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## Comparative study of pre-service and in-service physical education teachers attitudes toward inclusive physical education

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#### Abstract

The purpose of this descriptive comparative study was to describe the attitudes of Pre-service and In-service physical education (PE) teachers toward inclusive physical education. Non-probability based convenience sampling technique was used to select 40 Pre-service and 40 In-service physical education teachers who participated in the study. The “Teachers’ Attitudes toward Inclusion Scale” developed by Fathi Rezk El-Ashry (2009) [20] was administered to assess their attitudes toward inclusive physical education. The results showed that the mean score of In-service PE teachers is 112.93(± 5.967) and that of Pre-service PE teachers is 109.95(± 5.922). Two-way ANOVA was used to derive the inferential statistics. It was seen that there was no significant interaction between the effects of Groups and Gender on the attitudes of PE teachers toward Inclusive PE ( $F=0.468$ ;  $p=0.496$ ). Simple main effect analysis showed there is significant difference between Groups ( $F=4.292$ ;  $p=0.042$ ) and there is no significant difference between Gender ( $F=2.044$ ;  $p=0.157$ ). Hence it can be concluded that there is a significant difference between the attitudes of Pre-service and In-service physical education teachers toward inclusive physical education.

**Keywords:** Inclusive physical education, Pre-service PE teachers, In-service PE teachers

#### Introduction

With regards to students with special educational needs (SEN) and disabilities, in the school-for-all concept there is a need to re-plan and reinvent the way physical education (PE) and sports curriculum are implemented to provide equal opportunities to all the students. Contact and social relationships promoted in the PE class is considered to be a major contributor towards inclusive attitudes (Block; Rizzo, 1995, Webbert, 2007, Rodrigues, 2006) [3, 24, 28]. Therefore, the PE aspect of the curriculum needs to be considered as area for the expression of creativity and feelings which will help in the fight against the pre-existing notions and exclusions in school environment. Hence, it is necessary to motivate teachers to encourage participation of all students. (Ainscow, 1997) [1].

With regards to students with special educational needs and disabilities new concepts based on different educational responses to be given, began to be introduced. Right from promoting success for all the students to expecting unique responses, the progress of inclusive education system is marked by different perspectives varied attitudes. The important decrees published 1973-74 by the Ministry of Education in Portugal, for the first time assumed the inclusion of students with SEN and disabilities. Still, expected results are not achieved as a number of schools lack commitment toward this population.

For a right inclusive culture to exist in the proposed inclusive environment it is important to change the attitude of the teaching staff. Therefore there is a need for education of teachers and students. A right understanding needs to exist between the family-school relationship and cooperation between all those involved. Hence, cooperation in education is a necessary success factor, as the teachers need support and also need to acquire skills to cooperate with family members and professionals (Ainscow, 1997) [1]. Hence, cooperation in the teaching team of the school can lead to and facilitate positive attitudes in order to develop and successfully implement innovative projects.

Considering the PE curriculum implemented in schools, not many changes were done with regards to inclusive education. It is observed that the PE curriculum focusses on mainly the competitive aspects emphasising mostly on performance. Factors like these affect the participation of SEN students and students with disabilities considering equal opportunities with normal students (Haycock; Smith, 2011) [4].

Inclusive education is based on the initiative abilities of the teachers and their values (Rodrigues, 2006) [24]. Considering the PE taught in schools, teachers have not been able to deliver quality teaching to this heterogeneous population. Hence there is no doubt that inclusive physical education lacks interest and better preparation by teachers. This specific training has recently begun to be included in the respective curricular programmes.

Knowledge and experience about SEN students and students with disabilities are very important for developing positive attitudes in PE teachers, as teaching in an inclusive class requires more creativity and dynamism from the teachers (Jeong; Block, 2011) [8]. A connection between the PE content, the teacher and the students is also necessary, as the PE programme acts as an instrument to work with SEN students and students with disabilities.

Apart from understanding the concept of difference in the inclusive programme, we should also understand that it is not easy for a teacher to teach this heterogeneous population. It is not enough for the school to assume the discourse of difference but the difference itself needs to be debated upon. Many authors suggest that a positive attitude by teachers towards inclusive education is an important pre-requisite for quality effectiveness of this process (Lambe; Bones, 2006, Dunn, 2008, Jeong; Block, 2011, Jerlinder, Danermark; 2010) [15, 9, 10, 11].

