

Individuals with multiple disabilities in Türkiye: Descriptive content analysis

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ABSTRACT

This study aims to descriptively analyze the studies on multiple disabilities in Türkiye between 2008 and 2022. The data of the research were searched in Anadolu University Library, Google Scholar, and Higher Education Institution Thesis databases with the keywords multiple disability, multiple disabilities, and additional disability. In this context, 15 postgraduate thesis studies and 17 articles were included in the research. The studies included in the study were analyzed under themes such as the year they were published, the university where the study took place, the keywords of the study, the method of the study, the design, the data collection technique/tool, and data analysis method, the journal in which the study was published and its index. As a result of the descriptive analysis, more adjustments were made to the qualitative research method, design, data collection technique, and paper clips. The studies used several studies in which individuals with multiple disabilities were participants in addition to those with visual impairments. The studies were carried out within the body of Gazi University. The studies have been published in journals that are extensively scanned in the ESCI index. At the end of the research, forward-looking suggestions are presented.

Keywords: Multiple disabilities, special education, descriptive content analysis.

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Abbreviations: MA: Master's thesis, Dr: Doctoral thesis, CEG-SSI Scale: Preverbal communication skills scale for children with severe disabilities, ESCI: Emerging Sources Citation Index, ADHD: Attention Deficit and Hyperactivity Disorder.

INTRODUCTION

Due to abnormal situations experienced before, during, or after birth, some children differ from their peers in one or more areas such as their physical appearance, learning characteristics, language, and communication skills (Hallahan, Pullen, Kauffman and Badar, 2020; Heward, Alber-Morgan and Konrad, 2016; Kırcaali-İftar, 1998; Tekin-İftar, 2005). In the USA, from the 2009–2010 academic year to 2019–2020, the number of students aged 3 to 21 receiving special education services under IDEA increased from 6.5 million to 7.3 million. Percentage distribution of students aged 3 to 21, who are served within the scope of the Individuals with Disabilities Education Act (IDEA), USA, according to disability/disability type: In the 2019-2020 academic year; Learning Disability 33%, Speech, and Language Disorders 19%, Autism Spectrum Disorder 11%, Developmental Disability/Delay 7%, Intellectual Disability 6%, Emotional and Behavioral Disorder 5%, Multiple Disability 2%, Hearing Impairment 1%,

Orthopedic Disability 1%, Other Disabilities 15% (National Center for Education Statistics, 2021; Students with Disabilities, Condition of Education. US Department of Education, Institute of Education Sciences, 2022, <https://nces.ed.gov/programs/coe/indicator/cgg>.). According to the information obtained from the Address Based Population Registration System of the Ministry of Family and Social Services, the number of people aged 3 and above and having at least one disability is 6.9%, totaling 4,876,000 (<https://www.aile.gov.tr>, 2021). Some types of disability may have a higher incidence than others. These include the types of disability with a high incidence rate; learning disability, speech, and language disorder, emotional and behavioral disorder, intellectual disability, and autism spectrum disorder. Types of disability with a low incidence rate are; vision impairment, hearing impairment, blindness-deafness, and severe and multiple disabilities (Hallahan, Pullen, Kauffman and Badar, 2020; Stichter, Conroy and

Kauffman, 2008). The Ohio Coalition for the Education of Children with Disabilities has compiled a comprehensive list of definitions and explanations, and grouped the types of disability seen in individuals with special needs as follows; attention deficit and hyperactivity disorder (ADHD), special learning disability, hearing impairment, visual impairment, emotional and behavioral disorder, ASD, intellectual disability, deaf-blindness, orthopedic disability, cognitive disability, language and speech disorder, traumatic brain damage, multiple disabilities, and special/gifted abilities, in total 14 categories (<https://www.oecd.org/DisabilityDefinitions.aspx>).

IDEA, on the other hand, created 13 categories of other inadequacies by excluding special/superior talent. In our country, the Ministry of National Education According to the Special Education Services Regulation, individuals with special needs are listed as follows: It has been divided into 7 categories as attention deficit and hyperactivity disorder, pervasive developmental disorder (ASD), hearing impairment, visual impairment, language and speech disorder, intellectual disability and special abilities (Ministry of National Education, [MNE] 2018). According to the Ministry of National Education, multiple disabilities were not considered as a special group, but under the category of very severe mental disability until the EEHY in 2012. In the regulations after 2012, no definitions related to multiple deficiencies were made. If we look at the definition of very severe mental disability, which the Ministry of Education has shown as multiple disabilities, it defines it as "an individual who needs lifelong care and supervision due to the inability of the individual to gain self-care, daily life and basic academic skills due to mental disability, as well as other deficiencies". Experts working in the field other than MoNE, have defined multiple disabilities in different ways. While Tekin-İftar (2005) defined it as "*severe and multiple disabilities*", Şafak (2012) defined it as "*multiple disabilities*". IDEA, on the other hand, sees multiple disabilities as a separate disability group and defines it as deficiencies seen together or as deficiencies seen more than once (Rakap and Kalkan, 2017). For example, it explains situations such as visual impairment or hearing impairment in addition to intellectual disability. Although individuals with multiple disabilities generally vary according to the type of disability, there are features such as limited speech and communication, difficulties in basic physical movements, a tendency to forget skills when not used, problems in generalizing the skills to another environment or situation, and the need for support in independent living skills (Hardman, 2008). Drew, Egan and Wolf, 2005; Westling and Fox, 2004). The presence of two or more disabilities in an individual necessitates some changes in the services to be provided to these individuals. Individuals with multiple disabilities may have more complex educational needs than individuals with other disabilities, so individuals with multiple disabilities need more adaptations and also need more support (Hardman et al., 2005; Tekin-İftar, 2009; Westling and Fox, 2004).

Various medical problems may accompany severe

multiple disabilities. Examples include seizures, loss of sensation, hydrocephalus, and scoliosis. These conditions should be taken into account when establishing school services. A multidisciplinary team consisting of the student's parents, education professionals, special education teachers, and medical professionals in areas where the individual has a problem should work together to plan and coordinate necessary services. Although multiple disabilities are among the rare ones, they have been the focus of attention of researchers both in international publications and in publications in our country in recent years. Examining the studies on individuals with multiple disabilities in our country allows us to evaluate the studies in many ways. At the same time, it can guide us on what to do for individuals with multiple disabilities and their families. At the same time, it gives suggestions about the lack of the field or what should be done about which subjects the researchers working on or will study in the field. In this context, the research aims to analyze the studies on individuals with multiple disabilities in Turkey between the years 2008-2022 with descriptive content analysis. In addition, to provide direction for future studies. For this purpose, answers to the following questions were sought in the study:

1. What is the distribution of studies on multiple disabilities between 2008 and 2022 in Turkey by year?
2. What is the distribution of studies on multiple disabilities in Türkiye between the years 2008 and 2022, according to universities?
3. What are the subject areas/keywords of the studies on multiple disabilities in Türkiye between the years 2008 and 2022?
4. What is the distribution of the participants of the studies on multiple disabilities conducted in Türkiye between the years 2008 and 2022 by disability types?
5. What is the distribution of studies on multiple disabilities in Türkiye between the years 2008 and 2022 according to research method?
6. What is the distribution of studies on multiple disabilities in Türkiye between 2008 and 2022 according to research design?
7. What are the data collection techniques/tools used in studies on multiple disabilities in Turkey between 2008 and 2022?
8. What is the distribution of studies on multiple disabilities in Türkiye between the years 2008 and 2022 according to the data analysis method?
9. What is the distribution of studies on multiple disabilities in Türkiye between the years 2008 and 2022 according to the journals in which they are published and their indexes?

