



## **An Evaluation of Pre- and In-service Preschool Teachers' Attitudes towards Sports Activities of Individuals with Intellectual Disabilities: Kocaeli Province Example**

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. All authors participated in preparing the manuscript including the study design, data gathering, interpretation of the data and drafting the manuscript for publication. All authors read and approved the final manuscript.*

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### **ABSTRACT**

The purpose of this research was to evaluate the attitudes of preschool teachers (Primary-Special Education and Rehabilitation) who work within the Kocaeli Provincial Directorate for National Education and the teacher candidates who are attending to the Department of Preschool Education in School of Education at Sakarya University towards the sports activities of individuals with intellectual disabilities. In this survey modeled research, "Personal Information Form" developed by the researchers and "Attitude Scale on the Sports Activities of Individuals with Intellectual Disabilities developed by Ilhan, Esenturk and Yarimkaya [44]" were used. Attitude levels of

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participants are compared according to; gender, having a disabled family member, witnessing a disabled individual's sports education, having taken courses on the subject of sports and special education for individuals with disabilities during the period of teacher training, doing physical exercises and the institution that they work for.

The participants of this research are, 74 preschool teachers consisting of 72 females and 2 males who work for Ministry of National Education in Kocaeli province and the 100 students of Sakarya University Department of Preschool Education, consisting of 92 females and 8 males. The total number of participants is 174 in- and pre-service preschool teachers. In evaluation of the data and the obtainment of the calculated values, statistical package program SPSS 22.0, USA was used. For the values which are not normal according to the test of normality, Independent-Samples T-Test, Mann-Whitney U test and Kruskal Wallis H test among the nonparametric tests were used.

According to the gathered data; factors of gender, physical activities and having a family member with a disability had little to none effect on attitude levels of participants on the subject of sports activities of individuals with intellectual disabilities ( $P>0,05$ ). In contrast to that, factors of witnessing a disabled individual's sports education, institution they work for (Primary-Special Education or Rehabilitation) and being a teacher candidate, had real effects on the statistics of this comparison ( $P<0,05$ ).

In conclusion; It is seen that being in the same educational environment with the individuals who have special needs and witnessing a disabled individual's sportive talents affect teachers and teacher candidates attitudes positively towards the subject. Researching in different areas and samples related to the subject can contribute to create a positive attitude and generalisation of the demographical traits.

*Keywords: Preschool; teacher and teacher candidate; intellectual disability; sports activities; attitude.*

## 1. INTRODUCTION

Education supports the individual's orientation and relationships in the environment that he/she lives in; and also provides the permanent changes in individuals pre-existing talents so that these talents reach the top level. To provide this whole process of changes and improvements most efficiently, education should start in early ages [1,2,3,4,5,6]. This shows the importance of the activities and education in early childhood years of an individual's life.

To that end, preschool education has gained importance in our country in the recent years. Parents of the children in the age range of 0-6 are encouraged by Turkish National Education and non-governmental organizations to enroll their children for early childhood education.

It is obvious that training teachers who are capable of giving healthy and required preschool education in every aspect will have a significant impact on the rest of the children's educational lives. Correspondingly, inclusive educational practices which are adopted in primary schools are explained as "educational environments developed to efficiently teach and provide mutual interactions for individuals that need special attention" (National of Ministry Education

Regulation, 1997, no. 573 KHK, subparagraph c). Even though children with intellectual disabilities go through the same physical developmental stages as typically developing children, they fall behind and don't grow up like them Ozer [7].

In that case, we can say that it is important to implement the Inclusive Educational Practices of the primary schools into the preschool education of individuals with intellectual disabilities. This way special student can be educated in accordance with the essential principles of the special education. Thus, when essential principles of the special education are taken into consideration, it can be said that The Earliness Principle has an efficient and important spot in future educational processes.

Children with intellectual disabilities are one of the high incidence disability groups in special children. [8,9]. These children are identified as individuals who have mental, cognitive, social or practical adaptation deficiencies or limitations before the age of 18 and who show differences below two standard deviation of the average [10,11]. It is also stated that the motor developments of individuals with intellectual disabilities usually fall 2-4 years behind and they remain weak in motor abilities such as; stamina, strength, promptness, balance and activeness compared to their normal coevals [12,13,14].