It is doubtless that teachers play a very important role in schools. They are the link between society, school, students and knowledge (Dunn, 2008) [9]. Their participation in inclusive education is very important for achieving equal opportunities for all students. A dedicated and qualified teacher can develop well-designed systematic plans by constantly assessing and improvising discriminatory attitudes (Freitas, 2008) [17]. It is expected from teachers to possess a positive attitude towards the diversity in the class and to be able to implement new pedagogies in the class. Hence, a critical stand needs to be taken and innovative programmes must be implemented to respond to this diversity.

“Resources are secondary. The attitude of the school and the teacher is more important” (Rodrigues, 2006) [24].

Apart from the idealistic point of view that connects inclusive education to social justice and human rights, the basic element that is needed for the success of an innovative programme is the teachers’ attitude, ethics and will power. Related reviews suggest that a PE teacher’s pedagogy is influenced by his attitudes and beliefs which supports the theory of planned behaviour (Jeong; Block, 2011, Qi; Ha, 2012) [8, 14]. However, if PE teachers’ attitudes are given importance, there is a possibility that other factors like resources may get ignored. Considering the teachers attitude towards inclusion to be the first step towards effectively implementing programmes and strategies, the present study is focussed on assessing the attitudes of pre-service and in-service PE teachers toward inclusive PE. The research hypothesis was then formulated based on the PE teacher’s professional and personal characteristics.

## Materials and Method

After reviewing the literature in the researcher’s area of interest, it was deduced that the first step with regards to improving Inclusive PE in India was to assess the attitudes of teachers toward teaching an inclusive PE class and check if there exist a difference in the attitudes of Pre-service teachers’ and In-service teachers’ toward inclusive PE in the present scenario. Hence the variables for this descriptive comparative study were identified; Pre-service and In-service PE teachers’ were identified as the categorical variables and their attitudes toward inclusive PE as the dependant variable.

### Assessment Instrument:

The “Teachers’ Attitudes toward Inclusion Scale” developed by Fathi Rezk El-Ashry (2009) [20] was used to assess the attitudes of the Pre-service and In-service PE teachers. The validity and reliability of the tool was already established in his study.

The questionnaire consisted of 32 items and the responses to the items were based on a 5 point likert’s scale (Strongly agree, agree, Neutral, Disagree and Strongly Disagree). The maximum score that could be achieved by an individual was 160 and the minimum 32.

The “Teachers’ Attitudes toward Inclusion Scale” developed by Fathi Rezk El-Ashry (2009) [20] was mainly designed to assess the attitudes of the teachers teaching in a typical classroom environment. For the purpose of assessing the attitudes of physical education teachers specifically assessment instrument was modified. As the subjects for the study were from the state of Maharashtra, the assessment instrument was then translated into the Marathi language to make it more convenient for the subjects to give true responses. The validity and reliability of the modification and the translation of the assessment instrument were established by experts in the field of education, physical education and Marathi language.

### Sample and Sampling

All Pre-service and In-service PE teachers’ teaching at school level from the state of Maharashtra were considered to be the population for the Study. 40 Pre-service teachers and 40 In-service teachers’ (having at least 2 years of teaching experience) aged between 23years to 26years and were selected as sample for the study using the non-probability based convenience sampling technique. Convenience sampling technique was used for sample selection as the researcher had to consider the theoretical unit on Inclusive PE to be taught in case of the Pre-service teachers’ and acquaintance of the In-service teachers’ with a SEN or a disabled student in their class.

Procedure:

#### Phase 1

The phase 1 of the study which can also be called the pilot study was conducted on a small sample of 20 subjects with 10 subjects in each group. It was found that few of the subjects could not understand the items of the questionnaire as they were in English language. The maximum time taken to respond to the items was 45 minutes. The instrument was then translated into the Marathi language.

#### Phase II

The subjects were briefly explained the purpose and the objectives of the study before the administration of the

questionnaire. It was confirmed that the Pre-service teachers' had finished their unit on inclusive PE in the syllabus. The subjects were given 1 hour to give their responses based on the observations of the pilot study and the total score of each individual was obtained.

