

## Perceived barriers to the provision of physical education in Malaysian primary schools

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### **Abstract:**

**Background:** Despite numerous initiatives by the Malaysian government (e.g. retraining of non-PE majors, One Student One Sport Policy, continuous improvement of PE curriculum) aimed at improving the delivery and quality of physical education (PE) in primary schools, many remaining problems have been highlighted (e.g. unqualified PE teachers, inadequate facilities, lack of in-house staff training). In Malaysia, it is a common knowledge that the head of school (school principal) plays a pivotal role in the implementation of effective and quality PE programme. However, the role has not been examined adequately and thus the assessment of the perception of PE teachers on the barriers to the provision of PE has become important.

**Materials and Methods:** In this survey, a total of 1276 teachers (Male=49.8%, Female=50.2%) from 248 schools were randomly surveyed using questionnaires. A 21-item questionnaire was used to assess the three category of barriers to the provision of PE namely, 'barriers related to teacher' (TR), 'barriers related to non-human factors' (IRn), and 'barriers related to administration of PE' (IRa).

**Results:** Results on TR revealed that male teachers lacked PE subject matter, could not manage the students, could not teach game skills, could not manage fitness activity, unable to detect students' weaknesses, and unable to correct students' weaknesses when compared to female teachers. One-way ANOVA conducted according to age groups on TR revealed that the <30 years old group could manage class better and could detect students' weaknesses better than teachers in the 30-39 and 40-49 age groups. IRa analysis revealed that female teachers perceived strongly that administrators did not assigned teachers based on interest, and qualification. IRn analysis showed the 30-39 age group teachers disagreed more than the 40-49 age group that equipment for PE classes were inadequate.

**Conclusion:** This research findings provide valuable feedbacks to MOEM to improve PE programme delivery and to overcome TR and IR related barriers in the PE programme.

**Key Word:** physical education, curriculum implementation, institution-related barriers, teacher-related barriers, pedagogical content knowledge.

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### **I. Introduction**

The Malaysian primary schools Health and Physical Education (HPE) curriculum which was developed in 1983, was superseded with a new curriculum in 2011 after several reviews. The reviews were the results of numerous negative reports on unhealthy lifestyles, poor eating habits, prevalence of inactivity, and obesity affecting primary school students<sup>1,2</sup>. The goal of HPE curriculum is to develop students who would lead physically active lifestyles and remain active throughout their lives with the knowledge and skills acquired in physical education (PE) classes<sup>2</sup>. However, this goal has yet to be achieved as many barriers seemed to be hindering the quality delivery of PE in primary schools.

Although governments all over the world have endorsed PE as a holistic subject in schools after UNESCO had proclaimed the year 2015 as 'UN International Year of Sport and PE'<sup>3</sup>. Quality Physical Education (QPE) has not been implemented in many countries due to the lack of clear policies and commitments in the implementation of PE in schools. Those countries have yet to conform to UNESCO's recommendations on quality PE, which encompass qualified teachers, supported with administrative personnel and finance, adequate PE time allocation, ample and appropriate facilities, equipment, and teaching resources, proper and adequate government policies and strong community partnerships<sup>4</sup>. According to Hardman and Marshall<sup>5</sup>, the absence of national policies for PE in schools, and the lack of government's support globally has led to PE programmes existed only in name but not fully implemented due to lack of qualified specialist PE teachers, inadequate infra structures and facilities, and inadequate teaching time.

Literature review clearly pointed out that there are a number of interrelated factors inhibiting primary school teachers from delivering quality PE programmes. These factors could be categorized as teacher-related

