

Article

Analysis of the Factors Influencing Inclusive Education Competency of Primary and Secondary Physical Education Teachers in China

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Abstract: Teachers' inclusive education competency is an important factor influencing the realization of high-quality inclusive education. This study investigated the current situation of the inclusive education competency of primary and secondary school physical education teachers and analyzed its influencing factors. There were 286 physical education teachers who participated in the study, including 228 males and 58 females by answering Questionnaire on the Professional Competency of Teachers in Compulsory Education. We found the professional attitude dimension score regarding the inclusive education competency of physical education teachers was significantly higher than that of professional knowledge, professional skills and capacity of acquiring support, whereas the score of professional knowledge dimension was significantly lower than that of professional skills and capacity of acquiring support, and the score of professional skills dimension was higher than that of the capacity of acquiring support dimension. There was no significant difference in the inclusive education competency of physical education teachers in terms of gender, school district and study section, whereas there were significant differences in terms of teaching age, whether children with or without disabilities were taught, and the cumulative length of training related to inclusive education. The inclusive education competency of physical education teachers needed to be further improved.

Keywords: physical education teacher; inclusive education; inclusive physical education; inclusive education competency; influencing factors; quality of inclusive education



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1. Introduction

Inclusive education emphasizes that all children have the right to receive education, and proposes that children's characteristics and actual needs should be taken into account when providing education [1]. Until now, inclusive education was considered to be "children with disabilities and typically developing children study and live together in the same physical space, and enjoy equal, non-discriminatory and high-quality education" [2]. In the 1990s in China, children with disabilities were taught in regular class [3]. With the vigorous implementation of learning in a regular class, the quality of this teaching style has attracted more attention. Two periods of special education promotion plans were issued successively, aiming to put forward requirements for running special education well in the new era and caring for children with disabilities. On 31 December 2021, the General Office of the State Council forwarded the "14th Five-Year Plan" Special Education Development and Upgrading Action Plan, which clearly pointed out that it was necessary to explore an inclusive education model that could adapt to the common growth of children with disabilities and typically developing children, and promote the integration of children with disabilities and typically developing children [4]. The importance of inclusive education could be clearly seen. However, in the implementation of inclusive education, "along with the class but just sitting" and "mixed study with class", a decrease in the number of

students frequently occurred [5]; moreover, the teaching effects of inclusive education have always been questioned. The quality of inclusive education comprises the level of inclusive education and the degree of its effects [6]. High-quality inclusive education is crucial in enhancing the effect and value of children's learning [7]. Therefore, improving the quality of inclusive education is more and more important in China [8].

Inclusive physical education is an important part of inclusive education, which enables both children with disabilities and typically developing children to enjoy fair and high-quality physical learning and sports activities in the same physical space. Relevant studies have found that inclusive physical education can improve the active communication behaviors of children with disabilities, stabilize emotions, improve problem behaviors, improve social communication and social adaptability [9–11], realize the caring for life of sports disadvantaged students, promote the all-round development of students, and achieve educational equity [12]. Influenced by the development of inclusive education, the development of inclusive physical education in China is of low quality and incomplete [10]. Therefore, improving the quality of inclusive physical education in China has become a hot topic in academia. At present, most scholars have discussed from the aspects of policy supply and material support [13,14]. However, studies have shown that teachers' competency plays a more important role in students' learning performance than physical factors such as class size and environment as well as students' personal factors [15,16], and contributes more to improving the quality of education. However, few studies have been conducted on PE teachers' competency in inclusive education. Competency refers to the underlying characteristics of an individual that distinguish high achievers from average achievers in a particular job. It can be motivation, traits, self-image, attitude or values, knowledge of a particular field, cognitive or behavioral skills, or any other individual characteristic that can be reliably measured or counted and that can distinguish outstanding performance from average performance [17]. Under the concept of inclusive education, the competency of inclusive education of physical education teachers refers to the knowledge, ability, values and personal characteristics needed to achieve the goal of inclusive physical education, so as to meet the needs of children with disabilities and typically developing children to receive education under the same roof. It has been found that the influencing factors of teachers' inclusive education quality can be divided into their own factors and external environmental factors, including education background [18], teaching experience [5,19], etc. The external environmental factors include teachers' identity and treatment [20], class size [21], Resources and classroom support obtained by teachers [22], etc. Among them, different scholars have inconsistent research findings on the impact of teaching age on teachers' inclusive education competency. Wang found that in the first 15 years when teachers engaged in inclusive education, their inclusive education competency increased with the increase in teaching age [5]. However, according to Yan's research, kindergarten teachers with shorter teaching years are more confident in their own inclusive education ability and more likely to actively learn and acquire knowledge and skills related to inclusive education [19]. In addition, research has found that providing teachers with real teaching experience is conducive to teachers' professional development [23]. Therefore, physical education teachers' guidance to children with disabilities in inclusive education practice may promote teachers' professional development in both directions. Therefore, this study will explore the impact of PE teachers' teaching age, whether they have taught children with disabilities, and relevant training experience on their inclusive education competency.

