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## **Analysis of Research Trends on Physical Literacy in Indonesia**

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### **Abstract**

In Indonesia, physical literacy has not developed as rapidly as in developed countries. There are only a few of studies examining physical literacy in Indonesia. This study was aimed to scientifically reveal the focus of physical literacy studies in Indonesia by using an article review approach. The search for articles was limited to the latest 10-year publications and articles published in accredited National/International Journals and National/International Seminars provided with ISBN. A total of 7 articles were selected for further analysis using synthesis techniques. The results of the study revealed that there were only six studies on Physical Literacy in Indonesia published in National Journals and National/International Seminars. The focus of the study on physical literacy research in Indonesia included the lead to the measurement of physical literacy and the development of physical literacy instruments in elementary schools (three studies), using learning approach to improve physical literacy (two studies), and the concept of physical literacy in Physical Education (one study). This study is limited to an article review. For further research, it is hoped that new research focusing on physical literacy studies, using a research method approach adapted to the research objectives, will emerge to develop concepts, measurements, and implementations of physical literacy programs in Indonesia.

## INTRODUCTION

The term of physical literacy was first introduced at the International Association of Physical Education and Sport for Girls and Women Congress in Melbourne, Australia, in 1993 by Whitehead. Whitehead offers several concepts about the definition of physical literacy (Robinson et al., 2018). Physical literacy is defined as motivation, self-confidence, physical competence, knowledge, and understanding to appreciate and be responsible for their involvement in lifelong physical activity (M. Whitehead, 2007). Physical literacy can be described as a disposition characterized by motivation to utilize the potential of innate movements to make a significant contribution to quality of life (M. Whitehead, 2010). Individuals owning physical literacy will move calmly and confidently in various physically challenging situations and be perceptive in examining all aspects of the physical environment, anticipating the need or possibility of movement, and responding appropriately with movement intelligence and imagination (Allingham et al., 2019).

The concept of physical literacy has become popular in recent years in many different countries. Educational organizations and researchers around the world argue that physical literacy should have an equal educational value as literacy and numeracy (Shearer et al., 2018). The existence of physical literacy in education, especially physical education, as a mature concept is increasingly recognized shown by the emergence of the International Physical Literacy Association (IPLA) which provides a consensus statement involving several sports experts (Robinson et al., 2018). The development of physical literacy is inseparable from the results of studies carried out by experts around the world.

Research on physical literacy from 2001-2016 including 49 articles from electronic searches in reputable international journals revealed that the concept of physical literacy is used in various contexts, especially in relation to 'education', 'activity', 'fitness', 'health', 'concept', 'competence', 'understanding', 'role', 'curriculum', 'teaching' and 'assessment'. The most relevant concept to physical literacy is 'physical education', a term that is often replaced by 'literacy' (Hyndman & Pill, 2018). In addition, 103 papers from peer-reviewed literature from 1993 to 2019 highlighted the increase in physical literacy research worldwide, particularly in England, Canada, United States, Wales, Scotland, Aus-

tralia, and New Zealand, the countries that have invested in physical literacy development initiatives (Young et al., 2020). The high number of results of this study prove that physical literacy in the world has developed.

Physical literacy has become the main focus in research studies in the field of physical education, promotion of physical activity, and sports development in the world (Giblin et al., 2014). In the physical education research focus, physical literacy becomes the ultimate goal of physical education by conceptualizing the movement of children as human being, holistically, who move to learn to become children who are knowledgeable in movement (Chen, 2015). Physical literacy contributes to the fundamental concepts of motor skills and identification of sports talent that can be improved through physical education learning (Lundvall, 2015). In the study of promotion of physical activity, it is clear that physical literacy has an inseparable relationship with physical activity (PA). Increasing physical literacy does not only contribute to the increased physical activity but also to the results of participation in physical activity (Li et al., 2020). Physical literacy interacts with other physical components to influence children's physical activity patterns (Brown et al., 2020). For sport development study focus, physical literacy promotes the development of sport in Australia (Scott et al., 2021).