METHOD

In this study, the study method was determined as descriptive content analysis, since it aimed to examine the studies on individuals with multiple disabilities in Türkiye between 2008 and 2022. Content analysis types

are widely used in social sciences. Descriptive content analysis is one of them, "systematic studies conducted within a defined topic, published or unpublished, including the evaluation of trends and research results in a descriptive dimension" (Jayarajah, Saat and Rauf, 2014; Suri and Clarke, 2009). To examine the qualitative or quantitative studies made on a field determined by the researcher(s) and to determine the general tendency of these studies by considering them from different dimensions. It also guides new researchers who will study (Cohen, Manion and Morrison, 2007; Huberman and Miles, 1994; Miles and Huberman, 1994).

It is expected that the results obtained in this analysis method will guide future studies on the targeted issues. Since descriptive content analyzes are used in different studies, there is an obligation to present the literature systematically. If this systematic information is not presented in studies using this method, results that are not suitable for the main purpose of the analysis emerge. In studies in which descriptive content analysis is used, the obtained information should be presented accurately and systematically, analyzed, and interpreted and the results should be clearly stated.

Data collection process

In studies carried out with descriptive content analysis, it is first decided within which subject they will carry out the descriptive content analysis. Then, a file of the studies to be included in the research is created through the literature review of the relevant subject. The literature search is done by using detailed search sections from databases such as university libraries using international databases and national thesis centers. While making a detailed search from databases, keywords are used within the determined

subject. These keywords can be searched in the full texts of the studies to be reviewed, as well as in their abstracts and/or titles to reduce the possibility of reaching irrelevant studies. After these stages, if the number of studies obtained is quite large and the analysis becomes difficult, some limitations can be made in the search criteria. For example, sample limitation for detecting studies conducted only with university students; language limitation for identification of national studies only; Year limitation methods can be used to determine only the studies in the 2000s.

In the first stage of the research, it was ensured that the keywords related to the subject to be researched were created. The research was searched with the keywords "multiple disabilities", "severe disability", "severe multiple disabilities", and "additional disability". Search databases such as Recep Tayyip Erdoğan University Library Database, National Academic Network and Information Center (ULAKBİM), Google Scholar, and Higher Education Institution Thesis Center were used for resource searches. In this study, since studies on multiple disabilities in the national literature were included in the review, the literature review was made from the mentioned databases.

Inclusion-exclusion process

This research aims to analyze the studies about individuals with multiple disabilities in Türkiye by descriptive content analysis. For this purpose, studies to be included in the research must meet certain criteria. These criteria are: a) the study was conducted in Türkiye, b) the language of the study is Turkish or English, c) the participants of the study are individuals with multiple disabilities or their families, teachers) the study is an article or a graduate thesis.

Studies that were not included in the study were

determined according to the exclusion criteria. The exclusion criteria within the scope of this research are: a) not including individuals with multiple disabilities, b) having a national or international congress paper, c) being an undergraduate graduation thesis) being published outside of the ULAKBİM Tr Index database.

The studies were scanned from the databases determined according to the keywords. Post-scan research is all saturated. Each filed research and graduate thesis was examined according to inclusion and exclusion criteria. Research to be included filed by the researcher. Then, a researcher who is an expert in the field of special education was asked to examine the studies according to the inclusion and exclusion criteria.

The studies to be included after both reviews were compared. Source searches were made from the databases mentioned above. All of the studies reached with the keywords have been filed. As a result of the literature review, 39 postgraduate studies and 341 articles were reached. Each study reached was checked by a second researcher who is an expert in the field. After examining each source in detail, 15 postgraduate thesis studies and 17 articles (research article, review study, etc.) were included in the study.

Data analysis

The studies included in the research are presented in two different tables (Tables 1 and 2) as thesis studies and article studies. The thesis studies presented in Table 1 are given as the bibliography, the purpose of the study, the age/number of participants included in the study, the disability types of the individuals with multiple disabilities in the study, the keywords/subject area of the study and the method of the study. The article studies presented in Table 2 are given in the form of the study's bibliography, purpose, number/age

of participants, types of multiple disabilities included in the study, keywords of the study, method/design of the study, and the journal and index in which the

study was published.

Postgraduate thesis studies and article studies on individuals with multiple disabilities made in Turkey

between 2008 and 2022 are given in Table 1 and Table 2. A total of 15 postgraduate thesis studies and 17 articles are given in detail in the table.

Table 1. Postgraduate studies on multiple disabilities in Turkey*.

Source	Aim	Type	Number/age of participants	Types of Disability	Keywords	Method	Pattern
Hoş (2008)	To examine the effect of raising children with multiple disabilities on mothers in this mother-centered study.	MS Thesis	Mother and her 3 children. One of the children (Sevgi) is 23 and the other (Angel) is 14 years old with multiple disabilities.	Hearing impairment, cerebral palsy (CP), and intellectual disability (2)	Maternal experience, quality of life, family.	Qualitative Research	Case Study
Sardohan (2011)	To guide teacher opinions and further research on the effective inclusion of students with multiple disabilities.	MS Thesis	A total of 42 teachers, 28 female, and 14 male teachers.	-	Multiple disability, inclusion, teacher.	Qualitative Research	Case Study
Ayyıldız (2012)	Pre-verbal communication skills of blind children CEG-CBC Scale, the results of which will be used to evaluate the pre-verbal communication skills of these children, by examining them in depth based on their mothers' daily observations.	DR Thesis	34 very disabled children aged 4-13 and their mothers aged 31-50.	Visually impaired and mentally handicapped (8). In addition, children with CP (11), autism (6), physical (6), and special syndrome (3).	Multi-disability, preverbal communication skills, scale development.	Mixed Method Research	Consecutive Descriptor
Kadı (2016)	To determine the resilience levels of parents who have children with multiple disabilities in terms of various variables.	MS Thesis	A total of 222 parents, 183 women, and 39 men. 222 children with multiple disabilities, 89 women and 133 men.	Physical and mental disability (136), physical and hearing disability (18), physical disability and speech disorders (22), hearing and mental disability (31), and visual and intellectual disability (15).	Multiple disabilities, resilience, family resilience, parenting.	Quantitative Research	Scanning model
Uyar (2016)	the gestures used by blind children who are not affected by multiple disabilities and the behaviors of adults with children effectively.	MS Thesis	4 children aged 8-12 years who are not affected by multiple disabilities, mothers of children, and pre-service teachers working with children.	Visual impairment, severe intellectual disability, and physical disability (3,) and visual impairment and moderate intellectual disability (1).	Multiple disabilities, mother-child interaction, teacher-student interaction, gestures.	Qualitative Research	Case Study