In that case, we can say that to educate children with intellectual disabilities optimally in every way, physical education and sports activities reveal their importance in situations such as being in interaction with peers and attempting to reduce disabilities to minimum. Thus, when relevant literature is examined, it can be seen that taking part in physical education and sports activities has a positive effect on variables such as; perceived freedom [15], cognitive development, social adaptation, motor behaviors and social abilities, happiness levels, communication abilities and self-respect [16-31]. It is remarkable that sports activities that are helpful for individuals with disabilities are ignored for many years and the participation to these activities are in low levels [32,33,34,35]. We can assume that this is the result of disabled individuals' negative attitude towards taking part in the sports activities.

As a matter of fact, attitude is a factor that controls the individual's behavior and it develops in the educational process. Also, it is considered as an important descriptor of behaviors with its cognitive, affective and behavioral domains. There are lots of similar definitions in the respective literature [36,37,38,39]. Kosterelioglu [40], states that attitude is "a tendency that has emotional, mental and behavioral aspects which direct the actions in positive or negative ways". There are studies about the relationship between the attitude and sports activities in the literature [41,42,7].

In that case, the identification of negative and positive attitudes of preschool (Primary-Special education and Rehabilitation) teachers and teacher candidates towards sports activities of individuals with intellectual disabilities (being one of the most important aspects of the disabled children's general education) is important. Positive attitudes of teachers have great importance in these children's health and wellness. This study aims to identify preschool (Primary-Special education and Rehabilitation) teachers and teacher candidates attitudes towards the physical education of the individuals with intellectual disabilities.

## **2. MATERIALS AND METHODS**

### **2.1 Research Model**

In this study, general survey model which is a descriptive research model and descriptive statistical model were used. Survey model aims to describe a situation as is [43].

### **2.2 Research Group**

The participants of this research are, 74 preschool teachers consisting of 72 females and 2 males who work for Ministry of National Education in Kocaeli province (in Primary-Special Education and Rehabilitation Centers) and as of academic year 2015-2016, 100 students of Sakarya University Department of Preschool Education, consisting of 92 females and 8 males who are in their senior year. Although the numbers looks disproportionate, the female to male ratio of the study participants is representative of the actual population. In Turkey, mostly females choose to be an early childhood teacher as a profession. The total amount of participants is 174 preschool teachers and teacher candidates. Before administering the data collection tools researchers secured the necessary permissions from the Ministry of Education.

### **2.3 Data Collection Tools**

In this study, "Personal Information Form" developed by the researchers and "Attitude Scale on the Sports Activities of Individuals with Intellectual Disabilities developed by İlhan, Esenturk and Yarimkaya" [44] were used. Attitude levels of participants are compared in terms of; gender, having a disabled family member, witnessing a disabled individual's sports education, doing physical exercises and their institution.

#### **2.3.1 Explanation of attitude scale on the sports activities of individuals with intellectual disabilities (ASSIID)**

ASSIID was developed by İlhan, Esenturk and Yarimkaya [44]. After exploratory factor analysis it includes 28 items and 2 sub-dimensions. Sub-dimensions are named accordingly to their speculative fundamentals "Positive Attitude Towards The Sports Activities" (SEYOT) and "Negative Attitude Towards The Sports Activities" (SEIOT). SEYOT consists of 21 items (1, 2, 3, 5, 6, 7, 9, 10, 11, 13, 14, 15, 17, 18, 19, 21, 22, 23, 25, 26, 27). SEIOT consists of 7 items (4, 8, 12, 16, 20, 24, 28). Answerers can rate an article between the points of 1-5. With the usage of Likert scale, items are named as "Strongly Agree (5 points), Agree (4 points), Neutral (3 points), Disagree (2 points) and Strongly Disagree (1 point)". But the sentences which have negative meanings (4, 8, 12, 16, 20, 24, 28) are rated

contrarily. In this scale of 28 items, lowest and highest scores are respectively 28 and 140 [44].

individuals with intellectual disabilities ( $P>0,05$ ) (Table 1).

