# A QUALITATIVE RESEARCH ON THE ROLE OF EDUCATION AND SOCIAL WORK IN INTEGRATING AUTISTIC CHILDREN INTO SOCIETY

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#### Abstract

The aim of this study is to determine the educational role of social work in the social integration of individuals with an autism spectrum disorder, which is a social issue, through a qualitative research method. The study was carried out with twelve educator employees of three special education practice first-grade schools that teach children with autism spectrum disorder and are affiliated with the Ministry of National Education. The theoretical basis of the study is social learning, system, social exchange theories, and cognitive behavioral therapy, problem-solving, and crisis intervention models. According to the results of the study carried out with the interpretive phenomenology method, it was determined that social work had roles in the social integration of children with autism spectrum disorders such as family, education, care, counseling, sustainable innovation, and ethics. The results determined that ethics in social work was easy, equal, and free access to service. Innovation in social work includes new approaches in education and training, new methods, improvement and continuity in service, adaptation to change, and self-renewal. The problems experienced in the educational function of social work were basically determined as the lack of expertise of the educators, the ethical and social problems raised by the implementation of care and education services in schools by a single teacher, the lack of technological infrastructure of the schools, the deficiencies in the activities that need to be carried out for the children to socialize, the deficiencies in the education of families about autism, the problem with female students' personal care being provided by female staff

**Key Words:** Autism spectrum, role of social work, education, autistic children

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ÖZSUNGUR, F. (2022). A Qualitative Research on The Role of Education and Social Work in Integrating Autistic Children Into Society. Sosyal Politika Çalışmaları Dergisi, 22 (56), 567-595. DOI:10.21560/spcd.vi.1074666

# OTİSTİK ÇOCUKLARIN TOPLUMA ENTEGRASYONUNDA EĞİTİMİN VE SOSYAL ÇALIŞMALARIN ROLÜNE YÖNELİK NİTEL BİR ARAŞTIRMA

## Öz

Bu çalışmanın amacı, sosyal bir konu olan otizm spektrum bozukluğu olan bireylerin topluma kazandırılmasında sosyal hizmetin eğitime dayalı rolünün nitel araştırma yöntemi ile belirlenmesidir. Çalışma otizm spektrum bozukluğu olan çocuklara eğitim veren ve Milli Eğitim Bakanlığı'na bağlı üç özel eğitim uygulama birinci kademe okulunun on iki eğitimci personeli ile gerçekleştirilmiştir. Çalışmanın teorik temelini sosyal öğrenme, sistem, sosyal mübadele teorileri ile bilişsel davranış terapisi, problem çözme ve kriz müdahale modelleri oluşturmaktadır. Yorumlayıcı fenomenoloji yöntemine göre gerçekleştirilen çalışmanın sonuçlarına göre sosyal hizmetin otizm spektrum bozukluğu olan çocukların topluma kazandırılmasında aile, eğitim, bakım, danışmanlık, sürdürülebilir yenilik ve etik rollerinin olduğu tespit edilmiştir. Sonuclar sosyal hizmette etiğin hizmete kolay, eşit ve ücretsiz erişim olduğu belirlenmiştir. Sosyal hizmette inovasyon eğitim ve öğretimde yeni yaklaşımlar, yeni yöntemler, hizmette gelişim ve süreklilik, değişime adaptasyon ve kendini yenilemeyi içermektedir. Sosyal hizmetin eğitim fonksiyonunda yaşanan sorunlar temel olarak eğitmenlerin uzmanlık düzeylerindeki eksiklik, bakım ve eğitim hizmetlerinin okullarda tek bir eğitmen tarafından yürütülmesinin ortaya koyduğu etik ve sosyal sorunlar, okulların teknolojik altyapı eksiklikleri, çocukların sosyalleşmeleri için gerçekleştirilmesi gereken aktivitelerdeki eksiklikler, ailelerin otizmle ilgili eğitimindeki eksiklikler, kız öğrencilerin kişisel bakımlarının kadın personel tarafından yerine getirilmesi sorunu olarak belirlenmiştir.

Anahtar Kelimeler: Otizm spektrum, sosyal hizmetin rolü, eğitim, otistik çocuklar

### **INTRODUCTION**

The autism spectrum is one of today's current issues and no significant progress has been made in its solution yet (Lord et al., 2000; Newschaffer et al., 2007). It is a social necessity for individuals with this disorder to improve behavioral disorders that concern the family and society, to acquire basic skills and behaviors, to determine their needs, and to ensure their well-being with their families (Johnson and Myers, 2007).

The role of families in the development and education of children with autism can lead to unexpected consequences in guiding children's behavior (Myers and Johnson, 2007). The consciousness of parents in the diagnosis of autism in children may cause curative effects in the regression of the child's spectrum disorder (Simmons et al., 2009). Consciousness and awareness are important factors in the development of care, education, skills, and behaviors of children with autism (Matson and Kozlowski, 2011). This factor provides a social contribution to the rehabilitative, regulatory, and developmental roles of social work in autism (Iovannone et al., 2003).

The impact and role of social work on children with autism spectrum disorder and their families are important in the context of social adaptation of these individuals, whose population is increasing (Howlin and Moss, 2012; Dababnah et al., 2011). Gaining social values to individuals is possible by ensuring the welfare of individuals with such differences and their families with a sustainable social work understanding (Bishop-Fitzpatrick et al., 2019; Nicolaidis, Kripke, and Raymaker, 2014). The aim of this study is to determine the educational role of social work in the social integration of individuals with an autism spectrum disorder, which is a social issue, by qualitative research method, and to make practical recommendations for the detection and solution of the problems that arise in practice. It is thought that the study will contribute to the fields of social work, social policy, and education.

## **Autism Spectrum Disorder**

Autism spectrum disorder is a developmental and neurological disorder that develops in early childhood (Epp, 2008). This disorder limits the individual's communication and relationship with people (Mercer, 2017). Children with this disorder may avoid eye contact while communicating with

the other party (Dinecola and Lemieux, 2015). They may exhibit repetitive behaviors by restricting their interests (Howlin et al., 2015). These individuals experience significant limitations in their activities and skills in their school, work, and social life (Eaves and Ho, 2008).

After the symptoms of the disintegrative disorder appear from birth, a regression period occurs between 18-24 months (Narzisi et al., 2013). In this period, developments based on the improvement of the neuropsychological disorder can be achieved with behavior development, education, and therapy (Nealy et al., 2012). This neurological regression, known as Asperger's syndrome, may include difficulty in making short or inconsistent eye contact, not communicating with people, not listening to people, having difficulty in speaking, different gestures, and understanding other people (Fein, 2011; Maximo, Cadena, and Kana, 2014). This disorder, which shows different symptoms for each individual, constitutes an important obstacle to the individual's socialization (Nydén et al., 2010).