Table 1. Continues

Sardohan-Yıldırım (2017)	To examine the process of family-centered education services to be carried out in line with the needs of families with children with multiple disabilities in early childhood.	DR Thesis	Three mothers and their children whose children were diagnosed with multiple disabilities participated.	Mental disability and physical disability (1), intellectual disability, chronic illness (epilepsy) and physical disability (1), mild cognitive delay, hydrocephalus (VP Shunt), and cerebral palsy (1)	Family education, family empowerment, multiple disabilities	Qualitative Research	Action Research
Yılmaz (2017)	The direct instruction method was effective in teaching the subject of 'the life cycle of the frog', which is one of the science subjects, to three students with low vision and moderate intellectual disability, and whether the individuals continued the subject they learned 7, 14 and 21 days after the instruction. is to put	MS Thesis	3 students aged 10-11 with multiple disabilities and a substitute student.	Low vision and moderate intellectual disability (4)	Multiple disabilities, visual impairment, schematic organizer	Single Subject Research	Multiple probe model with inter-participant probe trials
Çavuşoğlu (2018)	To examine in detail the diagnosis, evaluation, and intervention processes of children with IC and ASD together in early childhood.	MS Thesis	10 experts, 4 teachers, and 4 parents.	Hearing loss and ASD	Diagnosis, assessment, hearing loss, and ASD	Qualitative Research	Case Study
Ekiz-Andinç (2018)	To examine the family quality of life and perceptions of the mothers of blind children affected by multiple disabilities.	MS Thesis	62 mothers of children with multiple disabilities.	Visual and intellectual disability (55), and visual and physical disability (7).	Multiple disabilities, family quality of life, mother of the disabled child.	Quantitative Research	Causal-Comparative Model
Baltacı-Ekşi (2020)	To examine the interaction behaviors of teachers of students with severe and multiple disabilities (SDI)	MS Thesis	It consists of 5 students and teachers of SMD between the ages of 8-11.	Visual impairment, autism, and intellectual disability (1), and visual and moderate intellectual disability (4).	Severe and multiple disabilities, teacher-student interaction	Qualitative Research	Case Study
Şanlı (2020)	To determine the effects of the posture, gait, balance, and physical performances of children with low vision and multiple disabilities on their participation.	MS Thesis	18 children with multiple disabilities and 18 typically developing children aged 6-14 years	In addition to the visually impaired, intellectual disability, autism, hearing disability, and speech disorder.	Multiple disabilities, low vision, posture, walking.	Quantitative Research	Causal-Comparative Model

Table 1. Continues

Özdemir (2021)	Examining the effectiveness of the Provide Opportunity for Choice (SFS) teacher education program with video technology applied to teachers working with SMD students.	MS Thesis	Three special education teachers working with SMD students and nine SLD students enrolled in these teachers' classes.	Visual, mental, cerebral palsy, epilepsy, microcephaly (1), Hearing, mental, epilepsy (1), Down syndrome and intellectual disability (1), Intellectual disability, cerebral palsy, and epilepsy (1), ASD, intellectual disability, epilepsy (1), Visual and intellectual disability ik (1), Intellectual disability, cerebral palsy and epilepsy 81), Intellectual disability, down syndrome and visual impairment (1), Hearing loss, and epilepsy (1).	For students with severe and multiple disabilities, teacher training, video modeling, video feedback	Single Subject	Inter-Subject Multiple Probe Pattern
Şakar (2021)	To examine the quality of life of the families of children with hearing loss according to their mothers' perceptions.	MS Thesis	Seven mothers of children with autism spectrum disorder, intellectual disability, or visual impairment with hearing loss.	-	Disability with hearing loss, quality of life, multiple disabilities.	Qualitative Research	Phenomenology
Şendur (2021)	To examine the self-efficacy levels of parents with children with multiple disabilities and to reveal the self-efficacy levels of parents in terms of various variables.	MS Thesis	136 mothers and 95 fathers.	two disabilities in 140 children; Three disabilities were found in 78 children and four disabilities were found together in 13 children. In addition to orthopedic disability, speech and language disorder (100), hearing impairment (6), and special learning disability (28). In addition to language and speech disorders, intellectual disability (37), learning disability (10), chronic illness (11), visual impairment (and 2), and hearing impairment (2).	Multiple disabilities, parental self-efficacy, social support.	Quantitative Research	Scanning Model/Descriptive
Demir (2021)	To determine the levels of care burden, perceived social support, and life satisfaction of parents of children with multiple disabilities and to examine the relationship between these levels.	MS Thesis	166 parents of children with multiple disabilities.	-	Multiple disabilities, perceived social support, life satisfaction	Quantitative Research	Relational Scan

• Studies are listed in order of the year.

• In the studies, the concepts of disability and sometimes disability (visual disability/visual impairment) were used. These have been taken as is, unchanged.

Table 2. Articles on multiple disabilities in Turkey*.

Source	Aim	Age/number of participants	Type of disability	Keywords	Method/pattern	Published journal-directory
Bahçivancıoğlu-Yazı and Akçin (2014)	Describing the views of mothers of children with multiple disabilities regarding their children's development	She is a mother of 29 very disabled children.	Visual impairment, intellectual disability, and communication disability (15), visual impairment, mental disability, and physical disability (8), visual disability and communication difficulty (5), vision, hearing, mental disability, and communication difficulty (1).	Multiple disabilities, development, maternal views	Qualitative Research Descriptive	<ul style="list-style-type: none"> Ahi Evran University Journal of Kirsehir Education Faculty (KEFAD) Tr Index
Sardohan-Yıldırım and Akçamete (2014)	To determine the difficulties faced by mothers of children with multiple disabilities in the process of benefiting from early childhood special education services and to produce solutions for the results.	6 mothers of children with multiple disabilities whose children aged 1 to 7 years	-	Early childhood special education, the child with multiple disabilities, semi-structured interview.	Qualitative Research Descriptive	<ul style="list-style-type: none"> Cumhuriyet International Journal of Education Tr Index
Şafak and Uyar (2015)	It is aimed to raise awareness by introducing the importance of the ability to make choices and the teaching strategy for children with severe and multiple disabilities.	-	-	Multiple disabilities, ability to make choices	Qualitative Research Descriptive (Compilation).	<ul style="list-style-type: none"> Turkish Studies Tr Index
Kahveci (2017)	To determine the comparative effectiveness of visual card (mining card teaching) and video-based teaching approaches applied to three preschool children with multiple disabilities in teaching color concepts.	3 students with multiple disabilities aged between five years and two months and five years and eight months.	Intellectual disability, visual disability, physical disability (1), mental disability, physical disability (1), intellectual disability, visual disability, CP, and hearing loss (1).	Multiple disabilities, combined behavioral consultation, video-based instruction, alternate therapies, and special education.	<ul style="list-style-type: none"> Mixed Research Method Qualitative research method + Single Subject Design 	<ul style="list-style-type: none"> Turkish Studies Tr Index
Adıgüzel, Kizir and Eratay (2017)	determine the problems experienced by special education teachers working with individuals with severe and multiple disabilities (SMD).	14 special education teachers working with individuals with SMD.	-	Severe and multiple disabilities, special education teacher, teacher problems, teacher efficacy.	<ul style="list-style-type: none"> Qualitative Research Method Case Study 	<ul style="list-style-type: none"> Ankara University Faculty of Educational Sciences Journal of Special Education ESCI

