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Assessing the Need for a Teaching Module on Self-Care Skills for Children with Autism Aged Three to Six Years Old

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Abstract. Self-care skill refers to an individual's ability to take care of themselves, with good self-care skills effectively contributing to an individual's development and improving their quality of life. The general lack of self-care skills among children with autism creates significant stress for their parents and teachers, who report that some of their stress is due to a lack of either professional guidance or available teaching materials. Consequently, the development of a teaching module on self-care skills for children with autism aged three to six years has become an important task. This study used a questionnaire to survey 100 parents and 100 teachers of children with autism. The aim was to investigate the current situation of teaching self-care skills to children with autism, the needs of parents and teachers for teaching modules and their suggestions for the development of teaching modules. The study found that the current teaching of self-care skills to children with autism suffers from a lack of attention as well as a lack of teaching frequency and materials. Both parents and teachers have a strong need for teaching modules and provided suggestions for their development. The results of the study provide a realistic basis and guidance for the further development of teaching modules.

Keywords: children with autism; needs survey; parents and teachers; self-care skills; teaching module

1. Introduction

In the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), the main characteristics of autism spectrum disorders are described as a lack of social skills and communication, restricted interests, and repetitive patterns of behavior (American Psychiatric Association, 2013). According to the latest data, the prevalence of autism is increasing; for example, data from the centers for Disease Control and Prevention (CDC) show that the prevalence of

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autism in the United States has increased from 2/10,000 to 1/54, which suggests that the United States may now have millions of children with autism (Maenner et al., 2020). Data released by a Chinese organization in 2022 suggests that China currently has approximately 3 million children with autism (Zhang, 2022). The World Health Organization (WHO) estimated in 2022 that approximately 1 in 100 children worldwide are currently diagnosed with an autism spectrum disorder (Zeidan et al., 2022).

With the increase in the number of children with autism comes additional pressure for teachers and parents. This is manifested in the lack of professional theoretical and practical guidance and the lack of understanding of interventions for children with autism (Hua, 2023; Zeng, 2015). Currently, there is an imbalance in the focus of teaching and intervention for children with autism, with studies showing that the current teaching areas for children with autism are mainly focused on theory of mind, social skills, and language development in relation to the core symptoms of children with autism (Wei et al., 2019; Zhou et al., 2022).

Self-care skills mainly refer to the ability of an individual to take good care of themselves, including eating, dressing, personal hygiene, and various other skills needed to have a good quality of life, both now and in the future (Shi, 2015). Self-care skills play an important role in the development of children with autism. In their study, di Rezze et al. (2019) found that if children with autism acquire good self-care skills, it can help to reduce the symptoms of ASD and improve the level of well-being and quality of life. Sato et al. (2020) argued that self-care skills are key prerequisites for children with autism, helping them to attend school successfully. Gray et al. (2014) believe that good self-care skills can effectively help children with autism to transition into adulthood, safeguarding the development of children with autism.

However, children with autism have some difficulties in self-care due to long-term impairments in social and communication skills, leading to deficits in self-care (Kabasakal et al., 2021). A study by Kabasakal et al. (2021) found that more than 80% of children with autism lacked self-care skills, such as the inability to eat independently, dress themselves, etc. After conducting a survey in 60 kindergartens and centers in China, Xu (2019) found that most children with autism did not have self-care skills, a situation that puts considerable pressure on both parents and teachers. Similarly, Qu (2021) found that the lack of self-care skills among children with autism has become one of the most significant factors in the teaching pressure of parents and teachers, and that the continued lack of self-care skills also creates significant barriers to social integration and independent development among children with autism.

From a medical as well as a psychological perspective, the period up to the age of six is a time of rapid neurodevelopment, and a critical period for providing early intervention for children with special needs to promote their full and complete physical and mental development. Providing early intervention for children with special needs is not only beneficial to the development of children and families, but also brings sustained long-term social benefits (Xu, 2019). Therefore, it is

important to focus on the development of self-care skills among children with autism aged three to six years old.

2. Literature Review

In terms of available research, the number of studies on self-care skills in children with autism is low, and mainly focuses on what factors influence the lack of self-care skills in children with autism and intervention studies. With regard to factors, Sezici and Akkaya (2020) suggested that motor skills may affect the development of self-care skills in children with autism. Similarly, Li et al. (2023) suggested that upper limb movement affects the development of self-care skills. In addition, sensory processing and executive functioning (Hosseiny et al., 2023) as well as perceptual functioning (Chi & Lin, 2021) also have an impact on the self-care skills of children with autism.

In intervention studies, various researchers have used one or more intervention modalities or forms to determine whether the intervention has a significant effect on the self-care skills of children with autism. For example, group work intervention (Feng, 2020), peer video method (Chen, 2020) and micro classroom (Zhang, 2021) were used as interventions for developing the self-care skills of children with autism.

From a practical point of view, Hakobyan and Harutyunyan (2021) conducted a survey among parents of children with autism aged three to six and found that most parents (81.8%) believed that their child lacked self-care skills but felt that they were unable to train their child correctly due to a lack of professional guidance or training, as well as a lack of appropriate teaching courses or materials.

In summary, the current literature on the self-care skills of children with autism mainly focuses on the two perspectives of influencing factors and interventions. Considering the difficulties faced by parents and teachers, many shortcomings remain. Research into influencing factors can allow researchers to fully understand the reasons why children with autism lack self-care ability. Intervention studies can demonstrate that the self-care ability of children with autism can be improved through training. However, there remains a lack of appropriate teaching and intervention materials as far as parents and teachers are concerned, representing a current problem and a gap within the existing research. Thus, it can be argued that there is a need to develop a teaching module on self-care skills for children with autism aged three to six years.