Children with autism may repeat certain behaviors, exhibit unusual behaviors, and use repetitive words and phrases (Barendse et al., 2013). These individuals may be more or less sensitive than other individuals to factors such as numbers, objects, mobility, noise, crowd movements, temperature, and light (Lai et al., 2017). The disorder can cause sleep, irritability, and anxiety problems. On the other hand, some strengths of this decline have also been identified (Geurts et al., 2014; Happé and Frith, 1996). Strengths-based on learning can develop in visual and auditory contexts such as art, mathematics, music, and painting (Wei et al., 2014). In addition, individuals with autism can have important learning functions such as comprehending the details of information and keeping them in long-term memory (Nydén, Hjelmquist, and Gillberg, 2000; Wilson et al., 2014).

# The Role of Social Work in Autism Spectrum Disorder

Social work plays an important role in applying the principles of equality and justice in individual-society relations (Hock, Timm, and Ramisch, 2012). Taking an active role in ensuring culture, public health, community peace, and welfare, social work functions as an adaptation with support and empowerment, based on the approach that differences arising from regressions

due to individuals are not social deficiencies (Hedley et al., 2018). This function is based on the human element that forms the basis of society. Social work is an important and driving force in many issues such as material and moral weaknesses, social adaptation problems, cultural and physical differences, inequality and injustice, immigration, security, and privacy (Gorjy, Fielding, and Falkmer, 2017). Another issue that has an important role in empowering the individual and adapting to society is individuals with autism spectrum disorder (Shattuck et al., 2012).

The difficulties experienced by families of children with autism in the care and education of their children emerge as an important stress factor (Mogro-Wilson, Davidson, and Bruder, 2014). Difficulties in diagnosis and pushing the child to negative behaviors with wrong reinforcers cause social adaptation problems (Fuld, 2018; Haney, 2016). Parents' stress and anxiety behaviors may cause regressions in children's development (Neely-Barnes et al., 2011; Harris and White, 2018). Difficulties in diagnosing autism in children with atypical syndromes cause depressive states in the family and social isolation (Volkmar, Reichow, and McPartland, 2014). It plays an important role of support these families with social work education and care services (Dente and Parkinson Coles, 2012; Goldstein and Ozonoff, 2018). Social work creates social and familial awareness in autism and activates social mechanisms in the development and education of these individuals (Orsmond et al., 2013). In addition, it ensures that individuals with autism are protected from social injustices by developing social policies (Hendricks, 2010; Preece and Jordan, 2010).

Social work plays a leading role in the adaptation of individuals with autism to society, improving their knowledge and skills, educating families about autism and providing consultancy services, education and care of individuals with autism, raising awareness of the society about autism, developing social policy in autism, organizing social and cultural activities related to autism, eliminating socioeconomic disadvantages, matters such as ensuring the security, welfare, and privacy of individuals and their families (Longtin, 2014). These important roles of social work are aimed at ensuring social welfare in terms of culture and values passed on to future generations. Social work continues to contribute to taking the necessary steps in supporting individuals

with autism and their families in social and economic inequalities, both institutionally and through social workers / social work experts (Hillier et al., 2007; Prizant et al., 2006).

Social workers transfer social work values to clients and the community to ensure social and individual trust in social justice (Patel, Preedy, and Martin, 2014). What distinguishes social workers from a normal profession is that they are the implementors of social values, justice, and policies that will ensure the transmission of equality between generations through social elements (Preece and Jordan, 2007; Van Der Steen et al., 2020). Supporting children with autism and their families due to the regressions of this neurological disorder is carried out with the active role of social work (Nicholas et al., 2015). Social work is an important tool and balance force in ensuring the balance of justice and equality on three pillars of society, individual and state, and integrating social and human values by highlighting the human element (Bishop-Fitzpatrick, Minshew, and Eack, 2013).

Social work undertakes the tasks as identifying tendencies related to autism, revealing the problems experienced by individuals in benefiting from the rights adopted by society, finding solutions by addressing the family element, determining the basic life, skills, and professional needs of individuals with autism, developing and improving the expertise of the workforce that will take part in the education and care of these individuals, formal education. These services are more than services such as counseling and education and are important tasks that affect all dynamics of the society (Duncan and Klinger, 2010).

#### Theoretical Framework

Social learning has an important place in the practices of social work. In the services provided to clients, gaining behaviors, ending unwanted behaviors, motivation, rewarding, and reinforcements constitute an important part of social learning (Bandura and Walters, 1977). Social workers constitute role models in the development of skills and behaviors of individuals with autism (Maisto, Carey, and Bradizza, 1999). Social work practitioners implement positive modeling and reinforcement to develop positive behaviors and ensure social cohesion in clients consisting of individuals with autism and their

families (Pratt et al., 2010; Misafir, 1982). Social learning theory, which forms the basis of positive psychology, also forms the basis of the role of social work on autism.

Apart from the genetic factors that are effective in autism, family, friends, social environment, economic and religious structure play an important role in shaping the behavior. Systems theory emphasizes the effect of these factors on individuals (Whitchurch and Constantine, 2009). Especially, social work practices based on system theory provide an important improvement and development in gaining behavior and eliminating behavioral disorders (Luhmann, Baecker, and Gilgen, 2013).

Social exchange theory is based on social workers and practitioners to grasp the perspective of clients, to determine the cost-benefit analysis of the individual and clients in the control and development of behaviors, and to have information about the causes of the behavior based on effect in practice (Emerson, 1976; Ekeh, 1974; Cook et al., 2013).

The determination of the cognitive process, emotions, and thoughts in autism by the social worker in the context of developing behaviors depends on the cognitive behavioral therapy approach (Rothbaum et al., 2000; Hofmann et al., 2012). Identifying the emotions and behaviors of clients that cause psychological problems is necessary for solving the problems of individuals with mental health problems or depression caused by trauma (Bieling, McCabe, and Antony, 2009). Cognitive-behavioral therapy provides important benefits to social workers in eliminating clients' destructive behaviors (Beck, 2011; Butler et al., 2006).

Violence, trauma, and crisis situations that occur in the families of the clients may prevent the achievement of the expected outcomes from the goal-target practices of social work (Roberts, 2002). This situation can be solved by the social worker based on the crisis intervention model. Determining the causes of the crisis, feelings, and thoughts of the clients, generating alternatives in dealing with the difficult situation, creating and implementing an action plan constitute the necessary steps of this model (Roberts and Ottens, 2005). The problem-solving model is implemented in the formation of the action plan (Roberts, 2005; Knox and Roberts, 2001). Action plans for solving problems in

solution-oriented interviews with families of children with autism spectrum disorders are realized through these models.