The trend of physical literacy research in the past 10 years has been more on measurement by developing several instruments (Young et al., 2021). Research of (Robinson et al., 2018) focused on measuring the movement skills and physical fitness of children using Sport for Life (PFL). CAPL for grade 4 elementary school students had also been developed by (Longmuir et al., 2015) which focused on individual measurement of all aspects of the physical literacy domain. Measurements on movement motivation, confidence, and understanding domains as a journey to achieve physical literacy had also been carried out by M. E. Whitehead, et al (2018). The majority of physical literacy measurement tools were identified that 70% adopt an assessment in learning, or at a certain time, combined with an assessment as learning while assessing the progress of physical literacy individually (Jean de Dieu & Zhou, 2021).

Meanwhile, in Indonesia, physical literacy has not developed as rapidly as in other developed countries. There are not many studies examining physical literacy in Indonesia (Permana & Habibie, 2020). As delivered

by Prof. Toho Cholik Mutohir at the National Webinar Physical Literacy In Indonesia: A New Challenge, there has not been many sports experts in Indonesia studying physical literacy, there is no research concept map focusing on the study of physical literacy integrated in sports education and sports achievements, and there is no program for physical literacy implemented. Therefore, from the theoretical and practical explanation, this study was aimed at describing scientifically the focus of physical literacy study in Indonesia by using an article review approach. The results of this study are expected to be the basis for sports experts, especially sports education, to start studying physical literacy in Indonesia (Permana & Habibie, 2020).

## METHODS

Literature review was used in this study to reveal trends in the physical literacy research issue in Indonesia. The electronic search strategy used google scholar using key words 'physical literacy in Indonesia', 'Literasi Fisik di Indonesia', 'Melek Fisik untuk anak Indonesia', 'perkembangan literacy fisik di Indonesia' and 'sejarah literacy fisik di Indonesia'. The search for articles using this keyword was carried out with a 10-year period and was limited to articles published in accredited National/International Journals and in National/International Seminars with ISBN.

Inclusion criteria of this study include: 1. based on the question scope, 2. research variables, 3. study design, 4. kindergarten-high school student population, 5. Published in the last 10 years, and 6. in Indonesia language. While the exclusion variable included not published in national journals or proceedings with ISBN. Of the obtained 6 articles, all of them were selected because they met the criteria for further analysis using synthetic techniques. Synthesis technique is a concluding technique conducted by reading, understanding, and analyzing the information conveyed by the authors in the concepts they provide (Rahayu et al., 2019).

## RESULT

From the search results from google scholar with the criteria described previously, there were only 7 articles that met the criteria to be presented using the matrix in Figure 1. Most researches using these keywords

were only articles stored in the repository and were not published in the accredited National/International Journals or National/International Seminars with ISBN.