Based on this, this paper investigates the current situation of inclusive education competency of primary and secondary school physical education teachers in China at the present stage, analyzes the factors that affect the inclusive education competency of primary and secondary school physical education teachers, and puts forward suggestions for optimization, aiming to provide useful reference for improving the quality of inclusive physical education in China, and promoting the sustainable development of inclusive education and inclusive physical education.

2. Methods

2.1. Participants and Procedures

Physical education teachers in primary and secondary schools were selected as the participants by convenient sampling throughout the country. Our research followed the principles of research ethics and integrity, and all participants provided informed consent on a voluntary basis. A total of 317 questionnaires were collected, covering 20 provinces, including the northeast, east, central and west. Eliminating questionnaires with a large proportion of missing answers and completely duplicated answers, 286 valid questionnaires were obtained, and the effective rate of the questionnaire was 90.2%. Participants' information is shown in Table 1.

Table 1. Demographic information of the participants (N = 286).

Teacher's Information	N	100%
gender		
male	228	79.7
female	58	20.3
the school district		
city	204	71.3
town	58	20.3
village	24	8.4
education background		
master degree or above	40	14.0
undergraduate	242	84.6
junior College and below	4	1.4
teaching age		
novice (0–5 years)	142	49.7
skilled (6–15 years)	80	28.0
expert (over 16 years)	64	22.4
study section		
primary school	82	28.7
junior high school	90	31.5
high school	114	39.9

2.2. Measures

2.2.1. Questionnaire on Physical Teachers' Inclusive Education Competency

On the basis of the "Questionnaire on Professional Quality of Teachers in Compulsory Education" compiled by Wang [5], a preliminary questionnaire was compiled by combining the expression of the questionnaire items with physical education. In order to investigate the structure of the questionnaire and the expression of the items, five primary and middle school physical education teachers and one special education expert were consulted for their opinions. After adjusting the items and expression, the questionnaire on inclusive education Competency of Primary and Middle School physical education Teachers was formed. The scale was divided into four parts with a total of 28 items. Part one, professional attitude, comprises 9 items; one sample item is "Children with disabilities should be equal to typically developing children to receive physical education". Part two, professional knowledge, comprises 6 items; one sample item is "I master the basic principles and methods of educating children with disabilities". Part three, professional skills, comprises 7 items; one sample item is "I can adjust the physical education objectives and requirements according to the characteristics of children with disabilities". Part four, capacity of acquiring support, comprises 6 items; one sample item is "I can take the initiative to seek guidance and help from special school teachers". The questionnaire used a five-level scoring method. According to whether the respondents agreed with the item description, the options were divided into "strongly agree", "relatively agree", "not sure", "not quite agree" and "strongly disagree", which scored 5, 4, 3, 2 and 1 points, respectively. The higher the score, the higher the inclusive education competency of the teacher.