Table 2. Continues

Şafak, Demiryürek and Yılmaz (2017)	The study, to test the effectiveness of multi-sensory storytelling presented with a fixed time delay teaching method in understanding the story heard by blind students with severe and multiple disabilities.	2 female and 1 male students aged 11-15 years were diagnosed with visual impairment and autism.	Visual impairment and autism (3).	Severe disability, multiple disabilities, visual impairment, multi-sensory history, fixed-wait instruction, listening comprehension.	<ul style="list-style-type: none"> • Single Subject Pattern • Multiple polling with inter-subject referral trial 	<ul style="list-style-type: none"> • Ankara University Faculty of Educational Sciences Journal of Special Education • ESCI
Kızır and Tekinarslan (2017)	To determine the problems experienced by mothers of children with SMD and the methods of coping with these problems.	Five mothers with a child with SMD.	Dandy-Walker and hydrocephalus (1), Sanfilippo syndrome (MPS iii) (1), total visual impairment, severe dysphagia, speech disorder, and physical disability (1), severe dysphagia, advanced well, tracheostomy, diabetes, heart disease (1) and cerebral palsy and severe zy (1).	Severe and multiple disabilities, maternal views problems, coping methods.	<ul style="list-style-type: none"> • Qualitative Research Method • Phenomenology 	<ul style="list-style-type: none"> • Ankara University Faculty of Educational Sciences Journal of Special Education • ESCI
Dayı and Şafak (2018)	transformable symbol reinforcement (DSP) system for a child affected by multiple disabilities, it is possible to gain toilet control during the day and then toilet control at night.	A child with multiple disabilities and his mother.	He has 90% vision loss in both eyes, bilateral microphthalmia (H44.9), and orthopedic failure of 96% due to Cerebral Palsy (G80.0) (1).	Daytime toilet training, nighttime toilet training, transformable symbol reinforcement, multiple disabilities, positive reinforcement	<ul style="list-style-type: none"> • Single Subject Research • EU Model 	<ul style="list-style-type: none"> • Education and Science • SSCI
Eldaniz-Çetin and Sönmez (2018)	To reveal the difficulties experienced by mothers with children with multiple disabilities in their home environment, school environment, social life, health areas, and problem behaviors.	10 mothers with a child aged 6-12 years with multiple disabilities.	Hearing and intellectual disability (3), autism and intellectual disability (4), intellectual disability, CP, and epilepsy (3).	Special education, multiple disabilities, mother, difficulty	<ul style="list-style-type: none"> • Qualitative Research Method • Case Study 	<ul style="list-style-type: none"> • Elementary Education Online • Tr Index
Dayı, Bilgiç, Kılıç and Okyar (2020)	To examine the effect of the feedback given to teacher candidates working with students with severe and multiple disabilities on their collaborative working skills.	12 teacher candidates who will practice teaching in the classrooms of students with severe multiple disabilities (SMD).	Students aged 6-14 with SMD (severe and moderate intellectual disability in addition to visual impairment).	Severe and multiple disabilities, collaborative working skills, performance-based feedback, pre-service teacher, teaching practice.	<ul style="list-style-type: none"> • Quantitative Research Method • Single group pretest-posttest 	<ul style="list-style-type: none"> • Journal of Hacettepe University Faculty of Education • ESCI

Table 2. Continues

Düzkantar, Ögülmüş, Altın and Görgün (2020)	To provide a perspective on new studies by reviewing all the studies on multiple deficiencies in the literature with the meta-synthesis method.	-	-	Special education, multiple disabilities, severe multi disabilities.	<ul style="list-style-type: none"> • Qualitative Research Method • Compilation • Meta-synthesis 	<ul style="list-style-type: none"> • Sakarya University Journal of Education • Tr Index
Eldeniz-Çetin, Çay and Bozak (2020)	Single-subject studies conducted with individuals with multiple disabilities in an educational context; age and number of participants, dependent and independent variables, setting, research model, reliability, social validity, and percentage of non-overlapping data (OVS)	-	-	Multiple disabilities, multiple individual single-subject research, meta-analysis, systematic review	<ul style="list-style-type: none"> • Compilation • Meta-analysis and descriptive analysis 	<ul style="list-style-type: none"> • Ankara University Faculty of Educational Sciences Journal of Special Education • ESCI
Sardohan-Yıldırım and Bozak (2021)	To determine the social, educational, and health supports offered to families with children with multiple disabilities during the COVID-19 process.	14 mothers aged 34-55 with children with multiple disabilities.	Mental disability and physical disability (4), ASD and mental disability (3), ASD, intellectual disability and CP (1), CP and intellectual disability (1), ASD, intellectual disability, CP and physical disability (1), physical disability and chronic illness (1), ASD, intellectual disability, and ADHD (1).	Children with multiple disabilities, support systems, covid-19	<ul style="list-style-type: none"> • Qualitative Research Method • Case Study 	<ul style="list-style-type: none"> • Journal of Education as You Live • Tr Index
Yavuz and Şafak (2021)	To examine the life satisfaction levels of parents of children with Autism Spectrum Disorder, Intellectual Disability, and Multiple Disabilities in terms of various variables.	256 parents with a child with a disability	Intellectual disability (116), ASD (105), and multiple disabilities (35).	Life satisfaction, disabled child, autism spectrum disorder, intellectual disability, multiple disabilities	<ul style="list-style-type: none"> • Quantitative Research Method • Descriptive Survey Model 	<ul style="list-style-type: none"> • Journal of Gazi University Gazi Education Faculty • Tr Index

Table 2. Continues

Bilgiç and Şafak, (2021)	The effectiveness of the schematic organizer presented with the direct instruction method in teaching one of the science subjects, 'the life cycle of the frog', to three students with multiple disabilities (low vision and affected by intellectual disability), continued the learning of the individuals about the subject 7, 15 and 21 days after the end of the instruction. determine if you can't keep up.	Three students with multiple disabilities.	Visual and intellectual disability (3).	Severe and multiple disabilities, science teaching, schematic organizer, direct instruction, multiple probe model.	<ul style="list-style-type: none"> • Single Subject Pattern • Multiple probes with inter-participant probe trials. 	<ul style="list-style-type: none"> • Ankara University Faculty of Educational Sciences Journal of Special Education • ESCI
Eldeniz-Çetin and Çay (2021)	To equip students with multiple disabilities with the ability to do jigsaw puzzles through a tablet computer and to enable them to exhibit the acquired skill fluently.	Three students with multiple disabilities, aged between 14-15, and one girl and two boys.	Intellectual disability, cerebral palsy (Diplegia), speech difficulties (2), and Intellectual disability, cerebral palsy (Hemiplegia), speech difficulties (1).	Multiple disabilities, tablet computer, puzzle, direct teaching method.	<ul style="list-style-type: none"> • Single Subject Research • Multiple probe model with between-subject probe trials. 	<ul style="list-style-type: none"> • Education and Science • SSCI
Sardohan-Yıldırım and Eldeniz-Çetin (2022)	To determine the perceptions and the tendency of perceptions through the metaphors that special education teachers use while describing their perceptions of students with multiple disabilities.	218 special education teachers.	-	Special education teacher, multiple disabilities, metaphorical perception.	<ul style="list-style-type: none"> • Qualitative Research Method • Phenomenology 	<ul style="list-style-type: none"> • Journal of Gazi University Gazi Education Faculty • Tr Index

*Studies are listed in order of year.

* In the studies, the concepts of disability and sometimes disability (visual disability/visual disability) were used. These have been taken as is, unchanged.

*Index: In the journals scanned in many indexes, the index accepted as the highest index in Türkiye was chosen.

FINDINGS

In this section, the findings of the research are given. The research findings were analyzed by considering the research questions.

