

Examination of mother's opinions on developmental differences of children with autism in early period

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Early diagnosis is extremely important for children with autism spectrum disorder (ASD), as other children having developmental disabilities. In early diagnosis, which is one of the most important elements of the treatment process, parents have a special place with different factors. Considering the importance of parents in early diagnosis, the aim of the study is to examine the opinions of the mother on early developmental differences in children with autism. The research is a case study designed in a qualitative research model. Accordingly, an interview form was developed by the researchers and data were collected in the scanning model in the first step of the study. In the second step of the study, data were obtained by using the semi-structured interview method, which is one of the qualitative research methods. In the study group of the research, 110 mothers were interviewed, whom were selected via purposeful sampling, and 87 mothers, who gave full answers to the questions, were included in the study. The data obtained were subjected to descriptive and thematic analysis. As a result of the study, it was found that children diagnosed with autism and children with development showed similar developmental characteristics during pregnancy and after birth. It was observed that mothers with a child diagnosed with autism have the awareness on the suspicion of autism in their children when they are between 18 and 24 months and 31 and 36 months, and they experienced problems in breast-feeding and falling asleep.

Keywords: early diagnosis; autism; parent

Introduction

Autism spectrum disorder (ASD) is a lifetime neurodevelopmental disorder characterized by the deficits in social communication and social interaction skills, limited interests, and repetitive behaviors that appear in the early childhood period (Michalek *et al.* 2020, Corsello 2005, Ekici *et al.* 2019, Chi 2014).

Autism spectrum disorder is one of the most commonly seen neurodevelopmental developmental disorder in childhood and its prevalence throughout the world has increased in the last 15 years. It is estimated that 1 of every 59 children in the United States is diagnosed with ASD, and in addition, ASD currently affects approximately 1% of the population around the world (Zwaigenbaum and Penner 2021, Kasilingam *et al.* 2021).

Despite the expansion in the range of current diagnostic criteria, knowledge and awareness levels of the society and health professionals, and advanced parental age are considered in the increase in the number of children with autism spectrum disorder around the world, the increasing prevalence rates have also caused significant concern (Arslan and Ve Sağlam 2021, King and Bearman 2009, Aydın and Özgen 2018).

Autism spectrum disorder is a complex disorder affecting numerous areas of development. Thus, early diagnosis is extremely important in terms of minimizing the harms caused by ASD. Although the progresses in the last decade have paved the way for earlier diagnosis, the average age of clinical diagnosis is in the range of 4–5 years (Itzhak and Zachor 2011, Zwaigenbaum and Penner 2021, Camarata 2014a).

Intervention studies that are developed for autism spectrum disorder are the studies focusing on improving the developmental, educational, or behavioral

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conditions of such children. In case timely and appropriate intervention is not provided to children with ASD, they may experience difficulties in academic studies, struggle with social situations, and develop additional compulsive behaviors such as self-destruction and aggression as coping mechanisms. Early intervention, however, is also critical for the development of some important skills such as motor skills, speech, and language skills. Thus, correct early diagnosis is required to provide early response (Samms-Vaughan 2014, Camarata 2014b, Kasilingam *et al.* 2021).

The process of diagnosis in children with ASD becomes difficult due to the different severity of symptoms in children, communication problems experienced by children, accompanying mental limitations, and the absence of an objective method, and biological examination that can be used in diagnosis. Thus, observations made during the diagnosis of children with ASD and information obtained from the families are used (Eyüpoğlu 2019, Şahin 2011).

Despite the symptoms of ASD should emerge before the age of 3, these symptoms can usually be observed at a much earlier period. About one third of children with ASD show a development during the first 12–18 months of their life, but then they avoid conservation, use objects repetitively and inappropriately, and become unable to respond socially. Furthermore, parents or caregivers of approximately two-thirds of children with ASD reported concerning the symptoms of their children with ASD at the time of diagnosis that these children did not show interest in toys or did not engage in physical contact with them during their infancy, had auditory or tactile vulnerabilities, show excessive crying, irritability, avoidance of eye contact, and have abnormal sleep patterns. In addition, it is also stated that there is an age range in which ASD symptoms are more easily evaluated, especially in the ages between 3 and 5 (Kış 2011, Eyüpoğlu 2019).

Early diagnosis is highly important for children with OSB as in other heteronomous children. The reason is that early diagnosis is one of the most important elements of the treatment and it is surely beyond doubt that the major role in early diagnosis falls to the parents (Akçin 2017). Therefore, the aim of the study is to examine the parental opinions on early developmental differences in children with autism.

Material and method

Research method

Research model

The research is a case study designed in a qualitative research model. Considering the common point of the definitions commonly used in qualitative research, it is seen that they are defined as the studies taking place in natural environment, obtaining important distinctions, collecting detailed data with a small number of

participants, and determining the meanings attributed to life experiences (Seggie and Bayyurt 2021, Aspers and Corte 2019, Johnson and Christensen 2014, Pathak *et al.* 2013, Merriam 2009, Maxwell 2008, Jackson *et al.* 2007, Denzin and Lincoln 2005, Guba and Lincoln 1994). In a case study, which is one of the qualitative research methods, it is aimed to obtain detailed and in-depth information about one or more situations (Gliner *et al.* 2015). In this direction, the data of the study, which was conducted to determine the views of the mothers on the developmental differences of children with autism in the early period, consists of two parts. The first part of the data collection form included some demographic characteristics of the participants and quantitative questions such as the age at diagnosis, gender, number of siblings, birth order, income level, parental education level, parental age, and parental employment status. In the second part of the form; there are open-ended questions prepared for the participants about the pregnancy and birth process, postnatal process, attachment process, behavioral characteristics of the child's infancy period, and the process of receiving the diagnosis of autism. The study collected data through semi-structured interviews, which is one of the qualitative research methods.