In response to the abovementioned issues, as well as the current situation, this research aimed to identify the specific needs of parents and teachers regarding a teaching module for self-care skills in children with autism and to gather suggestions for its development.

3. Methods

3.1 Research Design

This study use a questionnaire, which consisted of a parent version and a teacher version. Information about the questionnaire can be found in the Instruments

section. Firstly, the questionnaire was designed and tested for reliability and validity, before being distributed to the participants to complete. Following its completion, the questionnaire was screened to eliminate invalid responses. The results of the questionnaire were analyzed to address the research questions and objectives.

3.2 Participants

The participants in this study were 100 parents of children with autism aged three to six years and 100 teachers. All participants were from China, mainly in Qinghai, Henan and Anhui Provinces. A purposive sampling method was chosen for participant selection, which facilitated the direct selection of participants who met the objectives and were suited to the content of the study (Andrade, 2021). The inclusion criteria for parents were as follows: the main person responsible for the child with autism in their daily lives; a good understanding of the education of children with autism; and the ability to complete the questionnaire. The inclusion criteria for teachers were as follows: working in a rehabilitation center for children with autism; having a teaching qualification; being involved in the teaching of children with autism; and being engaged in teaching courses for children with autism. Before the survey commenced, the researcher introduced the main content and purpose of this study to parents and teachers and sought informed consent; all respondents agreed to participate in the survey of this study. The personal information of the parents who participated in the needs survey is summarized in Table 1.

As the table illustrates, of the 100 parents who participated in the survey, 69 were female (69%), and most parents were concentrated in the 26-30 age group (46%). In terms of the highest academic qualification attained, the largest group of participants were those with a bachelor's degree (44%). In terms of occupation, most participants were private enterprise employees (54%). Nearly half of the participants had a monthly household income of 5,001-10,000 yuan (43%), followed by those with less than 5,000 yuan (31%). In terms of family structure, participants mainly lived in a nuclear family (47%) or main family (46%), which indicated that most of the children with autism were raised by their parents as well as grandparents. The age of the participants' children was predominantly two to four years old (54%), followed by four to six years old (33%). Among the participants, 49 were mothers (49%) of children with autism, followed by grandparents (25%) and fathers (23%) of children with autism; only three were nannies of children with autism, thus revealing that the children with autism were mainly raised by family members.

Table 1: Parents' profiles

Item	Category	Frequency	Percentage
Gender	Male	31	31.0
	Female	69	69.0
Age	25 years old and below	8	8.0
	26-30 years old	46	46.0
	31-35 years old	18	18.0
	36-40 years old	3	3.0

	41 years old and above	25	25.0
Highest academic qualification	Senior high school or below	22	22.0
	Junior college	24	24.0
	Bachelor's degree	44	44.0
	Master's degree or PhD	10	10.0
	Other	0	0
Occupation	Civil servant	10	10.0
	Public institution worker	11	11.0
	State-owned enterprise employee	7	7.0
	Private enterprise employee	54	54.0
	Individual industrialist	18	18.0
	Unemployed	0	0
Monthly household income	Less than 5000 yuan	31	31.0
	5001-10000 yuan	43	43.0
	10001-15000 yuan	12	12.0
	15001-20000 yuan	6	6.0
	More than 20000 yuan	8	8.0
Family structure	Nuclear family	47	47.0
	Main family	46	46.0
	Single-parent family	5	5.0
	Blended family	2	2.0
	Other family	0	0
Your child's age	0-2 years old	13	13.0
	2-4 years old	54	54.0
	4-6 years old	33	33.0
Relationship to child	Father	23	23.0
	Mother	49	49.0
	Grandparent	25	25.0
	Nanny	3	3.0
	Others	0	0

An overview of the personal information of the teachers who participated in the needs survey is shown in Table 2. From the table, it can be seen that of the 100 teachers who participated in the survey, most of them had a junior college degree (39%) and a bachelor's degree (37%), while only seven (7%) had a master's or doctoral degree. In terms of area of specialization, 52 teachers had studied natural sciences (52%) and 48 teachers had studied social sciences (48%). In terms of teaching experience, more than half of the teachers had three to six years of teaching experience (54%), and those with more than six years of teaching experience were in a minority of only 20 teachers. In terms of teaching children with autism, most teachers had one to three years of teaching experience, with a minority of 15 teachers having more than six years of teaching experience. Finally, in terms of center area, nearly half of the centers are located in rural locations (48%).

Table 2: Teachers' profiles

Item	Category	Frequency	Percentage
Highest academic qualification	Senior high school or below	17	17.0
	Junior college	39	39.0
	Bachelor's degree	37	37.0
	Master's degree or PhD	7	7.0
	Other	0	0
Area of specialization	Natural Sciences	52	52.0
	Social Sciences	48	48.0
	Other	0	0
Length of teaching experience	1-3 years	26	26.0
	3-6 years	54	54.0
	6-9 years	8	8.0
	10 years and above	12	12.0
Length of experience teaching children with autism	1-3 years	61	61.0
	3-6 years	24	24.0
	6-9 years	9	9.0
	10 years and above	6	6.0
Areas of centers	City	21	21.0
	Countryside	48	48.0
	Town	14	14.0
	Village	17	17.0

3.3 Instruments

The instruments used in this study were needs questionnaires, including a Questionnaire on the Needs of Teaching Modules on Self-Care Skills for Children with Autism Aged 3-6 (Parents' Version) and Questionnaire on the Needs of Teaching Modules on Self-Care Skills for Children with Autism Aged 3-6 (Teachers' Version). Both questionnaires were designed and developed by the researcher, with full reference to the Learning and Development Guidelines for Children Aged 3-6 issued by the Ministry of Education of the People's Republic of China and the Developmental Ontology Scale for Children with Autism Spectrum Disorder published by Feng (2019).