## **METHODOLOGY**

## Sample Selection and Method

In accordance with the purpose and scope of the study, teachers and instructors who educate children with autism spectrum disorders were determined as target participants. These educators are experts in social work who fulfill the educational function of social work. These educators carry out services related to the acquisition of behaviors of autistic children, their basic skills, and education. For this reason, the first-grade schools of special education practice centers serving under the Ministry of National Education, which are the schools where the educators who provide the specified services are located, were selected as the sample of the study. The study was limited to pandemic conditions and the Adana province due to the curfew restrictions experienced in many provinces in Türkiye.

This study was carried out with educators providing education services to autistic children in Kazım Karabekir Special Education Practice Center 1st grade affiliated to Adana Province Seyhan District National Education Directorate, and Yüreğir Special Education Practice School I. grade affiliated to Yüreğir District National Education Directorate. This study was approved by the Adana Science and Technology University Ethics Committee (Date: 21/10/2021-No: 20/2). The research was carried out with a total of 58 educators in all three schools, 12 permanent and expert staff. The study was carried out in accordance with the COVID-19 pandemic measures, by taking the necessary precautions by the relevant schools.

#### **Data Collection Tools**

The questionnaire was sent to each participant electronically via Google Form through the school principals and their assistants. Later, after the responses received from the participants were stored electronically, group and face-to-face interviews were carried out in the relevant schools following the social distance rules. The reason for conducting these interviews is whether

the questions meet the expected purpose by brainstorming as a group after the answers given by each participant alone and to ensure that the existing problems are presented in a participatory manner.

The questionnaire was created by researching autism, education in autism, and the role of social work in autism. The questionnaire form consists of openended questions consisting of gender, age, marital status, work experience, education level, number of staff of the institution, number of autistic students, and 16 questions. Open-ended questions are shown in table 1.

## **Table 1. Research Questions**

### Open-Ended Questions

- S1. Could you tell us about the difficulties and problems encountered with autistic children?
- S2. What is done to integrate autistic children into society? What can be done?
- S3. What are the difficulties experienced by families of autistic children?
- S4. What are the problems experienced in the relationship between families of autistic children and social work personnel?
- S5. What are the problems that arise in the relations between the families of autistic children and the institution? What are your suggestions for solutions?
- S6. Which ethical principles are taken into consideration and implemented in your institution?
- S7. Does your institution have deficiencies in infrastructure (technological, technical, etc.) for the development and education of autistic children? What are they?
- S8. In your opinion, what are the ethics and innovation in social work?
- S9. Could you give information about autistic children's interactions with technology? What are the problems experienced in their interactions with technological devices?
- S10. In your opinion, how can be developed autistic children's creative and innovative abilities?
- S11. What are the things that autistic children need most in integration into society?
- S12. What are the things that autistic children are aware of society and their environment? What can be done to increase this awareness?
- S13. What can be done to increase the quality of life of autistic children?
- S14. Which characteristics of families are effective in the development and recovery of autistic children? (age, income level, race, religion, culture, education, household, etc.)
- S15. What kind of policies does the state have regarding the education of autistic children, their integration into society, their improvement, and their quality of life? Are there any projects that you can suggest on this subject?
- S16. Did you witness any development/recovery with autistic children? If so, what were the factors affecting this development/recovery?

### **Research Method**

This research was carried out by adopting the phenomenology method, one of the qualitative research methods. Adaptation of children with an autism spectrum disorder to society is a social problem. This problem concerns families, children with autism, and society closely. Also, social work plays an important role in this context. Education staff, who play an important role in the adaptation of education-oriented social work to society, play an important role in revealing the current problems as they carry out social work.

Phenomenology is a qualitative research method that tries to reveal social reality and evaluates experience and phenomenon together (Smith, Flowers and Larkin, 2009). The interpretive phenomenology approach goes beyond the definition of experience or basic concepts and focuses on experience and perceptions (Smith, Flowers and Larkin, 2009). This method is mostly performed with small samples (Brocki and Wearden, 2006). This method is an approach that highlights and cares about human existence. The aspects of people's view of events, their attitudes, and experiences in the face of their thoughts provide hidden meanings (Smith and Shinebourne, 2012). For this reason, experiences and perceptions are important in the "interpretive" phenomenological method. Due to the importance of social work's effects, roles and functions on individuals with autism spectrum disorder and society, problems can be uncovered by identifying different experiences and perceptions to be obtained with this method (Smith, Jarman, and Osborn, 1999). In this method, the following analysis process should be followed (Reiners, 2012; Roberts, 2013):

- > Selecting the tools to be used in collecting data to be obtained through the research, determining the research question, and the social problem
  - Collection of data, identification of experience, and phenomenon.
  - Classification the data and determining the main topic
- ➤ Determining perception relations about experience and phenomenon, revealing common and different points.
  - > Theorizing the essence of the experience

## **Data Analysis**

Findings obtained from the research were classified, related, grouped and words were sorted using MAXQDA software. This program is a software designed for Windows and Mac, which is used to make exploratory and relational inferences in the classification and grouping of data obtained by qualitative research method (Maxqda, 2021). The software provides reporting by projecting multiple sentences and texts such as literature review, and interviews.

### **FINDINGS**

## **Demographic Findings**

Demographic data in the study consisted of gender, age, marital status, education level, work experience, job description, the number of staff of the institution, and the number of autistic students (Table 2). According to the findings, 66.67% of the participants were women, and 33.33% were men. 41.67% of the participants were in the 29-34 age range, and 58.33% were in the 35-46 age range. 25% of the teachers participating in the research were single and 75% were married. 16.67% of the participants had 5-7 years of work experience, 83.33% of them had 8 years or more of work experience.

Table 2. Demographic Variables

Demographic Information		f	%
Gender (n <sub>1</sub> )	Women	8	66,67
	Men	4	33,33
Age (n <sub>1</sub> )	29-34	5	41,67
	35-46	7	58,33
Marital status (n <sub>1</sub> )	Single	3	25,0
	Married	9	75,0
Education level (n <sub>1</sub> )	Bachelor's degree	12	100
Work experience (n <sub>1</sub> )	5-7 years	2	16,67
	8 years and above	10	83,33
Job description (n <sub>1</sub> )	Teacher	12	100
The number of staff in the institution $(n_2)$	Yüreğir	27	46,55
	Seyhan	31	53,45
The number of autistic students (n <sub>3</sub> )	Yüreğir	30	38,47
	Seyhan	48	61,53

f: frequence; n<sub>1</sub>=12; n<sub>2</sub>=58; n3=78; %100

As a result of the analysis, a total of 1.975 words, and 1.123 unique word forms, 0.569 level of word density, 18.8 words of average words per sentence were calculated. The words "equality", "income" and "society" were identified as words associated with the words "autism" and "education".