Study group

In the study group of the research, 110 mothers were interviewed, whom were selected via purposeful sampling, and 87 mothers, who gave full answers to the questions, were included in the study. Purposeful sampling is preferred in the studies that are included in the study according to certain criteria or that are planned for special cases (Büyüköztürk *et al.* 2012). Inclusion criteria were being a mother, having a child with autism, and participating voluntarily in the study. Exclusion criteria were not completing the data and leaving the study at any stage of the study. Accordingly, 87 mothers, who had a child diagnosed with autism and receiving special education, were interviewed. In qualitative research, the sample size generally depends on the scientific paradigm of the research and since it is carried out by methods such as observation and interview, extensive sampling is not required (Boddy 2016, Morse 2016).

When Table 1 is examined, it can be seen that 82.8% of the children included in the study were male, 26.4% of the children were diagnosed between 31 and 36 months, 36.8% had two siblings, 42.5% were the first child, 34.5% of the mothers were primary school graduates, 33.3% of the fathers were high school graduates, 32.2% of the mothers were between the ages of 36 and 40, 39.1% of the fathers were between the ages of 36 and 40, 89.7% of the mothers were unemployed, 95.4% of the fathers were employed, and 48.3% of the families had less income than their expenses.

Table 1. Demographic information of the study group.

		<i>F</i>	%
Gender	Male	72	82.8
	Female	15	17.2
Age of the child at the time of diagnosis	17 months and earlier	3	3.4
	18–24 months	16	18.4
	25–30 months	9	10.3
	31–36 months	23	26.4
	37–42 months	7	8.0
	43–48 months	15	17.2
	49–54 months	3	3.4
	55–60 months	4	4.6
	61 months and later	7	8.0
No. of siblings	Only child	12	13.8
	2 siblings	32	36.8
	3 siblings	26	29.9
	4 and more siblings	17	19.5
During delivery	First child	37	42.5
	Middle	22	25.3
	Last child	28	32.2
Educational status of the mother	Illiterate	9	10.3
	Literate	12	13.8
	Primary school graduate	30	34.5
Educational status of the father	Secondary school graduate	14	16.1
	High-school graduate	14	16.1
	Faculty/College graduate	8	9.2
	Literate	4	4.6
	Primary school graduate	28	32.2
	Secondary school graduate	9	10.3
	High-school graduate	29	33.3
Age of the mother	Faculty/college graduate	15	17.2
	Other	2	2.3
	26–30	19	21.8
	31–35	25	28.7
	36–40	28	32.2
	41–45	10	11.5
	46 and over	5	5.7
Age of the father	26–30	2	2.3
	31–35	15	17.2
	36–40	34	39.1
	41–45	26	29.9
Employment status of the mother	46 and over	10	11.5
	Employed	9	10.3
Employment status of the father	Non-employed	78	89.7
	Employed	83	95.4
Income status of the family	Non-employed	4	4.6
	My income is less than my expenses	42	48.3
	My income is equal to my expenses	38	43.7
	My income is more than my expenses	7	8.0

*In the table, the answers given by 87 participants for each question are given with a total frequency of 87 and a total percentage of 100%.

Research plan

Figure 1.

Data collection tools

In the research, ‘Demographic Information Form’ and ‘Semi-Structured Interview Form’, that were prepared by the researcher, were used as data collection tools. Opinions of 7 experts were taken for the semi-structured interview form that was prepared by the researcher. The final form of the interview form was created according to the opinions of the experts. In the personal information form, questions such as the age of the child when diagnosed, gender, number of siblings, birth order, income level, educational status of the parents, age of the parents, and employment status of the parents were included. In the semi-structured interview form, questions about pregnancy and delivery, postpartum period, attachment process, behavioral

characteristics of the child during infancy, and the process of being diagnosed with autism were included.

Data collection

Data were collected through face-to-face interviews and online interviews after obtaining the approval of the ethics committee for the research. Detailed information were given to the participants regarding the study and the data were collected via interviews that lasted 20–30 min after obtaining their consent for voluntary participation. Since qualitative research is conducted through observation or interviews, large samples are generally not needed. As the interviews will start to repeat themselves after a certain stage, the researchers realize that the data has reached saturation with the repetition of the answers (Baltacı 2019). In the current study, the interviews were completed after the

