IDENTIFYING DIFFICULTIES OF CHILDREN WITH AUTISM SPECTRUM DISORDER IN EMOTION, COGNITIVENESS, BEHAVIOR AND SOCIAL COMMUNICATION: A CASE STUDY AT THE VIETNAM NATIONAL CHILDREN'S HOSPITAL

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Abstract: Children with autism spectrum disorder "are people under the age of 16 with a distinct symptom of neuro developmental disorder caused by impairments in social interaction and communication, express shaped behavior and have one of restricted functions in their lives". Based on the list of children's developmental behavioral disorders applied at the National Children's Hospital, the article focuses on 3 main groups of difficulties of children with autism spectrum disorder, including emotion, cognitiveness - behavior and social communication. The scale includes 4 difficult levels: 1 = Absolutely not difficult; 2 = A little difficult; 3 = Quite difficult; and 4 = Very difficult. The survey of 250 cases of autistic children who received treatment at the National Children's Hospital from June 1st 2022 to June 8th 2022 showed that the children were facing different levels of difficulty, with the most difficult level of social communication

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1. Introduction

Autism spectrum disorders (ASD) in children is a type of developmental disorder which tends to be more popular, stronger and has become a social problem.

Various studies have shown different viewpoints and explanations. According to Leo (1943), ASD "is a form of disease" *which is lack of ability to establish social relationships with other people as well as the ability to respond to daily situations in early living stages of children".*

The US Law on Education for Persons with Disabilities in 1997 stated that "*Autism is a developmental disorder that severely affects verbal and non-verbal communication, social interaction and usually begins before the age of 3, that has a negative impact on children's learning ability.*" (IDEA, 1997).

The French National Institute for Health and Medical Research in 2007 also stated that "*Autism is a disorder of a child from infancy to adulthood without an ability to interact socially and normally and etc.*" (Brigitte, 2015).

Based on DSM - 5, a study by the Center for Disease Control and Prevention of the United States in 2014 reported that about 1% of the world's population had ASD (CDC, 2014). In Vietnam, statistics in 2019 also showed that there were about 1 million people having ASD, on an average one out of every 100 children was born with this syndrome (GSO, 2020).

When getting ASD, children often have different difficulties, including (1) emotional unstability, (2) cognitiveness and behavior, (3) social communication. These difficulties were identified and analyzed through cases of children diagnosed with ASD at the National Children's Hospital.

In this study, children with ASD were understood as "*people under 16 years old with the symptom of distinct neuro developmental disorder caused by impairments in social interaction and communication, having shaped behavior and one of restricted functions*" (Ha et al., 2022).

2. Literature review

Autism Spectrum Disorder (ASD) in children is an attractive topic for researchers in the 1970s of the twentieth century like Leo Kanner, Eric Schopler, Ivan Lovass, Carol Gray, Lorna Wing, or Bryna Seigel. According to scientists ASD includes autism disorder, Asperger syndrome, childhood disintegration disorder, and Rett syndrome and etc. (Ha and Giang, 2010).

In the study of Leo (1943) "Autistic disturbances of affective contact - emotional communication in autistic people", he identified and pointed out children with ASD often lacked emotional contact, formed habits and repetitive behavior, could not use a language or used an abnormal language, and had difficulties in learning or playing games.

Research by Buno Bettlhem (1967) showed that ASD was caused by the family's neglect, improper care and poor nurturing, way of living with more focus on mind than love, distant and hostile attitude, neglect. Therefore, this group of children often had difficulties in the expression of emotion, cognitiveness, behavior, and social interactions.

Research by Robert Rosine Le Eost also indicated that children with ASD often lived in their own world that was called a self-destructive world, so they rejected the world around, treated everyone in the real world as objects. The children did not use the common language but their own language. They wanted to live apart from the common world and often felt that their own world was invaded by the society (Ha and Giang, 2010).