## **Qualitative Findings**

The findings obtained from the interviews with the participants consist of two main parts as questionnaire and group interview findings. The findings obtained from the surveys were analyzed to determine the main role of social work in the integration of children with autism spectrum disorder into society and the problems experienced in practice. These findings were transformed into creative ideas and recommendations through group interviews. The structured questions were also asked the principal, who is the executive of the school, and the data obtained were evaluated together.

## **Survey-Based Findings**

According to the participants, the most common problems experienced by families were divorce and violence. According to the participants, education should continue at home with the support of families. Problems experienced at home can negatively affect children's behavior.

"Financial support and material support are needed for socializing and continuing education at home."

Problems experienced by families were stated as social isolation due to the autism of their children, personal care, and education of children. The problems experienced between social work personnel and families were stated as high expectations of families about the benefit they would get from education, lack of empathy. Families perceive schools as institutions that act as a caregiver. This situation may cause communication problems between the family and the institution.

"Many families have the impression that the school has a babysitting role. As families feel desperate, their view regarding education is getting negative."

Educators believe that the balance between the family and the institution can be achieved through mutual understanding, empathy, and acting on the interests of the child.

"Families and institutions should be understanding and act in the best interests of the child."

"Lack of common perspective and lack of awareness, lack of empathy."

The subject of compliance with ethical principles in the institution was stated as principles of equality, accessibility, easy access to services, giving each child a special feeling, principled education, empathy, behavior suitable for privacy, commitment to the family institution.

Technical and technological tools for professional development, digital elements, and smartboards were reported as deficiencies in infrastructure (technological, technical, etc.) for the development and education of autistic children.

Ethics in social work were stated as equal and principled behavior, easy, equal, and free access to services, meeting the expectations of individuals and families in need of social work without discrimination within written and unspecified humanitarian rules.

Innovation in social work was stated by the participants as new approaches in education and training, new methods, creating continuous improvement and continuity in service, adapting to the necessary information and technological developments, and self-renewing.

It was stated by the participants that visual, auditory, and tactile tools attracted attention in the interaction of autistic children with technology. However, it was reported that some children had little attention to technological devices due to the problem that children had in establishing eye communication. Participants stated that children were highly addicted to smartphones when they were with their families. On the other hand, the participants stated that using technological devices for educational purposes may be beneficial for children.

"Like every child, colorful animated audio programs attract attention and facilitate their learning, but this situation is a bit abused and misused by parents and they use it to produce enough time whenever they are busy."

"All of them have different perception levels of technology. However, when used for educational purposes, I think the interest can be increased by independent or physical guidance.

It was determined that applying the applied learning method by doing repetition, using technology, applying activities according to the interests of the children, creating an environment suitable for demonstrating the talent are required for autistic children to develop their creative and innovative abilities.

The things that autistic children need most in integration into society were stated as developing social adaptation skills of children, making them at least independent, constantly supporting self-care skills, social acceptance, artistic activities, socialization, education in social life, improving communication, raising awareness of families and activities to reveal their professional skills.

Participants suggested providing the support necessary for autistic children to be fully independent within the appropriate environment and conditions in order to increase their quality of life, activities aimed at exploring sports, handicrafts and the social environment, music, painting, ensuring the rights and equality of children, increasing special education schools, developing self-care skills.

"They are especially those who are overly picky about nutrition or who can eat everything. This can lead to underweight or overweight. Regular sports events can be offered. In addition, hippotherapy, swimming, drama music, hand skills can be supported, and it can be introduced to a wide variety of environments to explore the close environment more and to remove asocial behaviors. But it should be regularly. It doesn't just happen with lessons at school. There should be half-lesson, half-life preparatory activities."

According to the participants, it was stated that characteristics such as income level, education, culture, awareness, age, number of households were effective in the development and recovery of autistic children.

"It is necessary to raise awareness in order to spread the responsibility that mostly belongs to mothers to the whole family. Therefore, general awareness is more important than family characteristics."

Since the autism spectrum disorder level of each student differs in the education of autistic children, their integration into society, their improvement, and their quality of life, it was thought by the participants that each individual should have been given a separate education. According to the participants,

due to the difference in this situation, the physical conditions, infrastructure, and the current education system limit the development of students.

"Medium-heavy level students should receive individual education. I think not all children are at the same level in group education. Group education focused on one-to-one education, unfortunately, is not effective for children with moderate level autism."

"Although there is an adequate level of government policy, projects that will facilitate the lives of people with autism who interact one-on-one with children can be developed and projects must be continuous, not temporary."

Participants reported improvements in the autism spectrum as literacy, ability to express themselves, basic life skills, desire to participate in artistic activities, and elimination of problematic behavior.

"Every child can make progress with private and individual work. Throughout my professional life, I made progress with many students. The first priority should always be to eliminate problem behavior. It is not possible not to proceed with stability."

## **Findings Based on Group Interviews**

In group interviews with teachers who teach children with an autism spectrum disorder, it was stated that students' skills, leisure time activities, and socialization were limited. It was stated by the participants that this training helped the family to breathe. It was stated that the most important problem in education was the lack of infrastructure, educational tools, and equipment. In particular, the importance of physical conditions was emphasized in the discovery of the abilities of autistic children and their socialization. On the other hand, another issue emphasized was that special education was required for each student and the situation of each student with an autism disorder was different. The characteristics of individuals in autism spectrum disorder, regressions that occur according to the disorder, behavioral limitations, and disorders differ from individual to individual. For this reason, it was recommended by the participants that each individual should receive separate training for individual skill development. Among the suggested activities, music, physical education, and painting were predominant. However, it was

emphasized that the schools did not have the necessary physical infrastructure for these activities.

During the pandemic period, it was reported by the participants that virtual education did not benefit from the families, and the children ended the education without withstanding more than five minutes of virtual education. Therefore, it was stated by teachers that digital education was not beneficial for individuals with autism disorder. However, the importance of a smart board in face-to-face education was emphasized by teachers. The reason for this was the emphasis on the importance of using such tools in formal education due to the students' interest in touch, auditory, and visual elements despite the indifference shown to distance education.

Participants stated that children displayed aggressive and anxious behaviors when their daily routines change. It was stated by teachers that the daily routines of students with autism spectrum disorder should be kept under control by teachers, otherwise, significant difficulties might be encountered in gaining behaviors to children. The importance of personal acceptance in teaching children behaviors was also emphasized. In order to achieve this acceptance, basic knowledge, and skill training starting from the family should be reinforced at school. On the other hand, it was emphasized by the participants that rewarding children and first-degree reinforcers were important in gaining behavior.

The family-teacher relationship is important in the education of children. Participants stated that most of the families of the children did not have enough information about the current situation of their children and they requested their opinions on this issue as a consultant. This situation reveals that families with children with autism should be educated.