Distribution of studies by years

The distribution of studies on multiple disabilities in Turkey between the years 2008-2022 by years is shown in Figure 1. The distribution of graduate

thesis studies is shown in the blue column. 4 studies were conducted in 2021, 2 studies in 2020, 1 study in 2018, 2017, and 2016, and 2012 and 2011. Looking at the distribution of article studies in the red column by year is seen that 5 studies were

conducted in 2017, 4 studies in 2021, 3 studies in 2020, and 2 studies in 2020. It is seen that 1 study was

conducted in 2014, 2015, 2018, and 2022.

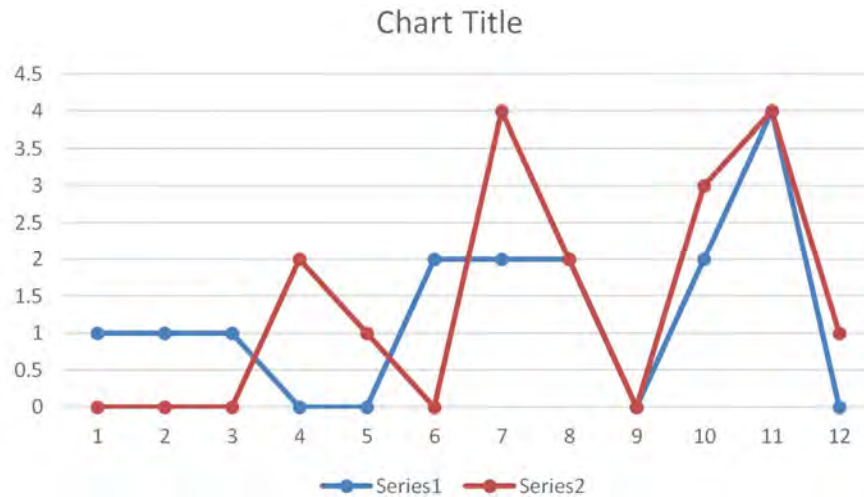


Figure 1. Distribution of articles and postgraduate thesis studies on individuals with multiple disabilities by years.

Distribution of studies by universities

The distribution of studies on multiple disabilities in Türkiye between the years 2008-2022 by universities is shown in Figure 2. Accordingly, it is seen that 5 studies were carried out at Gazi University, 3 studies at Abant

İzzet Baysal University (AİBÜ), 2 studies at Anadolu University, and 1 study at Middle East Technical University (OTDU), Selçuk University, Marmara University, Ankara University, and Hacettepe University. Since the authors of the articles given in Table 2 differ, they are not shown in this university.

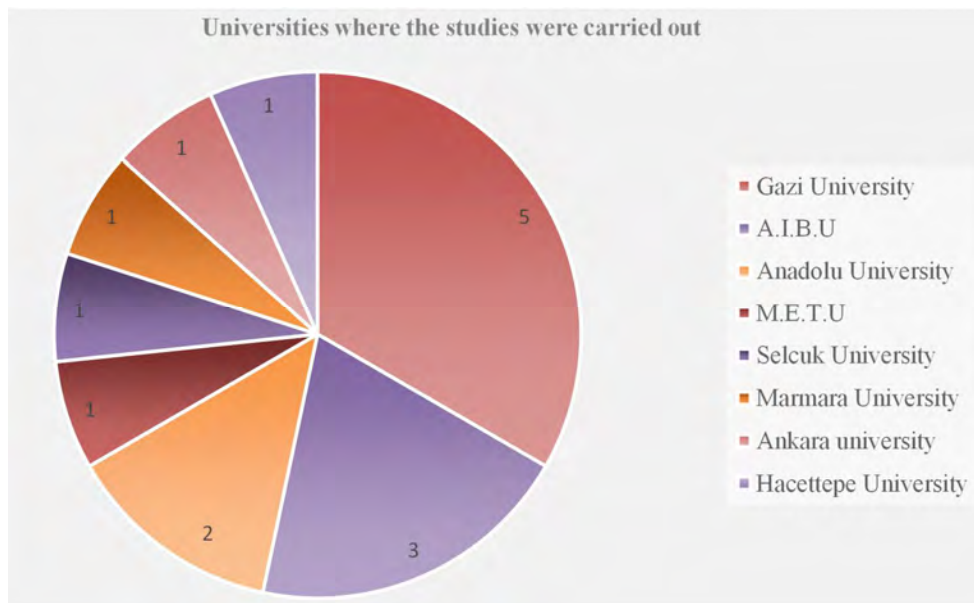


Figure 2. Distribution of postgraduate studies on multiple disabilities by universities.

Distribution of studies by subject areas/keywords

The distribution of studies on multiple disabilities conducted in Türkiye between the years 2008-2022 by

subject area/keywords is shown in Figure 3. When the studies are examined, it is seen that 14 studies were conducted with families/parents of individuals with multiple disabilities, 8 studies were conducted with

children with multiple disabilities, and 6 studies were conducted with teachers with multiple disabilities. In addition, 2 studies were not included in the distribution

because they were compilation studies. One study was conducted with families and teachers of individuals with multiple disabilities.

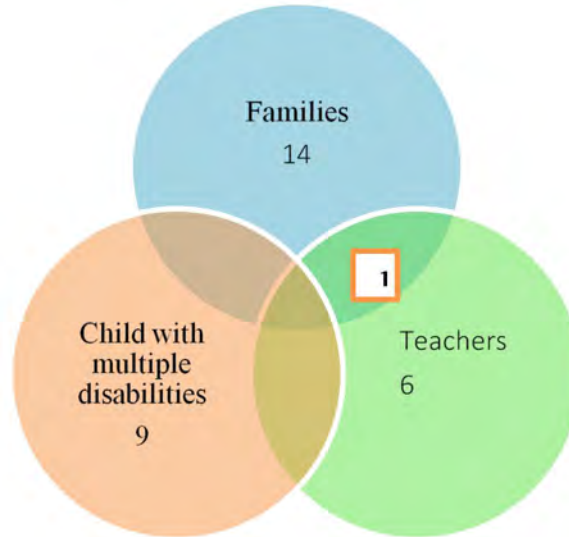


Figure 3. Distribution of studies on multiple disabilities by subject areas/keywords.

Distribution of participants with multiple disabilities by disability types

The distribution of children with multiple disabilities, who participated in studies on multiple disabilities in Türkiye between 2008 and 2022 according to disability types is shown in Figure 4. When the studies were examined, 4 different disability groups were included in 8 studies, 3 different disabilities in 15 studies, and 2 different disability and multiple disability groups in 23 studies. In

these studies, it is seen that the number of studies in which visual impairment is the first disability is 20, the number of studies in which intellectual disability is the first disability is 10, and the number of studies in which hearing loss is the first disability is 6. The number of studies in which ASD is the first disability is 4, the number of studies in which physical disability is the first disability is 3, and the number of studies in which cognitive delay is the first disability and Down Syndrome is the first disability is 1.