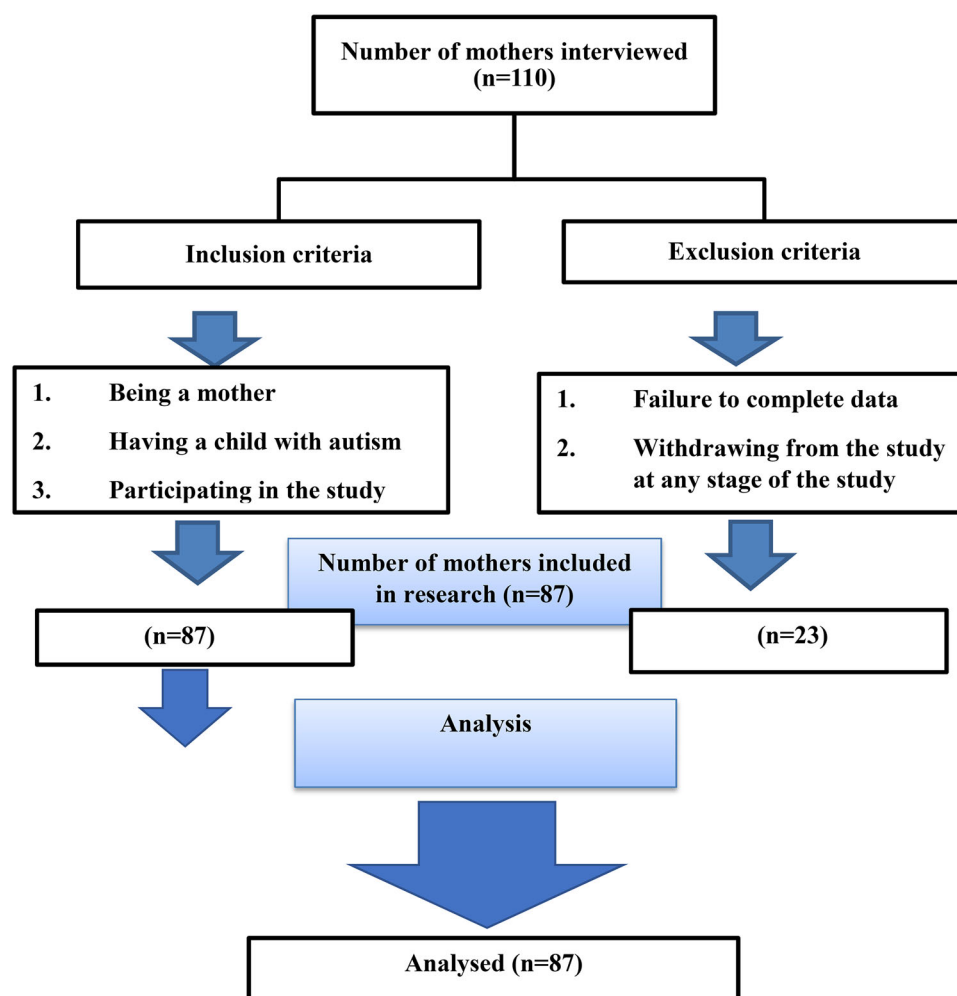


Figure 1. Research plan.

researchers realized that the responses were becoming repetitive.

In qualitative research, the interview process can be affected by the personal characteristics of the interviewers. Therefore, knowing the personal characteristics of the team conducting the research will enable the readers to consider this during the evaluation process of the study. In this direction, the Consolidated criteria for reporting qualitative studies (COREQ) has tried to standardize the reporting process in qualitative research. COREQ consists of 3 parts as research team and reflexivity, study design and analysis, and findings (Tong *et al.* 2007). Within the scope of the research, 5 experts in the field of child development took part and the researchers were coded from researcher 1 to researcher 5. Table 2 shows the characteristics of the experts involved in the research according to COREQ, Research team and reflexivity.

Limitations of the study

In the current study, considering the importance of mothers in early diagnosis, the aim was to examine the views of mothers on the developmental differences of children with autism in the early period. In line with

this aim, the limitations of the study include the fact that only mothers took part in the study, that the children were diagnosed with autism and that they were attending a special education institution.

Data analysis

The data obtained within the scope of the research were examined through descriptive analysis and content analysis. The findings summarized by descriptive analysis are analyzed in detail with content analysis, and the concepts determined and the relationships between these concepts are interpreted (Baltacı 2019). In the present study, demographic information, pregnancy and delivery, postpartum period, attachment process, and behavioral characteristics of infancy were carried out in the first step of the study via descriptive analysis. As a result of descriptive analysis, it is possible to organize, read, and interpret the obtained data (Dawson 2009). Content analysis was used in the analysis of the data obtained from the open-ended questions about the diagnosis process of autism. In content analysis, categories are created by encoding the related concepts and themes are determined. Concepts discovered are presented in a way that the reader can understand (Pope *et al.* 2000).

Table 2. COREQ for research team and reflexivity.

No	Item	R1	R2	R3	R4	R5
1	Interviewer/facilitator (Which author/s conducted the interview or focus group?)	x	x	x	x	
2	Credentials (What were the researcher's credentials? E.g. PhD, MD)	Master's degree graduate	Master's degree graduate	PhD graduate	Master's degree graduate	Associate Professor
3	Occupation (What was their occupation at the time of the study?)	Academician	Academician	Academician	Academician	Academician
4	Gender (Was the researcher male or female?)	Female	Female	Female	Male	Male
5	Experience and training (What experience or training did the researcher have?)	Child development	Early Child education	Child development	Early Child education	Child development
6	Relationship established (Was a relationship established prior to study commencement?)	No	No	No	No	No
7	Participant knowledge of the interviewer (What did the participants know about the researcher? e.g. personal goals, reasons for doing the research)	Participants were informed about the aim of the study.				
8	Interviewer characteristics (What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic)	No features reported				

While frequency and direct quotations were included in the analysis of the descriptive data in the study, the reliability of the data was ensured by ensuring that the different researchers involved in the research showed 100% agreement in the creation of the codes and themes for the analysis of the data obtained from the open-ended questions.

Results

The results obtained as a result of the study were evaluated in two groups as quantitative and qualitative results.

Data obtained by scanning method

When Table 3 is examined, 69% of the mothers participating in the study had a planned and expected pregnancy, 74.7% of the mothers did not have any problems during pregnancy, 54% of the children were born by cesarean, 71.3% of the mothers had seen their babies immediately after delivery, 80.5% of the children were born mature, and 59.8% of the mothers took their baby in their arms right after birth.

When Table 4 was examined, 67.8% of mothers mostly felt the feeling of happiness when they saw their babies for the first time in the postpartum period, the infant's diet in 62.1% was breast milk, 50.4% of mothers received support while giving care and 25.3% received this support from their families, 63.2% of mothers do not get tired while caring for their baby, and the temperament of the child in 48.3% was easy child, and 20.7% of the mothers noticed the difference between 18 and 24 months and 31 and 36 months regarding the suspicion of autism in their babies.

