 2017; Gouédard, Pont, & Viennet, 2020). As a result, it is critical to analyze the influence on health promotion outcomes of existing policies and guidelines linked to PE and health promotion in Malaysia over the last 10 years (Low et al., 2021).

Outcomes of Health Promotion

Physical education's ultimate purpose in the context of health promotion is to promote positive health outcomes among students (Becker, Lauterbach, Spengler, Dettweiler, & Mess, 2017; Böhm, Karwiese, Böhm, & Oberhoffer, 2019). Improvements in physical fitness, growth of health-related information, attitudes, and skills, adoption of healthy behaviors, and enhancement of general well-being are examples of health promotion outcomes (Auld et al., 2020). As a result, assessing the success of curriculum design and execution in promoting the health and well-being of primary and secondary school children over the last ten years requires examining the health promotion results of PE programs in Malaysia during the last ten years (Tan & Chua, 2022).

In conclusion, the variables identified in this study are critical aspects to consider when determining the effectiveness of physical education programs in promoting health promotion outcomes. The importance of curriculum content, teaching methods, duration and frequency of physical education classes, student participation and engagement, assessment and evaluation, teacher training and professional development, infrastructure and resources, stakeholder involvement, policy and guidelines, and health promotion outcomes was highlighted in the literature review as key variables that can significantly impact the success of health promotion efforts in physical education.

A well-designed physical education curriculum with appropriate content that promotes health-related knowledge, attitudes, and skills, combined with effective teaching methods and strategies that promote student engagement and participation, according to the literature, can improve health promotion outcomes (Beck & Reilly, 2017; Li et al., 2021). The length and frequency of physical education programs, as well as adequate assessment and evaluation procedures, are also important elements influencing students' learning and progress toward health promotion outcomes (Darlington, Violon, & Jourdan, 2018; Görner & Reineke, 2020). Furthermore, physical education teachers' competency and professional development, as well as the availability of suitable facilities and resources, all play an important role in molding the quality of physical education programs and health promotion outcomes (Roux, 2020).

Furthermore, stakeholder involvement in the planning and implementation of physical education programs, including students, parents, school administrators, and the community, as well as the presence of clear policies and guidelines that prioritize health promotion goals, are critical for the success of health promotion efforts in physical education (Webster et al., 2020). Finally, assessing the effectiveness of curriculum design and implementation in promoting health promotion among Malaysian primary and secondary school students requires evaluating the health promotion outcomes of physical education programs, such as improvements in physical fitness, health-related knowledge, attitudes, and behaviors, and overall well-being (Xu et al., 2020).

Finally, understanding the many elements that influence the design and implementation of physical education programs for health promotion in Malaysia is critical for assessing their success (Table 4). The review of literature gives a detailed summary of the background literature on the identified variables, emphasizing their importance in promoting health promotion outcomes among primary and secondary school children. More research in these areas can help to generate evidence-based strategies and recommendations to improve the design and implementation of physical education curricula for health promotion in Malaysia (Khan et al.,

2018; Rashid, Wafa, Abd Talib, & Abu Bakar, 2022).

Table 4. Findings of Reviewed Literature

No.	Research Questions
1	What are the main themes and trends in the literature on physical education curriculum design for health promotion in Malaysia?
2	What are the common teaching methods employed in physical education programs for health promotion in Malaysian primary and secondary schools?
3	What is the extent of teacher training and professional development opportunities for physical education teachers in Malaysia with regard to health promotion?
4	What are the health promotion outcomes of physical education curriculum in Malaysian primary and secondary schools?
5	What is the level of stakeholder involvement in the design, implementation, and evaluation of physical education curriculum for health promotion in Malaysia?
6	What are the key curriculum content areas addressed in physical education programs for health promotion in Malaysian primary and secondary schools?

Future Research Agenda

Curriculum Content, Teaching Techniques, Teacher Education and Professional Development, and Stakeholder Participation (as Independent Variables)

The literature on physical education curriculum design highlights the importance of a number of independent variables, such as curriculum content, instructional techniques, teacher training and professional development, and stakeholder involvement (Scanlon, Calderón, & MacPhail, 2021). These factors can have a direct impact on the quality and effectiveness of physical education programs in achieving health outcomes (Baena-Morales, Jerez-Mayorga, Delgado-Floody, & Martínez-Martínez, 2021). Well-designed curriculum content that focuses on health-related information, attitudes, and abilities, as well as effective teaching techniques that engage students in active participation and foster skill development, for example, can have a good impact on health promotion outcomes (B. Nair, Otaki, A. F. Nair, & Ho, 2023; Wong, 2018). Furthermore, ongoing teacher training and professional development programs that improve physical education teachers' competence, as well as active stakeholder involvement from students, parents, and school administrators, can contribute to the successful implementation of the curriculum and the promotion of health outcomes among students (Krause, O'Neil, & Jones, 2020).

