

A STUDY OF FACTS AND GENERATING FACTORS OF “DISLIKE FOR EXERCISE” AND “DISLIKE FOR PHYSICAL EDUCATION”

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1. INTRODUCTION

Recently, a decline in children’s fitness and lack of exercise has become a serious issue in Japan. Consequently, various governmental institutions have repeatedly taken up this problem and a number of policy recommendations have been made that aim to remedy the situation. Following these recommendations, the new Course of Study has proposed measures such as increasing the number of teaching hours for health and Physical Education (hereinafter abbreviated as “PE”) and reforming the PE curriculum within 12 years. By doing so, it has further emphasized the need “to develop the capacity and skills to engage in exercise throughout life, to realize an enriching sports life, and to improve physical fitness.” Despite these measures, the polarization between those children who actively engage in exercise and those who do not, as well as children who have an unfavorable or negative attitude toward exercise and PE lessons “Dislike for Exercise (hereinafter abbreviated as “DE”)” and “Dislike for Physical Education (hereinafter abbreviated as “DPE”)” still persist. The principal role of PE lessons at school is to introduce children to the joy and excitement of exercise. Within this context, emphasis should be placed on “PE” education that forms the basis of life-long engagement with sports. However, “DE” and “DPE” attitudes inhibit PE in school from achieving its goals.

2. AIM OF THE STUDY

The author seeks to reduce the number of “DE” and “DPE” children, realize an enriching sports life for them, as well as further develop and improve PE at school. For this purpose, the current study first clarifies the respective definitions of “DE” and “DPE,” which have been left ambiguous in previous studies. It then investigates the current situation surrounding “DE” and “DPE” with students in elementary schools. Finally, it examines the generating factors of “DE” and “DPE,” focusing on the relationship between the two.

3. PREVIOUS STUDIES

3.1. Defining “DE” and “DPE”

1) Defining “DE”

Nakagome (1995) defined “DE” in the Encyclopedia of Physical Education Lessons at School as “a generic term to refer to individuals with negative attitudes toward voluntarily engaging in sports activity or physical exercise.” Kagawa (2002) analyzed favorable attitudes toward PE of

pupils in the last two years of elementary school, and defined DPE as “a generic term that refers to individuals who are unfavorable or negative toward sports or physical activity in general.” On the other hand, in *Physical Education Psychology*, Handa (1989), who does not distinguish between “DE” and “DPE,” argues that “DE” means “those who are not forthcoming in, avoiding and negative toward voluntarily engaging with sports or participating in sports, sometimes with clear reasons and sometimes not. There are many types within the DE group and they include those who like sports and exercise but who do not like PE at school,” suggesting that “DPE” is contained in “DE.”

2) Defining “DPE”

Kagawa (2002) defines “DPE” as “a generic term to refer to individuals who are unfavorable or negative toward PE lessons, which are planned and organized based on sports and physical exercise.” Furthermore, Kaga (2006) defines it as having been “generated in the experience of PE lessons including the class atmosphere, types of exercise, facilities and equipment, lesson content, the teaching style, and evaluation” by referring to concrete factors to generate “DPE.” Masaki (1970) notes that “[children] can get into a psychological state in which they do not like or reject certain issues in their PE lessons (the type of exercise or teaching methods). Regardless of the cause, [DPE refers to] the learner entering a negative psychological state in PE lessons.”

3.2. Characteristics of conventional definitions of “DE” and “DPE”

As mentioned above, Nakagome (1995), Kagawa (2002), and Handa (1989) have examined “DE” and the definition is reasonably well established as a technical term. Contrastingly, however, while academic articles and reports have examined the definition and meaning of “DPE,” it has not been clearly defined as a technical term. Following these studies, we can conclude that while “DE” has been established as a technical term, “DPE” has not reached that level. Moreover, the conceptual relationship between “DE” and “DPE” has not been fully investigated.