When Table 5 was examined, it was observed that 37.9% of the children did not realize that their mother left them even for a short time and also even if 41.4% of the children felt restless and cried when their mother left them, then they felt comforted and calmed down when their mother returned.

When Table 6 is examined, it can be seen that 67.8% of the infants were reluctant to suckle in infancy, 51.7% of infants had difficulty falling asleep during infancy, 55.2% of babies do not make eye contact with individuals (mother, father, sibling), 65.5% of them do not play interactive games with the individuals (mother, father, sibling) around them, 58.6% of babies do not look when they are called by their name, 70.1% of babies do not like crowds, 71.3% of babies are restless in different environments, 54% of babies do not carry a certain object or toy together, 69% of babies overreact when they go out of their daily routines, 69% of babies do not play symbolic games until 18 months, 65.5% of babies use voice, gesture and facial expressions to express their wishes, 75.9% of babies do not say the names of objects or people when they are 12 months old, 69% of babies show behaviors such as clapping

Table 3. Pregnancy and delivery process.

		<i>F</i>	%
Did you have a planned and expected pregnancy?	Yes	60	69.0
	No	27	31.0
Did you have any problems during pregnancy?	Yes	22	25.3
	No	65	74.7
How was your child born?	Cesarean	47	54.0
	Vaginal delivery	40	46.0
How long after birth did you see your baby for the first time?	Immediately	62	71.3
	Within 1–3 h	13	14.9
	Within 4–6 h	2	2.3
	Within 7–24 h	6	6.9
	1–3 days	1	1.1
	8–14 days	2	2.3
	15–30 days	1	1.1
How was your baby's birth time?	Preterm delivery	13	14.9
	Born mature	70	80.5
	Late delivery	4	4.6
How long after birth did you hold your baby in your arms?	Immediately	52	59.8
	Within 1–3 h	22	25.3
	Within 4–6 h	2	2.3
	Within 7–24 h	7	8.0
	1–3 days	1	1.1
	8–14 days	2	2.3
	15–30 days	1	1.1

*In the table, the answers given by 87 participants for each question are given with a total frequency of 87 and a total percentage of 100%.

Table 4. Postpartum period.

		<i>F</i>	%
How did you feel when you saw your baby for the first time?	Happy	59	67.8
	Excited	14	16.1
	Neutral/Did not feel anything	3	3.4
	Scared	6	6.9
	Anxious	2	2.3
	Upset	1	1.1
	Other	2	2.3
How was your baby's diet?	Breast milk	54	62.1
	Infant formula	9	10.3
	Breast milk and infant formula	24	27.6
Did you get support while caring for your baby?	Yes	44	50.4
	No	43	49.4
What type of support did you get?	I Got Support From My Husband	21	24.1
	I Got Support From My Family	22	25.3
	I Got Support From a Babysitter	1	1.1
Are you tired of caring for your baby?	Yes	32	36.8
	No	55	63.2
How would you describe your child's temperament when you consider the infancy period?	Easy child	42	48.3
	Slowly warming towards	14	16.1
	Difficult child	31	35.6
When did you notice the difference in the suspicion of autism in your baby?	17 months and earlier	9	10.3
	18–24 months	18	20.7
	25–30 months	17	19.5
	31–36 months	18	20.7
	37–42 months	4	4.6
	43–48 months	1	1.1
	49–54 months	1	1.1
	55–60 months	2	2.3
	61 months and later	6	6.9
	I did not notice	11	12.6

*The answers given by 87 participants for each question are given with a total frequency of 87 and a total percentage of 100%.

their hands, turning around, shaking their body, 74.7% of babies react abnormally to sounds, smells and tastes or do not respond to these tastes, 71.3% of babies had unexplained laughing or crying behavior, 80.5% of babies are more interested in objects than people around them, 50.6% of babies do not show interest in objects until 14 months, 66.7% of babies are hyperactive, 75.9% of babies are excessively sedentary, 56.3% of

babies act as if they don't need their mother or someone from the environment, 57.5% of infants were unresponsive when presented with various stimuli, 67.8% of infants do not have difficulty in eating solid foods, 66.7% of babies do not hold their head up too late and their muscle tone is not weak, 56.3% of the babies were quiet, calm and rarely crying babies, 52.9% of the babies did not overreact to any change in their room or

Table 5. Attachment process.

		<i>F</i>	%
How would your child react when you had short separations with your child?	Had crying fits and it was hard to calm down	21	24.1
	Didn't react at all when I left with him/her.	33	37.9
	Did not notice that I left his/her side	9	10.3
	Didn't want to leave my side and wanted me to hold him/her in my arms	22	25.3
	Other	2	2.3
How would they greet you when you came back after a short separation with your child?	Was still crying when I came back and didn't want to come to my lap	6	6.9
	Was indifferent to me when I came back	30	34.5
	Used to come to me from time to time when I came back, but still reacted when he/she came to my lap	15	17.2
	Even though he/she was restless and crying when we left, when I came back he/she was relaxed and calm	36	41.4

*The answers given by 87 participants for each question are given with a total frequency of 87 and a total percentage of 100%.

Table 6. Infancy period.