As a result of the interviews, it was emphasized that the children did not have any awareness of competition/rivalry in the context of socialization. It was emphasized that this situation was an important obstacle in determining children's abilities and socialization.

Participant teachers stated that children often had to physically intervene due to a lack of behavioral control. In particular, it was stated by the participants that children had to intervene gently to prevent some of their behaviors and not to harm themselves, but these behaviors were often perceived and reflected as violence against children in social media and society. Teachers stated that they were social workers in charge of education and suggested that in order not to cause misunderstanding on this issue, a staff member who would prevent the child in case of harming the child herself/himself should have been present with each teacher.

Teachers stated that children with autism were not provided with adequate support and opportunities by society. Emphasizing the lack of educational tools, projects, and infrastructure, the teachers emphasized the lack of permanent teachers. Contract work is another deficiency reported by teachers about personal rights.

According to the information obtained from one of the school principals who work except teachers and stated that he was an expert in the education of children with autism, the lack of specialist teachers on this subject was a current and important problem. The school principal stated that the contract teachers did not have enough information about children with autism and that they should have been subjected to specialist training on these subjects. Another problem reported by the school principal was the scarcity of women staff at school to provide care for students with a female autism spectrum disorder. It was reported that as female students had significant problems in measuring and interpreting their behaviors, they could have been safer in an environment with women staff in toilets and similar needs. It was emphasized that women's menstrual bleeding, toilet needs, and their inability to pay attention to their clothes in the classroom should be supported by women staff.

Participants drew attention to an important problem in the distinction between moderate and severe autism and mental illness in autism. It was reported that students should have been classified in terms of making a distinction between mental illness and autism. It was stated that many students had serious problems beyond autism and this also affected the learning behaviors of other students.

The teachers emphasized the need for the family's education on autism and the existence of an expert team that would provide consultancy services to the family. It was stated by the participants that social awareness and consciousness on this issue should have been provided through public service announcements and training. On the other hand, it was emphasized that there should have been centers like a creche for the care of autistic individuals in public institutions. The principal of a school where the research was conducted stated that there were similar centers in Holland and that its implementation in the research country would provide significant benefits, especially for families in practical terms.

#### DISCUSSION

Studies on children with autism spectrum disorders usually include information obtained through interviews with families (Higgins, Bailey, and Pearce, 2005; Kogan et al., Bekhet, Johnson, and Zauszniewski, 2012; Montes and Halterman, 2008; Gazzellone, 2015; Smith and Elder, 2010; Cridland et al., 2014; Hartley et al., 2010; Tint and Weiss, 2016). There are few studies in the literature on the determination of the problems that arise in the practice of educators working in social work. Some of these studies are related to post-secondary education among youth with autism spectrum disorder (Shattuck et al., 2012), educational experiences and needs of higher education students with autism spectrum disorder (Cai and Richdale, 2016), meeting academic needs in secondary education (Fleury et al., 2014), satisfaction with the training (Renty and Roeyers, 2006), the impact of education on the well-being of students (Van Hees, Moyson, and Roeyers, 2015), an educational approach suggested as authentic participation (Lynch and Irvine, 2009), phased transition program in education (White et al., 2017).

Ashburner, Ziviani, and Rodger (2008) found that auditory filtering difficulties, sensory underreaction, and sensory seeking patterns were associated with academic failure, children who had difficulty processing verbal instructions in noisy environments and who often focused on sensory seeking behaviors were less successful academically. Hannah and Stagg (2016) found that schools were not adequate for sex education. Anderson, Stephenson, and Carter (2017), according to the results of their systematic literature review, showed that children with autism had social, emotional, and sensory difficulties and how these difficulties negatively affect all aspects of their post-secondary education, that the support provided to these children

was generally incompatible with the needs and provided unique benefits. They found that there was a need for personalized supports and new solutions to be identified.

The results of this study include the determination of the role of social work in the context of education in addition to the findings regarding the literature puts forward that the methodology in education, the satisfaction of the family with the service provided, the impact of families, and determining the current needs of children. In addition to this, the compliance of the practice to the purpose of social work was revealed in this study.

#### CONCLUSIONS AND PRACTICAL RECOMMENDATIONS

Social work fulfills important functions in the context of education and care services for the integration of autistic children into society. In the context of these functions, the most important problems that arise in the field of education in practice are the lack of infrastructure and expert trainers, the problems arising from the common care and education services in schools, the lack of expertise in special education on autism, the lack of specialized training of teachers and staff, the lack of expert women staff and family counseling services at schools were determined.

According to the results of the research, it is revealed that a dual structure should be implemented in the education of children with an autism spectrum disorder, including care and education. Two different specialist trainers (teachers) should be assigned to special education practice schools to provide care and education for children with autism. Care service should include services that will control the child's behavior, limit behavioral disorders, and prevent the child from harming his environment and himself. The trainer who will provide care will be able to provide support to the teacher who will provide the education service, and increase the benefit to be obtained regarding the behaviors and skills of the child. The fact that this service is performed by teachers in charge of education may cause misperceptions by society and a separate workload for teachers. Besides, executing specialties in care and education services separately in such education units is important for children to acquire behavior, skills, and knowledge.

The professional trainer responsible for caring should provide support to children during breaks and leisure activities. To prevent children from harming themselves and their environment during the time they spend except their normal education, and teaching to the child that leisure activities serve the purpose of socialization, care service educators should fulfill them.

Specialization fields in teaching at universities should be separated in the context of autism and mental illness such as mathematics and geography. The special education teaching department may not be sufficient to fully respond to this area. On the other hand, all educators, principals, and staff serving these schools must have received autism spectrum specialist training. This is because autism spectrum disorder requires a different specialty than normal education.

As a result of the research, it was determined that according to the information obtained from a school principal, the children were released without the supervision of teachers or staff members between classes. This situation may prevent the reinforcement of behavior patterns that children learn and are conditioned, and may cause the loss of the intended benefit. The skills, knowledge, and behaviors that are tried to be gained by rewarding and reinforcers just ten minutes ago may result in failure by interacting with other children and being exposed to negative behaviors between courses. Because the behaviors taken as an example by each child with autism disorder differ. For this reason, it is recommended for autistic students to socialize between courses under the supervision of a different teacher or social worker.

Female students' education should be paid attention to in the education of children with autism. It may be beneficial to provide girls with menstrual periods, personal care, toilet needs, and problems arising due to puberty by women staff. Women specialist personnel can contribute to the total benefit of autism by providing the necessary sensitivity in the development of female students.