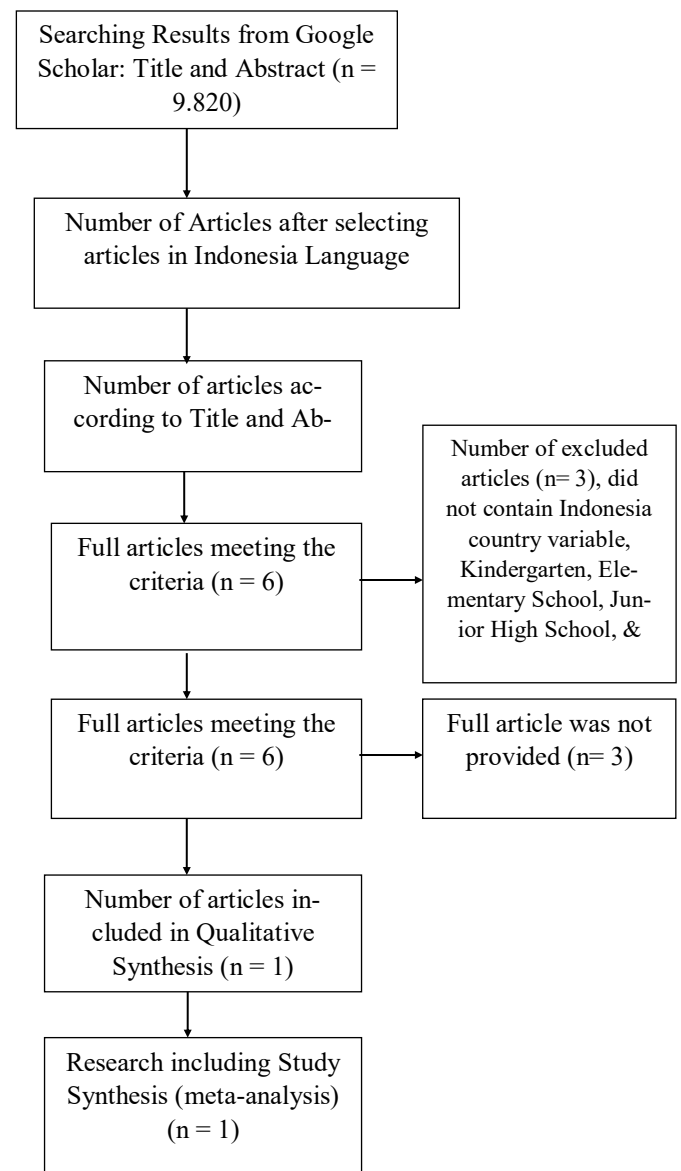


Figure 1. Prisma Diagram of Literature Review

## Productivity of Physical Literacy Research

After eliminating non-eligible articles, 6 studies met the inclusion criteria based on the location of the study. From the articles in Table 1, there were two studies using the literature study method, two studies using surveys, one study using R&D, and one study using a one-shot case study.

**Table 1.** Matrix of Articles

Authors/ Years	Title	Source	Method	Results
Widodo, Agung (2018)	The meaning and role of physical education in the formation of physically literate/physically literate people	Motion Jurnal, Volume IX, No.1	Literature Study	Student learning achievement boils down to being physically literate. This learning achievement is obtained through learning experiences during the learning process through physical activities that are followed
Gustian, Uray; Supriatna, Eka; Purnomo, Edi (2018)	Learning Activity To Develop Physical Literacy In Kindergarten	Advances in Social Science, Education and Humanities Research, volume 278	R & D	Results of research showed that the model of learning activities that were developed were feasible and effective to increase the ability of physical literacy of kindergartens because learning activities were developed in accordance to the basic concept of learning model and able to encourage children to move
Said, Hariadi (2019)	Physical Literacy Of Elementary School Students In Gorontalo	Advances in Social Science, Education and Humanities Research, volume 335	Survey	Students with a physical literacy in the low-level category were eight (2.36%), low physical literacy level was 135 (39.94%), medium category was 166 (49.11%) and good physical literacy level category was 38 people (9.79%)
Gustian, Uray (2020)	Traditional Games: An Approach in Developing Physical Literacy for Elementary School Students	Jurnal SPORTIF: Jurnal Penelitian Pembelajaran, 6 (1) 2020   199-215	Experimen one shoot cased study	The use of modified traditional games can improve the PL of elementary school students
Priadana, W.B; Saifuddin, Hasan: Prakoso, B.B (2021)	Feasibility of measuring knowledge aspects on physical literacy instruments for students aged 8-12 years	MULTILATERAL : Jurnal Pendidikan Jasmani dan Olahraga 20 (1), 2021, 21-32	Survey	Physical Literacy Knowledge Questionnaire (PLKQ) can be an alternative options for measuring physical literacy knowledge in Indonesia
Permana, Rahmat & Habibie, Alfadh (2021)	Analysis of Physical Literacy Assessment with PJOK Learning Needs at Muhammadiyah Elementary School Tasikmalaya	SemNas Universitas Muhammadiyah Purwokerto ISBN: 978-602-6697-66-0	Literature Study	Canadian assessment Physical literacy lebih mencakup seluruh aspek hasil belajar yaitu afektif, kognitif dan psikomotor sedangkan TKJI yang sering dilakukan hanya mencakup psikomotor

### Physical Literacy Research Focus

The focus of the study on physical literacy research in Indonesia began with a literature review in 2018 discussing the meaning and role of physical education in building physically literate people. In 2018 there was also R&D research creating learning activity models to improve physical literacy of kindergarten students. In 2019, the focus of research studies led to descriptive measurements of physical literacy in elementary school students. The focus of research studies in 2020 was experimental research using traditional games as an approach in developing physical literacy for elementary school students. In 2021, the focus of the study had begun on developing physical literacy instruments for students aged 8-12 years and analyzing physical literacy assessments related to learning needs of Physical Education in elementary school. The

focuses of these studies are concluded in Table 2.