3.3. Previous studies on “DE” and “DPE”

1) Characteristics of previous studies on “DE” and “DPE”

Studies on “DE” and “DPE” have been conducted since approximately 40 years ago (Kagawa 2002) and a large number of studies including reports have been produced. We cannot review them all here, and we focus on those that have been relatively frequently quoted and used.

There are three major aspects to the previous studies on “DE” and “DPE”: “facts,” “factors,” and “teaching methods and solutions.” Due to space limitations, we only focus on “facts” and “factors.” Regarding “facts,” many studies have shown that there are more “DPE” than “DE” children and this tendency is more pronounced among girls.

Regarding the change brought about by progression in school years, the number of both “DE” and “DPE” children increases as they move to higher levels in school and this tendency is stronger among girls. However, there is a report that this tendency is reversed in the third grade in elementary school. Next, many studies have also been conducted on “factors,” and wide-ranging findings have been reported. Particularly, the “Teacher of Physical Education (TPE)” has been pointed out as a major factor for “DE.” “TPE” is also focused upon as a factor for “DPE,” and studies have been conducted that focus on the teachers’ behavior (Hyodo 1992). As we have seen, previous studies have pointed out that “TPE” exerts a strong influence on “DE” and “DPE,” a point that needs further attention.

2) Limitations of previous studies on “DE” and “DPE”

Previous studies are not necessarily clear in defining “DE” and “DPE.” Sakumoto (1978) has argued that it is difficult to come up with a precise definition of “DE” because it can be defined in various ways depending on the definition of exercise subject, judgment criteria, and how problematic it is. Handa (1989) does not distinguish between “DE” and “DPE” and argues that “DPE” is contained in “DE.” As seen, previous studies have a tendency to leave ambiguity with regard to the definition and concept of “DE” and “DPE.” However, as Shinsenji et al. (1993), Watanabe et al. (1997), Kobayashi (1989), and Okada (1979) have pointed out the presence of “those who like exercise but dislike PE,” and as there is a significant number of “those who like PE but dislike exercise” (Watanabe et al. 1997), we need to distinguish between “DE” and “DPE” and establish clear definitions of each.

4. HYPOTHESES

Following the examination of previous studies, the current study set the following three hypotheses to guide its investigation and analysis.

Hypothesis 1 was set as similar results have been reported by Watanabe et al. (1997), and Taniki (2003). Hypothesis 2 was set as similar results have been reported by Shinsenji et al. (1993) and Taniki (2003). Hypothesis 3 was set because Shinsenji et al. (1993) have pointed out “TPE” as a factor for “DPE,” and because Hyodo et al. (1992) have conducted a study focusing on teachers’ behavior as a factor of “DPE.” Additionally, Tachiki (1997) and Taniki et al. (2003) also pointed out the teacher factor in “DE” and “DPE.”

5. METHODOLOGY

5.1. To clarify the definition of “DE” and “DPE”

As discussed above, previous studies have tended to conflate “DE” and “DPE.” This study understands “DE” and “DPE” as separate concepts and proposes the following definitions of each, drawing on previous studies.

We define DE as “forming unfavorable or negative attitudes toward play generated from children’s free physical and club activities in which they voluntarily take part due to various reasons including environmental factors and PE lessons, and entering into a psychological state that rejects exercise.” Concrete factors that engender “DE” include: exercise skills, instructors (teachers), fellow students, understanding of the rules, personal character, emotions, a sense of uselessness, types of exercise, physical disability, illness, obesity, and family. Recent studies have suggested that the lack of “perceived competence in exercise” is a factor for “DE” and “conditioning by pain stimulus” and “learned powerlessness” serve as mechanisms to generate “DE.”

We define DPE as “forming unfavorable and negative attitudes toward PE lessons conducted by the TPE or (in the case of elementary school) homeroom teachers using exercise and sports as a means in a planned and systematic manner due to certain factors (causes) in PE lessons, and for the learner to enter into a rejective psychological state.” Concrete factors for “DPE” include: the teaching method, teacher’s character, and experience of pain in PE lessons. If we focus on teachers’ behavior, “DPE” is said to be produced by delivering skills-focused and teacher-centric

lessons in which children are compared in terms of their competence and only competent children can enjoy themselves.