Separate counseling centers should be established for schools to support families. Families should be provided with autism awareness training, and children should be taught practical knowledge about behaviors. Besides, a unit should be established for the families of children with autism in every public

institution, and specialist personnel in autism should be employed in these units. It is recommended to assign two different social work expert trainers in the context of care and education in the education to be given to children and to increase the necessary artistic, professional, and leisure activities in the context of social integration and adaptation.

#### Limitations

Conducting the study with a larger number of samples from different provinces will increase the generalizability of the results. The communication difficulties caused by the pandemic and the low sample size and variety constitute the main limitations of the study.

## Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article

## **Funding**

This research was funded from the author's own funds.

#### REFERENCES

Anderson, A. H., Stephenson, J., and Carter, M. (2017). A systematic literature review of the experiences and supports of students with autism spectrum disorder in post-secondary education. *Research in Autism Spectrum Disorders*, 39, 33-53.

Ashburner, J., Ziviani, J., and Rodger, S. (2008). Sensory processing and classroom emotional, behavioral, and educational outcomes in children with autism spectrum disorder. *American journal of occupational therapy*, 62(5), 564-573.

Bandura, A., and Walters, R. H. (1977). *Social learning theory* (Vol. 1). Englewood Cliffs, NJ: Prentice-hall.

Barendse, E. M., Hendriks, M. P., Jansen, J. F., Backes, W. H., Hofman, P. A., Thoonen, G., ... and Aldenkamp, A. P. (2013). Working memory deficits in high-functioning adolescents with autism spectrum disorders: neuropsychological and neuroimaging correlates. *Journal of neurodevelopmental disorders*, 5(1), 14.

Beck, J. S. (2011). Cognitive-behavioral therapy. *Clinical textbook of addictive disorders*, 491, 474-501.

Bekhet, A. K., Johnson, N. L., and Zauszniewski, J. A. (2012). Resilience in family members of persons with autism spectrum disorder: A review of the literature. *Issues in mental health nursing*, 33(10), 650-656.

Bieling, P. J., McCabe, R. E., and Antony, M. M. (2009). *Cognitive-behavioral therapy in groups*. Guilford press.

Bishop-Fitzpatrick, L., Dababnah, S., Baker-Ericzén, M. J., Smith, M. J., and Magaña, S. M. (2019). Autism spectrum disorder and the science of social work: A grand challenge for social work research. *Social work in mental health*, *17*(1), 73-92.

Bishop-Fitzpatrick, L., Minshew, N. J., and Eack, S. M. (2013). A systematic review of psychosocial interventions for adults with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 43(3), 687-694.

Brocki, J. M., and Wearden, A. J. (2006). A critical evaluation of the use of interpretative phenomenological analysis (IPA) in health psychology. *Psychology and health*, *21*(1), 87-108.

Butler, A. C., Chapman, J. E., Forman, E. M., and Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: a review of meta-analyses. *Clinical psychology review*, 26(1), 17-31.

- Cai, R. Y., and Richdale, A. L. (2016). Educational experiences and needs of higher education students with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 46(1), 31-41.
- Cook, K. S., Cheshire, C., Rice, E. R., and Nakagawa, S. (2013). Social exchange theory. In *Handbook of social psychology* (pp. 61-88). Springer, Dordrecht.
- Cridland, E. K., Jones, S. C., Magee, C. A., and Caputi, P. (2014). Family-focused autism spectrum disorder research: A review of the utility of family systems approaches. *Autism*, 18(3), 213-222.
- Dababnah, S., Parish, S. L., Brown, L. T., and Hooper, S. R. (2011). Early screening for autism spectrum disorders: A primer for social work practice. *Children and Youth Services Review*, *33*(2), 265-273.
- Dente, C. L., and Parkinson Coles, K. (2012). Ecological approaches to transition planning for students with autism and Asperger's syndrome. *Children and Schools*, *34*(1), 27-36.
- Dinecola, C. M., and Lemieux, C. M. (2015). Practice with persons with autism spectrum disorders: Predictors of self-efficacy among social work students. *Journal of Social Work in Disability and Rehabilitation*, 14(1), 23-40.
- Duncan, A. W., and Klinger, L. G. (2010). Autism spectrum disorders: Building social skills in group, school, and community settings. *Social Work with Groups*, *33*(2-3), 175-193.
- Eaves, L. C., and Ho, H. H. (2008). Young adult outcome of autism spectrum disorders. *Journal of autism and developmental disorders*, 38(4), 739-747.
  - Ekeh, P. P. (1974). Social exchange theory: The two traditions. London: Heinemann.
- Emerson, R. M. (1976). Social exchange theory. *Annual review of sociology*, 2(1), 335-362.
- Epp, K. M. (2008). Outcome-based evaluation of a social skills program using art therapy and group therapy for children on the autism spectrum. *Children and Schools*, 30(1), 27-36.
  - Fein, D. (2011). The neuropsychology of autism. Oxford University Press.
- Fleury, V. P., Hedges, S., Hume, K., Browder, D. M., Thompson, J. L., Fallin, K., ... and Vaughn, S. (2014). Addressing the academic needs of adolescents with autism spectrum disorder in secondary education. *Remedial and Special Education*, 35(2), 68-79.

- Fuld, S. (2018). Autism spectrum disorder: the impact of stressful and traumatic life events and implications for clinical practice. *Clinical social work journal*, 46(3), 210-219.
- Geurts, H., Sinzig, J., Booth, R., and HappÉ, F. (2014). Neuropsychological heterogeneity in executive functioning in autism spectrum disorders. *International Journal of Developmental Disabilities*, 60(3), 155-162.
- Goldstein, S., and Ozonoff, S. (2018). *Assessment of autism spectrum disorder*. Guilford Publications.
- Gorjy, R. S., Fielding, A., and Falkmer, M. (2017). "It's better than it used to be": Perspectives of adolescent siblings of children with an autism spectrum condition. *Child and Family Social Work*, 22(4), 1488-1496.
- Haney, J. L. (2016). Autism, females, and the DSM-5: Gender bias in autism diagnosis. *Social Work in Mental Health*, 14(4), 396-407.
- Hannah, L. A., and Stagg, S. D. (2016). Experiences of sex education and sexual awareness in young adults with autism spectrum disorder. *Journal of autism and developmental disorders*, 46(12), 3678-3687.
- Happé, F., and Frith, U. (1996). The neuropsychology of autism. *Brain*, 119(4), 1377-1400.
- Harris, J., and White, V. (2018). A dictionary of social work and social care. Oxford University Press.
- Hartley, S. L., Barker, E. T., Seltzer, M. M., Floyd, F., Greenberg, J., Orsmond, G., and Bolt, D. (2010). The relative risk and timing of divorce in families of children with an autism spectrum disorder. *Journal of Family Psychology*, 24(4), 449.
- Hedley, D., Cai, R., Uljarevic, M., Wilmot, M., Spoor, J. R., Richdale, A., and Dissanayake, C. (2018). Transition to work: Perspectives from the autism spectrum. *Autism*, *22*(5), 528-541.
- Hendricks, D. (2010). Employment and adults with autism spectrum disorders: Challenges and strategies for success. *Journal of vocational rehabilitation*, 32(2), 125-134.
- Higgins, D. J., Bailey, S. R., and Pearce, J. C. (2005). Factors associated with functioning style and coping strategies of families with a child with an autism spectrum disorder. *Autism*, 9(2), 125-137.
- Hillier, A., Campbell, H., Mastriani, K., Izzo, M. V., Kool-Tucker, A. K., Cherry, L., and Beversdorf, D. Q. (2007). Two-year evaluation of a vocational support program for adults on the autism spectrum. *Career Development for Exceptional Individuals*, *30*(1), 35-47.