The two questionnaires consisted of three parts: demographic information, the current situation of teaching self-care skills to three- to six-year-old children with autism, and the need for the teaching module development. The questionnaires were based on a four-point Likert scale (where 1=Strongly Agree and 4=Strongly Disagree). The reason for selecting a four-point Likert scale was due to the influence of intermediate items on the results of the study, as a four-point Likert scale allows for obtaining clear attitudes from the participants. Secondly it was also considered to have the advantage of flexibility and applicability (Joshi et al., 2015). In order to ensure the reliability and validity of the questionnaires' questions and options, the scale questions in this questionnaire were subjected to reliability and validity testing. In this case, the Cronbach's alpha value of the two questionnaires was 0.957 (parents' version) and 0.964 (teachers' version), indicating good reliability and internal consistency according to Carmines and Zeller's (1979) standard requirements for reliability.

Regarding the validity of the two questionnaires, two teachers and two parents of children with autism were invited to assess the face validity of the questionnaires, and three experts in the field were invited to assess the content validity of the questionnaires. The Face Validity Index (FVI) and Content Validity Index (CVI) of the two questionnaires were both assessed to be 1, indicating that the two questionnaires have good face and content validity. FVI was calculated according to the method shown in Yusoff (2019)'s study and CVI was calculated according to the method in Zhang et al. (2019)'s study.

This indicates that the two questionnaires can be used to investigate the need for a teaching module on self-care skills for children with autism.

3.4 Data Collection and Statistical Analysis

Data collection for this study consisted of questionnaires, which were distributed in two forms. The questionnaire was printed and distributed to those participants who found it convenient to complete the questionnaire in person. Those participants for whom it was not convenient to complete the email in person received an electronic version via email.

The data for this study were analyzed using the Statistical Packages for Social Science (SPSS) version 28. For demographic information, the frequencies and percentages of different categories in the items were counted separately. The scale questions in the questionnaire were analyzed by counting the frequency (n), percentage (%), mean (M) and standard deviation (SD) of the different options. The questionnaire was arranged under headings such as "Current problems in teaching children with autism self-care skills" and "Suggestions for the development of teaching modules". Where multiple choice options could be provided, visualizations were used for clarity, such as bar charts or fan charts, to give a more intuitive representation of the statistical results.

3.5 Community Involvement Statement

No children with autism were involved in designing or conducting this research. However, the participants in this study were parents and teachers of children with autism, who provided advice and support regarding the implementation of the study from a variety of perspectives. Prior to conducting the survey, consent was obtained from all participants and informed consent forms were signed.

4. Results

As the demographic information in the questionnaire has been analyzed and described in the participant section above, this section focuses on the questions regarding the current status of teaching self-care skills to children with autism aged three to six years old, and the needs and suggestions of parents and teachers for the module on teaching self-care skills.

4.1 Current Situation of Teaching Self-Care Skills to Children with Autism Aged Three to Six Years Old

Since this study utilized two questionnaires, a parent version and a teacher version, the two questionnaires were analyzed separately. Table 3 shows the

findings of the parent version of the questionnaire regarding the current status of teaching self-care skills to children with autism.

Table 3: Current situation of teaching children with autism self-care skills (Parents' questionnaire)

Item	Frequency % (n)				M	SD
	Strongly agree 1	2	3	Strongly disagree 4		
My child's center has special curriculum and instruction in self-care skills.	33.0 (33)	52.0 (52)	11.0 (11)	4.0 (4)	1.86	0.762
My child's center can provide Individualized Education Plans (IEP) for my child's self-care skills.	23.0 (23)	52.0 (52)	21.0 (21)	4.0 (4)	2.16	0.769
I can receive training and guidance from the center and other sources regarding the self-care skills of my child with autism.	29.0 (29)	32.0 (32)	31.0 (31)	8.0 (8)	2.18	0.939
In daily life, I often encourage my child to eat, dress and undress, wash, sleep, etc. by themselves.	32.0 (32)	53.0 (53)	9.0 (9)	6.0 (6)	1.89	0.799
In daily life, I acknowledge my child's initiative in trying to eat, dress and undress, and wash by themselves.	39.0 (39)	48.0 (48)	6.0 (6)	7.0 (7)	1.81	0.833
In daily life, I will directly help my child to dress and undress, wash, etc. when they can't do it well.	46.0 (46)	39.0 (39)	9.0 (9)	6.0 (6)	1.75	0.853
Item	1	2-3	4-6	7 and above		
How many self-care sessions does your child receive per week at the center?	37.0 (37)	32.0 (32)	20.0 (20)	11.0 (11)		

As can be seen in Table 3, most parents felt that their child was able to receive instruction in self-care skills at the center (85%) and that the institution was able to provide appropriate IEPs based on the children's different levels of development (75%). Although more than half of the parents felt that they were able to receive instruction and training from the center, it is nevertheless worth noting that nearly half of the parents also indicated that they did not receive appropriate instruction (40%).

In terms of daily family life, most parents stated that they encourage their child to perform activities such as eating and dressing on their own (85%), and would also allow their child to take the initiative to complete simple self-care skills. However, when they found that their child had difficulties or problems in completing them,

most parents chose not to teach their child how to complete them, but instead helped them directly with eating, dressing, and so on (85%). When asked how many times a week their child was able to receive self-care training at the center, 37 parents thought that their children could only be guaranteed to receive one relevant session per week, while 32 parents said that their child was able to receive two or three sessions of training. Only 11% were able to achieve more than seven training sessions.