2.2.2. Reliability and Validity

The construct validity of the questionnaire was tested, the KMO value was 0.937, and the significance level of chi-square value of Bartlett sphericity test was $p = 0.000 < 0.001$; therefore, this questionnaire was suitable for exploratory factor analysis. The principal component analysis method was used to extract the common factors, and the maximum variance method was used to rotate the factors. Finally, four common factors were extracted, and the cumulative variance contribution rate was 78.58%. Confirmatory factor analysis of the questionnaire was performed; the results showed that $\chi^2/df = 1.416$, $p < 0.001$, GFI = 0.968, AGFI = 0.922, RMSEA = 0.051, meaning that the questionnaire structure validity was good. The reliability analysis of the questionnaire showed that the internal consistency coefficients of the four factors of professional attitude, professional knowledge, professional skills and capacity of acquiring support were 0.931, 0.951, 0.958 and 0.952, respectively. The internal consistency coefficient of the total questionnaire was 0.968, indicating that the reliability of the questionnaire was good [24,25].

2.3. Data Analysis

In this study, the data were obtained by distributing questionnaires, carefully screening questionnaires and eliminating extreme values and outliers. SPSS 26.0 soft-ware (created by Norman H. Nie, C. Hadlai (Tex) Hull and Dale H. Bent, Chicago, IL, USA) was used for data analysis to test the reliability and validity of the data and analyze the differences. First, we analyzed the demographic data of the subjects to obtain the personal information of the subjects. Second, we conducted exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to evaluate the reliability and validity of the measure. Third, frequencies, means and standard deviation were calculated for the sociodemographic variables and four dimensions of inclusive education competency. Finally, in terms of different demographic variables, independent sample t test or one-way analysis of variance (ANOVA) were conducted for each dimension score and total score to assess the influencing factors of physical teachers' inclusive education competency.

3. Results

This section may be divided by subheadings. It should provide a concise and precise description of the experimental results, their interpretation, as well as the experimental conclusions that can be drawn.

3.1. Physical Education Teachers' Inclusive Education Competency

In order to investigate the scores of each dimension of the inclusive education competency of the participants, Table 2 shows the mean and standard deviation of the scores of each dimension. Among them, the score of professional attitude dimension of physical education teachers was significantly higher than that of professional knowledge ($t = 8.639$, $p < 0.001$), professional skills ($t = 4.903$, $p < 0.001$) and capacity of acquiring support ($t = 6.296$, $p < 0.001$), and the score of professional knowledge dimension was significantly lower than that of professional skills ($t = -5.664$, $p < 0.001$). and the capacity of acquiring support ($t = -3.873$, $p < 0.001$). The score of professional skills was higher than that of the capacity of acquiring support ($t = 1.980$, $p < 0.05$).

Table 2. The general situation of inclusive education accomplishment of physical education teachers in primary and secondary schools.

Dimensions	M $\pm$ SD
professional attitude	4.08 $\pm$ 0.79
professional knowledge	3.41 $\pm$ 0.97
professional skills	3.73 $\pm$ 0.89
capacity of acquiring support	3.64 $\pm$ 0.90
inclusive education competency	3.76 $\pm$ 0.74

3.2. Difference Analysis of Physical Education Teachers' Inclusive Education Competency

Under different background variables, the differences of inclusive education competency on physical education teachers were analyzed, and it was found that there were no significant differences in gender, school district and study section, whereas the statistical test results of four background variables, teaching age, taught children with disabilities or not, and the length of training related to inclusive education, reached the significant level. Furthermore, one-way analysis of variance (ANOVA) was conducted on the length of training related to inclusive education, and an independent samples *t*-test was conducted on taught children both with or without disability (Tables 3 and 4). Posterior comparisons are to test which population means are equal and which population means are different through pairwise comparison between population means. In this study, the least significant difference method (LSD) proposed by Felsch was adopted, which is essentially *t*-test [26]. Therefore, the variables with significant difference analysis results were further analyzed by the posterior comparisons, so as to explore the differences in the dimensions of inclusive physical education and the overall situation of different teaching ages, whether children with or without disability were taught and the length of training related to inclusive education.