(TR) (arising from the teachers' behaviour), and institutional-related factors (IR) (outside the teachers' control) which are beyond the control of teachers<sup>6,7,8</sup>. These two factors impact adversely the quality provision of PE in primary schools. In Malaysia, the inadequate implementation of primary school PE programme has been confirmed through a number of questionnaire-based studies. To date, there have been only three published studies reporting on various aspects of primary school PE implementation. Syed Ali, Zahidi and Ab. Samad<sup>9</sup> reported over crowded, narrow, and unsafe field conditions, insufficient PE facilities and equipment, and insufficient and improper utilization of PE funding. Dewi Mohamed, Amri, Kok and Abdullah<sup>10</sup> examined factors influencing the level implementation of PE in primary schools such as leadership and vision, organizational management, teaching and learning, and student achievement. While Kenayathulla<sup>11</sup> revealed that the per capital funding in primary school PE programme was insufficient especially for schools with smaller enrollments. However, there was inadequate report on TR barriers and IR barriers in PE implementation. Hence, to address this gap in knowledge, this study aimed to investigate the perceived barriers to the provision of PE in Malaysian Primary Schools.

## **II. Material and Methods**

### *2.1 The participants*

The sample respondents (1276 PE teachers) consisted of slightly more female (50.2%) than male (49.8%). By age, the majority of respondents (76.8%) was below 40 years in age. In terms of academic qualification, the sample was made up of 8% of graduates and 92% non-graduates. With regard to professional qualification, about half of the respondents had entered Malaysian Teacher Training Colleges (MTTCs) while the other half had their teaching education in the universities through the Diploma in Education or Degree in Education Programmes. Almost 94% of the teachers were trained in non-PE subjects while only 6.2% were PE majors. The data on working experience showed that 60% of the teachers have less than 10 years teaching experience and one third (33.9%) of them have less than five-year experience. Almost 14% of the teachers have never taught PE before and 48.5% have taught PE for less than 5 years.

### *2.2 Instrumentation*

*Major Barriers Inhibiting the Delivery of Physical Education.* A 21-item instrument was developed to determine the factors PE teachers perceived to be the most substantial. Teachers were asked to indicate the strength of each barrier on a scale 1 to 5 with 1 = no barrier or does not inhibit and 5 = a major barrier or strongly inhibits. All items from the PE teaching barriers instrument were examined using principal components factor analysis with varimax rotation. For example, "Not trained in PE", "Financial allocation is adequate for PE". Results revealed three distinct factors, confirming the existence of reliable constructs for 'barriers related to teacher' (8 items,  $\alpha = .812$ ), 'barriers related to non-human factors' (6 items,  $\alpha = .844$ ) and 'barriers related to administration of PE' (7 items,  $\alpha = .834$ ).

### *2.3 Data Collection and Analysis*

The collection of data was through mailing of questionnaires to the listed primary schools. The collection of data commenced after the approval was obtained from the Ethical Committee of Tunku Abdul Rahman University College. The quantitative data were analysed using SPSS (version 23.0). All variables satisfied normality criteria and were examined using relevant tests. Two types of statistical techniques were used to analyze the data, namely, descriptive and inferential statistics. Descriptive statistics were used to analyse gender, age, years of PE teaching experience, academic qualification, field of specialization. Several inferential statistics such as t-tests and analysis of variance (ANOVA) to analyse the relationships among selected variables. T-tests were used to contrast mean scores for key variables in terms of gender and majors. One-way ANOVAs were used to examine differences between PE teachers' age categories on TR barriers, IRa and IRn barriers toward teaching PE. All tests of significance were set at .05 level. For the one-way ANOVA, where F-tests were significant, a post-hoc test using the Tukey-HSD tests were employed.

## **III. Result**

### *3.1 Barriers to the Delivery of PE Lessons*

The questionnaire required PE teachers to indicate the degree to which certain factors were barriers or inhibited PE programme delivery. Table 1 provides a summary of the 21 most substantial factors that influenced the teaching of PE. Seven of eight teacher-related (TR) barriers were moderate barriers to provision of PE with 'could not manage the students in my class' as low barrier. For IRn, all the barriers were perceived as moderate barriers. As for IRa, all institutional-related (IR) barriers were perceived as moderate barriers. TR and IR barriers items were used as dependent variables for inferential statistical analyses. For TR barriers, t-tests according to gender revealed that male teachers lacked PE subject matter ( $t = -4.734$ ,  $p = 0.01$ ), could not manage the students ( $t = -2.234$ ,  $p = 0.026$ ), could not teach game skills ( $t = -5.386$ ,  $p = 0.001$ ), could not manage