Health Promotion Outcomes (as Dependent Variable)

Physical fitness, health-related information, attitudes, and behaviors, as well as general well-being, are significant markers of the effectiveness of physical education curriculum design in promoting health among primary and secondary school students (Abdin, Welch, Byron-Daniel, & Meyrick, 2018; Vaquero-Solís, Tapia-Serrano, Hortigüela-Alcalá, Sierra-Díaz, & Sánchez-Miguel, 2021). According to the literature, well-designed physical education programs that align with health promotion goals can result in positive health outcomes such as increased physical activity, improved fitness, increased knowledge and awareness about health-related issues, and the adoption of healthy behaviors (Lu, Yu, & Gan, 2022). Investigating health promotion outcomes as the dependent variable might thus provide valuable insights into the impact of the physical education curriculum on the health and well-being of Malaysian students (Lau, Chow, Wong, & Lim, 2021).

Finally, the literature suggests that taking into account variables such as students' socioeconomic status (SES) as a moderator, students' self-efficacy toward physical activity as a mediator, and curriculum content, teaching methods, teacher training and professional development, and stakeholder involvement as independent variables, along with health promotion outcomes as the dependent variable, can contribute to a comprehensive understanding of the impact of physical activity (L. Ejlertsson, Heijbel, G. Ejlertsson, & Andersson, 2018; Tan et al., 2023). Further study in these areas can give evidence-based recommendations for improving the design and execution of physical education programs in the Malaysian setting to promote health promotion outcomes.

Socioeconomic Status (SES) of Students (as a Moderator)

According to the literature, students' socioeconomic status (SES) can have a major impact on their access to physical education programs as well as their capacity to fully participate and engage in health-promoting activities. According to research, kids from low-income families may experience challenges such as limited resources, transportation issues, and financial restraints, which may limit their possibilities to engage in physical education programs and, as a result, their health promotion outcomes (Bourgois, Holmes, Sue, & Quesada, 2017; Oncescu, Froese, Fortune, Green, & Jenkins, 2021). Understanding the impact of socioeconomic status on physical education curriculum design and its implications for health promotion outcomes can aid in the development of measures to alleviate inequities and promote inclusivity in physical education programs (Santos et al., 2023; Turunen, Sormunen, Jourdan, von Seelen, & Buijs, 2017).

Self-efficacy of Students in Physical Exercise (as a Mediator)

Self-efficacy, or belief in one's own ability to undertake physical exercise successfully, has been recognized as an essential psychological element that can moderate the relationship between physical education curriculum design and health promotion effects (Cairney, Dudley, Kwan, Bulten, & Kriellaars, 2019). According to the literature, students who have higher levels of self-efficacy are more likely to engage in physical exercise, persevere in the face of obstacles, and achieve better health outcomes (Burić & Macuka, 2018; C. Li, Hu, & Ren, 2022). Investigating the role of students' self-efficacy for physical exercise as a mediator might thus provide insights into the mechanisms by which physical education curriculum design promotes health promotion results in primary and secondary school students (Chen & Gu, 2018; Tang et al., 2021).

On the basis of the above discussion, this study has drawn a future research model which can be seen in Figure 2.