Table 3. Summary of descriptive statistics of different teaching ages, whether children with or without disabilities were taught and length of training related to inclusive education in each dimension.

Dimensions	Teaching Age				Whether Children with or without Disabilities Were Taught				Length of Training Related to Inclusive Education			
	Level	N	M ¹	SD ²	Level	N	M	SD	Level	N	M	SD
professional attitude	novice (A)	142	4.18	0.69	yes (A)	82	4.35	0.71	never (A)	206	4.00	0.81
	skilled (B)	80	3.84	0.85					within 1 month (B)	40	4.17	0.62
	expert (C)	64	4.17	0.87					more than 1 month (B)	40	4.40	0.76
professional knowledge	novice (A)	142	3.54	0.90	no (B)	204	3.97	0.79	never (A)	206	3.19	0.93
	skilled (B)	80	3.08	0.96					within 1 month (B)	40	3.92	0.74
	expert (C)	64	3.55	1.06					more than 1 month (B)	40	4.07	0.92
professional skills	novice (A)	142	3.83	0.75	yes (A)	82	4.30	0.70	never (A)	206	3.53	0.88
	skilled (B)	80	3.50	0.98					within 1 month (B)	40	4.20	0.61
	expert (C)	64	3.77	1.04					more than 1 month (B)	40	4.28	0.71
capacity of acquiring support	novice (A)	142	3.80	0.77	no (B)	204	3.50	0.86	never (A)	206	3.44	0.89
	skilled (B)	80	3.27	1.01					within 1 month (B)	40	4.07	0.65
	expert (C)	64	3.76	0.90					more than 1 month (B)	40	4.28	0.71
inclusive education competency	novice (A)	142	3.87	0.63	yes (A)	82	4.20	0.69	never (A)	206	3.59	0.70
	skilled (B)	80	3.47	0.78					within 1 month (B)	40	4.10	0.56
	expert (C)	64	3.85	0.83					more than 1 month (B)	40	4.27	0.74

¹ M = Mean, ² SD = Standard Deviation.

The analysis found that the scores of the novice and expert physical education teachers in the dimension of professional knowledge and capacity of acquiring support were significantly higher than those of skilled physical education teachers in terms of teaching ages background variables. In general, the novice and expert physical education teachers' education quality is significantly higher than for a master type fusion of physical education teachers' education competency. In terms of the background variable of taught children with disabilities or not, physical education teachers who had taught children with disabilities had significantly higher scores in all dimensions of inclusive education competency than those who had not taught children with disabilities. Physical education teachers who have taught children with disabilities had higher inclusive education competency. In terms of the background variables of the length of training related to inclusive education, the scores of physical education teachers who had received inclusive education-related training in the three dimensions of professional knowledge, professional skills and capacity of acquiring support were significantly higher than those who had not received inclusive education-related training. However, the length of time receiving inclusive education-related training had no significant effect on the inclusive education competency of physical education teachers. In general, the inclusive education competency of physical education teachers who had received inclusive education-related training was higher than that of physical education teachers who had not received inclusive education-related training.

Table 4. The general situation of inclusive education accomplishment of physical education teachers in primary and secondary schools.

Sources of Variation	Dimensions	F/t	Posterior Comparisons
teaching age	professional attitude	2.686	
	professional knowledge	3.306 * ¹	A > B; C > B
	professional skills	1.805	
	capacity of acquiring support	5.030 **	A > B; C > B
	inclusive education competency	4.272 *	A > B; C > B
whether children with or without disabilities were taught	professional attitude	2.629 **	A > B
	professional knowledge	4.443 ***	A > B
	professional skills	5.271 ***	A > B
	capacity of acquiring support	4.149 ***	A > B
	inclusive education competency	4.880 ***	A > B
the length of training related to inclusive education	professional attitude	2.299	
	professional knowledge	11.483 ***	C > A; B > A
	professional skills	10.424 ***	C > A; B > A
	capacity of acquiring support	11.431 ***	C > A; B > A
	inclusive education competency	11.018 ***	C > A; B > A

¹*, $p < 0.05$, **, $p < 0.01$, ***, $p < 0.001$.