- Hock, R. M., Timm, T. M., and Ramisch, J. L. (2012). Parenting children with autism spectrum disorders: A crucible for couple relationships. *Child and Family Social Work*, 17(4), 406-415.
- Hofmann, S. G., Asnaani, A., Vonk, I. J., Sawyer, A. T., and Fang, A. (2012). The efficacy of cognitive behavioral therapy: A review of meta-analyses. *Cognitive therapy and research*, 36(5), 427-440.
- Howlin, P., Arciuli, J., Begeer, S., Brock, J., Clarke, K., Costley, D., ... and Guastella, A. (2015). Research on adults with autism spectrum disorder: Roundtable report. *Journal of Intellectual and Developmental Disability*, 40(4), 388-393.
- Howlin, P., and Moss, P. (2012). Adults with autism spectrum disorders. *The Canadian Journal of Psychiatry*, *57*(5), 275-283.
- Iovannone, R., Dunlap, G., Huber, H., and Kincaid, D. (2003). Effective educational practices for students with autism spectrum disorders. *Focus on autism and other developmental disabilities*, 18(3), 150-165.
- Johnson, C. P., and Myers, S. M. (2007). Identification and evaluation of children with autism spectrum disorders. *Pediatrics*, *120*(5), 1183-1215.
- Knox, K., and Roberts, A. (2001). The crisis intervention model. Theoretical perspectives for direct social work practice: A generalist-eclectic approach, 183-202.
- Kogan, M. D., Strickland, B. B., Blumberg, S. J., Singh, G. K., Perrin, J. M., and van Dyck, P. C. (2008). A national profile of the health care experiences and family impact of autism spectrum disorder among children in the United States, 2005–2006. *Pediatrics*, 122(6), e1149-e1158.
  - Maxqda (2021). <a href="http://www.maxqda.com">http://www.maxqda.com</a>
- Lai, C. L. E., Lau, Z., Lui, S. S., Lok, E., Tam, V., Chan, Q., ... and Cheung, E. F. (2017). Meta-analysis of neuropsychological measures of executive functioning in children and adolescents with high-functioning autism spectrum disorder. *Autism Research*, *10*(5), 911-939.
- Little, C. 2017). Supporting social inclusion for students with autism spectrum disorders: insights from research and practice. Taylor and Francis.
- Longtin, S. E. (2014). Using the college infrastructure to support students on the autism spectrum. *Journal of Postsecondary Education and Disability*, *27*(1), 63-72.
- Lord, C., Cook, E. H., Leventhal, B. L., and Amaral, D. G. (2000). Autism spectrum disorders. *Neuron*, 28(2), 355-363.

- Luhmann, N., Baecker, D., and Gilgen, P. (2013). *Introduction to systems theory*. Cambridge: Polity.
- Lynch, S. L., and Irvine, A. N. (2009). Inclusive education and best practice for children with autism spectrum disorder: An integrated approach. *International Journal of Inclusive Education*, 13(8), 845-859.
- Maisto, S. A., Carey, K. B., and Bradizza, C. M. (1999). Social learning theory. *Psychological theories of drinking and alcoholism*, 2, 106-163.
- Matson, J. L., and Kozlowski, A. M. (2011). The increasing prevalence of autism spectrum disorders. *Research in Autism Spectrum Disorders*, *5*(1), 418-425.
- Matua GA, Van Der Wal DM (2015) Differentiating between descriptive and interpretive phenomenological research approaches. Nurse Researcher. 22, 6, 22-27.
- Maximo, J. O., Cadena, E. J., and Kana, R. K. (2014). The implications of brain connectivity in the neuropsychology of autism. *Neuropsychology review*, 24(1), 16-31.
- Mercer, J. (2017). Examining DIR/Floortime™ as a treatment for children with autism spectrum disorders: A review of research and theory. *Research on Social Work Practice*, 27(5), 625-635.
- Mogro-Wilson, C., Davidson, K., and Bruder, M. B. (2014). An empowerment approach in teaching a class about autism for social work students. *Social work education*, 33(1), 61-76.
- Montes, G., and Halterman, J. S. (2008). Association of childhood autism spectrum disorders and loss of family income. *Pediatrics*, *121*(4), e821-e826.
- Myers, S. M., and Johnson, C. P. (2007). Management of children with autism spectrum disorders. *Pediatrics*, *120*(5), 1162-1182.
- Narzisi, A., Muratori, F., Calderoni, S., Fabbro, F., and Urgesi, C. (2013). Neuropsychological profile in high functioning autism spectrum disorders. *Journal of autism and developmental disorders*, 43(8), 1895-1909.
- Nealy, C. E., O'Hare, L., Powers, J. D., and Swick, D. C. (2012). The impact of autism spectrum disorders on the family: A qualitative study of mothers' perspectives. *Journal of Family Social Work*, *15*(3), 187-201.
- Neely-Barnes, S. L., Hall, H. R., Roberts, R. J., and Graff, J. C. (2011). Parenting a child with an autism spectrum disorder: Public perceptions and parental conceptualizations. *Journal of Family Social Work*, 14(3), 208-225.

Newschaffer, C. J., Croen, L. A., Daniels, J., Giarelli, E., Grether, J. K., Levy, S. E., ... and Reynolds, A. M. (2007). The epidemiology of autism spectrum disorders. Annu. Rev. Public Health, 28, 235-258.

Nicholas, D. B., Attridge, M., Zwaigenbaum, L., and Clarke, M. (2015). Vocational support approaches in autism spectrum disorder: A synthesis review of the literature. *Autism*, 19(2), 235-245.

Nicolaidis, C., Kripke, C. C., and Raymaker, D. (2014). Primary care for adults on the autism spectrum. *Medical Clinics*, 98(5), 1169-1191.

Nydén, A., Niklasson, L., Stahlberg, O., Anckarsater, H., Wentz, E., Rastam, M., and Gillberg, C. (2010). Adults with autism spectrum disorders and ADHD neuropsychological aspects. *Research in Developmental Disabilities*, *31*(6), 1659-1668.