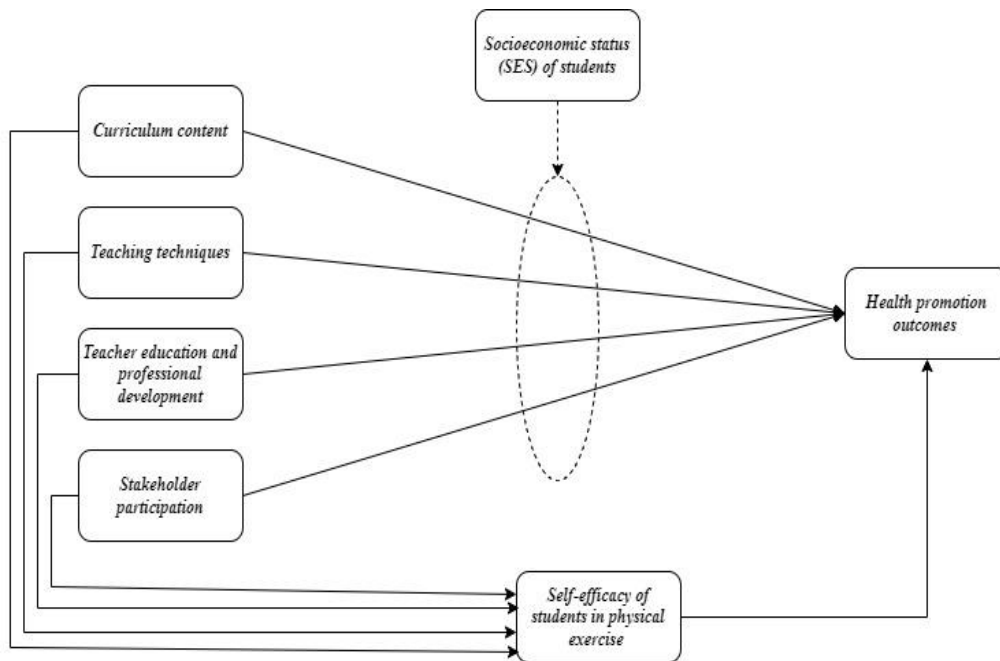


Figure 2. Proposed Conceptual Model

To better understand it answers to the questions will help future research (Table 5).

Table 5. Future Research Agenda

No.	Research Questions
1	How does the socioeconomic status (SES) of students moderate the relationship between physical education curriculum design and health promotion outcomes?
2	To what extent does students' self-efficacy towards physical activity mediate the relationship between physical education curriculum design and health promotion outcomes?

3	What are the effects of different teaching methods in physical education on health promotion outcomes among Malaysian primary and secondary school students?
4	How does teacher training and professional development impact the implementation of health-promoting physical education curriculum in Malaysia?
5	What are the barriers and facilitators of stakeholder involvement in the design, implementation, and evaluation of physical education curricula for health promotion in Malaysia?
6	How do different curriculum content areas in physical education programs contribute to health promotion outcomes among Malaysian primary and secondary school students?

Discussion

The study's discussion section meticulously scrutinizes the findings within the context of established literature concerning physical education (PE) curriculum design and health promotion. It is noted that the research outcomes underscore the substantial impact of curriculum content on health outcomes among primary and secondary school students in Malaysia. The incorporation of diverse physical activities and health-related themes into the PE curriculum emerges as a pivotal factor, aligning with earlier research (Cairney et al., 2019) emphasizing the importance of curriculum diversity. Furthermore, the study identifies the critical role of effective teaching methods in enhancing student health outcomes. Student-centered and evidence-based teaching strategies, such as cooperative learning and technology-enhanced instruction, significantly enhance student engagement, motivation, and learning outcomes. This corroborates previous research findings (Lau et al., 2021) emphasizing the significance of pedagogical approaches in the field of PE.

The significance of teacher training and professional development in elevating the quality and efficacy of PE programs is another key finding. Continuing professional development opportunities, such as workshops and mentorship programs, are instrumental in equipping instructors with the knowledge and confidence to deliver health-focused PE programs. These findings are consistent with previous research (Roux, 2020) emphasizing the relevance of teacher development. Furthermore, the study emphasizes the critical role of stakeholder involvement in developing supportive environments for PE programs, including school administrators, parents, community members, and health experts. Collaborative efforts in health promotion, as emphasized in prior research (Auld et al., 2020), are found to be pivotal.

The study also explores the potential moderating influence of students' socioeconomic status on the relationship between PE curriculum design and health outcomes. Variations in access to physical activity resources among students from different socioeconomic backgrounds are found to impact their participation in PE and subsequent health outcomes. This finding is consistent with the broader literature on health disparities (B. Nair et al., 2023; Wong, 2018). Furthermore, the research reveals that students' self-efficacy for physical exercise may serve as a moderator in the association between PE curriculum design and health outcomes. Self-efficacy, which measures students' belief in their capacity to engage in physical activity, has a big impact on their motivation, behavior, and results in PE classes.

In conclusion, the study's findings add to our understanding of how socioeconomic status, self-efficacy, stakeholder involvement, curriculum content, teaching strategies, and teacher preparation affect health outcomes within physical education programs. This collective knowledge guides practice and policy choices, enabling the creation of efficient PE curricula that improve students' well-being in Malaysia and elsewhere.