Similarly, studies in Vietnam also showed ASD's symptoms included impairments in social communication, expression of repetitive, stereotyped, ensconced behavior (Ministry of Health, 2015), playing alone; children with ASD are unable to speak or speak only a few simple words, use a weird language; do not respond to name, do not make eye contact; unable to use non-verbal communication such as extending arms, crossing arms to show respect, nodding head or shaking head; unable to play imaginary games or make friends; often watch moving stuff; stack toys in rows; mess objects. They often have stereotyped moves such as walking on tiptoes, spinning around, looking at hands, seeing on one side, swaying, spinning toys; have a rigid way of thinking and greetings, repeate the words of others; have very tight and persistent attachment to an object; have sense disorders at different levels (Uy et al., 2019; Thang et al., 2022)

Limitations of the study

The above literature shows a comprehensive picture of children with autism spectrum disorder with difficulties in stereotyped behavior, emotion, cognitiveness, and social communication. But this study did not yet go deep into difficult levels that

the children faced in their families. Therefore, this article focuses on their parents' evaluation through a 4 measurement scale. 1 = Absolutely not difficult; 2 = A little difficult; 3 = Quite difficult; and 4 = Very difficult.

3. Methods

The article used research results on children with ASD published from 2015 to 2022. Along with this, the article also used the results of the research "Individual social work intervention for children with autism spectrum disorder at the National Children's Hospital" implemented by Dr. Nguyen Thu Ha in 2022. Specifically:

• By non-probability sampling method, the study included the survey questionnaire of 250 cases of children with ASD who had treatments at the National Children's Hospital. After the completion of the survey, the research team dissolved.

• Similarly, by this sampling method, the study conducted in-depth interviews with 15 cases of parents whose children have ASD.

• Social groups participating in this questionnaire survey and in-depth interviews were selected randomly, conveniently and introduced by doctors.

• When participating in the survey activities, these social groups were given detail information and had the right to refusing to provide information that may influence their private lives and received part of the remuneration for replies.

• Survey period: from June 1, 2022 to June 8, 2022.

4. Results

Based on the "List of developmental behavioral disorders in children" applied at the National Children's Hospital, the research team grouped the similar indicators and established a 4 level scale of difficulties in stabilizing emotion, cognitiveness, behavior and social communication as follows:

1 = Absolutely not difficult

2 = A little difficult

3 = Quite difficult

4 = Very difficult

The survey results showed that based on the given indicators the rate of children with ASD who were absolutely not difficult or a little difficult accounted for a small portion, the majority of the surveyed children had certain difficulties, some children were rated at "very difficult" level.

4.1. Difficulty in emotional stability

Many studies agreed with the statement that children with ASD could experience different types of emotional difficulties. Based on the "List of developmental and behavioral disorders in children" at the National Children's Hospital, the study mentioned 12 specific types of difficulties which were classified into 3 groups with quite similar indicators.

From the symptoms of the children, parents had corresponding assessment.

Table 1. Emotional difficulties in group 1

	Absolutely not	**A little**	**Quite**	**Very**
Easy to get angry	10,4	31,6	40,4	17,6
Easy to throw a tantrum	16,8	33,6	37,2	12,4
Easy to cry	16,8	36,0	34,0	13,2
Aggressive (hitting others, throwing things…)	28,8	29,2	29,6	12,4
Overall average	**18,2**	**32,6**	**35,3**	**13,9**

Source: survey results of the study, 2022

The survey results showed the rate of children in group 1 who were "absolutely not difficult" was low. That means most children have difficulties, over 35.3% in the group was "quite difficult" to stabilize their emotion and 13.9% was very difficult. The highest level focuses on the emotion of "easy to get angry". When negative emotion arises, children can have different ways of reaction, such as crying, screaming, or performing adverse behavior. "*He is fastidious, cries, always gets angry, insists on what he wants, screams loudly; My child is easily irritable, angry, demands, always tears books,paper at school. When he's angry, he will lay down and cry on the floor, regardless of whether it's dirty or clean. He is demanding, irritable, throwing things around, hitting people nearby such as parents, grandparents, or his friends. I let him participate in the intervention for 20 months but in the covid period he was completely off, during this time, his emotions were easily irritated, explosive, hostile and had undesirable behavior*" (A quote from in-depth interview 1, 2, 5, 6, 8).

Table 2. Emotional difficulties in group 2

	Absolutely not difficult	A little difficult	Quite difficult	Very much difficult
Panic	33,2	27,6	25,2	14,0
Anxiety	29,6	36,8	24,0	9,6
Restlessness	37,6	27,2	24,8	10,4
Insecurity	43,6	24,4	18,4	13,6
Sadness	41,2	30,8	18,0	10,0
Overall average	**37,0**	**29,4**	**22,1**	**11,5**

Source: survey results of the topic, 2022

The survey results in emotional stability in group 2 showed that the percentage of children who were "absolutely not difficult" increased a bit, which reflected the level of the children's emotional expression such as panic, anxiety, restlessness, insecurity or sadness was lower than that of anger, crying and aggressiveness. But the survey results also showed that some parents admited their children were quite difficult (about 22%), in some cases they were very difficult (approximately 12%).