fitness activity ( $t=-2.807$ ,  $p=0.005$ ), unable to detect students' weaknesses ( $t=-3.554$ ,  $p=0.001$ ), and unable to correct students' weaknesses ( $t=-3.947$ ,  $p=0.001$ ) when compared to female teachers. One-way ANOVA conducted according to age groups (<30, 30-39, 40-49, & 50 &> years old) on TR revealed that the <30 years old group could managed class better ( $F[3,684] = 3.587$ ,  $p=0.014$ ) and could detect students' weaknesses better ( $F[3,684] = 5.023$ ,  $p=0.002$ ) than teachers in the 30-39 and 40-49 age groups.

**Table 1.** Barriers to teaching Physical Education subject.

Key barriers	IR or TR	M	SD	Barrier Level
Lacking subject matter knowledge to teach Physical Education	TR	2.62	.909	Mod
Could not manage the students in my class	TR	2.02	.635	Low
Could not teach game skills	TR	2.45	.792	Mod
Could not teach gymnastic skills	TR	3.65	.944	Mod
Could not manage fitness activity	TR	2.44	.798	Mod
Unable to detect students' weaknesses	TR	2.36	.709	Mod
Unable to correct students' weaknesses	TR	2.42	.721	Mod
Unable to plan lesson	TR	2.36	.928	Mod
Inadequate facilities for Physical Education classes	IRn	2.71	.945	Mod
Inadequate funds allocated for Physical Education	IRn	2.71	.874	Mod
Inadequate equipment for Physical Education classes	IRn	2.78	.967	Mod
Inadequate reference books on Physical Education	IRn	2.96	.934	Mod
Unsuitable Physical Education reference books	IRn	2.87	.859	Mod
Inadequate Physical Education reference books in Bahasa Malaysia	IRn	3.03	.890	Mod
Administrators did not assign PE teachers based on their interest.	IRa	3.26	1.229	Mod
Administrators did not assign teachers based on their PE qualification	IRa	3.28	1.218	Mod
Administrators did not discuss before deciding on PE teachers.	IRa	3.04	1.260	Mod
Administrator did not assumed PE is important	IRa	2.47	1.057	Mod
Administrator did not observe PE teaching	IRa	2.93	.982	Mod
Administrator did not organize in-house PE courses	IRa	3.54	1.059	Mod
Administrator did not discuss with teachers regarding factors affecting the teaching of PE	IRa	3.13	1.051	Mod

Note. IR = Institution related, IRn = Institution Non-human related; IRa = Institution Administration related, TR = Teacher related. Mean rating: 1.00-2.33 = Low barrier or does not inhibit [Low], 2.34-3.66 = moderate barrier [Mod], 3.67-5.00 = a major barrier or strongly inhibits [Maj]. (Sources: From Ahmad (1992)<sup>12</sup>, Rashid (1990)<sup>13</sup>.

Analysis of IRa according to gender revealed that as compared to male counterparts, female teachers perceived strongly that administrators did not assigned teachers based on interest ( $t=-8.880$ ,  $p=0.001$ ), and qualification ( $t=-7.521$ ,  $p=0.001$ ). Female teachers also perceived more strongly that administrators did not discussed with them before assigning them to teach PE ( $t=-3.680$ ,  $p=0.001$ ), did not observe PE teaching ( $t=-3.073$ ,  $p=0.002$ ), and did not discuss with them factors affecting the teaching of PE ( $t=-2.569$ ,  $p=0.01$ ). One-way ANOVA did not show significant results on IRa according to age groups but for IRn the 30-39 age group teachers disagreed more than the 40-49 age group that equipment for PE classes were inadequate ( $F[3,1272]=3.481$ ,  $p=0.015$ ).

#### IV. Discussion

This study examined the perceived barriers to the provision of PE in Malaysian primary schools. Discussion below are organised according to teacher-related barriers and institutional-related barriers toward the implementation of PE programme.