### 2.4 Analysis of the Data

In evaluation of the data and the obtainment of the calculated values, statistical package program SPSS 22.0, USA was used. For the values which are not normal according to the test of normality, Independent-Samples T-Test, Mann-Whitney U test and Kruskal Wallis H test among the nonparametric tests were used. Error performance is valued 0.05. The techniques used in the analysis of the data are within the scope of descriptive statistics.

The factor of witnessing a disabled individual's sports education, had effects on the statistics of this comparison ( $P<0,05$ ). So, it can be said that participants who claim to have witnessed a disabled individual's sports education have higher attitude levels than those who haven't (Table 2).

The factors of institution and being a teacher candidate had effects on the statistics of this comparison on the attitude levels of participants towards the sports activities of individuals with intellectual disabilities ( $P<0,05$ ). So, it can be said that participants who are special education and rehabilitation center teachers have higher attitude points than teacher candidates and teacher candidates have higher attitude points than primary school teachers (Table 3).

### 3. RESULTS

According to the gathered data; factors of gender, physical activities and having a disabled family member had little to none effect on attitude levels of participants towards the sports activities of

**Table 1. Participants' attitude levels on the sports activities of mentally disabled individuals compared in; gender, doing physical exercises, having a disabled family member**

Attitude		N	Mann-Whitney U	P
Gender	Female	164	1.059,500	,121
	Male	10		
Total		174		
Does physical exercises	Yes	34	2.232,500	,575
	No	140		
Total		174		
Has a relative with a disability	Yes	26	1.987,500	,788
	No	148		
Total		174		

( $P>0,05$ )

**Table 2. Participants' attitude levels on the sports activities of mentally disabled individuals compared in witnessing a disabled individual's sports education**

Attitude		N	Mean rank	Mann-Whitney U	P
Witnessing a disabled individual's sports education	Yes	55	101,62	2,496	,012
	No	119	80,97		

( $P<0,05$ )

**Table 3. Participants' attitude levels on the sports activities of mentally disabled individuals compared in; institution they work for**

Attitude		N	Mean rank	Kruskal-Wallis	P
Institution	Primary School	37	94,2162	23,030	,000
	Special Education and Rehab.	37	102,9459		
	Teacher Candidate	100	100,5900		

( $P<0,05$ )

#### 4. DISCUSSION AND CONCLUSIONS

Because “The Subject of Sport Activities of Individuals with intellectual disabilities (ASSIID)” which is used to reach the main goal of the study is a new concept, it limits the comparison between the findings acquired during the study and researches made with respect to the level of attitude of people with individuals with intellectual disabilities towards participating in sport activities. Due to this limitation, study findings are tried to be explained with the help of comparison with attitude research made with different perspectives.

According to the findings obtained from participants in the research, there isn't any meaningful difference in attitude levels in terms of gender variance. Some studies located in the previous literature are supporting our findings and according to them, there isn't any meaningful results in terms of gender variance [45,46]. Zaglı (2010)'s research findings support our findings closely. In the research, preschool teachers' attitudes towards general education and inclusive education for the students with intellectual disabilities were studied but no important result in terms of gender variance was detected. Notwithstanding, in Yıldırım Sari et al. [47]'s research, there is a difference in nursing students' attitude point average towards individuals with intellectual disabilities in terms of gender. They reported higher point average for women than for men. In consideration of these findings acquired with respect to gender variance in literature, in order to generalise the topic, extensive and illustrative studies in which only the gender variance is focused on are needed.

Again, in terms of having an individual mentally handicapped in family, there isn't any detection of significant, statistical difference in participants' level of attitude. Corresponding to this situation, [48,49,50,51]'s findings support and match up with our findings. However, Colak and Cetin, [46]'s study named “A Study on Attitudes of Teachers towards Mentally Handicapped” found that those having an individual mentally handicapped in family have a higher perception of mental disability. This argument is in contradiction with our findings. It is clear that any generalisation in terms of this aspect cannot be made. In another finding acquired from our study about level of attitudes towards individuals with intellectual disabilities participating in sport activities, there isn't any significant, statistical difference between those doing exercise and those who don't ( $P>0,05$ ).