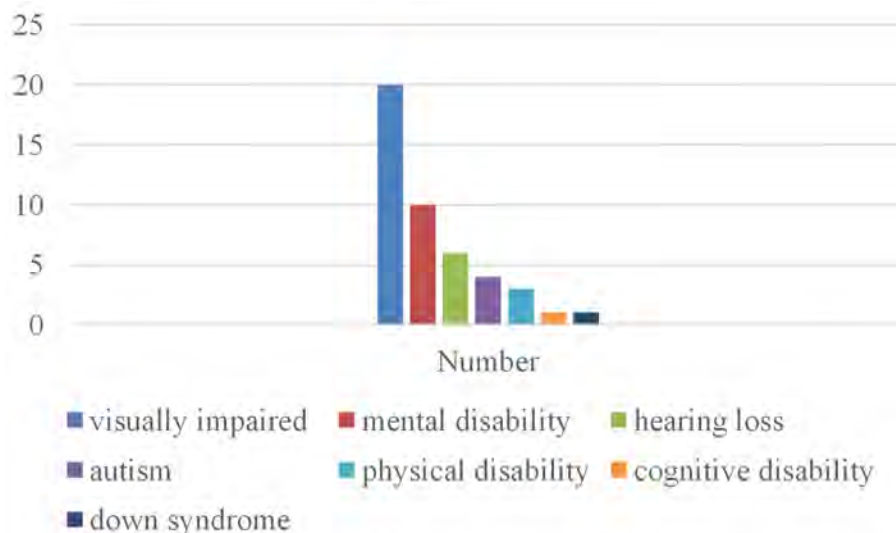


Figure 4. Disability types of participants in studies on multiple disabilities.

Distribution of studies on individuals with multiple disabilities according to their methods

The distribution of research methods of studies on multiple disabilities in Türkiye between the years 2008-

2022 is shown in Figure 5. 14 studies were designed as qualitative research methods, 8 studies as quantitative research methods, 6 studies as single-subject research, and 2 studies as compilation study.

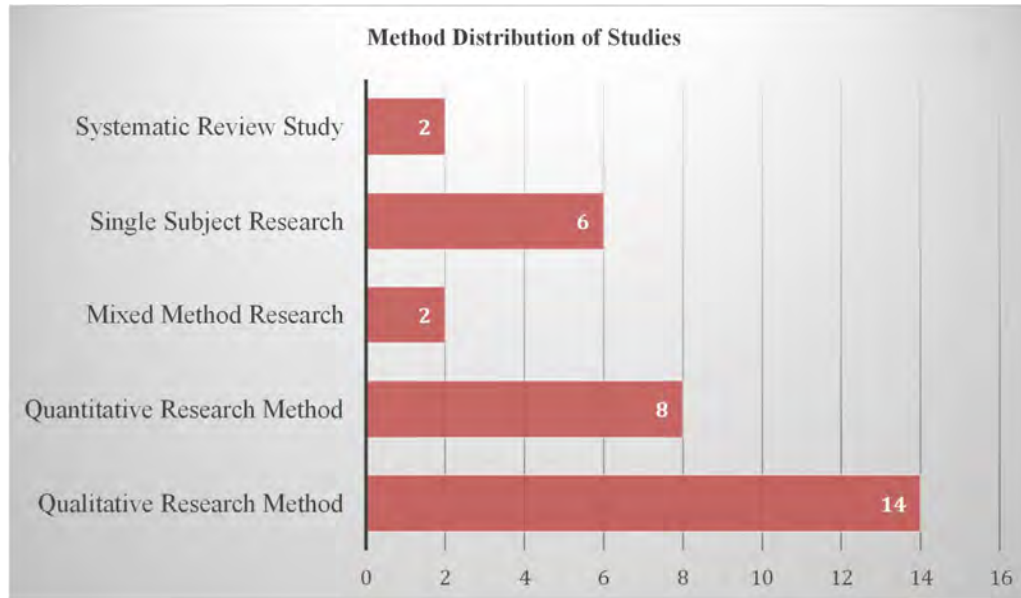


Figure 5. Distribution of studies on multiple disabilities according to the methods in which they were patterned.

Distribution of studies on individuals with multiple disabilities according to research design

The distribution of studies on multiple disabilities conducted in Türkiye between the years 2008-2022 according to research patterns is shown in Figure 6. When the studies are examined, it is seen that 8 studies

were carried out as case studies, 5 studies were carried out as multiple probes with probe trials, and 3 studies were carried out as survey models and phenomenology. It is seen that 3 studies were carried out descriptive study and causal-comparative, action research, post-explanatory, AB Model, meta-synthesis, meta-analysis, and single group pre-test and post-test.

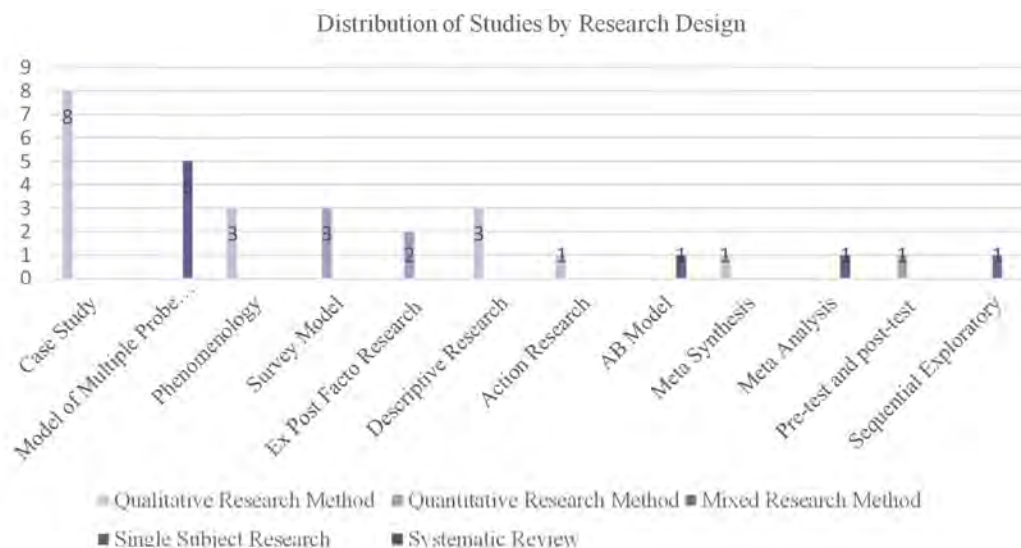


Figure 6. Distribution of studies with multiple disabilities by research design.

Distribution of data collection techniques/tools used in studies on individuals with multiple disabilities

Data collection techniques/tools of studies on multiple disabilities in Türkiye between 2008 and 2022 are shown in Figure 7. When the studies were examined, data were collected through interviews in 13 studies. In 11 studies, researchers used scales for data collection. While

information forms were used in 8 studies, observation data collection technique was used in 6 studies. While the data collection tool was checklists in 5 studies, data were collected through diaries in 3 studies. While 3 studies collected data through documents, the researcher used data collection in 1 study with field notes.

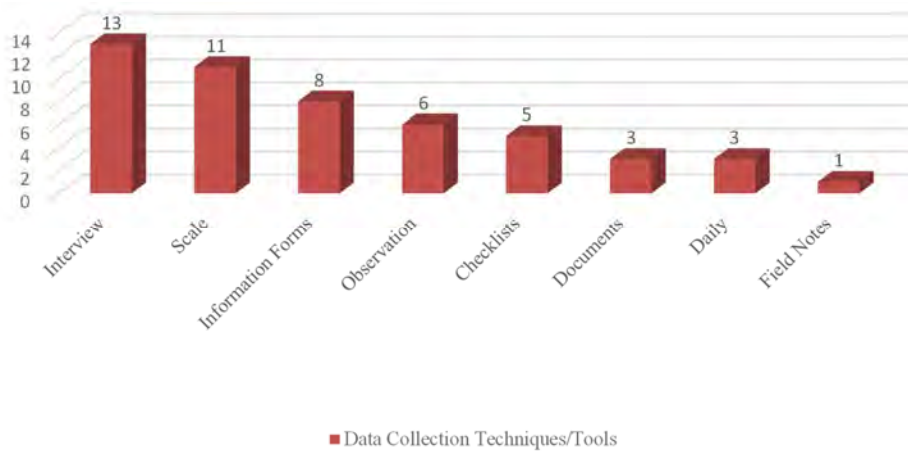


Figure 7. Distribution of studies with multiple disabilities by data collection techniques/tools.

