Attitudes of Preservice Physical Education Teachers towards Individuals with Special Needs

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Abstract: This research aims to identify the attitudes of preservice physical education teachers towards individuals with special needs based on various variables. Survey method was used and a total number of 105 preservice physical education teachers participated in the study. “Attitudes towards Individuals with Special Needs Scale” was used to collect the data. Data were analyzed with descriptive statistics, Mann-Whitney U test and Kruskal Wallis-H test. Results showed that attitudes of preservice physical education teachers towards individuals with special needs were “undecided” referring that their attitudes were neither positive nor negative. Results were discussed with reference to related literature.

Keywords: Attitudes; individuals with special needs; physical education; special education; preservice teachers.

1. Introduction

Physical education is the branch of education that aims to develop human health and various skills. It is a discipline that incorporates gymnastics, games and sports activities which develop individuals in spiritual, mental and physical ways (Bailey, 2017; Hosker, Elkins & Potter, 2019). Physical activities and sports are essential components of human life. Bouchard, Blair and Haskell (2018) stated that efforts to improve the quality of physical education and sports activities which positively affect physical and mental development will also contribute to the healthy growth of young generations. The success of the students in schools will increase accordingly with increased attention and importance to physical education and sport activities.

In daily life, sports is a good tool for promoting physical capacity of individuals to be healthy in terms of anatomical, physiological and psychological aspects. For individuals with special needs, sports is a reactive activity to achieve adaptation to the society and reveal the feeling of self-sufficiency (Konar & Yildiran, 2012; Brady, Christensen & Holt, 2017; Leo, Faulkner, Volfson, Bassett-Gunter & Arbour-Nicitopoulos, 2018). In this context, physical education practices are one of the most effective activities for individuals with special needs especially for increasing their academic, social and gross motor skills (Winnick & Porretta, 2018). By means of physical activities, individuals with special needs easily experience self-realization, learn to obey the rules, be more creative and concerned with their environment. In this respect, the program to be implemented in physical education courses for individuals with special needs should be shaped according to the education performance level, ability and needs of the student with special needs. Accordingly, physical education teachers are required to have essential knowledge and skills to give education for individuals with special needs and have positive attitudes towards them (Terzioglu, 2002; Temple, Frey & Stanish, 2017; Fakolade, Lamarre, Latimer-Cheung, Parsons, Morrow & Finlayson, 2018).

Considering these positive effects of sports, individuals with special needs should be regularly and continuously engage in physical activities. These activities include play, dance, swimming, regular physical education and sports activities as well as team or individual games (Yanardag & Yilmaz, 2017). There are specific physical education models developed and applied for individuals with special needs. These include active program, achievement-based program, play program, physical education opportunity
Facilitating the lives of individuals with special needs by creating a functional unity in society is a social responsibility. In this sense, every part of the society has to do its duty. As a matter of fact, teachers in schools which are the most effective socializing tool after the family in terms of their positive contribution to socialization and give a certain self and a personality to the individual are the most important role model after the parents (Colak & Cetin, 2014). Teachers are the most important components to reach the planned goal in the teaching process. The teacher's upbringing process and field knowledge as well as pedagogical knowledge and skills in the field are very important. The physical and psychological status of the student should be considered in terms of the effectiveness and success of the learning process. For this reason, the teacher has to determine the curriculum according to the interests, skills and needs of the student who needs special education and should be in a position to act accordingly.

Physical education teachers provide services in special education schools as well as general education environments. Inclusion practices are becoming more widespread in recent years and students with special needs are directed to general education environments rather than disaggregated environments compared to the past (Armstrong, Armstrong & Barton, 2016; Slee, 2018). This requires physical education teachers to have knowledge and skills about physical education and sport for students with individuals with special needs. Therefore, it is crucial for preservice physical education teachers to interact more frequently with students with special needs through teaching practices courses in order to acquire teaching skills to be more effective when teaching students with special needs.

The attitude in the way of handling a problem takes place in all subjects throughout the lives of individuals. For this reason, it has been defined by many people in many respects. According to Vogel and Wanke (2016), attitudes are highly organized, long-term emotions, beliefs and behaviors. Attitude is a phenomenon that directs the behavior of individuals and causes bias in decision making process. Therefore, it could be considered that attitude of teachers plays an important role in the achieved inclusion of children with special needs (Rizzo & Vispoel, 1992). According to Bartlo and Klein (2011), physical education practices play a crucial role on quality of life among individuals with special needs. Therefore, it is really crucial to reveal the attitudes towards individuals with special needs among preservice physical education teachers, examine the factors which affect their attitudes and provide recommendations. Therefore this study aims to
determine preservice physical education teachers’ attitudes towards individuals with special needs. The research questions are as follows:

1. What are the attitudes of preservice physical education teachers towards individuals with special needs?

3. Do the attitudes of preservice physical education teachers towards individuals with special needs differ in terms of their age?