5.2. Questionnaire survey

A number of fact-finding investigations have been conducted into “DE” and “DPE” but there are insufficient data for children in elementary schools. Consequently, this study expanded the scope of the questionnaire about “DE” and “DPE” as much as possible and administered the expanded questionnaire to a wide range of respondents, covering those from second grade in elementary school to the final year of high school.

(1) When the survey was conducted

The questionnaire survey was conducted from September 2010 to April 2011 and the responses were collected within approximately three months of the date of conduction.

(2) Survey subjects

The schools from Ikhtamirsoum in Arkhangaiimag, Mongoliawere surveyed. A total of 149 questionnaires (70 males and 79 females) were collected.

(3) Details of the survey

The questionnaire comprised three questions, and was administered to one whole class in each grade by either homeroom teachers or TPEs in the PE lessons, class activity hours, or homeroom hours. Question 1 asks whether the respondent likes or dislikes “exercise” and “PE” on a five-point scale (a five-point scale was used for children from the third grade in elementary school to high school and a three-point scale was used for children in the first and second grades of elementary school). Question 2 presents 12 itemson ideal teachers and asks the respondents to select three items according to their preference. However, the response to Question 2 was not used in this analysis. Drawing from the questionnaire used in Shinsenji et al. (1993), Question 3 sets two questions about factors that make children dislike PE/exercise and asks the respondents to respond using a five-point scale.

(4) Analytical method

1) Facts about “DE” and “DPE”

The respondents were straightforwardly askedwhether they liked or disliked exercise and PE lessons on a five-point scale. While there are at least two ways of classifying “DE” and “DPE,” as shown in thebelow, the current study adopted classification B.

Regarding statistical analysis, simple and cross tabulation were conducted for progression in school years and gender in reference to “DE” and “DPE.” All items in cross tabulation were tested for significance using a chi-square test.

2) Generating factors of “DE” and “DPE”

The liking/disliking of exercise/PE was examined by factor analysis, and comparison was made with the sub-scale score in the “dislike group” from the nine groups identified by the fact-finding surveyto examine the influence of each. Sub-scale scores were calculated for four factors extracted by factor analysis and a one-way analysis of variance was conducted by the group to

carry out multiple comparison. For all items, multiple comparison was carried out by the Tukey method.

6. RESULTS AND DISCUSSION

6.1. Facts about “DE” and “DPE”

(1) Classification of attitudes toward exercise and PE

The analysis of attitudes toward exercise and PE produced nine groups.

(2) Change with progression in school years

Regarding change with progression in school years, while “DPE” has the tendency to increase as children progress through the school system, we did not find any increasing tendency for “DE.” We also found many “DE” children among elementary school students and many “DPE” children among school students. As no increase in “DE” was observed as children progress through the school system, Hypothesis 1 is not supported.

In this regard, we speculate that the mode of instruction in PE lessons changes dramatically between elementary schools. More concretely, in elementary school, all subjects are delivered by the homeroom teacher, while in elementary school, specialized teachers deliver each subject. In other words, because elementary school is a period in which the basis for exercise is to be developed, PE lessons by the homeroom teacher incorporate a great deal of play. However in secondary education, a subject-specific teacher instructs children to engage in various sports, understand the features of different types of sports, and develop their skills. It is plausible that this change in conditions causes children to form unfavorable attitudes toward PE lessons. It is also speculated that the fact that there are more “DPE” children than “DE” children is related to features of PE lessons.

(3) Gender difference

We found that “DE” accounts for 4.2 per cent and 7.3 per cent in boys and girls respectively, and that “DPE” accounts for 4.4 per cent and 8.8 per cent in boys and girls, respectively, showing that the proportion of “DE” and “DPE” is higher among girls than boys. For both boys and girls, there are more “DPE” than “DE” children, and we also found that this tendency is more pronounced among girls. This suggests that there is some difference in attitudes toward exercise and PE between boys and girls. In other words, while boys are not that attentive to the difference between exercise and PE, it is presumed that girls are more unfavorable toward “PE” than “exercise.” Therefore, Hypothesis 2 is supported.