Table 3. Emotional difficulties in group 3

	Absolutely not difficult	A little difficult	Quite difficult	Very difficult
Indifference, not showing affection to people	35,6	23,2	18,0	23,2
Repeating the same behavior over and over (e.g., fidgeting things, or hold on to a collar, hold a fixed object in hand…)	20,8	32,0	33,2	14
Difficult to accept changes (e.g. cry when going to strange places , or constantly running around...)	25,2	32,8	29,6	12,4
Overall average	**27,2**	**29,3**	**26,9**	**16,5**

Source: survey results of the study, 2022

Similarly, the survey results showed that difficulties in the 3rd group of children were very clear with 26.9% falling to the "quite difficult" level and 16.5% falling to the "very difficult" level. The emotions such as "indifference, not showing affection to people" were recognized at the highest level. The results of in-depth interviews showed that the children's emotional expressions were crying, clinging to parents, worried, restless, losing a temper or unable to sit still. "My child is always crying when going out in public, clinging to her father and unable to hold back; her emotions are often unstable if she is in different environments, strange places like my work place, amusement parks, or hospitals, she is nervous and confused and I feel that she feels insecured. My child calms down when she gets home; My child is always screaming, talking loudly, restless and can't wait for anything. She sits restlessly all the time. It's hard for her to sit still in a chair, she is always moving to mess things around. (A quote from in-depth interviews 3, 5, 15).

4.2. Cognitive difficulties

The cognitive difficulties of children with ASD were divided into two similar groups.

Table 4. Cognitive difficulties in group 1

	Absolutely not difficult	A little difficult	Quite difficult	Very difficult
Don't know how to point with the index finger	35,6	20,4	32,8	11,2
Do not recognize familiar objects (fans, lights, cars…)	35,2	22,0	32,0	10,8
Do not recognize familiar animals (chickens, pigs, dogs, cats…)	36,4	20,4	33,6	9,6
Do not recognize body parts	35,2	17,2	36,8	10,8
Do not recognize family members	37,6	19,2	32,4	10,8

	Absolutely not difficult	A little difficult	Quite difficult	Very difficult
Do not how to serve themselves (self-catering,drink, go to the toilet by themselves, change clothes by themselves, etc.)	22,8	22,4	34,4	20,4
Overall average	33,8	20,3	33,7	12,3

Source: survey results of the study, 2022

Table 4 showed the rate of children who were assessed at "absolutely not difficult" level accounted for about 1/3. Meanwhile, up to 33.7% and 12.3% were rated at the level of "Quite difficult" and "Very difficult" respectively. Particularly, the children "are unable to serve themselves (self-feeding, toileting, self-service, changing clothes)", according to the results of in-depth interviews, do not have normal movement such as holding and grasping objects, can not distinguish tidiness and dirtiness, can not go to the toilet on their own. *"My child's move is very poor. At home, his grandparents do everything for him such as feeding food, helping him wear clothes and etc. so my child rarely uses his hands he does not have an ability to grasp things, he can't hold a pen to draw; My child can't distinguish what's his own and what is others, he can't keep his stuff and constantly loses them. My child can not match words, can not write or read; He is also very afraid of pooping or going to the toilet. He can't distinguish dirtiness and tidiness so he can't feel bad smell so he makes his pants dirty. I teach my child a lot but I don't understand why he can not go to the toilet normally"* (A quote from in-depth interview 12, 13, 14).

Table 5. Cognitive difficulties in group 2

	Absolutely not difficult	A little difficult	Quite difficult	Very difficult
Unable to talk the normal language	20,0	22,0	35,2	22,8
Not clear pronunciation	15,2	20,0	39,2	25,6
Speaking many nonsense sounds	16,0	23,2	38,0	22,8
Speaking very few meaningful words (1-2 single words)	20,4	26,0	36,0	17,6
Overall average	**17,9**	**22,8**	**37,1**	**22,2**

Source: survey results of the study, 2022

The assessment of cognitive difficulties in group 2 also showed that more than 37.1% of children rated at the level of "quite difficult" and 22.2% at the level of "very difficult". A quote from the in-depth interview 4 illustrates this type of difficulty: *"Our child can not speak and often screams "*.