##### 4.1 Teacher-related barriers toward PE programme implementation

The results of this study showed the teachers lacked pedagogical content knowledge (PCK). This is concurred by Lynch<sup>14</sup> that teachers must increase their level of knowledge and skills to ensure teaching effectiveness in their classes. Lynch<sup>14</sup> in a study of primary PE in Australia found that the key attributes of a good HPE teacher were HPE curriculum knowledge and developmentally appropriate pedagogy. In fact, Lynch<sup>14</sup> emphasized that currently the main barrier for HPE implementation seemed to be teachers' qualifications and preparation. As 93.8% of teachers in this study were non-PE majors, PE subjects might be considered a new subject to them. According to Sidentop, Hastie and van der Mars<sup>15</sup>, when teachers are not adequately equipped with PCK but are assigned to teach a new subject (eg. PE), the outcome of implementation would be poor. The lack of qualified teachers is one of the barriers that impedes effective and consistent academic programme implementation in schools<sup>16</sup>. To ensure success in academic instruction, expertise is required<sup>17</sup>. In fact, professional development that prepares teachers must be the top priority of schools as qualified teachers in schools helped maintain consistency in teaching academic subject, making the academic

subject relevant in schools<sup>18</sup>. Globally, generalist classroom PE teachers are commonly employed in primary schools. In a survey of the status of PE in Singapore, McNeill, Coral Lim, John Wang, Clara Tan, and MacPhail<sup>19</sup> reported that 50 percent of the primary schools had two or less PE specialists. Similarly, international survey on PE found a global shortage of trained personnel teaching PE in the primary schools<sup>5</sup>, and European study reported that 85 percent of the countries surveyed employed generalist teachers to teach primary school PE<sup>20</sup>.

This study examined PCK and gender and found that when compared to female teachers, male teachers were reported to be lacking in PE subject matter knowledge, could not manage students, could not teach game skills, could not manage fitness activity, unable to detect students' weaknesses, and unable to correct students' weaknesses. The positive perception of female over male on PCK was investigated by Kovac, Sloan and Starc<sup>21</sup> where 85 Slovenia PE teachers were surveyed and reported that female teachers felt significantly more competent in PE and sports pedagogy, management of students and sport activities, and assessment, evaluation and grading. However, in Malaysia male teachers were reported to be more competent in teaching PE<sup>22, 23, 24</sup>.

Our result showed that the younger PE teachers (<30 years old group) was more competent in managing class and in detecting students' weaknesses than the 30-39 and 40-49 age groups. This could be explained by the number of PE majors for each age group. Further analysis showed that more PE majors were in the <30 years old group (3.7%) as compared to the 30-39 age group (1.2%), and 40-49 age group (1.0%), thus more competent in the above-mentioned skills.

The higher barriers perceived by male teachers is supported by a study in Ghana. In examining 296 primary PE school teachers, Sofo and Asola<sup>25</sup> reported that male teachers perceived 11 TR and IR as major barriers when compared to female counterparts. Overall, 48% of them cited the lack of adequate training contributed to their perceived barriers. However, on the contrary, other Malaysian researchers reported male teachers perceived lower barriers as compared to female teachers. Wee<sup>23</sup> examined 1388 out-field PE teachers in Malaysian secondary schools and found that male teachers perceived less barriers toward teaching PE and felt that their teaching abilities were higher than that of female teachers in all aspects of TR barriers. Similarly, Wee and Raj<sup>24</sup> in a study of 111 PE teachers from the urban area secondary schools of Shah Alam in Malaysia reported that male teachers (n=60) performed better (having higher mean scores) than female teachers (n=51).