When asked what they identified as the current challenges in teaching self-care skills to children with autism, parents mentioned the following problems. As Figure 1 shows, parents identified “a lack of attention from the center” (55%), “insufficient child participation” (45%), “no specialized instructional program and evaluation system” (21%), “too few courses” (21%) and “insufficient parental involvement” (21%) as being the main problems.

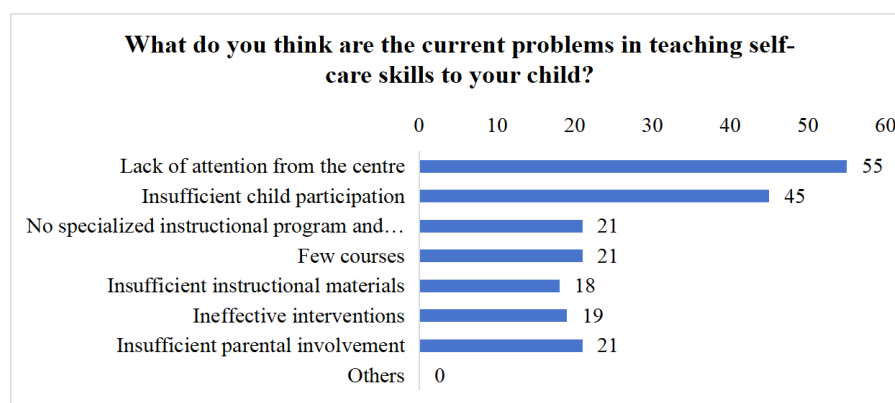


Figure 1: Current problems in teaching self-care skills (Parents' questionnaire)

As illustrated in Table 4, the teachers' version of the questionnaire was dominated by the current situation of teaching self-care skills to children with autism. More than half of the teachers believed that their center provided instruction in self-care skills for children with autism (53%), while almost half believed that their center did not provide such instruction (47%). Most teachers felt that their center had a specific curriculum plan for self-care skills (80%) and that it was able to design different teaching plans for children with autism who were at different developmental stages (82%). Fifty-eight teachers felt that they were able to receive training at their center (58%), while 42 teachers disagreed (42%). Most teachers felt that their centers were able to make appropriate assessments of self-care skills (64%). Also, most teachers felt that their center was currently able to provide instruction in self-care skills for children with autism either once a week (34%) or two to three times a week (39%), with only six teachers (6%) believing that they were able to provide more than seven sessions of instruction.

Figure 2 shows the main barriers that teachers perceived to exist in terms of teaching self-care skills to children with autism, including “lack of attention from the center” (50%), “insufficient child participation” (50%), “insufficient instructional materials” (35%), “ineffective interventions” (25%) and “too few courses” (22%).

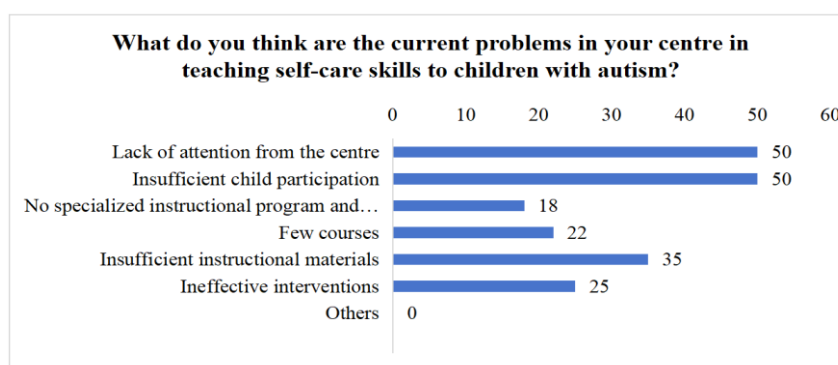


Figure 2: Current problems in teaching self-care skills (Teachers' questionnaire)

Table 4: Current situation of teaching children with autism self-care skills (Teachers' questionnaire)

Item	Frequency % (n)				M	SD
	Strongly agree 1	2	3	Strongly disagree 4		
My center has a curriculum and instruction in self-care for children with autism.	17.0 (17)	36.0 (36)	31.0 (31)	16.0 (16)	2.46	0.953
My center has special teaching programs and teaching aids on self-care skills for children with autism.	29.0 (29)	51.0 (51)	13.0 (13)	7.0 (7)	1.98	0.836
My center has different education plans for children with various levels of autism.	31.0 (31)	51.0 (51)	12.0 (12)	6.0 (6)	1.93	0.816
I am able to receive instructional guidance and teacher training on self-care for children with autism.	25.0 (25)	33.0 (33)	35.0 (35)	7.0 (7)	2.24	0.907
I am able to develop child-level teaching objectives and contents for the self-care skills of children with different levels of autism.	25.0 (25)	55.0 (55)	14.0 (14)	6.0 (6)	2.01	0.794
My center evaluates and assesses the teaching of self-care skills.	23.0 (23)	41.0 (41)	30.0 (30)	6.0 (6)	2.19	0.857
Item	1	2-3	4-6	7 and above		
How many lessons of self-care skills are provided for children with autism in your center each week?	34.0 (34)	39.0 (39)	21.0 (21)	6.0 (6)		

From the above findings regarding parents' and teachers' views on the current teaching of self-care skills for children with autism aged three to six, it is clear that the centers are basically able to provide teaching on self-care skills for children with autism, and that the centers are able to provide appropriate teaching

objectives and contents for children with autism at different stages of development. However, there is an obvious lack of teaching frequency, and most parents and teachers responded that they were unable to receive relevant training or guidance on the teaching of self-care skills. Lack of attention, lack of participation and lack of teaching materials were cited as the main problems. It is also worth noting that although the parents tended to encourage their child to perform simple self-care activities, most of them decided to help directly upon finding that their child was not able to complete the task well, preventing them from continuing to try, and there is a lack of appropriate teaching materials or methods for parents to use.