4.3. Behavioral difficulties

In terms of behavioral difficulties of children with ASD there are 2 groups in Tables 6 and 7 below.

Table 6. Behavioral difficulties in group 1

	Absolutely not difficult	Little difficult	Quite difficult	Very difficult
Being attracted to 1-2 toys (strings, sticks, leaves ...)	22,4	32,4	33,2	12,0
Often walking on tiptoes or spinning, or shaking their head, or looking at their hands	24,8	40,4	24,0	10,8
Often knocking, kicking or spinning objects around	28,4	42,4	19,6	9,6
Often smelling, tasting or licking things	41,2	32,4	20,8	5,6
Staring at a light or air conditioner, spinning fan	39,6	29,2	21,6	9,6
Often turning on and off lights continuously	39,6	29,6	19,2	11,6
Overall average	**32,7**	**34,4**	**23,1**	**9,9**

Source: survey results of the study, 2022

According to table 6 , on average, 9.9% of children listed in group 1 had many difficulties. For example, "Only attracted to 1-2 toys (strings, sticks, leaves), "Often turning on and off lights continuously", "Often walking on tiptoes or spinning, or shaking their heads, or looking at their hands". The children ran, jumped a lot without a purpose, climbed, and performed behavior that disturbed other people: "*My child runs a lot, he runs around the house in a circle, he runs from one side to the other of the house or jump continuously, once he climbed up the front door and jumped down he scared me; He is very fond of typing toys and can't do anything gently, he does everything loudly. In addition, he loves to constantly open the door which causes a headache for other people. He also often turns lights on and off and turns the fan on and off and also watches the air conditioner* " (A quote from in-depth interview 3, 7, 9).

Table 7. Behavioral difficulties in group 2

	Absolutely not difficult	Little difficult	Quite difficult	Very difficult
Often biting other people or biting himself	38,8	33,2	16,4	11,6
Often laughing without a reason	37,2	32,8	20,0	10,0
Often sitting still in one place	33,2	24,8	21,2	20,8
Often wandering aimlessly	36,0	26,8	24,4	12,8
Disliking being hugged by other people	38,0	24,8	16,8	20,4
Overall average	36,6	28,5	19,8	15,1

Source: survey results of the study, 2022

Regarding behavior difficulty in group 2, the percentage of children rated at the level of "very difficult" was 15.1%, which is 6.2% higher than the rate in group 1. Behavior difficulty included "often sitting still in one place" or "disliking being hugged by other people". The Quote from in-depth 6, 7, 9 below further demonstrated this kind of difficulty: "*My child just entered grade 1 in this school year, he studied at school for about 2 hours and then came back, he still hadn't played with his friends. His teacher complained a lot, she complained that my child often walked freely in class, he did not sit still to study and took things from his friends, tore his books and others; I am most worried that he can climb over the gate and get lost because he doesn't know much about roads and he can't talk, if he get lost, he can't find the way back home himself. Besides, around the house, there are many fish ponds, I'm worried that he can fall down; My child's teacher is mostly afraid that he went to the yard a few times, played in the school yard, sometimes he went to the school gate, she couldn't keep her eyes on him because she was teaching, so we must have someone to watch my child at the school gate, the teacher is afraid that my child goes to school and run away without safety".*

4.4. Social communication difficulty

The assessment of mental retardation of the children with ASD also reflected that they faced the risk of withdrawal into themselves, reducing social interactions.

Table 8. Social communication difficulties in group 1

	Absolutely not difficult	Alittle Little difficult	Quite difficult	Very difficult
Talking nonsense	11,6	22,0	37,2	29,2
Repeating a word or phrase over and over	19,2	24,8	38,4	17,6
Mimicking other people	34,8	22,0	26,8	16,4
Whispering or speaking with a high voice	23,2	28,4	29,6	18,8
Talking alone or speaking with imagination	22,4	20,0	35,2	22,4
Unable to make a conversation	24,0	20,0	35,6	20,4
Unable to understand normal communication situations	16,4	21,2	34,8	27,6
Unable to understand figurative sense when talking with other people	15,2	14,4	33,6	36,8
Overall average	**20,9**	**21,6**	**33,9**	**23,7**