		<i>F</i>	%
Was reluctant to suckle in the infancy period	Yes	28	32.2
	No	59	67.8
Had difficulty falling asleep during the infancy period	Yes	42	48.3
	No	45	51.7
Used to make eye contact with the individuals around (mother, father, sibling) during the infancy period	Yes	39	44.8
	No	48	55.2
Used to play interactive games with the individuals around (mother, father, sibling) during the infancy period	Yes	30	34.5
	No	57	65.5
When we called him/her by name, he/she would turn and look	Yes	36	41.4
	No	51	58.6
Didn't like crowds	Yes	61	70.1
	No	26	29.9
Would be restless in different environments	Yes	62	71.3
	No	25	28.7
Never left a particular object or toy with him/her.	Yes	40	46.0
	No	47	54.0
Overreacted when we broke out of daily routines.	Yes	60	69.0
	No	27	31.0
Didn't play symbolic games until the age of 18 months (For example, using a lego piece as if it was an airplane, using any object as if it was a different object, etc.)	Yes	60	69.0
	No	27	31.0
Used voice, gesture, and facial expressions to express his/her demands	Yes	57	65.5
	No	30	34.5
Said the names of objects or people by 12 months old	Yes	21	24.1
	No	66	75.9
Had behaviors such as clapping hands, turning around, shaking body	Yes	60	69.0
	No	27	31.0
Experienced abnormal responses or lack of response to sounds, smells, tastes	Yes	65	74.7
	No	22	25.3
Behaviors of laughing or crying for no reason were present	Yes	62	71.3
	No	25	28.7
More interested in objects than in the people around	Yes	70	80.5
	No	17	19.5
Showed no interest in objects until the age of 14 months	Yes	43	49.4
	No	44	50.6
Was too active	Yes	58	66.7
	No	29	33.3
Was too sedentary	Yes	21	24.1
	No	66	75.9
Didn't seem to need me or anyone around	Yes	49	56.3
	No	38	43.7
Was unresponsive when we presented various stimuli	Yes	50	57.5
	No	37	42.5
Had trouble while eating solid foods	Yes	28	32.2
	No	59	67.8
Held his/her head high very lately. Muscular tonus was weak	Yes	29	33.3
	No	58	66.7
Was a quiet, calm, seldom crying baby.	Yes	49	56.3
	No	38	43.7
Overreacted to any change in the layout of the room or comfort zone.	Yes	41	47.1
	No	46	52.9
Very interested in technological devices (TV, Tablet, Cell phone, etc.).	Yes	68	78.2
	No	19	21.8
Calmed down with technological devices (TV, Tablet, Cell phone, etc.).	Yes	66	75.9
	No	21	24.1

*The answers given by 87 participants for each question are given with a total frequency of 87 and a total percentage of 100%.

Table 7. Opinions of the mothers regarding awareness for autism.

Awareness in the first years	<i>n</i>	<i>f</i>
Withdrawal of the child	4	4
Decrease in eye contact	12	12
Failure to respond to sounds	9	9
Having a growth retardation	4	4
Being different from peers	7	7
Restricted games	5	5
Dissonance	5	5
Medical diagnosis	6	6
Unresponsiveness	6	6
Hypersensitivity to sounds	8	8
Speech problems	11	11
Communication gap	9	9
Walking on the balls of the feet	2	2
Reacting significantly differently when compared to their peers	5	5
Hair pulling	1	1
Child masturbation	1	1
General Total	93	93

* *n*: number of respondents, *f*: number of repetitions of the answers given.

comfort zone, 78.2% of babies are very interested in technology devices (TV, tablet, mobile phone, etc.), and 75.9% of babies calmed down with technological devices (TV, tablet, mobile phone, etc.).

Findings of qualitative data

In this section, the findings created by using data obtained from the interview questions are included. In the tables consisting of the data obtained from the views of the participating mothers, '*n*' refers to the number of mothers using the code (the number of people who gave opinions about the code), and '*f*' refers to the number of code highlighting (how often the code is used).

When Table 7 is examined, regarding the opinions of the mothers on awareness for autism are examined, they primarily use the expressions of decreased eye contact, speech problems, being unresponsiveness to sounds, and communication gap. When the opinions of the mothers on autism awareness were examined, it was found that mother A69 said, '*When we went to the neighbor etc., he did not know any rules and we thought he was a child with high self-confidence, but when this lasted for a long time, we started to get tired when he did not know the rules, and his disobedient, rule-breaking behavior made us suspicious ...*', mother A1 said, '*I thought it was normal because it was the first birth, but it was different when we were with the neighbor's child ...*', mother A50 said, '*There was no reaction to the name at all. There was no eye contact, there was indifference to the environment, such as turning around and shaking the head ...*', mother A58 '*... the teacher first noticed it because I did not know what it was and we immediately took him to the doctor ...*', mother A32 said '*... I understood it from the fact that he was not talking*', mother A36 said '*... It*

Table 8. Opinions on the mothers' attempts.

Attempts of the Mother	<i>n</i>	<i>f</i>
<i>Intervention to treatment</i>		
Applying to a specialist/hospital	25	25
<i>Educational intervention</i>		
Learning about autism	13	13
Receiving education	13	13
<i>Emotional reaction</i>		
Crying	6	6
Sadness	27	27
Concern	2	2
Acceptance	8	8
Failure to get over	8	8
General total	102	102

* *n*: number of respondents, *f*: number of repetitions of the answers given.

Table 9. Opinions of the mothers regarding the developments of their child.

Different behaviors observed	<i>n</i>	<i>f</i>
Inability to make eye contact	17	17
Failing to comply with the commands	9	9
Difficulty in following the orders	6	6
Communicational difficulty	21	21
Being obsessed by objects	5	5
Irrelevance to the environment	17	17
Showing his/her demands by marking	2	2
Late speaking	5	5
Rotating around himself/herself	3	3
Crying without any reason	5	5
Routine repetitions	5	5
Late walking	4	4
Glassy behaviors	2	2
Nutrition problems	8	8
Failure to establish a relation	3	3
Aggression	5	5
Chuckling	1	1
Failure to touch	3	3
Odor sensitivity	2	2
Failure to hold his/her head up	1	1
Reacting differently to events	2	2
Does not play games	3	3
Clapping hands	2	2
Being scared	1	1
General total	132	132

* *n*: number of respondents, *f*: number of repetitions of the answers given.

was like he could not hear ...', and mother A40 said '*He was very distracted and did not speak ...*'.