Nydén, A., Hjelmquist, E., and Gillberg, C. (2000). Autism spectrum and attention-deficit disorders in girls. Some neuropsychological aspects. *European child and adolescent psychiatry*, 9(3), 180-185.

Orsmond, G. I., Shattuck, P. T., Cooper, B. P., Sterzing, P. R., and Anderson, K. A. (2013). Social participation among young adults with an autism spectrum disorder. *Journal of autism and developmental disorders*, 43(11), 2710-2719.

Patel, V. B., Preedy, V. R., and Martin, C. R. (2014). *Comprehensive guide to autism*. Springer New York.

Pratt, T. C., Cullen, F. T., Sellers, C. S., Thomas Winfree Jr, L., Madensen, T. D., Daigle, L. E., ... and Gau, J. M. (2010). The empirical status of social learning theory: A meta-analysis. *Justice Quarterly*, 27(6), 765-802.

Preece, D., and Jordan, R. (2010). Obtaining the views of children and young people with autism spectrum disorders about their experience of daily life and social care support. *British Journal of Learning Disabilities*, 38(1), 10-20.

Preece, D., and Jordan, R. (2007). Social workers' understanding of autistic spectrum disorders: an exploratory investigation. *British Journal of Social Work*, *37*(5), 925-936.

Prizant, B. M., Wetherby, A. M., Rubin, E., Laurent, A. C., and Rydell, P. J. (2006). *The SCERTS model: A comprehensive educational approach for children with autism spectrum disorders, Vol. 1.* Paul H Brookes Publishing.

Reiners, G. M. (2012). Understanding the differences between Husserl's (descriptive) and Heidegger's (interpretive) phenomenological research. *Journal of Nursing and Care*, 1(5), 1-3.

- Renty, J., and Roeyers, H. (2006). Satisfaction with formal support and education for children with autism spectrum disorder: The voices of the parents. *Child: Care, Health and Development*, 32(3), 371-385.
- Roberts, A. R. (2002). Assessment, crisis intervention, and trauma treatment: The integrative ACT intervention model. *Brief Treatment and Crisis Intervention*, *2*(1), 1-21.
- Roberts, A. R. (2005). Crisis intervention handbook: Assessment, treatment, and research. Oxford university press.
- Roberts, T. (2013). Understanding the research methodology of interpretative phenomenological analysis. *British Journal of Midwifery*, 21(3), 215-218.
- Roberts, A. R., and Ottens, A. J. (2005). The seven-stage crisis intervention model: A road map to goal attainment, problem solving, and crisis resolution. *Brief Treatment and Crisis Intervention*, 5(4), 329.
- Rothbaum, B. O., Meadows, E. A., Resick, P., and Foy, D. W. (2000). Cognitive-behavioral therapy. In E. B. Foa, T. M. Keane, and M. J. Friedman (Eds.), Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies (p. 320–325). Guilford Press.
- Rotter, J. B. (1982). Social learning theory. Expectations and actions: Expectancy-value models in psychology, 241-260.
- Scott, M., Falkmer, M., Girdler, S., and Falkmer, T. (2015). Viewpoints on factors for successful employment for adults with autism spectrum disorder. *PloS one*, 10(10), e0139281.
- Shattuck, P. T., Roux, A. M., Hudson, L. E., Taylor, J. L., Maenner, M. J., and Trani, J. F. (2012). Services for adults with an autism spectrum disorder. *The Canadian Journal of Psychiatry*, *57*(5), 284-291.
- Shattuck, P. T., Narendorf, S. C., Cooper, B., Sterzing, P. R., Wagner, M., and Taylor, J. L. (2012). Postsecondary education and employment among youth with an autism spectrum disorder. *Pediatrics*, 129(6), 1042-1049.
- Simmons, D. R., Robertson, A. E., McKay, L. S., Toal, E., McAleer, P., and Pollick, F. E. (2009). Vision in autism spectrum disorders. *Vision research*, 49(22), 2705-2739.
- Smith, L. O., and Elder, J. H. (2010). Siblings and family environments of persons with autism spectrum disorder: A review of the literature. *Journal of Child and Adolescent Psychiatric Nursing*, 23(3), 189-195.

- Smith J. A, Flowers P, Larkin M. (2009). Interpretative phenomenological analysis: Theory, method and research. London: Sage.
- Smith, J. A., Jarman, M., and Osborn, M. (1999). Doing interpretative phenomenological analysis. *Qualitative health psychology: Theories and methods*, 218-240.
- Smith, J. A., and Shinebourne, P. (2012). *Interpretative phenomenological analysis*. American Psychological Association.
- Tint, A., and Weiss, J. A. (2016). Family wellbeing of individuals with autism spectrum disorder: A scoping review. *Autism*, 20(3), 262-275.
- Wei, X., Wagner, M., Christiano, E. R., Shattuck, P., and Yu, J. W. (2014). Special education services received by students with autism spectrum disorders from preschool through high school. *The Journal of special education*, 48(3), 167-179.
- Whitchurch, G. G., and Constantine, L. L. (2009). Systems theory. In *Sourcebook of family theories and methods* (pp. 325-355). Springer, Boston, MA.
- White, S. W., Elias, R., Capriola-Hall, N. N., Smith, I. C., Conner, C. M., Asselin, S. B., ... and Mazefsky, C. A. (2017). Development of a college transition and support program for students with autism spectrum disorder. *Journal of autism and developmental disorders*, 47(10), 3072-3078.
- Wilson, C. E., Happé, F., Wheelwright, S. J., Ecker, C., Lombardo, M. V., Johnston, P., ... and Chakrabarti, B. (2014). The neuropsychology of male adults with high-functioning autism or Asperger syndrome. *Autism Research*, *7*(5), 568-581.
- Van Der Steen, S., Geveke, C. H., Steenbakkers, A. T., and Steenbeek, H. W. (2020). Teaching students with Autism Spectrum Disorders: What are the needs of educational professionals?. *Teaching and Teacher Education*, *90*, 103036.
- Van Hees, V., Moyson, T., and Roeyers, H. (2015). Higher education experiences of students with autism spectrum disorder: Challenges, benefits and support needs. *Journal of autism and developmental disorders*, 45(6), 1673-1688.
- Volkmar, F. R., Reichow, B., and McPartland, J. C. (2014). *Adolescents and adults with autism spectrum disorders*. New York: Springer.
- Yuen, R. K., Thiruvahindrapuram, B., Merico, D., Walker, S., Tammimies, K., Hoang, N., ... and Gazzellone, M. J. (2015). Whole-genome sequencing of quartet families with autism spectrum disorder. *Nature medicine*, *21*(2), 185-191.