Source: survey results of the study, 2022

Regarding the above-mentioned social communication difficulties in group 1, the children encountered the most difficulty of being "unable to understand figurative meaning when talking with other people", "Talking nonsense" and "Mimicking other people". However, the rate of 23.7% of the children in group 1 at "very difficult level" who need to be resolved to help enhance their ability to integrate into social life "*My child doesn't know how to talk to his friends in class, how to play with his friends; his language and communication are very poor, he can only speak a few short sentences which is not enough to communicate with others, so that hinders him from going to school normally with his friends; My child loves speaking English, it is because he watches Youtube a lot but sometimes he makes messy words because he is not sure what to say, sometimes, he speaks clearly in English like blue, red, triangle and etc, but not for normal communication to understand other people or to be understood. My child has not distinguished people yet, he needs to call a person is aunt, but just rushes out to call her as sister; Normally, he has a difficulty in playing with friends, he doesn't know how to talk with them, or how to use the language to communicate, he does not understand what people say; in the class, the teacher teaches very slowly but my child can only understand a little. In a special class, he can play more; he uses very messy words like calling mommy as sister, and can't distinguish a stranger with an acquaintance*" (A quote from in-depth interview 4, 9, 12).

Table 9. Social communication difficulties in group 2

	Absolutely not difficult	**Little difficult**	**Quite difficult**	**Very difficult**
Like playing with older or younger friends, don't like playing withfriends at the same age	28,8	29,6	30,4	11,2
Like standing close to otherpeople	43,6	26,4	20,8	9,2
Feel scared when other people approach	32,4	28,8	20,8	18,0
Overall average	**34,9**	**28,3**	**24,0**	**12,8**

Source: survey results of the study, 2022

As compared with the social communication difficulties in group 1 above, the level of difficulty in social communication of group 2 is lower. Only about 12.8% of children had these symptoms at the level of "very difficult". The following quote from parents of the children further demonstrated this kind of difficulty: "My child had difficulties in playing with friends, the child often did not know how to talk to friends". To help children gradually adapt to the society, these are also the indicators that need attention to minimize the children's problems.

5. Discussion

Theoretically, the above findings are completely similar to many different studies (Leo, 1943; IDEA, 1997; Ha and Giang, 2010). In this regard, early and active intervention activities that many studies conducted will contribute to reduce difficulties in emotional, cognitive, behavioral and emotional stability for children. But the ignorance, lack of interest or inappropriate concerns from the family will now become the main reasons why children find it is difficult or impossible to adapt to the social life that leads to an isolated life in which they live alone in the world of their own.

In practical terms, the above findings indicated the different levels of difficulties in children's emotional stability, cognitiveness, behavior and social communication, some children were not absolutely difficult or had some difficulties measured by the given scale, but some others were very difficult (Ministry of Health, 2015). These signs and indicators are positive information, that allow social workers to have appropriate, timely and correct interventions in the right way, identify the right level of difficulties and development of children (Uy et al., 2019).

The findings also indicated the interventions that social workers perform in helping children reduce difficulties and integrate into the society need to be diverse and various for each case. Although the rate of the children who were very difficult to do social communication was very high, interventions rely on the emotion, cognitiveness and behavior of the children in each period (Thang et al., 2022).

The study of 4 aspects including emotion, cognitiveness, behavior and social communication is practical and significant for determining the nature and intervention measures to help children integrate into the society.

6. Conclusion

Children with ASD often coped with many difficulties, but the main ones identified were emotion, cognitiveness, behavior and social communication. Based on the List of "children's developmental behavioral disorders" applied at the National Children's Hospital, children's emotional, cognitive-behavioral and social communication difficulties were grouped according to similar indicators. Accordingly, the children met fewer difficulties in emotional expression than in cognitiveness and behavior, but those expressions could also become a barrier to limit their ability to communicate with other people and integrate into the society. Therefore, the most common difficulty of children with ASD is social communication such as talking nonsense, being unable to talk much, unable to use or understand the meaning of a language, unable to understand common communication situations, unable to play with friends, "feeling fear when other people approach". These indicators are the signs for children in need of supports to adapt and gradually integrate into the social life, thereby reduce the risk of being isolated by the society.

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