When Table 8 is examined, when the opinions of the mothers on their attempts at first hearing about autism are analyzed, they mainly used expressions about intervention for treatment, educational intervention, and emotional reactions. When the opinions of the mothers about their interventions when they first heard about autism were examined, mother A2 said, '*We went to the hospital for the treatment process ...*', mother A75 said, '*You feel like your world has collapsed. We were very upset and my husband and I cried for hours ...*', mother A55 said '*... The emotional process lasted for a week. I already knew that there was a difference in my child and I thought he needed education*', mother A58 said '*I was confused. I had mixed and different emotions. I told myself a lot whether it would get better or whether it was temporary ...*', mother A35 said '*... I*

Table 10. Opinions of the mothers regarding their emotions experienced.

Emotion experienced	n	f
Sadness	38	38
Shock	7	7
Failure to get over	9	9
Desperation	4	4
Denial	4	4
Hopelessness	2	2
Fear	7	7
Anxiety	7	7
Acquiescency	6	6
Confusion	9	14
Pessimism	2	2
Heart rising	1	1
General total	98	103

* n: number of respondents, f: number of repetitions of the answers given.

Table 11. Opinions of the mothers about their attachment types with their child.

Type of attachment	n	f
Showing interest	19	19
Continuous eye contact	2	2
Eliminating the requirements	4	4
Talking with the child	6	6
Mimicking motions	2	2
Playing games	10	10
Bonding/Establishing closeness	17	17
Being in touch	5	5
Dependency on mother	14	14
General apathy in the child	8	8
Problems in the dependency on mother	7	7
General total	87	87

* n: number of respondents, f: number of repetitions of the answers given.

could not accept it...’, and mother A36 said ‘... Confusion... I did not know what autism was...’.

When Table 9 is analyzed, the opinions of the mothers regarding the development of their children with autism are examined, they mainly used the expressions of communicational difficulties, inability to make eye contact, irrelevance to the environment, failing to comply with the commands, and nutrition problems. When the opinions of the mothers about the development of their children with autism were examined, mother A3 said that ‘All his behaviors were very different...’, mother A82 said ‘He chose food a lot and ate few kinds of food. He could not control his emotions and did not know how to behave...’, mother A55 said ‘I considered all his behaviors normal. His late speech made me uneasy, I thought he would get better over time...’, mother A28 said ‘...clapping, crying all the time, being very scared...’, and mother A38 said ‘Not playing with children, crying all the time, sometimes laughing by himself...’.

Table 10 shows that when the opinions of the mothers on the feelings they experienced when they first heard about autism were examined, they mainly used expressions about sadness, shock, helplessness, fear, and anxiety. When the opinions of the mothers about the feelings they experienced were examined; mother

Table 12. Opinions of the mothers regarding their difficulties experienced.

Difficulties experienced	n	f
Regarding the environment		
Social reaction	11	11
Exclusion	6	6
Being accused	1	1
Lack of social support	2	2
Preconception	3	3
Regarding the child		
Inability to express himself/herself	5	5
Communicational difficulty	6	6
Incomprehension	4	4
Eating problems	12	12
Social adaptation problems	4	4
Obsession	8	8
Temper tantrum and crying	7	7
Irregularity	4	4
Bad temper	7	7
Addiction	8	8
Poor quality of education	2	2
Difficulty in meeting personal needs (self-care)	5	5
Regarding the family		
Failure to manage the crisis	4	4
Family structure	4	4
Acquiescency	2	2
Domestic conflicts	3	3
Other		
Busy works of health institutions	2	2
Unqualified educational institutions	2	2
General total	112	112

* n: number of respondents, f: number of repetitions of the answers given.

A5 used the expressions ‘It is a terrible, desperate and very bad disease...’, mother A81 used ‘I wish God for patience and we are used to it now’, mother A64 used ‘I was so surprised, and I decided to talk to my husband’, and mother A26 stated as ‘Fear’.

When Table 11 is examined, when the opinions of mothers on attachment types with their children are examined, they mainly use expressions such as showing interest, establishing closeness, dependency on the mother, and playing games. When the opinions of the mothers about the attachment styles with their children were analyzed, different expressions were observed as mother A11 said ‘It was a very difficult process. But in a very short time, my attachment to my child increased even more’, mother A76 said ‘... we take care of everything from treatment to taking him to the hospital, we play games...’, mother A58 said ‘We were very happy and there were no problems between us. I was very surprised when he was diagnosed. Everything was fine and good.’ mother A61 said ‘He is very fond of me and I am very fond of him. There is a strong bond between us...’, mother A33 said ‘...it is like I am not her mother...’, and mother A26 said ‘The bond between us is weak, the bond with her sister is stronger...’.

In Table 12, when the opinions of the mothers regarding the difficulties experienced are observed, they primarily use expressions related to the environment, social reaction, exclusion, eating problems, obsession, addiction, family structure, inability to manage crisis, and expressions regarding the health and educational

Table 13. Opinions of the mothers regarding the points to be considered in early diagnosis of autism.