Distribution of the data collected in the studies according to the analysis method

The distribution of studies on multiple disabilities in Türkiye between the years 2008-2022 according to the method of analysis is shown in Figure 8. When the

studies are examined, it is seen that descriptive analysis 8, statistical analysis 8, graphical analysis 7, content analysis 3, inductive analysis 1, meta-analysis 1, meta-synthesis 1, systematic analytical analysis 1, and intra-situational and inter-situational analysis 1 was performed in the research data.

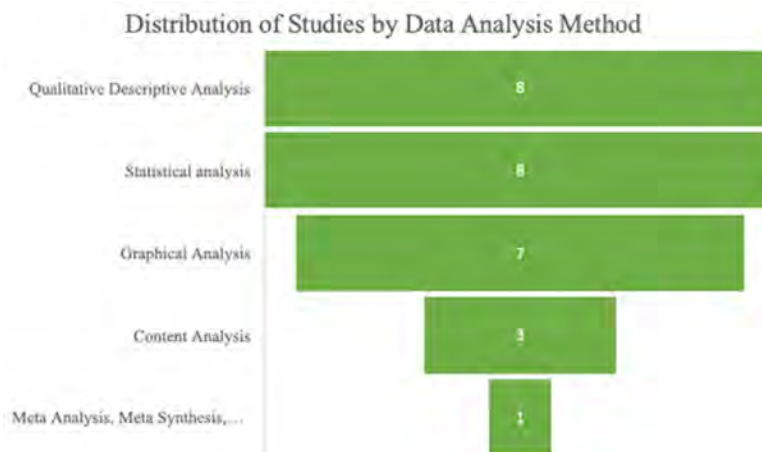


Figure 8. Distribution of studies with multiple disabilities according to data analysis.

Journals in which they were published and the indexes they were scanned

The distribution of article studies on multiple disabilities between 2008-2022 in Türkiye according to the journal

in which they were published and the index in which they were scanned is shown in Figure 9. When the studies were examined, 5 studies were published in the Journal of Special Education of the Faculty of Educational Sciences of Ankara University, which was indexed in

the ESCI database. 2 studies were published in Gazi University Journal of Gazi Education Faculty indexed in the Tr Index database, 2 studies were published in the Journal of Education and Science indexed in the SSCI database, and Turkish Studies journals indexed in the Tr Index database. 1 study in Hacettepe University Education Journal indexed in the ESCI database, Ahi

Evran University Kırşehir Education Journal indexed in the Tr Index database, Sakarya University Education Journal indexed in the Tr Index database, Cumhuriyet International Education Journal indexed in the Tr Index database, Elementary Education Online indexed and published in the Journal of Education, which is indexed in the Tr Index database.

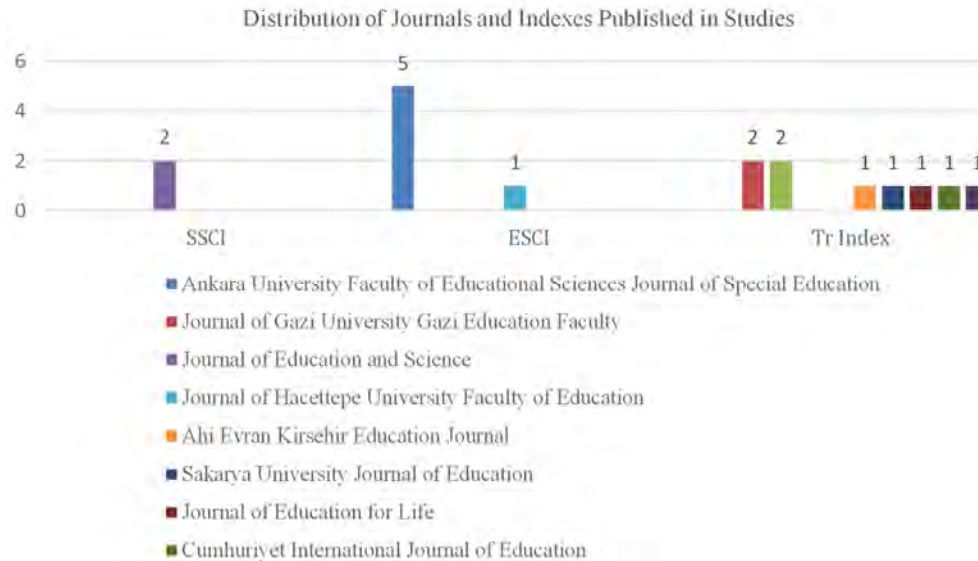


Figure 9. Distribution of journals and indexes in which studies on multiple disabilities were published.

DISCUSSION AND RECOMMENDATIONS

This research examines the studies conducted with individuals with multiple disabilities in the field of special education in Türkiye, or their families and teachers, with descriptive analysis. In this context, 15 thesis studies and 17 articles were included in the research. The answers to eight research questions were sought according to the distribution of each study included, according to the years it was published, the university where the postgraduate theses were held, the subject areas/keywords of the studies, the method, pattern, and data analysis of the studies, the participant characteristics/disability types, the journals in which the articles were published and the indexes they were scanned.

The first question of the research is to examine the distribution of studies on multiple disabilities in Türkiye between the years 2008-2022 by years. Within the scope of this research, 15 postgraduate thesis studies and 17 articles were included. Of the 15 included theses, 2 are doctoral dissertations and 13 are master's thesis. When the distribution of the studies according to the years is examined, the first study that can be reached within the scope of the research is the postgraduate thesis that took place in 2008. Since 2016, it is seen that there has been an increase in the number of postgraduate studies and articles. It can be interpreted that the subject of

multiple disabilities has begun to attract the attention of researchers in recent years.

The second question of the research is the distribution of the studies according to the universities examined. Within the scope of the research, the distribution of postgraduate thesis studies according to universities was examined. Since the studies of the article were carried out by different researchers and there was diversity in the university, it was not included in the study. At the same time, it is thought that the inclusion of only the responsible author will not constitute a consistent situation in terms of evaluation. When the distribution of graduate thesis studies is examined, Gazi University Institute of Educational Sciences, Department of Special Education, Education of the Visually Impaired is in the first place with 5 studies. Bolu Abant İzzet Baysal University, Institute of Educational Sciences, Department of Special Education, Department of Education of the Mentally Handicapped, completed 3 postgraduate thesis studies. Anadolu University, Institute of Educational Sciences, Department of Special Education, and Department of Education of the Hearing Impaired are involved in 2 studies. It is seen that studies on multiple disabilities are carried out in different departments of special education. Multiple disabilities are of interest to researchers in different programs. In addition to these, another postgraduate thesis study, which was examined within the scope of the research,

was carried out in the field of Physiotherapy and Rehabilitation at Hacettepe University Health Sciences Institute. Since multiple disabilities is a field that requires different disciplines to work together, studying by different researchers contributes to a better understanding of the field and makes improvements for individuals with multiple disabilities.

