

# The evaluation of physical education, sport, and exercise for individuals with mental disabilities in turkey: a study of meta-synthesis

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**Summary.** *Study Objectives:* This study aimed to analyze the results of studies conducted on physical education, sports, exercise, and physical activity applied to individuals with developmental disabilities in Turkey. *Methods:* A total of 47 studies, including 23 master theses between 2012-2020 and 24 articles between 2014-2020 were examined, and the obtained data were analyzed with a meta-synthesis study using the qualitative research method. Studies to be included in the research were chosen by using the Google Academic search engine, Council of Higher Education National Thesis Center, and Dergipark databases. Chosen articles' code, author, year and aim, distribution by type, data collection tools, sample group, and sample number, research methods, and the data related to the results obtained at the end of these studies were examined in detail. However, in this study, a general evaluation of existing studies in the literature was performed. *Results:* It was predicted that the data obtained would be beneficial in terms of directing future research and in terms of awareness of physical education, sports, exercise, and physical activity studies conducted for individuals with mental disability. *Conclusion:* It was determined that when physical education, sports, and exercises applied to individuals with mental disabilities at a trainable level systematically and regularly, provided positive and significant improvements on their bio motor properties.

**Key words:** Mental disability, Sports, Physical Education, Exercise

## Introduction

Individuals with mental disabilities face many difficulties throughout their lives. The most important of the difficulties they face is the belief that these people are not well known and that there is not much to be done for these individuals (1). Physical education and sports activities aim to help people with disabilities control their emotions such as aggression and anger, which are a natural result of the mood they are in due to their disabilities and society's attitudes towards them (2). It can be said that sports support the establishment of new friendships, reinforcement, and social cohesion and play an important role in the reintegration of disabled individuals into society (3).

Also, it is necessary to give priority to the awareness levels of their families and social environment in their participation in physical education and sports activities that contribute to the development of all developmental characteristics of mentally disabled individuals (4).

This study aimed to find the current situation of the physical education, sports, exercise, and physical activity studies for the individuals with mental disability in Turkey with meta-synthesis descriptions. According to results, theses and essays performed regarding individuals with mental disability in Turkey should examine using the meta-synthesis method. Features like aim, sample group, and number, how results were obtained and using which data collection tool, etc. are represented descriptively.

The study conducted on physical education, sports, and exercise practices in individuals with a mental disability with meta-synthesis description and the results of the research in this field should be evaluated qualitatively. Thus, it constitutes an important resource to reach studies on physical education, sports, exercise, and physical activity in individuals with mental disabilities.

## Materials and Methods

### *Experimental Design*

In the research, a total of 47 studies, including 23 master theses between 2012-2020 and 24 articles between 2014-2020 were examined. When the Master theses were examined according to the aim of the study, a total of 2787 people were reached, and a total of 4559 people were reached with the articles. Scales such as questionnaire, form, inventory, test, interview, and basic motor skill tests were used for a total of 7346 people with different levels of mental competence in master and article studies.

The meta-synthesis research method was used for reaching the results of the studies about physical education, sports, and exercise for individuals with mental disabilities in Turkey in this study. Meta-synthesis was a research method that combines and evaluates the information obtained using qualitative and quantitative research by reinterpreting (5). Meta-synthesis was a method of bringing a new dimension and perspective to these studies based on the findings and results obtained as consequences of the studies (6). The main aim of meta-synthesis was to reinterpret the reviewed studies by blending them and to adhere to these studies in this interpretation process (7).

### *Data Collection*

Studies to be included in the research were chosen by using the Google Academic search engine, Council of Higher Education Thesis Center, and Dergipark databases. To determine the studies to be included, a search was made using keywords during the data collection process. While examining the literature, it

was seen that the words “Mental Handicap, Mental Retardation, Mental Disability” and “Physical Education, Sports, Exercise” were mostly used as keywords in the studies. Descriptive features of the studies included in the meta-synthesis study were presented in tables.

Investigated studies, master theses were coded as T1, T2, ..., T23 and articles were coded as A1, A2, ..., A24. The concepts in themes and sub-themes were summarized and codes for each theme were created. The aim of the research and the research questions were written in ensuring validity and reliability. Themes were organized in consideration of their suggestions (8). These; 1- The names of the themes should be compatible with the orientation of the study, 2- may be completely your opinion or a concept in the literature, 3- Your data can be extracted directly from itself or your data, 4- Some of the main themes can be given as sub-themes.

## Results

When Table 1 was examined, it was seen that quantitative research methods were preferred the most and qualitative research methods were preferred the least.

### **Results of Studies Included in Meta-Synthesis Analysis**

The results of the studies examining the effects of participation in sports and physical activity activities on motor development in mentally disabled children showed that regular physical activity and sports activities support the motor development of mentally disabled children, their physical fitness increased statistically and there was a statistically significant improvement in strength and flexibility parameters (9-16).

It was observed that the participants' attitude scores towards sports activities of mentally disabled individuals did not differ significantly according to gender (17-21). However, in some studies, it was observed that female participants' attitudes towards mentally disabled students had higher mean scores than males (22-24).

**Table 1.** Research Method of Studies Included in Meta-Synthesis Description

Research Method	Master Thesis	Article	%
Qualitative	2	1	%14.1
Quantitative	21	23	%85.9
Mix	-	-	-
<b>Total</b>	<b>23</b>	<b>24</b>	<b>%100</b>

When the attitude scores of mentally disabled individuals towards sports activities were examined, it was seen that those who did sports were more aware of the effect of sports than those who did not do sports (17,21,23,26).

In some of the studies, a significant difference was observed between the total scores obtained from the scale according to the state of having a family member and a person with a mentally disabled person (17-19,21-23), while some studies reported that there was no significant difference (20,27).