4.2 Need for Teaching Modules on Self-Care Skills for Children with Autism

The parents' responses regarding the need for a teaching module on self-care skills for children with autism are shown in Table 5.

Table 5: Perceptions of the need for a self-care skills teaching module (Parents' questionnaire)

Item	Frequency % (n)				M	SD
	Strongly agree 1	2	3	Strongly disagree 4		
I think self-care skills play an important role for children with autism.	28.0 (28)	60.0 (60)	7.0 (7)	5.0 (5)	1.89	0.734
I think there is a need for more teaching of self-care skills for children with autism.	47.0 (47)	40.0 (40)	10.0 (10)	3.0 (3)	1.69	0.771
I believe that teaching self-care skills to children with autism should be done as early as possible.	48.0 (48)	37.0 (37)	11.0 (11)	4.0 (4)	1.71	0.816
I believe that teaching self-care skills can improve the quality of life of children with autism.	23.0 (23)	62.0 (62)	13.0 (13)	2.0 (2)	1.94	0.661
I believe that teaching self-care skills can promote the overall development of children with autism.	31.0 (31)	57.0 (57)	8.0 (8)	4.0 (4)	1.85	0.726
I believe that teaching self-care skills to children with autism through teaching modules in small steps is more conducive to the acquisition of skills.	32.0 (32)	53.0 (53)	10.0 (10)	5.0 (5)	1.88	0.779

As seen in Table 5, most parents believed that self-care skills play an important role for children with autism (88%), improve the quality of their children's lives (85%), and promote children's all-round development (88%). Most parents believed that their child needed more teaching or training in self-care skills (87%). Eighty-five parents believed that children with autism should be trained in self-

care skills as early as possible (85%) and that choosing a small-step approach to teaching was more conducive to the child's learning of skills (85%).

Figure 3 illustrates the perceived need of parents for a teaching module on self-care skills. As the figure indicates, 30% of parents felt that a teaching module on self-care skills was necessary, 55% agreed with the development of the teaching module, and only a few parents felt that there was less need for the development of the module (15%). Figure 4 shows the results of the parents' survey regarding the need to evaluate the effectiveness of the teaching module on self-care skills. As can be seen in Figure 4, the vast majority of parents felt that there was a need to assess the effectiveness of the teaching module (85%). Only a minority of parents felt that assessing teaching modules was unnecessary (15%).

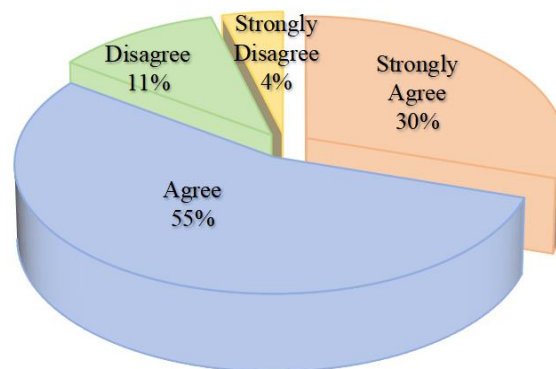


Figure 3: The need to develop and design teaching modules (Parents' questionnaire)

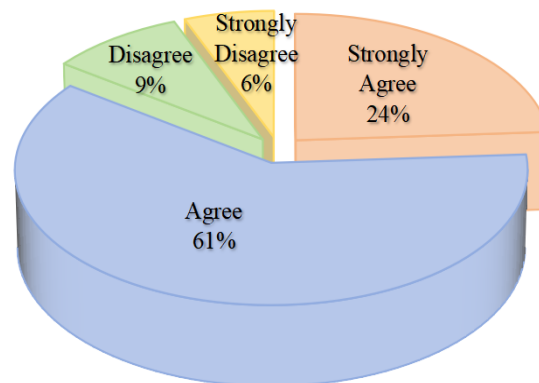


Figure 4: The need to evaluate and test the effectiveness of teaching modules (Parents' questionnaire)

The teachers' perceived need for a module on teaching self-care skills to children with autism is shown in Table 6. From the table, it can be seen that most teachers believed that the acquisition of self-care skills could improve the quality of life of children with autism (96%) and could contribute to the overall development of children with autism (83%). Eighty-one teachers believed that self-care skills should be taught as early as possible (81%) and that small steps could be used to improve learning (80%). When teaching children with autism self-care skills, the

teaching objectives should be designed for them according to their different developmental levels, according to the majority (79%). Eighty teachers considered it necessary to assess the effectiveness of such teaching modules (80%).

Table 6: Perceptions of the need for a self-care skills teaching module (Teachers' questionnaire)

Item	Frequency % (n)				M	SD
	Strongly agree 1	2	3	Strongly disagree 4		
I believe that teaching self-care skills to children with autism should be done as early as possible.	43.0 (43)	39.0 (39)	15.0 (15)	3.0 (3)	1.78	0.807
I think teaching children with autism to take care of themselves in small steps with teaching modules is more conducive to the children's mastery of skills.	27.0 (27)	53.0 (53)	10.0 (10)	10.0 (10)	2.03	0.877
I think the quality of life of children with autism can be improved by teaching self-care skills.	39.0 (39)	57.0 (57)	3.0 (3)	1.0 (1)	1.66	0.587
I think that teaching self-care skills can promote the all-round development of children with autism.	32.0 (32)	51.0 (51)	13.0 (13)	4.0 (4)	1.89	0.773
I think that self-care skills for children with autism should be targeted according to the developmental levels of individual children.	38.0 (38)	41.0 (41)	11.0 (11)	10.0 (10)	1.93	0.941
I think it is necessary to evaluate and assess the effectiveness of the teaching of self-care skills to children with autism.	21.0 (21)	59.0 (59)	12.0 (12)	8.0 (8)	2.07	0.803