Data analysis of this research showed that seven of eight TR barriers were moderate barriers to the provision of PE with 'could not manage the students in my class' as low barrier. The results could be explained in terms training of teachers through the MTTCs. In Malaysia, all trainee teachers who are not training to be PE specialists, are required to go through a mandatory PE course (2 hours/week, for two years), learning how to teach PE<sup>26</sup>. This exposure through MTTCs enable them to handle PE classes though their PE teaching skills might not be excellent. The use of generalists or classroom teachers to teach PE in Malaysia is similar to the use of teachers holding broad qualification without a qualification in PE<sup>27,28</sup> as practiced in the UK, and Australia<sup>29</sup>, as well as New Zealand<sup>30</sup>. According to Petrie<sup>31</sup>, despite the lack of training and preparation, the generalist classroom teachers might be in a better position to teach PE due to their knowledge of the students. However, Petrie<sup>31</sup> agreed that the lack of training and preparation could result in a lack of confidence in teaching PE. This is so when generalist classroom teachers have to deal with a wide spectrum of PE curriculum which has proven to be challenging even for the specialist PE teachers<sup>32</sup>. The lack of confidence among generalist PE teachers and the low levels of PE expertise have been highlighted by numerous researchers all over the world<sup>33,32,34,35,36,31,37</sup>. Further, other international researchers concurred that the perceptions of PE classroom teachers on their inadequate knowledge and the skills to teach PE have contributed to the low levels of confidence<sup>32,38,8,39</sup>. This consequently has led to the negative attitude towards teaching PE<sup>32,38</sup>. And this is accompanied by a lack of enthusiasm<sup>8</sup> and a lack of dedication<sup>40</sup> for PE.

#### 4.2 Institutional-related barriers toward PE programme implementation

Data analysis of IRa according to gender revealed that female teachers perceived barriers more strongly than male counterparts on all barriers except Administrator did not assumed PE is important, and Administrator did not organize in-house PE courses. The results of this study were contrary to Wee's<sup>23</sup> findings of non-PE majors in secondary schools. Wee<sup>23</sup> reported that almost 72% of the administrators did not consult teachers before assigning them to teach PE. Only 9% of PE teachers perceived that they were given PE classes based on their interest and almost 68% ('never' and 'rarely') of them confirmed that teaching assignment was not based on their PE qualification. Similarly, in Brazil, Osborne et al.<sup>41</sup> reported that PE teaching assignment was decided without consensus as PE was considered less important than other academic subjects.

On the barrier of PE teacher observations, Wee<sup>22</sup> reported that about 49% of principals did not observed PE lessons, and 6% of them often allowed their assistants to carry out the duties. On the contrary, Strampel et al.<sup>42</sup> surveyed 36 primary schools and 137 teachers in Ontario, Canada revealed that administrators supervised PE/Daily PA classes. The high incidence of the lack of observation and supervision of PE lessons by school principals was reported in Malaysia<sup>43,44,45</sup>. Wee and Raj<sup>44</sup> reported that only about half of principals

performed PE observations. The MOEM<sup>43</sup> revealed that only 18.5 percent of school heads (8 of 46 schools) carried out the mandatory supervision. In addition, it was reported that there was no planned observation carried out by the school PE Curriculum Committee<sup>45</sup>. Wee<sup>23</sup> reported that only 21.1% of administrators observed teaching ('frequently' and 'always').

On barrier regarding discussion between administrator and teachers on factors affecting the teaching of PE, Wee<sup>23</sup> found that 52.5% of the administrators did not discuss teaching issues with teachers. Similarly, Jenkinson and Benson<sup>46</sup> reported that PE teachers in Victoria, Australia perceived receiving low support from management and administration (ranked 6th of 10 in importance), and there was a lack of leadership from the heads of PE department (ranked 7th of 10 in importance) in terms of PE programme implementation.

Data analysis on IRn of this study showed significant result on age group. The 30-39 age group teachers disagreed more than the 40-49 age group that equipment for PE classes were inadequate. This result is not supported by Wee<sup>23</sup> who investigated 1388 secondary school non-PE major and found that there was no significant difference in the perceptions on non-human factors which included 'adequacy of equipment' according to age groups. Wee<sup>23</sup> also revealed that only 42.6% of the teachers agreed that equipment for PE classes were adequate. Similarly, in a study of 115 PE teachers to establish the barriers to their implementation of PE in Victorian state secondary schools, Australia, Jenkinson and Benson<sup>46</sup> reported that although access to equipment was the third highest ranked barrier with 91% of the teachers reported that the equipment standard acceptable or better, there was no association found between the rating of equipment or facilities and PE teachers' years of PE teaching experience. In Malaysia, Syed Ali, Zahidi and Ab. Samad<sup>9</sup> surveyed 155 primary school and 310 PE teachers reported that 77% of the teachers acknowledged shortage of PE equipment in their schools. However, PE teachers also agreed that the shortage was due to damage equipment not unrestored/replaced as a result of insufficient funding for PE and inappropriate usage of PE budget.