In the results of other studies, it was determined that participation in exercise and sports games in mentally disabled children had a positive effect on the control of anger (15,28)

In the research results, it was observed that individuals who did not do sports had higher BMI than those who did. There was a significant difference between males who did and did not do sports, and females who did sports, and those who did sports had better means (29,30).

According to the results of the studies, when the psychological adjustment, self-esteem, neurotic and behavioral problem levels of children with mild mental disability were examined in terms of the variables of doing sports, in terms of parents and educator views, it was found that children who did sports were better than those who did not (31-33). As a result of parental interviews, it was reported that behaviors before and after the physical activity had a positive effect on individuals with moderate mental disabilities. Parents also stated that they observed that their children felt the sense of achievement, their ability to act developed, their communication through sports was strengthened and they were accepted in the society (34,35).

The behaviors that parents told before and after physical activity showed us that physical activity made

many positive developments in individuals with moderate mental disabilities. Parents who complain about their children being excessively active or inactive stated that they observed a positive change in their children after participating in sports, this change increased their level of happiness and they could spare time for themselves. In addition, they observed that their children felt a sense of achievement, their ability to act developed, their communication through sports was strengthened and they were accepted in the society (34,35)

They also observed that physical education and game practices had a positive effect on the socialization of individuals with mild mental disabilities. It was reported that these practices were effective in many personal areas such as feeling valued, tolerant, and feeling of competition, teamwork, group membership, and self-confidence (36-39)

## Discussion and Conclusion

This section aimed to re-evaluate the thesis and article studies of individuals in Turkey with mental disabilities by using the meta-synthesis description method. It was determined that most of the studies included in the study were created using the quantitative research method and the minority using the qualitative research method. Scales such as questionnaire, form, inventory, test, and interview were used as data collection tools. When the sample group in the studies was examined, it was seen that individuals with mental disabilities were mostly studied.

When a general evaluation of the studies was made, it could be said that physical education and sports practices in mentally disabled individuals were beneficial in many ways, including socialization,

development of motor characteristics, self-esteem, and ability to control anger. In addition, when studies conducted for employees and students in special education, physical education, and health departments were examined, it was reported that activities such as physical education, sports, exercise, educational games, and physical activity contributed to the development of mentally disabled people. It could be thought that secreted hormones provided these positive developments. Serotonin and dopamine - neurotransmitters - were chemicals produced in the brain. They improve mood and protect against mental health disorders. Researchers proved that sports activity had a positive effect on self-confidence, serotonin and dopamine levels (40). In this context, it was thought that individuals felt better both mentally and physically, thanks to these hormones after exercising.

It was found that participation in sports and physical activities provided positive improvements in the motor development levels of mentally disabled children. Atan et al. (2016) observed that children with mild mental disabilities who participated in basketball training had an increase in their performances and an improvement in their motoric properties (10).

When the attitude scores of mentally disabled individuals towards sportive activities were examined by gender, no significant difference was found. There were studies in the literature that paralleled the research results (41-45). It was found that mentally disabled individuals who exercise had higher attitude scores towards sports activities than those who did not. Kırımoglu et al. (2016) study results were in parallel. In this context, it was reported that mentally disabled individuals who had the habit of doing sports had a high level of awareness about the effects of sports (17).

As a result of the studies, there was no significant difference between males and females who exercise and did not exercise, and individuals who did not exercise have higher BMI than those who did. However, it was observed that individuals who exercised in all parameters in both genders had better means than those who did not (46). In the School of the Visually Impaired in Turkey, Significant differences were found between the Visually Impaired Students (doing sports and not doing) in handgrip strength, vertical jump,

and standing long jump parameters (47), in their study comparing Some Physiological and Motoric Characteristics of 9-15 Age Group Hearing Impaired and Non-Hearing Students, found significant differences in handgrip strength, standing long jump parameters. It was observed that individuals who exercised in all parameters had a better mean than those who did not.

When psychological adjustment, neurotic, behavioral problem levels, and self-esteem of children with mild mental disabilities were examined according to the exercise variable, it was found that the psychological adjustment, self-esteem, neurotic, and behavioral problem levels of the children who exercised were better than the children who did not exercise. Gencer and İlhan (2016) found in their study that children who attended the summer sports school had low neurotic, behavioral, and other behavioral problems (49).

According to parental opinions; when the participation of mentally disabled children in exercise and physical activities was evaluated, it was concluded that the children were better in communicating with people after exercising, they talked with people and asked questions, and they used statements that their children were socialized, stating that they were not introverted. In Demirdağ (2010), a statistically significant difference was found between the responses of parents for the socialization of children with mental disabilities that can be taught, between the child's ability to introduce himself/herself, having apologizing and thanking skills, and leadership skills, and found that exercise was effective on children's socialization.

When the results were examined, it was seen that physical education and game practices had a positive effect on the socialization of mentally disabled children. In the studies of İlhan (2008) and Duman, Sukan (2014), it was found that physical activity provided positive effects on the socialization of mentally disabled children (1,50). While exercising, the individual was in constant communication with his teammates. In this context, it was thought that they complied with the principle of acting together and that they can achieve success and victory if they act by the team order. Therefore, it was thought that mentally disabled individuals who exercised gained the ability to socialize more easily.

As a result, it was determined that when physical education, sports, and exercises applied to individuals with mental disabilities at a trainable level systematically and regularly, provided positive and significant improvements on their bio motor properties. Moreover, it was found that it took the individual out of his narrow world and socialized, it was able to control their anger levels, and these developments had healing effects on the individuals' ability to meet their own needs and the living conditions of their parents.

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