Figures 5 and 6 show the results of teachers' surveys regarding the question of whether teachers of children with autism in China and current teachers of children with autism need a teaching module on self-care skills for children with autism, respectively. As can be seen in Figure 5, 91% of the teachers thought that China needed teaching modules for teaching children with autism to take care of themselves, with only a very small number of teachers responding that they did not need teaching modules (9%). Eighty-eight teachers felt that current teachers of children with autism needed to use teaching modules for teaching self-care skills to children with autism, and only 12 teachers felt that they did not need teaching modules.

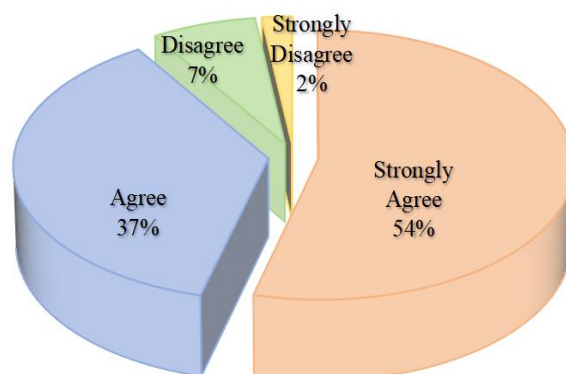


Figure 5: Need for teaching modules in China (Teachers' questionnaire)

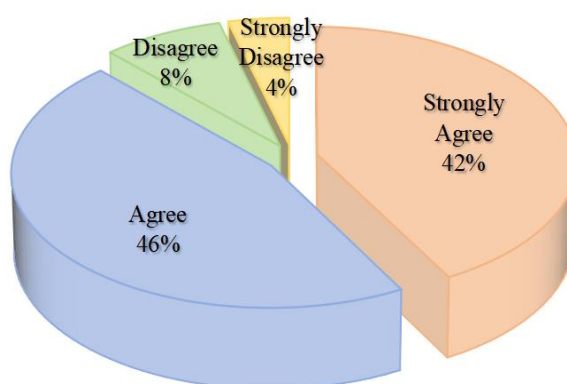


Figure 6: Teachers' perceived need for teaching modules (Teachers' questionnaire)

In terms of the need for teaching modules on self-care skills for children with autism aged three to six, the results of this study show that the vast majority of parents and teachers believe that self-care skills play an important role for children with autism and can improve their quality of life and promote their all-round development. Furthermore, the majority of parents and teachers believe that intervention for self-care skills for children with autism should be carried out as early as possible, and that the principle of small steps should be used for intervention to facilitate the acquisition of skills among the children. There was a high demand from parents and teachers for the development of teaching modules on self-care skills for children with autism, which they felt were necessary, given the current lack of teaching materials on self-care skills for children with autism.

4.3 Basis and Recommended Topics of a Teaching Module on Self-Care Skills for Children with Autism Aged Three to Six Years

The abovementioned needs analysis revealed that parents and teachers felt that there was a need to develop a module on teaching self-care skills; moreover, they felt that they would be able to refer to the suggestions they had made in developing such a module. As can be seen in Figures 7 and 8, the parents believed that in developing a teaching module on self-care skills for children with autism, attention should be paid to the "teacher's own specialties" (52%), "children's interests and needs" (48%), and "social needs" (35%). In terms of choosing the

content of teaching modules, parents suggested focusing on “dressing and undressing” (53%), “personal hygiene” (52%), and “toileting” (48%).