6.2. Generating factors of “DE” and “DPE”

(1) Factor analysis of generating factors

Factor analysis was conducted with responses to the questionnaire with two items drawing from Shinsenji et al.’s (1993) survey on factors for PE/DE to examine attitudes toward exercise/PE. Among the factors extracted, we adopted four factors with an eigenvalue of 0.5 or above as significant factors. The first factor is named “Merits of exercise/PE factor” as it refers to positive experience/impression of exercise and PE and merits that are acquired through PE. The second factor is named “Likable teacher factor” as it refers to positive impression of TPEs. The third

factor is named “Exercise loving family factor” as it refers to the family’s positive attitudes toward exercise. Lastly, the fourth factor is named “Drawbacks of PE factor” as it refers to the drawbacks of attending PE lessons.

(2) Generating factors of “DE”

A comparison of sub-scale scores in reference to “DE” found a significant difference at $p < .05$. The features of “DE” children include that there are fewer children with positive experiences or impressions of exercise or PE expressed as “I am good at exercising,” “I like sweating when exercising,” “I have made friends or worked with friends in PE lessons,” and “PE lessons have helped me develop my exercise skills,” while their families show a lower degree of enthusiasm toward exercise as shown in “we often exercise as a family” or “my family love exercising.” These results suggest that the lack of positive experience/impression of exercise and PE and the family’s weak preference for exercise are major factors that engender “DE.” Furthermore, to verify Hypothesis 3, the “Likable teacher factor” has to be significantly low but the results did not replicate Hypothesis 3. Therefore, in regards to “DE,” Hypothesis 3 was not supported.

(3) Generating factors of “DE”

A comparison of sub-scale scores with regard to “PE exercise” did not identify any remarkable factors among the four extracted factors, and no factor with significant difference was identified. This suggests that the four extracted factors exert equal influence on “DPE.” Furthermore, to verify Hypothesis 3, the “Likable teacher factor” has to be significantly low but the results did not replicate Hypothesis 3. Therefore, in regards to “DPE,” Hypothesis 3 was not supported.

However, if we focus on those who “like PE but dislike exercise,” we found that the “Likable teacher factor” was the highest among the “dislike group” (“Neutral about exercise but dislike PE,” “Like exercise but dislike PE,” “Neutral about PE but dislike exercise,” “like PE but dislike exercise,” and “dislike both”). In other words, among those children who “like PE but dislike exercise,” we find many with a positive impression of their teachers. Although this was not considered in the study, the result suggests that even if a child does not like exercise, if they have a positive impression of the TPE, they may like PE. In previous studies, the teacher factor has been found to be the most important in relation to “DE” and “DPE.” Our study has shown that the “Likable teacher factor” is stronger than other factors in relation to both “DE” and “DPE.” In other words, there are many children who do not like exercise or PE but who have a positive impression of their TPEs. However, the fact that many children have a positive impression of their TPEs does not allow us to conclude that “DE” and “DPE” are not caused by TPEs. Hyodo et al. (1992) have stated that there are two main factors in teachers’ behavior that engender DPE: first, aspects of the teachers themselves such as their personality and character, and second, their teaching methods such as teaching policy and skills. As the majority of questions contained in our study questionnaire concerned teachers’ personality and character, no questions were asked about teaching policy and skills. Because of this limitation, we do not think we can conclude that teachers are not a factor in engendering “DE” and “DPE,” since while children may have a positive impression of their TPEs, we need to take into account teachers’ policy and skills in teaching as well.

7. FUTURE RESEARCH AGENDA

The current study has shed light on the unexpected fact that “DE” and “DPE” children can have a positive impression of their TPEs.

In the future, we need to conduct analysis focusing not only on the “dislike group” but also on the “like group.” Regarding the teacher factor, we need to keep working on it by, for instance, improving the questionnaire. Regarding those children who “like PE but dislike exercise,” we need to conduct further analysis on the influence of the four factors on such children.

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