**Table 2.** Focus of the Physical Literacy Research

Total	Research Focus
3	Measurement of physical literacy and development of physical literacy instruments in Elementary School
2	Learning approach to improve physical literacy
1	The concept of physical literacy in physical education

### DISCUSSION

The focus of physical literacy research in Indonesia is more on measuring physical literacy and developing physical literacy instruments. There are 3 research focusing on measuring physical literacy. In the first

study, the measurement used a physical fitness test for elementary students (Said, 2019). The second study used the collaboration of the Indonesian Physical Fitness Test (TKJI) measurement and the Canadian Assessment of Physical Literacy (CAPL) for elementary students (Permana & Habibie, 2020). The last is the development of the Physical Literacy Knowledge Questionnaire (PLKQ) instrument for elementary school students in Indonesia (Priadana et al., 2021).

Physical literacy measurement instruments have become the focus of studies in global research to monitor the development of physical literacy skills in elementary school students (Longmuir & Tremblay, 2016). The development was started with CAPL for children aged 8-12 years and followed by the development for children aged 12-16 years developed in Canada (Blanchard et al., 2020; Longmuir et al., 2015) with instrument improvements and developments every year on physical literacy indicators, such as motivation and self-confidence (Gunnell et al., 2018; Longmuir et al., 2018; Longmuir & Tremblay, 2016). Until now, CAPL has become the main reference of the instrument to measure physical literacy of elementary school students aged 8-12 and for middle school students aged 12 -16 years (Young et al., 2021) and has been developed in several countries including in Indonesia.

The next research focus is learning approaches to improve physical literacy found in 2 research in Indonesia. The first study is the development of movement learning activities for kindergarten students in improving physical literacy (Gustian et al., 2019). The next is the use of traditional games in the physical education learning process to improve the physical literacy of elementary school students (Gustian, 2020).

Research on physical activity interventions integrated into physical education curricula has been widely carried out in America, Australia, and Europe such as the play streets program which includes physical activity for improving children's physical literacy in Portugal (Nicholson & Thorn, 2020). The development of sports education curriculum programs integrated into physical education curricula in Europe is used to improve physical literacy in schools (Farias et al., 2019; Hastie & Wallhead, 2015; Scott et al., 2021). Meanwhile, the program to increase physical literacy integrated into physical education in the form of Physical Education Physical Literacy (PEPL) intervention has spread

worldwide as a reference for adopting this program into the physical education curriculum to improve students' physical literacy (R. Telford et al., n.d.; R. M. Telford et al., 2021).

There was only one study focusing on the level of the concept of physical literacy in physical education in Indonesia. The description of the concept of physical literacy and the actual orientation of physical education in schools as an effort to build physically literate individuals has been revealed (Widodo, 2018). Research at the concept level is always developing every year. The concept of physical literacy continues to develop from definition to program implementation (Bailey, 2020; Hyndman & Pill, 2018; Shearer et al., 2018). Physical literacy is not a new concept to be revived in the last decade when researchers and practitioners are trying to improve the status of physical education in the school environment (Gu, et al., 2019). Determining the concept of physical literacy in general can be related to a clear philosophical approach and transparency that can be used as a reference for how physical literacy program actions are made (Shearer et al., 2018).

## CONCLUSION

This study informs the public that research on Physical Literacy (PL) has not been widely studied in Indonesia. The results of the study revealed that there were only six studies in Indonesia on Physical Literacy published in National Journals and National/International Seminars. Three studies focused on the measurement of physical literacy and the development of physical literacy instruments in elementary schools. Two studies focused on using a learning approach to improve physical literacy. One study focused on the concept of physical literacy in physical education.

The findings of this study indicate that research on physical literacy in Indonesia needs to be developed so that physical literacy becomes an important focus of study in the field of physical education to measure the success in teaching, thus it can be integrated into the physical education curriculum in Indonesia. This study is limited to an article review. For further research, it is hoped that new research will focus on physical literacy studies using a research method approach adapted to the research objectives to develop concepts, measurements, and implementation of physical literacy programs in

Indonesia.

## CONFLICT OF INTEREST

The authors declared no conflict of interest.

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