As of 2022, there are special education teaching programs in 35 states and 15 foundation universities in our country. Among these programs, the Department of Education for the Disabled is located in a few universities. Among the existing universities, only Gazi University is active by having a faculty member in the education of the disabled. The high number of studies on multiple disabilities at Gazi University is thought to be a result of this situation.

The third research question is to examine the distribution of studies on multiple disabilities in Türkiye between 2008 and 2022 by keywords/subject areas. Among the 32 studies examined within the scope of the research, it is seen that individuals with multiple disabilities are families, individuals with multiple disabilities, and teachers of individuals with multiple disabilities in terms of keywords/subject areas. When evaluated in this context, it was concluded that there are more studies conducted with the families of individuals with multiple disabilities. Almost all studies focus on mothers. No source could be found regarding the fathers of individuals with multiple disabilities. Teachers of individuals with multiple disabilities are another subject of study. Studies generally focus on the care of individuals with multiple disabilities, family experiences, and teachers' experiences.

The fourth research question sought to answer the distribution of individuals with multiple disabilities, who were included in studies on individuals with multiple disabilities, according to disability types. When the studies are examined in detail, while individuals with multiple disabilities have 4 different disabilities in eight studies, there are 3 different disabilities in 15 studies. In 23 studies, it is seen that individuals with multiple disabilities have 2 different types of disability. When these studies are examined, it is seen that the number of studies in which the first disability of individuals with multiple disabilities is visual impairment is higher than other disabilities. In 20 studies, individuals with multiple disabilities who had an additional disability to visual impairment were included. In 10 studies, the first disability of individuals with multiple disabilities was intellectual disability. The number of studies on individuals with multiple disabilities in which hearing impairment is the first disability is 6, the number of studies in which ASD is the first disability is 4, and 3 studies are the number of studies in which physical disability is the first disability. One of the reasons why there are more studies on visual impairment among the types of disability is thought to be carried out mostly in Gazi University, Department of Education for the Visually Impaired. It is seen that the research made here and the researchers who graduated from different universities and went to different departments of different

universities carried out studies with individuals with multiple disabilities who have additional disabilities in their studies on multiple disabilities.

It is thought that it will be more effective to evaluate the researcher's fifth question and the sixth question together. When the distribution of studies on individuals with multiple disabilities is examined according to research method and design, 14 of the 32 studies included in the research were carried out according to the qualitative research method. Eight of the studies carried out according to the qualitative research method were carried out according to the case study pattern. 3 studies were carried out according to the phenomenological design, and 1 study was carried out according to the action research and descriptive study design. Three of the 8 studies carried out with the quantitative research method were designed according to the scanning model. 2 studies were carried out according to the causal-comparative model and the descriptive design. 1 study was carried out with a single group pretest and posttest. The 4 studies conducted with single-subject experimental research were designed according to the multiple probe model with inter-participant probe trials. One study was conducted with the EU single-subject research model. Two studies were carried out with the mixed research method. Two studies were conducted as a compilation study. When the studies are considered, it is seen that studies are carried out with each research method and different designs. These studies, which were carried out by different researchers with different methods, show that the subject of multiple disabilities is handled from different perspectives.

It is the seventh research question that examines the distribution of data collection techniques/tools used in studies on individuals with multiple disabilities. Data were collected from 13 of the 32 studies examined within the scope of the research by interview technique. While data were collected with different scales in 11 studies, data were collected with 8 study information forms. In 6 studies, the researchers used the observation technique while collecting their data, while the data were collected with checklists in 5 studies. While 3 studies collected data with documents, 3 studies collected data with diaries. In one study, the researcher collected data with field notes. Researchers seem to use different data collection techniques and tools in their studies on individuals with multiple disabilities. A striking point here is that in some of the studies conducted with the qualitative method, it was declared that only the data were collected through structured or semi-structured interviews. To ensure the credibility of the qualitative research method, it is necessary to provide diversity (Yıldırım and Şimşek, 2021). It is a remarkable finding that the studies included within the scope of the research do not mention that they use a different data collection technique apart from the interviews. It is thought that the lack of researcher diaries (Glesne, 2015; Saban and Ersoy, 2016), which includes the researcher's experiences in the research process, the negative experiences, and coping methods, reduces the effect of

the data used in the studies as valid and reliable data.

The eighth research question of the study was the distribution of the data collected in studies on multiple disabilities between 2008 and 2022 in Türkiye according to the method of analysis. Eight of the 32 studies examined were analyzed using the qualitative descriptive analysis method. While 8 studies were analyzed with the statistical analysis method using the SPSS program, the graphical analysis method was used in 7 studies. Three studies were analyzed with the qualitative content analysis method.

The ninth question, which is the last question of the research, is the distribution of the journals in which studies on multiple disabilities were published in Turkey between the years 2008-2022 and the indexes in which they were scanned were examined. When we look at the journals in which the article studies included in the research were published; 5 studies were published in the Ankara University Journal of Educational Sciences Special Education, which was scanned in the ESCI index. Two studies were published in the Journal of Education and Science, which was scanned in the SSCI index. Two studies were published in the Journal of Turkish Studies, which was scanned in the TR Index. Two studies were published in the Journal of Gazi University Gazi Faculty of Education, which was scanned in another Tr Index. Other studies were published in Hacettepe University Education Faculty Journal scanned in the ESCI index, Ahi Evran University Kırşehir Education Journal scanned in the Tr index, Sakarya University Education Journal scanned in the Tr index, Cumhuriyet International Education Journal scanned in the Tr index, Primary Education Online. In the selection of the journals in which the studies were published, the journals scanned in the ULAKBİM Tr Index database were taken into account. Particular attention has been paid to the absence of predatory journals that have emerged in recent years. Thus, this research was ensured to be valid and reliable. One of the important findings of studies on individuals with multiple disabilities is that 9 out of 32 studies conducted on individuals with multiple disabilities were conducted to provide individuals with multiple disabilities with a skill. Other studies focus on the problems experienced by teachers and families. While 2 studies were conducted on compiling studies on multiple disabilities, 1 study focused on single-subject studies with individuals with multiple disabilities.

As a result, it is seen that various studies were carried out with different methods in Türkiye between the years 2008-2022. It is thought that it is important in terms of research diversity that the studies include individuals with multiple disabilities, themselves, their families, and their teachers.

As mentioned in a part of the research, it is necessary to increase the courses related to multiple disabilities by reviewing the current special education teaching undergraduate programs and graduate programs in our country. More researchers can be encouraged to work on multiple disabilities. The number of direct studies with individuals with multiple disabilities can be increased. In

research, applied research can be carried out, especially for individuals with multiple disabilities, their families, and teachers. It can be suggested that field experts who want to make future applications and research should carry out studies by taking this study as a reference. Within the scope of this research, studies on multiple disabilities in Türkiye were examined. Researchers who want to do forward-looking research can conduct studies that address the theses and articles made at the international level more broadly.

Research and publication ethics statement

This research is a descriptive analysis study carried out using different databases. The questionnaire, experiment, interview, etc., about humans or animals. Ethics committee approval is not required for studies using data collection techniques.

Statement of interest

There is no conflict of interest to be disclosed.

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