Points to be considered in Early Diagnosis	<i>n</i>	<i>f</i>
Being aware of meaningful sounds in the early years of life	9	9
Making eye contact	15	15
Significant reactions of the child	12	12
Starting education at an early age	13	13
Raising awareness of families/Family trainings	6	6
Developmental follow-up of the child	23	23
Observation	10	10
Concern	16	16
Education of the child	6	6
Following obsessive behaviors	3	3
Conforming to instructions	2	2
Getting medical support	2	2
Ability to build meaningful relationships	4	4
Following the speaking skills	1	1
General Total	122	122

* *n*: number of respondents, *f*: number of repetitions of the answers given.

institutions. Mothers expressed their opinions on the difficulties they experienced as mother A11 said *“Environmental factors and external factors” pity for my child and seeing him as a different being...*, mother A65 said *‘... Sometimes I could not calm him down, I could not feed him...’*, mother A61 said *‘... her father not supporting me, struggling alone and stigmatization of my child. It was very difficult for me to hide this situation’* mother A38 said *‘... very selective feeding... not being able to enter every society...’*, mother A39 said *‘... My surrounding compels me. They tell me to give him medicine, give him injections...’*, and mother A40 said *‘... Our bond is very strong. Beniz does not sleep...’*.

When Table 13 is examined, the opinions of the mothers on what should be considered in the early diagnosis of autism are analyzed. The mothers participated in the study stated that tracking the child in terms of their development, being interested, making eye contact, starting early education, and meaningful reactions of the child are important in early diagnosis. When the opinions of the mothers on what should be considered in the early diagnosis of autism were examined, mother A46 stated *‘The child’s insensitivity to the environment, you already feel the difference with the maternal instinct...’*, mother A64 stated *‘... They should pay attention to their movements, nutrition and interest in friends...’*, mother A50 said *‘... Delay in starting to speak, not reacting to people, they should go to the doctor for a check-up...’*, mother A13 said *‘... in case of the slightest abnormal behavior, they should get expert advice immediately...’*, mother A61 said *‘... they should definitely get education. They should not wait for it to pass. They should not ignore the differences thinking that it is temporary...’*, mother A33 said *‘... They should look at the actual movements.... It was like he was not hearing...’*, and mother A35 said *‘... Autism research, eye contact, child’s behavior...’*.

Discussion and conclusion

The aim of the study is to examine the parental opinions on early developmental differences in children with autism. Accordingly, when the prenatal data of the mothers having a child diagnosed with autism were evaluated, it was concluded that the mothers mostly had a planned and expected pregnancy, did not experience any problems during pregnancy, children were born on time, the mothers saw their babies and took them in their arms immediately after birth. Due to this result, it can be said that the pregnancy and delivery processes of mothers having a child diagnosed with autism are on the same course as the mothers with children with development. Despite the mothers had problems during the pregnancy process, this may not be related to autism. Hence, in a study conducted by Atladóttir *et al.* (2010), no relationship was found between any maternal infection during pregnancy and autism.

In the evaluation of the postpartum period of the mothers, it was observed that the mothers were happy when they see their babies after birth, the babies were mostly fed with breast milk, and half of the mothers received support for baby care. In a study examining the relationship between breastfeeding duration and autism in children with Autism Spectrum Disorder, it was found that the severity of autism increased as the breastfeeding duration of children diagnosed with autism decreased (Şahin *et al.* 2019). In this direction, it can be said that the process of breastfeeding has an effect on the severe or mild course of autism. When the care process of the mothers is evaluated, it is seen that they mostly received support. Resources such as the support of the spouses, friends, and family can help the caregivers to strengthen their positive perspective. Thus, increasing social support networks should be considered as an important situation (Ekas *et al.* 2010).

When the temperament of the babies was examined, it was determined that the mothers stated that their babies had easy temperament. According to this result,

it can be said that children diagnosed with autism did not have distinctly different temperaments in infancy when compared to children with development. However, when the literature is examined, it is seen that the temperament characteristics of children diagnosed with autism differ from children with typical development, especially due to sensory differences (Del Rosario *et al.* 2014, Brock *et al.* 2012, De Pauw *et al.* 2011). In contrast, there are examples of research showing that temperament of children can influence the severity of autism and comorbid psychiatric symptoms (Yıldız *et al.* 2022). In this case, tracking the temperament development process may have a helpful role in understanding the emergence of autism symptoms.

It was observed that mothers with a child diagnosed with autism have the awareness on the suspicion of autism in their children when they are between 18 and 24 months and 31 and 36 months. According to this result, it can be specified that developmental differences may be seen in children between 1.5 and 3 years old. There are studies in the literature that coincide with the said result (Elder *et al.* 2017, Fernell *et al.* 2013, Selimoğlu *et al.* 2013). Spreading autism studies and the increase in the awareness about autism can be considered as the factors for the parents to be aware of early symptoms of autism.

When the data of the mothers regarding the attachment process were evaluated, it was observed that the children mostly did not notice that their mothers left their mothers' side and even if they were restless and cried when the mother left, they relaxed and calmed down when the mother returned. Even if children diagnosed with autism do not notice when their mother leaves their side during infancy, the fact that they relax and calm down when their mother returns may indicate that they are in an attachment process with their mother. Accordingly, it can be interpreted that there are no differences in the attachment process of children diagnosed with autism and typically developing children. As a matter of fact, in a meta-analysis study that examined the attachment process of children diagnosed with autism, it was concluded that 47% of children diagnosed with autism were in secure attachment style (Teague *et al.* 2017). Contrary to these results, the studies showing that children diagnosed with autism have different attachment processes when compared to children with development and that they are in the high risk group in terms of insecure attachment process are also included in the literature (McKenzie and Dallos 2017, van Ijzendoorn *et al.* 2007, Akdemir *et al.* 2009). The fact that the attachment process varies can be explained by the fact that there are many factors affecting attachment. Instead, many factors such as the relationship between the mother and infant, culture, level of education, and age affect the attachment process (Karakaş and Dağlı 2019).