4. Do the attitudes of preservice physical education teachers towards individuals with special needs differ in terms of their gender?

5. Do the attitudes of preservice physical education teachers towards individuals with special needs differ in terms of their class level?

6. Do the attitudes of preservice physical education teachers towards individuals with special needs differ in terms of their status on receiving a lecture on special education before or not?

2. Method

2.1. Research model

Descriptive survey research was used in the study. In survey method, an old or current phenomenon or event is described as it exists (Karasar, 2011). According to Buyukozturk, Cakmak, Akgun, Karadeniz and Demirel (2017), descriptive survey studies are used to obtain information about the opinions, interests, talent, attitude of the participants regarding a situation or event. Descriptive survey research aims to determine the specific characteristics of a group.

2.2. Participants

As the selection criteria for the participants of the study, the participants were determined to be studying in the physical education teaching department in accordance with the purpose of the study. Participants included 105 volunteer preservice teachers from the department of Physical Education and Teaching Sports in Faculty of Sports Sciences at Near East University in North Cyprus. Participants were chosen with simple random sampling. According to the results, it is seen that 101 of the participants (96.2%) were between the ages of 20 and 30; 4 of them (3.8%) were between 31 and 40. In addition, 92 of the participants (87.6%) were male and 13 of them (12.4%) were female. Additionally, majority of the participants were first year (f=44, 41.9%) and second year students (f=41, 39.0%). Besides, 19 participants (18.1%) were third year students and 1 of them (1.0%) was fourth year student. Approximately 85% of the participants reported that they did not receive a lecture on special education and the
other remained participants reported that they received a lecture on special education (f=16, 15.2%).

2.3. Instrument

Demographic information form and one scale were performed to obtain the data. In this form, there were questions on participants’ age, gender, class and whether they received a lecture on special education or not. “Attitudes towards Individuals with Special Needs Scale” was developed by Yarali (2015) to determine preservice teachers’ attitudes towards special needs. There are 13 statements in the scale and items were scored on a 5-point Likert scale. It was determined that Cronbach Alfa internal consistency value of the scale is .841. Regarding the validity of the scale, it was found that the scale expressed the %58.592 of the total variance (Yarali, 2015).

Scale development study was carried out with 180 pre-service teachers by (Yarali, 2015). In order to test the reliability of the scores obtained from the scale in terms of internal consistency, the Cronbach alpha reliability coefficient, the unrelated t-test between the item mean scores of the lower and upper 27% groups of each item, the two half test reliability Spearman-Brown correlation value and Guttman Split-Half value and each corrected total item correlations of the item were calculated. Before factor analysis, Kaiser-Meyer-Olkin coefficient (KMO) and Bartlett sphericity test were analyzed and KMO value of the scale was revealed to be 0.855 and Bartlett sphericity test (2341.713, df = 561, p = 0.000).

2.4. Procedure and Research Ethics

Preservice teachers were firstly informed about the aim of the study and preservice teachers who were voluntary are included. Instruments administered to the participants in the lectures. It was approximately took 15-20 minutes for participants to complete the instruments. The data of the study were collected during 2018-2019 academic year spring term. Ethical rules in the process of conducting the research were considered. Before the application of the study, all necessary ethical requirements were carried out and ethical approval from the university’s ethics committee were received. Participants were interviewed and the aim of the research and general information about the research were given. In this context; to ensure that participants do not feel pressured, they were informed that participation to the study is voluntary and they can quit from the study whenever they want and that they would not be harmed.
2.5. Data Analysis

Data were examined with SPSS 20.0 statistics program. Significance level was regarded as \( p < .05 \). Data were entered into SPSS and then tested whether data were normally distributed or not. According to the normality test, it was found that data were not normally distributed and therefore descriptive statistics and various statistical analysis tests were used in data analysis.

3. Results

3.1. Preservice Physical Education Teachers’ Attitudes towards Individuals with Special Needs

Table 1. Descriptive statistics on preservice teachers’ attitudes towards individuals with special needs

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total score on attitudes</td>
<td>105</td>
<td>16</td>
<td>31</td>
<td>20.05</td>
<td>3.19</td>
</tr>
<tr>
<td>towards individuals with</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>special needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Table 1, it is seen that preservice teachers’ mean scores on “Attitudes towards Individuals with Special Needs Scale” is (\( X = 20.05 \)). When it is considered that the highest score that can be obtained from the scale is 75, it could be inferred that preservice physical education teachers’ attitudes towards individuals with special needs lie between “neither positive nor negative” and/or “undecided”.