## Results

**Table 1:** Descriptive Statistics

Groups		M	SD	N
Pre-Service	Male	110.31	6.156	26
	Female	109.29	5.622	14
	Total	109.95	5.922	40
In-Service	Male	114.08	6.079	24
	Female	111.19	5.528	16
	Total	112.93	5.967	40
Total	Male	112.12	6.349	50
	Female	110.30	5.559	30
	Total	111.44	6.094	80

**Table 2:** Tests of Between-Subjects Effects

Source	Type III Sum of Sqrs	Df	M Sqr	F	Sig.
Groups	150.582	1	150.582	4.292	.042
Gender	71.706	1	71.706	2.044	.157
Groups * Gender	16.404	1	16.404	.468	.496
Error	2666.666	76	35.088		
Total	996399.000	80			
Corrected Total	2933.688	79			

a. R Squared = .091 (Adjusted R Squared = .055)

Two-way ANOVA was used to see the effects of groups and gender on the attitudes of PE teachers towards inclusive PE. For group wise comparison the 'F' value was 4.292 which was significant at 0.05 level of significance ( $p=0.042$ ). This indicates that In-service PE teachers ( $M=112.93, \pm 5.967$ ) were better than Pre-service PE teachers ( $M=109.95, \pm 5.922$ ) with regards to their attitudes toward inclusive PE. For gender wise comparison no significant effect was observed in the PE teachers' attitudes towards inclusive PE ( $F=2.044, p=0.157$ ). There was also no interaction effect observed between groups and gender ( $F=0.468, p=0.496$ ).

## Discussion and Findings

The findings of this study show that there exists a significant difference between the attitudes of Pre-service and In-service PE teachers toward inclusion. It was seen that the In-service PE teachers have a higher positive attitude compared to that of the Pre-service PE teachers. This outcome may have been influenced by the years of experience the In-service teachers had which was not more than two years. The influence of the unit on inclusion taught during their Pre-service course may have had an influence on their responses. A different result may be assumed if the years of experience of the In-service teachers would have been at least more than five years.

Many previous studies have found that though there are teachers that have positive attitudes towards inclusion they feel undertrained for teaching an inclusive PE class (Hodge *et al.*, 2004, Jerlind; Danermark, 2010) [6, 11]. Knowledge and training about teaching SEN students or adapted physical education plays a major role for shaping the teachers' attitudes towards inclusive PE. On the contrary, many authors (Block; Rizzo, 1995, Hutzler, 2003, Kowalski; Rizzo, 1996, Rizzo; Vispoel, 1991, Rizzo; Kirkendall, 1995) [3, 8, 14, 23, 22]

have found that teachers who did not possess the knowledge and training with regards to inclusive PE had negative attitudes. Teachers must be trained to understand and implement the inclusive curriculum in a different manner (Rodrigues, 2008, Sharma, 2008) [24, 26]. To achieve this, continuous training proves to be more appropriate than PE classes during the course. More so, after analysing the PE curriculum at the universities in Portuguese it was concluded that there exists no background with regards to teachers' training to materialise the concept of inclusive PE. It is the need of the hour that training in inclusive PE should extend beyond the basic course. Teachers should enhance their knowledge and experience of inclusive PE throughout their careers (Block; Rizzo, 1995, Rizzo; Kirkendall, 1995) [3, 22]. Researchers' like Block, Rizzo (1995) [3]; Rizzo, Vispoel (1991) [23] and Rodrigues (2005) [24] suggest that teachers that have an experience in inclusive PE easily overcome the pre-existing notions and demonstrate more congenial attitudes. Ainscow (1997) [1] confirm that in an inclusive school the employees are encouraged to be more dynamic and the environment promotes the school and its teachers to implement new methods of teaching.

Healthy cooperation between teachers, parents and the society leads to achieving higher goals with regards to inclusive PE (Ainscow, 1997, Haycock; Smith, 2011) [1, 5]. It was also seen that the existing curriculum was rigid and did not allow the acceptance of the pedagogical differences and the adoption of teaching methodologies appropriate for all students. Therefore, the teachers are underscored for their classroom management skills teaching techniques and teamwork. Hence, few researchers (Howes; Grimes; Shohel, 2011, Khochen; Radford, 2012, Sharma, 2008) [7, 13, 26] insist on the point that PE teachers should develop flexible and critical pedagogy during their training and collaborating with the entire school staff. For this, it is necessary to develop an inclusive culture within the educational institution through conversations based on different perspectives but aimed towards a common objective. Studies suggest improvement of inclusive PE can be brought about by giving importance to the participation of family members in inclusive practices. Participation like this will eventually lead to an increased understanding about the teaching-learning process and build trust and cooperation (Rodrigues, 2008) [24]. The teacher qualification and teacher training process combined with the school staff and parents may be the best way to promote inclusive PE (Rodrigues, 2008) [24].

## Conclusion

From this study it was concluded that In-Service PE teachers' have a better attitude toward Inclusive PE compared to Pre-Service PE teachers'. It was also found that gender does not have any effect on the attitudes of the PE teachers towards inclusive PE and there was no interaction found between the effects of groups and gender on the attitudes of PE teachers toward inclusive PE.

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