IRn and IRa barriers were perceived as moderate barriers by PE teachers in this study. Analysis of IRn revealed that the top three highest ranked barriers (based on mean scores) were related to inadequate/unsuitable reference books for PE. Syed Ali, Zahidi, and Ab. Samad<sup>9</sup> attributed this condition to improper use of PE Budget. This is supported by Wee<sup>23</sup> who reported that only 36.3% of 1388 PE teachers perceived that financial allocation was adequate, thus this might not support the purchase of reference books for PE. In addition, Wee<sup>23</sup> indicated that only 35.0% of the 1388 respondents agreed that PE books in the school library were suitable. Numerous other researchers<sup>26,22,2,23,24</sup> also reported the inadequacy of PE teaching references in Malaysian schools. As for IRa, this study showed that PE teachers perceived administrator did not organize in-house courses or staff training programme (STP) as the top barrier, followed by administrators did not assign PE teachers based on qualification, and based on interest. Wee<sup>23</sup> reported that 91.5% of the administrators did not ('never', 'rarely' and 'occasionally') organize STP. Similarly, other Malaysian researchers<sup>47,48,22,2,24</sup> also reported insufficient STP were provided by administrators of schools. Sebastian<sup>48</sup> reported that almost 31 percent of the schools never organized STP and almost 63 percent organized STP 1-3 times annually while Wee<sup>22</sup> reported that only 14% of the principals in 290 secondary schools organized STP.

In examining the perception of 1388 secondary non-PE major teachers, Wee<sup>23</sup> revealed that almost 86% ('never', 'rarely' and 'occasionally') of the administrators did not assign PE classes based on teachers' qualification and 79% of administrators did not assign teachers based on their interest towards PE. In addition, Wee<sup>23</sup> revealed that almost 19% (responses as 'frequently' and 'always') of the respondents perceived that PE classes were given to them in order to fulfil the number of teaching periods required.

The barriers reported in this study were supported by numerous studies on the implementation of schools academic programme such as PE programme<sup>49,46,50</sup>, where it was reported that institutional barriers such as budget cutbacks, lack of access to program funding, lack of access to proper facilities and equipment, poorly maintained facilities, lack of equipment, unqualified teachers, overcrowded classes, and inconsistent implementation of academic program continue to increase. In the study of PE programme, Jenkinson and Benson found the top three barriers to providing quality PE to be 'access to facilities', 'access to suitable teaching facilities' and 'access to equipment'.

## **V. Conclusion**

The results of this study identified the key factors inhibiting PE teachers, which were categorized as teacher-related (TR) or institutional-related (IR). All barriers were perceived as moderate barriers except '*could not manage the students in my class*' as low barrier. PE teachers ranked top three highest TR barriers as 'could not teach gymnastic skills', 'lack of PCK', and could not teach game skills. However, PE teachers perceived that they could manage their classes. In terms of IRn, the top three barriers were inadequate PE reference books in Bahasa Malaysia, followed by inadequate books on PE, and unsuitable PE reference books. As for IRa, PE teachers perceived administrator did not organize in-house courses as the top barrier, followed by administrators did not assign PE teachers based on qualification, and based on interest. Overall, this study revealed the importance of PCK as majority of the respondents were non-PE majors. In view of this, it is imperative to

provide professional learning or STP to ensure teachers are equipped with relevant PCK in PE, and to boost the self-confidence of PE teachers. The requirement of PCK and to overcome the main barriers of IRa and IRn, leadership must prevail in schools. Administrator must prioritize and allocate budget fairly to overcome the inadequate PE resources. In addition, administrators must use consensus to assign PE teaching classes and to provide adequate STP to ensure quality teaching in schools. Only if all the above-mentioned concerns are addressed, quality PE could be implemented in Malaysian primary schools.

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