4. Discussion

The aims of the current study were to investigate the current situation of inclusive education competency of primary and secondary school physical education teachers in China and explore the impact of different teaching age, teaching children with disabilities or not and the length of training related to inclusive education on physical education teachers' inclusive education competency.

4.1. Physical Education Teachers' Inclusive Education Competency

The study found that inclusive education competency on physical education teachers in Chinese primary and middle schools needed to be further improved. Among the four dimensions, professional attitude scored the highest, followed by professional skills, capacity of acquiring support, and professional knowledge scored the lowest.

In the professional attitude dimension, most physical education teachers held a positive attitude towards inclusive physical education. They generally believed that children with disabilities should receive physical education on an equal basis with typically developing children. They also believed that children with disabilities and typically developing children attending classes together was conducive to the social development of children with disabilities and the alleviation of social discrimination against special groups, which could also have a certain positive impact on the physical and mental development of typically developing children. In this survey, more than 95% of physical education teachers have a bachelor's degree or above. Some studies have pointed out that educational background essentially reflects the knowledge accumulation of teachers. Higher educational background means that teachers have received long-term, professional and systematic training, and they have a more positive view of inclusive education, and believe that both children with disabilities and typically developing children can benefit from the process of inclusive education [27]. Therefore, with the spread of the concept of inclusive education, the concept of implementing inclusive physical education has been accepted by the majority of physical education teachers with a positive attitude.

In the professional knowledge dimension, most physical education teachers believed that their theoretical knowledge of inclusive education was not enough. On the one hand, they did not know much about the relevant policies, laws and regulations of inclusive education, on the other hand, they did not master the specific teaching methods of inclusive physical education and did not have the knowledge of how to analyze and adjust the

psychology of children with disabilities. The reason for this problem was that most physical education teachers usually graduated from the major of physical education, whereas students majoring in physical education in China had not received the study of inclusive physical education related knowledge [11]. In addition, 72 percent of teachers had no in-service training related to inclusive education. Therefore, there was a lack of inclusive education and other relevant training in both pre-service training and in-service training systems, which hindered the accumulation of teachers' professional knowledge and further affected the improvement of teachers' inclusive education competency.

In the professional skills dimension, the score of professional skills was significantly lower than the score of professional attitude, but higher than the score of professional knowledge and capacity of acquiring support. Some physical education teachers believed that they lacked the ability to adjust the teaching objectives and teaching strategies according to children with disabilities in physical education teaching, and they had low self-efficacy in implementing group cooperative learning and effective management for children with disabilities. The lack of training related to inclusive education would have a negative impact on the accumulation of professional knowledge, as well as the promotion of professional skills [11]. However, the score of the dimension of professional skills was higher than that of the dimension of professional knowledge and capacity of acquiring support. The reason was that, on the one hand, professional skills could accumulate practical experience in physical education and improve by imitating other teachers or professional teachers. On the other hand, most physical education teachers had not participated in the inclusive physical education teaching or the training of relevant professional knowledge and skills, which led to their lack of understanding of the actual classroom teaching situation, and their cognition of professional skills stayed in the general physical education classroom teaching, which could result in a high score of the dimension of professional skills [5].

In the capacity of acquiring support dimension, the score of capacity of acquiring support was only higher than that of professional knowledge. On the one hand, the lack of professional knowledge of physical education teachers could affect their capacity of acquiring support. Lack of understanding of relevant policies, laws and regulations could affect teachers' understanding of the channels through which they can obtain relevant support. On the other hand, due to the traditional examination evaluation system for pursuing higher education, physical education teachers paid more attention to the physical education examination of all students, but ignored the children with disabilities, which limited the initiative of teachers to obtain relevant support.