However, in Yilmaz et al. [51]'s study named “People with Mental Disabilities' Awareness of Benefits of Sport: A Study on Candidates for Degree of Physical Education”, there is a meaningful finding in favor of those doing exercise. Although these findings are in contradiction with our findings, it is considered that the discrepancy arises from the difference of branch between groups illustrated. Because, the group illustrated in Yilmaz et al. [51]'s study consist of candidates for degree of physical education and during the process of being accepted to the department, they are assessed by the special talent test and the sport background.

In the light of findings of the research, we can at least say that there isn't any difference in preschool teachers and the candidates' level of attitudes towards individuals with intellectual disabilities participating in sport activities in terms of gender, sport background and having an individuals with intellectual disabilities in family.

In another finding of our study, we see a significant difference when research is made determining if intellectual disabilities witness any sport education ( $P<0,05$ ). This difference is in favor of intellectual disability who witnessed sport education. In literature of field, as İlhan [52] stated, this situation is accepted as a finding of “belief that although children with intellectual disabilities are most encountered group in society, they are not fully recognized, there is a bias and belief against them and nothing can be done about these”.

But the numerical increase in intellectual disabilities participating in Paralympics and organizations of Federation of Special Sportsmen and their successes can be considered as an indication that these negative bias and belief will disappear in time. Again, in Gurel 2006's study that take place in literature of the field, it is shown that “Physical Education and Sport for Mentally Handicapped course has a positive effect on general attitude of students in Physical Education and Sport Teaching department towards the mentally handicapped”. Similarly, as a result of education programmes given to insufficient individuals, there are some studies [53-59] indicating that a positive attitude is being developed.

Together with findings of these studies matching up with ours, we can say that governmental and non-governmental organizations' awareness projects, which became widespread in our country especially after 1990, increase of

Exercise and Sport Education for Mentally Handicapped Departments in Special Education Teaching, Faculties of Education of Universities and Faculties of Sport Science, Physical Education and Sport for Handicapped taking place in all departments' curriculums can be seen as an indication that bias and belief against the handicapped in our society have began to disappear and they will gain importance in creating an overall, positive attitude at all levels of society in future.

Then, for teachers and the candidates for teaching, who are seen as architects of future, to create a positive attitude towards the handicapped, in terms of sport education for handicapped, Physical Education and Sport for Handicapped course should be at least an elective course in related departments.

The last finding from participants is that there is an important, statistical difference in averages of attitude levels towards intellectual disabilities participating in sport activities in respect to variances of where they work and whether they are teacher candidate. According to this, preschool teachers in Special Education and Rehabilitation School have a higher point average of attitude levels than preschool teachers who work in Primary School and the candidates. Also, the teacher candidates have a higher point average of attitude levels in proportion to preschool teachers in primary schools. Kırımoglu et al. [50]'s study named "Research on Awareness Levels of Teachers and Teacher Candidates Towards Effects of Participating in Sport Activities for Mentally Handicapped", it is shown that teachers working in Special Education and Rehabilitation Center have a higher level of awareness than those working in other institutions.

We consider that our findings that teachers working in Special Education and Rehabilitation institutions have a higher level of attitude is because they interact with individuals with intellectual disabilities daily and they can observe developments of mentally handicapped better.

We can conclude that sharing the same environment of school with intellectual disability and witnessing their abilities in sport activities have a positive effect on creating a positive attitude for teachers and teacher candidates.

## 5. SUGGESTIONS

- Working with different fields and examples can contribute to both developing positive

attitudes and generalizing demographic characteristics.

- In Special Education and Rehabilitation Schools where children with intellectual disability have often education, employment of people graduating from Physical Education and Sport Department, and Exercise and Sport for Handicapped Department in Faculty of Sport Science can have a positive effect on levels of attitude towards the healthy development of workers of institution in other fields (psychologist, physio, preschool and special education teacher, different field), families having various problems due to the insufficiency of their children and children with intellectual disabilities in many aspect.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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