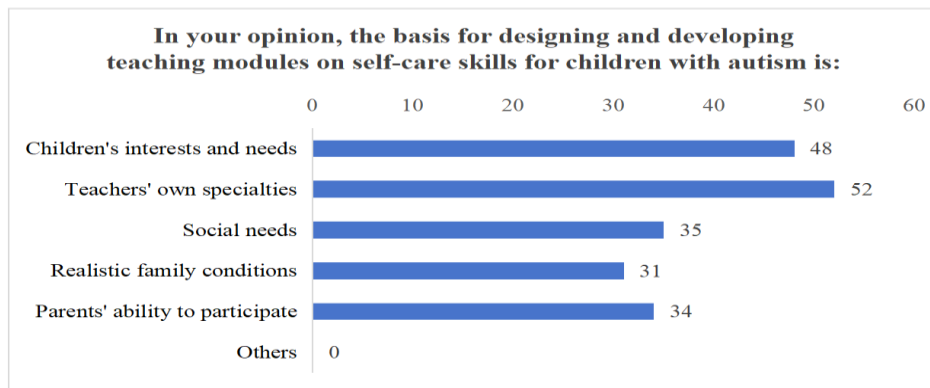


Figure 7: Bases suggested by parents

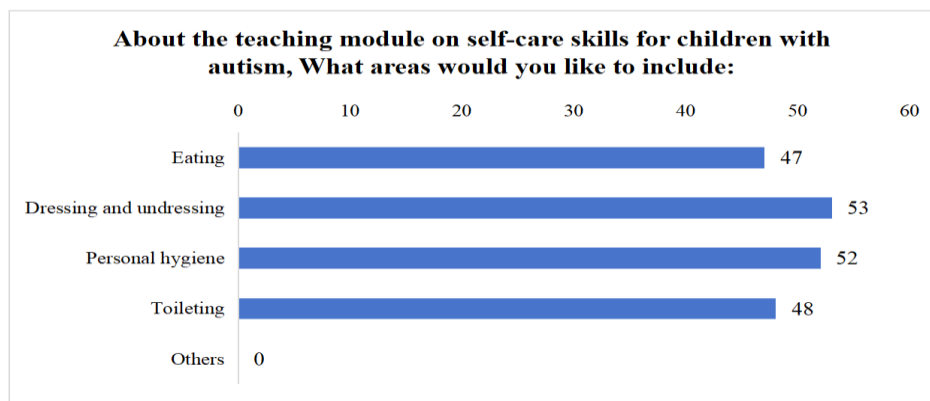


Figure 8: Topics suggested by parents

As shown in Figures 9 and 10, the teachers felt that in developing a teaching module on self-care skills for children with autism, attention should be paid to the “teachers’ own specialties” (57%), “social needs” (55%), “realistic center conditions” (45%), and “children’s interests and needs” (43%). In terms of selecting the content of teaching modules, the teachers suggested focusing on “eating” (59%), “personal hygiene” (57%) and “toileting” (48%).

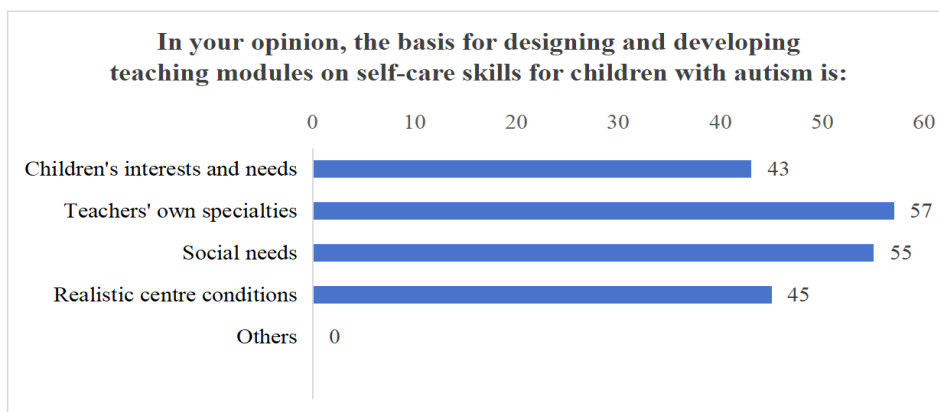


Figure 9: Bases suggested by teachers

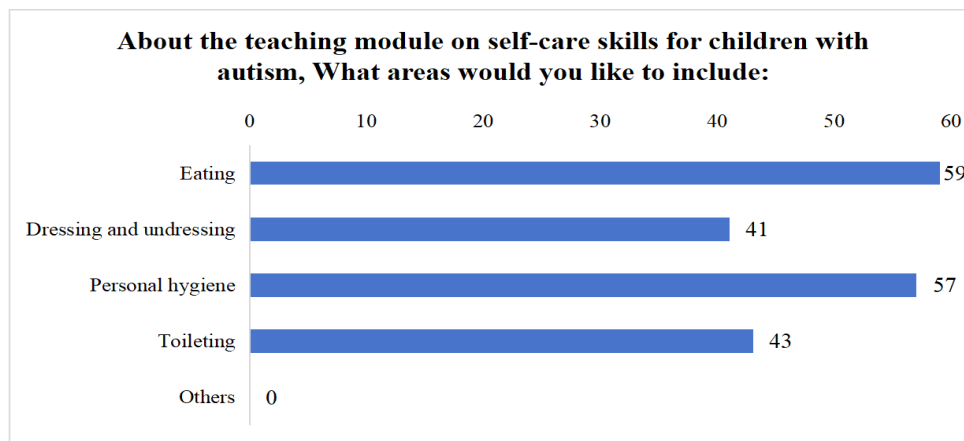


Figure 10: Topics suggested by teachers

From the above suggestions made by parents and teachers in relation to the development of teaching modules on self-care skills for three- to six-year-old children with autism, it can be seen that parents and teachers believe that the needs of both the children with autism themselves and the wider community should be fully taken into account, as well as the situations of the teachers and the centers. In terms of content selection, participants placed the main focus on skills such as eating, personal hygiene, toileting, dressing and undressing.

By examining the results of the three parts of this study – namely, the current teaching situation, the needs and the recommendations – we can better understand the current need for greater self-care skills among children with autism as well as the scarcity of teaching and learning materials, allowing us to harvest valuable recommendations. The results of this study are therefore important and informative in terms of their contribution to existing studies.

5. Discussion

In this study, the parents as well as teachers of children with autism were surveyed through questionnaires to collect information on the current situation with regard to the teaching of self-care skills for children with autism aged three to six, the needs of parents and teachers in terms of the development of teaching modules on self-care skills for children with autism aged three to six, and their suggestions for developing such modules.

Regarding the current status of the teaching of self-care skills to children with autism aged three to six, the results of the data analysis confirm that, at present, the centers for children with autism are able to provide children with autism with teaching or courses related to self-care skills, and that some of the teachers at the centers are able to provide for children at different levels of development with corresponding teaching plans, which mainly contain teaching contents and teaching objectives that are appropriate for them. However, there are some practical problems. From the results, we know that although the centers provide teaching on self-care skills for children with autism, the frequency of teaching

sessions is considered insufficient, at one or two times per week on average, which is far less than the number of teaching sessions in areas such as social skills, cognitive training, and so on. Many parents and teachers believe that the current frequency of teaching is insufficient to support the development of self-care skills in children with autism. Secondly, we found that nearly half of the participants felt that they could not receive instruction or training from the center or other sources regarding the teaching of self-care skills to children with autism, which is highly consistent with the findings of Hakobyan and Harutyunyan (2021), who noted that there was a lack of systematic instruction and training, and a lack of appropriate instructional materials, which, in turn, contributed to the existence of instructional pressure on the parents or teachers (Hua, 2023).

