

# Perception of physical literacy among secondary school physical education teachers

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## ABSTRACT

**Introduction:** Physical literacy (PL) is important among children and teenagers. Studies have shown that children with high level of PL tend to be more active and not only is an active lifestyle linked to lower risk of metabolic disease, it's also associated with better academic results. Physical Education (PE) curriculum in school is aimed to develop PL among school children and PE teachers plays an important role in achieving that goal. Although PE teachers are models of people with good PL, PE teachers in schools does not necessarily take this into account.

**Aim:** The purpose of this study was to identify the level of perception PL among PE teachers in Malaysia.

**Methods:** This quantitative study involved secondary school PE teachers (N=100) from Miri, Sarawak. Physical literacy was measured using the Perceived Physical Literacy Instrument (PPLI).

**Results:** This study found that the overall level of PL is high among PE teachers ( $M = 4.23 \pm 0.39$ ) with no significant difference between gender, location and teaching experience. However, PE teachers who majored in PE have a significantly higher PL compared to PE teachers who were not PE majors.

**Conclusions:** The significantly higher PL among PE teachers who majored in PE shows that they may be more suitable to teach PE. Whenever possible, PE should be taught by subject-qualified teachers for PE to be effective in developing PL among students.

**Key Words:** Physical literacy, physical education teachers, primary school

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Submitted: 06-Aug-2021 Accepted: 03-Sep-2021 Published: 28-Dec-2021

## INTRODUCTION

Physical literacy (PL) can be defined as the motivation, confidence, physical competence, understanding and knowledge to main physical activity at an individually appropriate level throughout life (Whitehead 2001). The development of PL leads to the acquirement of fundamental movement skills, such as running, swimming, cycling, throwing, catching and jumping, and has to start from a young age, just like literacy and numeracy (Balyi and Hamilton 2004). PL allows children to demonstrate a variety of movements confidently, efficiently, and solve problems in different situations creatively (Higgs et al. 2008). Physical

literacy should be nurtured from an early age, through various activities that aim to develop fundamental movement skills, through planned and unplanned activities (Penney and Chandler 2010). According to Robinson et al. (2018), better physical activity can support children to be more active in their daily lives.

In the Malaysian education system, physical education (PE) class is the best opportunity to develop PL among children, and it can start as early as 7 years old, when they enrol in primary school. PE teachers therefore play an important role in the development of PL in the school through PE lessons. Children

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Quick Response Code: 	Website: <a href="https://www.mohejournal.org">https://www.mohejournal.org</a>
	DOI: 10.4103/mohe.mohe_19_21

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**How to cite this article:** Cheng, C. S., Koh, D. (2021). Perception of physical literacy among secondary school physical education teachers. *Malaysian Journal of Movement, Health & Exercise*, 10(2), 117-20.

learn by observation, and PE teachers displaying high PL will help the children to also develop their PL not only through the carefully planned PE lessons but also through observing the teachers.

So far, there is no study that explores the level of PL among PE teachers in Malaysia. This is important because teachers with high PL will be able to demonstrate confident and accurate movement skills for the students to emulate, as well as show that they enjoy moving. However, there is no standard protocol to measure adult's PL directly, and therefore, this study will measure PE teacher's perceived PL. This study aims to explore the perceived PL among PE teachers in rural primary schools in Malaysia.

## METHODOLOGY

This is a cross-sectional study. PL is measured using the Perceived Physical Literacy Instrument (Sum et al. 2016). This is a questionnaire with nine items, as presented in Table 1. It measures three domains: (i) knowledge and understanding; (ii) self- and self-confidence and (iii) self-expression and communication with others. All responses for the items were a five-point Likert scale, where 1 is 'strongly disagree' to 5 'strongly agree.' A mean composite score was calculated, where higher score means higher perceived PL. Socio-demographic factors measured in this study include gender, teaching experience (in years), school location (urban vs. rural) and whether they were trained PE teachers. Trained PE teachers here refer to teachers who majored or minored in PE during their undergraduate studies. In Malaysian schools, teachers can be assigned to teach subjects they were not formally trained for if the school lacked trained teachers in the subject. The questionnaire was distributed to participating schools through the Head of PE from each school to all teachers currently teaching PE in the school.

## RESULTS

A total of 100 PE teachers completed the questionnaire. The majority of the respondents are male (68%), with the other socio-demographic factors quite evenly distributed, such as teaching in rural schools (51%), are experiences (55%) and are trained PE teachers (53%) [Table 2].

This study found that the overall perceived PL reported among PE teachers in Malaysia is high ( $M = 4.23 \pm 0.39$ ). The domain 'knowledge and understand' has the highest mean score ( $M = 4.59$ ) and contributed the most to the PL scores, while the domain 'self- and self-confidence' has the lowest mean ( $M = 4.02$ ). In line with these findings, the item with the highest percentage of agreement is item 2 'I appreciate myself or others doing sports', and it belongs to domain 'knowledge and understanding'. The item with the highest percentage of disagreement is item 7 'I am physically fit, in accordance with my age', which is in the domain 'self-self-confidence' [Table 3].