3.2. Results on Preservice Physical Education Teachers’ Attitudes towards Individuals with Special Needs Based on Age

Table 2. Results on preservice physical education teachers’ attitudes towards individuals with special needs based on age

<table>
<thead>
<tr>
<th>Age range</th>
<th>N</th>
<th>Mean rank</th>
<th>Sum of ranks</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>20-30</td>
<td>101</td>
<td>53.47</td>
<td>5400.50</td>
<td>154.50</td>
</tr>
<tr>
<td></td>
<td>31-40</td>
<td>4</td>
<td>41.13</td>
<td>164.50</td>
<td></td>
</tr>
</tbody>
</table>
Table 2 shows the Mann-Whitney U test results of the attitudes of pre-service teachers towards individuals with special needs based on age variable. As it is seen in Table 2, the scores of pre-service teachers' attitudes towards individuals with special needs according to the age variable of the teacher candidates [U = 154.500; p < .05] did not differ significantly. Considering the rank averages, it could be said that pre-service teachers' attitudes towards individuals with special needs do not differ according to age.

### 3.3. Preservice Physical Education Teachers’ Attitudes towards Individuals with Special Needs Based on Gender

Table 3. Results on preservice physical education teachers’ attitudes towards individuals with special needs based on age

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Sum of ranks</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female participants</td>
<td>13</td>
<td>57.46</td>
<td>747.00</td>
<td>540.00</td>
<td>.567</td>
</tr>
<tr>
<td>Male participants</td>
<td>92</td>
<td>52.37</td>
<td>4818.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows the Mann-Whitney U test results of physical education teacher candidates' attitudes towards individuals with special needs according to gender variable. As shown in Table 3, it was found out that the attitudes of the pre-service teachers towards the individuals with special needs according to the gender variable were determined by the female and male teacher candidates [U = 540.00; p < .05] did not differ significantly. Considering the rank averages, it can be stated that female and male pre-service physical education teachers' attitudes towards individuals with special needs do not differ according to gender.

### 3.4. Results on Preservice Physical Education Teachers’ Attitudes towards Individuals with Special Needs Based on Class Level

Table 4. Kruskal Wallis H test results on class level variable

<table>
<thead>
<tr>
<th>Class Level</th>
<th>N</th>
<th>Mean rank</th>
<th>SD</th>
<th>X²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Class</td>
<td>44</td>
<td>40.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>2nd Class</td>
<td>41</td>
<td>68.38</td>
<td>3.19</td>
<td>19.172</td>
</tr>
<tr>
<td></td>
<td>3rd Class</td>
<td>20</td>
<td>50.05</td>
<td></td>
<td></td>
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</tbody>
</table>
Table 4 shows the Kruskall Wallis H Test results for the comparison of the attitudes of individuals with special needs according to the grade level. According to Table 4, pre-service teachers' attitudes towards individuals with special needs differ significantly according to the class level variable \(X^2 = 19.172; p < .05\). When the mean scores were taken into consideration and the U-test was used to find the source of the differences again, it was concluded that the second-grade pre-service teachers gained higher attitude scores than the other teacher candidates.

### 3.5. T-test Results on Preservice Physical Education Teachers’ Attitudes towards Individuals with Special Needs Based on Their Status on Receiving a Lecture on Special Education or not

Table 5. Results on preservice physical education teachers’ attitudes towards individuals with special needs based on their status on receiving a lecture on special education or not

<table>
<thead>
<tr>
<th>Received a lecture on special education or not</th>
<th>N</th>
<th>Mean rank</th>
<th>Sum of ranks</th>
<th>U</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-30</td>
<td>65</td>
<td>58.78</td>
<td>3821.00</td>
<td>924.00</td>
<td>.012</td>
</tr>
<tr>
<td>31-40</td>
<td>40</td>
<td>43.60</td>
<td>1744.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5 shows the results of the Mann-Whitney U test of the attitudes of the pre-service teachers towards individuals with special needs according to the variable of previous courses. As seen in Table 5, physical education teacher candidates' attitudes towards individuals with special needs according to the age variable of teacher candidates received the score \(U = 924.00; p < .05\) was significantly differentiated. When the averages are taken into consideration, it was concluded that the attitude scores of the pre-service teachers who had previously received a special education course were higher than those who did not.

### 4. Discussion

Special education and rehabilitation centers, which are increasing in number in the process of dissemination of special education, serve a significant proportion of the population of individuals with special needs. It affects all individuals in the natural environment of physical education and sports activities in different ways and supports all developmental
dimensions. As a result of this study, it has become clear that physical education and sports, which are the necessary elements of education, are an effective element in the socialization of individuals with special needs. Within the framework of special education programs, physical education and sports activities should take the place it deserves.