4.2. Influencing Factors of Physical Education Teachers' Inclusive Education Competency

4.2.1. Difference of Inclusive Education Competency of Physical Education Teachers with Different Teaching Age

First, we analyzed the inclusive education competency of physical education teachers with different teaching ages; the results were consistent with the results of previous studies [5,19]. It was found that different teaching ages were the main factors affecting the inclusive education quality of primary and secondary school teachers. On the whole, the inclusive education competency of novice physical education teachers was significantly higher than that of skilled physical education teachers, and the inclusive education competency of expert physical education teachers was significantly higher than that of skilled physical education teachers. Generally speaking, the longer they had been teaching, the longer they had received training related to inclusive education, and the more likely they were to improve their inclusive education competency. Therefore, the longer they had been teaching, the higher their inclusive education competency was. However, the data of this study showed that the length of teachers' teaching time was not proportional to the level of their inclusive education competency. The score of inclusive education competency of skilled teachers was the lowest, whereas the score of novice teachers (0–5 years of teaching) and expert teachers (more than 16 years of teaching) had no significant difference. Relevant

studies had found that skilled teachers (who have been teaching for 6–15 years) were in the most serious stage of job burnout [28]. Teachers in this stage had negative emotions towards work and low sense of self-efficacy, resulting in the lowest inclusive education competency. Novice teachers were relatively rich and skilled in theoretical knowledge and skills, and had a high sense of self-efficacy. Moreover, they might not have been exposed to inclusive education-related work, leading to high scores. Constrained by their original thoughts and limited training, expert teachers held a negative attitude towards such a form of education and were unwilling to adjust their teaching strategies to promote the development of inclusive physical education [29], resulting in a low score of their inclusive education competency.

4.2.2. Difference of Inclusive Education Competency on Physical Education Teachers with Teaching Children with Disabilities or Not

In terms of experience of teaching children with disabilities, we found that the factor “taught children with disabilities or not” had a significant impact on the inclusive education competency of physical education teachers. The scores of physical education teachers who had taught children with disabilities in all dimensions of inclusive education competency were significantly higher than those who had not taught children with disabilities, is consistent with the results of previous studies [23]. It was found that physical education teachers who had taught children with disabilities had certain teaching experience, had certain understanding of the characteristics of physical and psychological development of children with disabilities, and could adjust teaching strategies and teaching methods so that all students could adapt to physical education, so as to show high inclusive education competency. Relevant studies also showed that teachers’ experience in inclusive education was an important factor affecting teachers’ attitude toward inclusive education, and experienced teachers had more positive attitudes [30]. The quality of education experience had a significant impact on teachers’ attitudes towards inclusive education. Teachers with successful inclusive education experience had a more positive attitude than teachers without successful inclusive education experience [31]. Continuous contact with children with disabilities could also improve teachers’ professional knowledge and skills related to inclusive education, to a certain extent, so as to improve their inclusive education competency.

4.2.3. Difference of Inclusive Education Competency on Physical Education Teachers with the Length of Training Related to Inclusive Education

It was found that whether they had received training related to inclusive education had a significant effect on the inclusive education competency of physical education teachers, and the inclusive education competency of physical education teachers who had received relevant training was significantly higher than that of physical education teachers who had not received relevant training. This is consistent with the existing research results, physical education teachers receiving relevant training of inclusive education can promote their attitude towards inclusive education to be more positive and accumulate more professional knowledge and skills, thus enabling them to obtain higher levels of inclusive education competency [2,32]. The results of this study showed that there was no significant difference in the inclusive education competency of teachers who received training within one month and more than one month, which was consistent with the research results of Wang [5]. Through interviews with teachers who have participated in relevant training, this study found that the reasons for this situation could lie in the following two points. First, the training content was too shallow. The training content mainly stayed at the macro level, but did not involve the knowledge that teachers needed in practice, such as how to help children grow and progress through inclusive education, and how to properly deal with the differences between typically developing children and children with disabilities. Second, teachers lacked practical exercise. The training content was completely lecture-style without any practical training, which hindered the improvement of inclusive education competency.