**Table 1: The perceived physical literacy instrument**

No.	Item
Item 1	I have a positive attitude and interest in sports
Item 2	I appreciate myself or others doing sports
Item 3	I am aware of the benefits of sports related to health
Item 4	I have strong social skills
Item 5	I am confident in wild/natural survival
Item 6	I am capable in handling problems and difficulties
Item 7	I have physically fit, in accordance with my age
Item 8	I possess self-management skills for fitness
Item 9	I possess self-evaluation skills for health

**Table 2: Socio-demographic factors**

Socio-demographic factors	Percentage
Gender	
Male	68
Female	32
Location	
Urban	49
Rural	51
Teaching experience (years)	
0-5	45
6 and above	55
Specialisation	
Trained in PE	
Male	37
Female	16
Not trained in PE	
Male	31
Female	16

PE: Physical education

**Table 3: Perceived physical literacy among physical education teachers**

Physical literacy domains	Mean
Knowledge and understanding (items 1, 2, 3)	4.59
Self-expression and communication with others (items 4, 5, 6)	4.11
Self-and self-confidence (7, 8, 9)	4.02

Although the domain 'self- and self-confidence' has the lowest mean score, it still has a high mean score. Therefore, we can conclude that overall, teachers teaching PE in Malaysian primary schools have a high perceived PL; however, they reported lower self- and self-confidence in their movement. They felt that they are not as physically fit as their age.

This study found no significant difference in perceived PL between gender, school location and teaching experience. Although teachers from urban schools and with higher teaching experience did report higher perceived physical literacy, the differences were not significant. The only socio-demographic factor that showed a significant difference between groups is teacher's specialisation. Teachers who are trained in PE have a significantly higher perceived PL compared with teachers who are not trained in PE ( $t(98) = 4.52, p < 0.001$ ) [Table 4].

**Table 4: Socio-demographic differences in perceived physical literacy among physical education teachers**

Socio-demographic factors	n	Mean±SD	t	Significance
Gender				
Male	68	4.22±0.44685	4.20	0.61
Female	32	4.26±0.26281		
Location				
Urban	49	4.32±0.37486	2.15	0.34
Rural	51	4.15±0.40216		
Specialization				
Trained in PE	53	4.39±0.37749	4.52	<0.001*
Not trained in PE	47	4.06±0.34383		
Teaching experience (years)				
0-5	45	4.16±0.34020	-1.69	0.93
6 and above	55	4.29±0.43025		

\* $p < 0.05$ . SD: Standard deviation, PE: Physical education

## DISCUSSION

Findings from this study showed that overall, teachers who are teaching PE in primary schools in Malaysia have high perceived PL. They perceived themselves as having the needed knowledge, skills and confidence to be physically active and fit. The very high scores in the domain 'knowledge and understanding' reflect the scope of knowledge that PE teachers have to be able to teach PE effectively. The higher perceived PL among trained PE teachers highlights the importance of assigning teachers the subject to teach based on their expertise. This indicates that despite whether teachers currently teaching PE in primary schools are trained PE teachers or not, overall, PE teachers do have the needed self-confidence and perceived knowledge and skills to be a role model to students on being active and staying fit.

The most notable findings from this study are the significant difference on perceived PL between teachers who were trained in PE and teachers who were not trained in PE. Teachers who were currently teaching PE but were not trained in PE reported a significant lower perceived PL compared to teachers who were trained in PE. This suggests that teachers who are trained in PE do not only have better training to teach PE, but they may also be a better model for motivating students to participate in physical activity. Previous study has found that teachers trained in PE are able to create a fun environment for learning and organise teaching activities that are effective in increasing student's interest during PE lessons (Ali et al. 2017; Lundvall 2015). The findings from this study are also supported by previous studies that found most teachers trained in PE have a higher level of enjoyment, self-confidence and knowledge on teaching PE compared with teachers teaching PE who were not trained in PE (Decorby et al. 2005).

This study found that there were no significant differences in perceived PL between genders, location and teaching experience among PE teachers. Although there was a lack of similar studies that reported on perceived PL among PE teachers, previous studies reported that gender and location (urban/rural) does not play a role in the ability of teachers to create effective teaching environment for PE in schools (Ali et al. 2017; Ghani et al. 2017).

Although previous studies have reported that teachers with higher teaching experience have a higher self-confidence in teaching PE compared to teachers with less experience (Kilue and Muhamad 2017; Stoddart and Humbert 2017), the findings from this study that found no relationship between perceived PL and teaching experience suggest that PL may not have an impact on a teacher's confidence in teaching PE. Although self-confidence in teaching PE was reported to have a positive relationship with self-efficacy of PE teachers (Yakub et al. 2019), this study suggests that it is not associated with perceived PL. This could be because self-confidence in teaching may come from other factors and perceived PL may only have played a small role.

## CONCLUSION

The study found that the level of perceived PL among PE teachers in Malaysia was high. Teachers trained in teaching PE have a significantly higher perceived PL compared with teachers teaching PE who were not trained in PE. This suggests that teachers trained in PE may be better role model to students during PE lessons in adopting an active lifestyle due to their higher perceived PL. However, additional studies are needed to further explore the relationship between PL among teachers and the level of enjoyment and effectiveness of PE lessons of the students. This supports previous study that found teacher who are trained and have relevant content knowledge are more confident in teaching PE (Faucette et al. 2002; Jani 2012).

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

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