This study aimed to determine preservice physical education teachers’ attitudes towards individuals with special needs and reveal whether their attitudes show difference according to some demographic variables including age, gender, class level and status on receiving a lecture on special education or not. Results showed that preservice physical education teachers’ attitudes towards individuals with special needs lie between “neither positive nor negative” and/or “undecided”. According to literature, research has more focused on physical education teachers towards individuals with special needs and there are different research results regarding their attitudes. Combs, Elliott and Whipple (2010) showed that elementary physical education teachers have positive attitudes towards individuals with special needs and they desire to give education to individuals with special needs in their courses. Morley, Bailey, Tan and Cooke (2005) also showed that physical education teachers support inclusion of students with special needs in physical education classes. When results of the studies on preservice physical education teachers’ attitudes towards individuals with special needs are examined, it is seen that their attitudes are positive towards individuals with special needs, disability and teaching students with disability (Hodge, Murata & Kozub, 2002; Mangope, Mannathoko & Kuyini, 2013; Kim & Koh, 2018).

Furthermore, the present study investigated whether preservice physical education teachers’ attitudes towards special needs show significant difference based on demographic variables including age, gender, class level and status on receiving a lecture on special education or not. According to the results, pre-service physical education teachers’ attitudes towards individuals with special needs do not differ according to age. There are limited number of studies examining preservice special education teachers’ attitudes towards individuals with special needs and their age. Yarali (2015) found that preservice teachers’ attitudes towards individuals with special needs do not change according to their age. In addition, results showed that pre-service physical education teachers' attitudes towards individuals with special needs do not differ according to gender. In line with this result, Hodge and Jansma (2000) indicated that no gender difference was found among preservice physical education teachers toward teaching students with disability. In contrast, Karademir, Acak, Turkecapar and Eroglu (2018) found
that female preservice physical education teachers have more positive attitudes towards individuals with special needs.

According to the results, second-grade pre-service physical education teachers gained higher attitude scores than the other teacher candidates. However, Karademir, Acak, Turkcapar and Eroglu (2018) showed that there are no significant difference between class levels of preservice physical education teachers’ attitudes towards individuals with special needs. Attitude scores of preservice physical education teachers who had previously received a special education course were higher than those who did not. In accordance with this finding, Hutzler, Zach and Gafni (2007) found that previous participation in an academic course related with special education positively affects preservice physical education teachers’ attitudes towards individuals with special needs. Oh, Rizzo, So, Chung, Park and Lei (2010) also showed that prior teaching experience and previously preparing a coursework on special education predicted positive attitude and intention towards teaching individuals with disability.

In this study, there is an emphasis on the importance of having positive attitudes towards individuals with special needs. Results of the study have implications for the field of special education and physical education teacher training programs. In terms of improving physical, mental and social development of individuals with special needs, it is important to participate in physical education activities organized by physical education teachers with necessary knowledge and skills related with special education. In addition, there should be more emphasis on individuals with special needs in physical education teacher training programs. Therefore, preservice physical education teachers will be able to develop more attitudes towards special needs. When they have more positive attitudes, they can develop, plan, modify and deliver programs in accordance with the characteristics of the individuals with special needs. In the light of the results obtained in this study, it is necessary to draw attention to some limitations before making generalizations. First of all, this study is limited to the sample group studying at a private university in North Cyprus. Therefore, studies with different sample groups and studying in different locations may give a different dimension to these results. In addition, by adding data to be collected with another measurement tools, it is possible to reveal other latent variables that may affect the attitudes of preservice physical education teachers towards individuals with special needs.
5. Conclusion and Recommendations

The results provided evidence on preservice physical education teachers’ attitudes towards individuals with special needs and association of their attitudes with demographic variables. In regard to the results of the present study, there is a requirement for supporting positive attitudes among preservice physical education teachers towards individuals with special needs. Following recommendations were provided according to the results of the study:

- Teacher training programs should focus more on teaching individuals with special needs in order to promote knowledge, skills and attitudes of preservice physical education teachers.
- Association with different demographic variables such as having a relative or close one with special needs or teaching experience in special education might be examined.
- In the context of the special education course, pre-service physical education teachers might be encouraged to make school visits in order to recognize and gain experience with individuals with special needs and therefore develop positive attitudes towards them.
- Elective courses may include courses to enable increased awareness on individuals with special needs. Within the scope of teaching practice course, preservice physical education teachers may be asked to participate in observing and implementing practices of inclusive education.

References


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