5. Practical Implications

First, it is necessary to provide support for physical education teachers who are attempting to implement inclusive education. Relevant studies showed that adequate external support could improve teachers' attitude towards inclusive education [33], and thus improve their inclusive education competency. Therefore, this study suggested that physical education teachers should be equipped with sufficient external support to carry out inclusive physical education, so as to promote the improvement of inclusive education competency of physical education teachers. First, the construction of resource classrooms should be improved to ensure that every school had at least one resource classroom. The resource classroom was the most important part of inclusive education. The resource classroom was also equipped with special resource teachers who had rich experience in special education. Under such a condition, improving the construction of resource classrooms could not only provide individualized education for children with disabilities, but also promote the mastery of knowledge and skills of ordinary physical education teachers and improve their inclusive education competency. Next, it is important to bring in a variety of sports equipment. Various kinds of equipment could be customized to meet the needs of different children with disabilities, in order to promote the steady progress of the teaching plan.

Second, pre-service and in-service training on inclusive education should be increased for physical education teachers. It was found in the survey that teachers who had received training related to inclusive education had significantly higher inclusive education competency than those who had not received training, and inclusive education courses for pre-service physical education teachers could improve their self-efficacy when teaching children with disabilities [32]. Therefore, carrying out training related to inclusive education was the key to improve the inclusive education competency of physical education teachers, mainly in the following two points. First, improving the pre-service training. Relevant content such as inclusive education and special education should be embedded into the compulsory curriculum for physical education. Relevant teaching content could be learned from western countries to improve the pre-service training system. Second, improving post-job training. Experts and scholars of inclusive education and special education were invited to compile training programs. In terms of content, due to the strong practical characteristics of physical education, it was necessary not only to have reasonable teaching content with increasing difficulty, but also to have practical operation content, so that physical education teachers could fully explore and understand relevant theories in practice, but also to ensure frequent training and promote the specialization of in-service training.

Third, incorporating the inclusive education competency into teacher assessment of physical education Teachers. As a baton, evaluation can effectively guide teachers' actions, and the performance incentives of schools can improve teachers' enthusiasm for inclusive education. Therefore, this study suggested that inclusive education competency should be included in teacher assessment to enhance the external motivation of physical education teachers to improve inclusive education competency.

6. Limitations

There are still some limitations in this study. First, this study adopted a cross section research design. However, the formation and development of physical education teachers' inclusive education competency is a dynamic process. In the future, longitudinal study design could be used to investigate physical education teachers' inclusive education competency at different stages. Second, this study only discussed the influencing factors of physical education teachers' inclusive education competency on the basis of demographic variables. Future studies can further explore the influence of other variables on physical education teachers' inclusive education competency and the internal mechanism.

7. Conclusions

The inclusive education competency on physical education teachers in primary and secondary schools in China needs to be further improved, and the scores in each dimension were successively professional attitude, professional skills, capacity of acquiring support and professional knowledge. Through the analysis of variance, it was found that different teaching ages were the main factors affecting the inclusive education competency of primary and secondary school teachers. On the whole, the inclusive education competency of novice physical education teachers was significantly higher than that of skilled physical education teachers, and the inclusive education competency of expert physical education teachers was significantly higher than that of skilled physical education teachers. On the other hand, the scores of physical education teachers who had taught children with disabilities in all dimensions of inclusive education competency were significantly higher than those who had not taught children with disabilities. In terms of the length on training related to inclusive education, it was found that whether they had received training related to inclusive education had a significant effect on the inclusive education competency of physical education teachers, and the inclusive education competency of physical education teachers who had received relevant training was significantly higher than that of physical education teachers who had not received relevant training. However, the longer the training time, the higher inclusive education competency is not necessarily. Based on this, this paper gives suggestions from three aspects: External resource supply, pre-service and in-service training and teacher performance appraisal, so as to enable the sustainable development of inclusive physical education.

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