When the developmental course of children diagnosed with autism during infancy is examined; it was found that children were mostly reluctant to suck and had difficulty in falling asleep, did not make eye contact and did not play interactive games with the individuals around them, did not turn around when called by name, did not like crowded environments and different environments, overreacted when they went out of the daily routine, did not play symbolic games, were more interested in objects than the people around them, were overactive or overly sedentary, were very interested in technological devices (Television, Tablet, Phone), and calmed down with technological devices. These results are parallel with the studies conducted on the early symptoms of autism (Dahiya *et al.* 2020, Savucu 2020, Kadak and Meral 2019, Muratori and Maestro 2018, Arslan 2013, Korkmaz 2010).

When the awareness of mothers on the autism symptoms in the first years was evaluated, behavioral characteristics such as difficulty in making eye contact, speech problems, not responding to sounds, and lack of communication were found. According to this result, it can be said that mothers recognize the early symptoms of autism. Mothers spending more time with their children and observing their children more closely may have an impact on this result. In another study examining the level of awareness of mothers, more than half of the participants (57.4%) reported that they observed autism symptoms between the ages of 2 and 5 years, and about one-third (34.1%) reported that they observed behavioral characteristics of autism between the ages of 0 and 1 years (Neng 2021). Finally, it is suggested that the mothers observe the differences in the developmental process of their children and recognize the first signs of autism, even if the age range differs.

When the opinions of the mothers regarding their interventions when they first heard about autism are evaluated, the statements regarding intervention for treatment, intervention for educational processes and emotional reactions come to the fore. Mothers may have thought of autism as a developmental disorder and made treatment-oriented interventions in the first stage. In this case, it is important to have detailed information about autism. In a study examining the experiences of families with children diagnosed with autism regarding the diagnostic process, it was concluded that families were not given any information about what kind of a process awaited them regarding education and health opportunities related to autism (Selimoğlu *et al.* 2013). In addition, the way of explaining the diagnosis of autism may also have an impact on this result. Instead, in a study examining the experiences of mothers with children diagnosed with autism regarding the diagnostic processes, it was concluded that the majority of mothers were not satisfied with the way the diagnosis was explained (Chamak *et al.* 2011). According to this

result, it becomes a sensitive issue to exhibit more sensitive and professional approaches to families in the diagnostic process.

When the opinions of mothers regarding educational processes were analyzed, it was observed that they found educational institutions to be qualitatively inadequate. In another study, similar to this result, it was found that parents found the educational opportunities provided to their children inadequate (Köksal and Erciyes 2021). According to this result, some arrangements and improvements should be made regarding the educational processes of children diagnosed with autism. Planning and reviewing educational processes according to the needs of the family and the child may contribute to reducing the problems experienced by families in educational processes.

When the emotional process experienced by mothers upon hearing the diagnosis of autism were considered, it is seen that they mainly experience negative emotions such as sadness, confusion, helplessness, fear, and anxiety. The acceptance of the mothers regarding the development of their children and the unexpectedness of the autism diagnosis may have caused negative emotional states. According to these results, it can be said that mothers need emotional support during the diagnostic process. Thus, there are studies showing that when families are supported during the diagnostic process, this process continues in a positive course (Ochsner 2018, Banach et al. 2010).

Among the difficulties experienced by the mothers after their children were diagnosed, difficulties related to the environment were listed as social reaction and exclusion, while difficulties related to the child were expressed as eating problems, obsession, and addiction. When the challenges related to the family are considered, challenges such as the negative impact on the family structure and the inability to manage crises were mentioned. In a general evaluation, it is observed that mothers have difficulties in the development process of their children diagnosed with autism. In a study conducted by Güleç-Aslan et al. (2014), similar to the results of the current study, it was concluded that the majority of mothers perceived autism as a condition that negatively affected their lives. In another study, it was found that the diagnosis of autism causes difficulties in areas such as family relationships and social life (Anderberg and South 2021, Akkuş et al. 2021, Gomes et al. 2015, Ludlow et al. 2012).

When the opinions of the mothers on the points to be considered for early diagnosis of autism are analyzed, it is seen that they mostly mentioned points such as following the child developmentally, taking care, making eye contact, starting education early, and paying attention to the reactions of the child as giving meaningful messages. The level of awareness and knowledge of mothers may be critical for early

diagnosis. Especially during infancy, infants spend almost all their time with their mothers. Accordingly, the awareness of mothers gains great importance in early diagnosis. Thus, the observations of mothers about their children diagnosed with autism are mostly consistent with the diagnostic criteria manual published by the American Psychiatric Association (2013). (Servi and Ve Baştuğ 2018).

Conclusion and recommendations

Early recognition of autism is extremely important in terms of creating intervention programs for children with autism and enabling early intervention.

Early detection is possible with close follow-up of these children. Herein, the observations of parents, especially mothers, who have children with autism during infancy and their experiences before and after birth are critical for the early diagnosis of autism. In addition, Early Screening of Autistic Traits Questionnaire (ESAT) and Modified Checklist for Autism in Toddlers (M-CHAT) screening tests also contribute to the recognition of early symptoms of autism.

Considering the early symptoms of autism and the sensitivity of mothers with children with autism, it is important to increase the awareness of parents about child development in general and infancy development in particular. Competence of parents in observation and assessment of the development of the child will facilitate the identification of children at risk. Studies with larger samples will contribute to the identification of children with early autism symptoms or autism potential. Considering the difficulties experienced by the families of diagnosed children, it would also be beneficial to support both children at risk and their families medically and educationally by keeping them under supervision starting from infancy.

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