In addition to this, the participants believed that some of the current problems in teaching self-care skills to children with autism also included the lack of attention from the center, the lack of children's participation, and the fact that some of the teaching was only superficial and did not provide substantial help.

In the daily lives of families with children with autism, parents will actively encourage their children to perform some simple self-care activities by themselves, such as eating by themselves, dressing themselves or going to the toilet. However, due to the limitations of the cognitive characteristics of children with autism, leading to their general lack of self-care ability (Zhang, 2021), the children may make many mistakes or may take a long time to complete the activities. When this happens, this study found that most parents will not continue to teach these children how to complete the activities, but will instead complete the activities for the child. The reasons for this may be related to the lack of professional training and teaching materials, and parents' inability to teach their children in the correct way.

In terms of the need for teaching modules for three- to six-year-old children with autism, the results of the survey indicated that parents and teachers generally believe that self-care skills represent an important survival ability for children with autism, and that such skills can help children with autism to improve the quality of their lives, and can create the basic conditions for them to live a better life. This is consistent with the findings of Ma (2020), who reported that self-care skills help to provide for a better life for children with autism. Additionally, parents and teachers also believe that the improvement of self-care skills can effectively promote the overall development of children with autism.

Secondly, this study found that both teachers and parents believe that children with autism should be taught self-care skills as early as possible, which is why children with autism aged three to six years old were chosen for this study. Medically, as well as psychologically, the ages up to six years constitute an important period of rapid neurological development of an individual; this stage is therefore a critical period for providing early intervention to promote the development of children with autism, which can bring about long-term beneficial effects for the development of children with autism (Xu, 2019). Although children with autism aged three to six years old are in a critical period of development and

growth, due to the lack of current specialized instruction on self-care skills for life and teaching materials, there is a high risk that children with autism will not benefit from this optimal period of intervention and will be negatively impacted by the lack of teaching with regard to self-care skills among this age group.

Regarding the need for teaching modules, we found that both parents and teachers agreed that children with autism need teaching modules on self-care skills. Due to the reality of the current lack of relevant materials, there is a strong need for teaching modules according to both parents and teachers, with more than 85% of both groups confirming this. This provides a realistic basis for the further development of teaching modules on self-care skills for children with autism.

Participants also gave their views and suggestions on proposals for the development of teaching modules on self-care skills for children with autism aged three to six. They were of the view that the development of a module on self-care skills should take into full consideration the individual needs of children with autism, while being conducive to the children's learning abilities. Secondly, the needs of society should be taken into account, so that children with autism can better integrate into society in the future. Finally, the participants considered that the personal experience of the center personnel and the teachers was also an important basis on which to develop teaching modules that could effectively improve the self-care skills of children with autism through teachers' instruction. In terms of content, the participants generally agreed that personal hygiene, eating, dressing and undressing, and toileting were the key elements to focus on. These basic life skills can ensure a better quality of life and greater independence for children with autism.

In summary, the findings of this study provide a sound basis for the necessary further development of a teaching module on self-care skills. According to an announcement by the Ministry of Education of the People's Republic of China, good living habits and basic life skills are important indicators of a child's physical and mental health, as well as the foundation for learning and development in other areas. According to the law of early detection, early diagnosis and early intervention for children with autism, it is important to have sufficient teaching materials for the teaching intervention for children with autism to ensure that they are trained in a timely manner, and also to provide assistance to parents and teachers.

6. Conclusion

This study aimed to identify the needs of parents and teachers of children with autism aged three to six years old for the development of teaching modules on self-care skills. The current status of teaching self-care skills to children with autism, the requirements of parents and teachers with regard to teaching modules, and the suggestions for possible teaching modules were explored in turn. The study revealed that challenges exist, such as infrequent teaching sessions and a lack of materials for teaching self-care skills to children with autism aged three to six years old. Both parents and teachers believe that it is necessary to develop teaching modules on self-care skills for children with autism and

suggest that the development of teaching modules should take into account the needs of the children and society, and should align with the situations of the teachers and the centers. Parents and teachers identified topics such as personal hygiene, eating, and feeding as important to consider in teaching modules. Reasonable and scientifically sound teaching modules can have a far-reaching impact on improving the quality of life for children with autism and reducing the pressure on parents and teachers of children with autism. Therefore, this study provides a realistic basis and important reference for the further development of teaching modules on self-care skills for children with autism aged three to six years in the future.

7. Limitations

Certain limitations of this study exist in relation to the selection of participants. Firstly, in terms of the number of participants, 100 parents and 100 teachers of children with autism were selected for this study, so that there is a possibility that the data obtained in this area are not representative. Thus, an appropriate increase in the number of participants may make the results of future studies richer and more representative. Second, in terms of the geographical locations of the study participants, the respondents mainly came from three provinces in China; namely, Qinghai Province, Henan Province, and Anhui Province. Qinghai Province is in the western part of China, Henan Province is in central China, and Anhui Province is in the eastern part. As China is known to be a vast country with many provinces, an expansion of the regions involved in participant selection may enrich the results of future studies, enhancing understanding of the views of parents and teachers in other provinces related to the teaching of self-care skills to children with autism. In addition to this, it is recommended that future studies explore the need for self-care teaching modules for children with autism of different ages and with differing levels of autism, to further assess the effectiveness and reasonableness of the teaching modules that may be developed.

8. Acknowledgments

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