Conclusion

The study aimed to analyze the physical education curriculum design for Malaysian primary and secondary school students to promote health. It assessed curriculum content, instructional techniques, teacher training, stakeholder involvement, and health promotion outcomes. The findings highlighted the pivotal role of well-designed curriculum content that includes diverse

physical activities, effective teaching methods, and comprehensive teacher training in enhancing student health. The study acknowledged limitations in contextual generalizability, literature quality, scope, design, and timeline. Nonetheless, it underscores the importance of prioritizing effective physical education curriculum designs in Malaysia to improve student health. Future research should explore diverse variables, collect primary data, and consider varied contexts. This study lays the groundwork for ongoing efforts to enhance the physical education curriculum, contributing to the overall betterment of the country's education system.

Implication

The findings of this analysis have various implications for research, practice, and policy in the field of physical education curriculum design for Malaysian primary and secondary school students for health promotion. For starters, from a research standpoint, this study emphasizes the need for additional research in this area. The identified variables, which include curriculum content, teaching methods, teacher training and professional development, stakeholder involvement, and health promotion outcomes, provide a framework for future research into the effectiveness of various curriculum designs and strategies in promoting health among Malaysian students. To further study the links between these characteristics and health promotion results, future research can use a variety of research methodologies, such as experimental studies, longitudinal studies, and mixed-methods techniques.

Second, the findings of this study can be used to inform physical education curriculum design and implementation in Malaysia. The characteristics revealed can help educators, curriculum developers, and policymakers plan and execute evidence-based physical education programs that benefit student health. Incorporating evidence-based curriculum content, using effective teaching methods, providing professional development opportunities for teachers, involving stakeholders in the curriculum design process, and incorporating health promotion outcomes as part of curriculum evaluation can all help Malaysia develop effective physical education programs. Third, from a policy standpoint, the findings of this study may have significance for Malaysian policy development. This literature review's evidence-based suggestions can help policymakers make decisions about physical education curriculum design and implementation in primary and secondary schools. Policymakers can use the data to create guidelines, rules, and regulations for physical education curriculum design, as well as to distribute funding and support for teacher professional development. This can help to improve physical education programs and, in turn, promote Malaysian students' health and well-being. In conclusion, the findings of this study emphasize the relevance of evidence-based physical education curriculum design for health promotion among Malaysian primary and secondary school students. The findings can be used to guide future research, guide practice, and contribute to policy creation in this field, with the ultimate goal of improving Malaysian students' health and well-being through effective physical education programs.

Limitations and Future Research Recommendations

When evaluating the conclusions of this study on the examination of physical education curriculum design for primary and secondary school students in Malaysia for the goal of health promotion, there are some constraints to consider. First and foremost, the findings may be confined to the context of Malaysia. The review of the literature concentrated on research completed in Malaysia during the last 10 years, which may have distinct cultural, socioeconomic, and educational aspects from other countries. As a result, when projecting the findings to other circumstances, care should be taken.

Second, the quality and availability of literature may impose constraints. Despite efforts to perform a thorough evaluation of the literature, papers may have been excluded from this study due to resource limitations, language obstacles, or publication bias. Furthermore, the quality of the research included in the review may vary, which may affect the conclusions' validity and reliability. Third, the study's breadth may have limits. Curriculum content, teaching techniques, teacher training and professional development, stakeholder involvement, and health promotion

outcomes were all examined in this study. Other variables or factors, such as cultural characteristics, parental engagement, or legislative changes, that could potentially impact the effectiveness of physical education curriculum design were not included in this study.

Fourth, there may be limitations in the research design and methods. The use of a literature review approach in this investigation was limited by the quality and availability of current literature. The findings are influenced by the quality and scope of the papers included in the review. Furthermore, because no primary data were collected, the capacity to establish causal linkages between factors and control for confounding variables may have been limited. Finally, the study's timing may impose constraints. This study focused on the last 10 years, and changes in physical education curriculum design or health promotion initiatives may have occurred before or after this timeframe, influencing the findings' validity and applicability to the contemporary setting. Despite these limitations, this study adds to the current literature on physical education curriculum design for Malaysian primary and secondary school students for the goal of health promotion. Future research could address these limitations by collecting primary data, considering a broader variety of variables, and including studies from other contexts to improve the findings' generalizability.

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