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A survey on school adaptation of pupils with developmental disabilities in mainland China¹

In order to provide reference for intervention of school adaptation to special schools and improve the adaptation level of children with disabilities to their school life, this study investigated the current situation of school adaptation among children in Peizhi department² of special schools. The sample comprised by 197 pupils from 1st to 3rd grades in 9 special schools in Sichuan province of mainland China. Brief Demographic Questionnaire and School Adaptation Assessment Scale for Children with Disabilities were used to collect data. The results show that the overall situation of school adaptation for children with developmental disabilities is not satisfying and especially need to be improved in the dimensions of resource utilization & rule adaptation, interpersonal communication & activity participation, and academic activities & common sense accumulation. Moreover, there is no significant gender or geographical differences of school adaptation. However, significant variances are existing among children with different types of disabilities with the best school adaptation among children with intellectual disabilities and worst among children with multiple disabilities. And there are significant differences in school adaptation among children at different ages. The adaptation of older children is significantly better than that of younger children.

Keywords: developmental disabilities; school adaptation; mainland China

Badania sondażowe adaptacji szkolnej uczniów z zaburzeniami rozwojowymi w kontynentalnych Chinach

Artykuł przedstawia wyniki badań dotyczących poziomu adaptacji szkolnej uczniów szkół specjalnych podlegających wydziałowi edukacji dla dzieci z zaburzeniami rozwojowymi. Jego celem

¹ This study is the result of a speech at the International conference *Unequal Education. Forum for the exchange of thoughts and experiences*, organized by a team of special educators from the Faculty of Arts and Educational Science at the University of Silesia in Katowice, headed by dr hab. Elżbieta Górnikowska-Zwolak, prof. UŚ. The conference was held on November 20, 2019 in Cieszyn. The event was co-organized by the Polish Teachers' Union and the Paradigmat Foundation.

² Peizhi department is one department for children with developmental disabilities in comprehensive special schools in China, which literally means education department for children with intellectual disabilities.

była analiza obecnej sytuacji oraz opracowanie wskazań odnośnie interwencji i wspomaganie procesu adaptacji dzieci z zaburzeniami rozwojowymi do życia szkolnego. Badaniami objęto 9 szkół specjalnych w prowincji Sihuan w Chinach kontynentalnych, grupa badawcza liczyła łącznie 197 uczniów klas I-III. Do zebrania danych wykorzystano Brief Demographic Questionnaire (Skrócony Kwestionariusz Demograficzny) oraz School Adaptation Assessment Scale for Children with Disabilities (Kwestionariusz Oceny Adaptacji Szkolnej Uczniów z Niepełnosprawnościami). Uzyskane rezultaty pokazują, że poziom przystosowania do życia szkolnego uczniów z zaburzeniami rozwojowymi nie jest zadowolający i wymaga poprawy przede wszystkim w zakresie takich wymiarów jak: wykorzystanie zasobów i adaptacja do zasad, komunikacja interpersonalna i uczestnictwo w zajęciach, aktywności szkolne i przyrost wiedzy. Płeć i czynniki geograficzne nie różnicują istotnie uzyskanych wyników, stwierdzono natomiast, że istnieją znaczne różnice między dziećmi z różnymi rodzajami niepełnosprawności, wśród których najlepiej adaptują się do życia szkolnego dzieci z niepełnosprawnością intelektualną, a najniższy poziom adaptacji wykazują dzieci z niepełnosprawnością sprzężoną. Stwierdzono także istotne różnice w adaptacji wśród dzieci w różnym wieku. Poziom adaptacji starszych uczniów jest znacząco wyższy niż młodszych dzieci.

Słowa kluczowe: zaburzenia rozwojowe, adaptacja szkolna, Chiny kontynentalne

Introduction

According to the Compulsive Education Law, receiving nine years compulsive education is the basic right and obligation of every child in China. And school is the main place for pupils to receive systematic education. According to China's average life expectancy of 72 years, at least 1/8 of an individual's whole life will be spent in school from first grade in primary school to the graduation from junior high school. Then, how the pupils adapt to school life becomes very important to their development and school performance (Y. Wang, J.Y. Wang 2004; X. Guo 2010).

Adaptation in psychology is a concept that describes an interaction relationship, usually referring to the coordinated relationship between individuals and their environment (X. Guo 2010). Therefore, school adaptation is the adaptation of all learning activities and all things in the learning environment after the children entering the school, including adjusting their own behavior, complying with school norms, having good teacher-student relationships, peer relationships, and reaching school's academic requirements and living requirements etc. (Y.K. Wang 2013).

The adaptive level of individual to the school life directly affects their emotional experience of school life and is closely related to the development of children's physical and mental health, academic achievement, and emotional and social skills. This will have a long-term impact on the individual's maturity and future social adaptation. The environmental factors faced by individuals in schools are complex and diverse. And successful adaptation to school is based on several factors range from self-help skills to emotional competency and academic

performance (McIntyre, Blacher, Baker 2006) Moreover, success in school adaptation also requires students to be familiar with the school environment, understand the requirements of the environment, and adjust their physical and mental status in accordance with environmental requirements (Y.K. Wang 2013). This is undoubtedly a huge challenge for children with developmental disabilities who are featured with large individual heterogeneity and congenital underdevelopment. Due to the defects of their physical and mental development, children with developmental disabilities usually have limited cognitive ability, poor language skills and academic skills, and most of them are accompanied by behavior problems and interpersonal barriers, which can easily lead to difficulties in adapting to their school life (Y. Wang, J.Y. Wang 2004; McIntyre, Blacher, Baker 2006; M.N. Hsiao *et al.* 2013; Charitaki, Marasidi, Soulis 2018).

In recent years, with the continuous development of special education, the amount of students' enrollment in special education schools and the types of students with disabilities continue to expand, making the school adaptation of pupils with developmental disabilities in special schools to be an increasingly prominent issue. At present, Chinese government attaches great importance to, cares for, and supports the development of special education, and on the basis of guaranteeing the right of children with disabilities to receive equal education, higher requirements for the quality of special education have been put forward. In order to guarantee the quality of special education, improving the level of school adaptation for pupils with disabilities in special educational schools has become the first problem that must be solved. In this research, school adaptation means the adaptation of all learning activities and school life after pupils with developmental disabilities entering the special educational schools.

The term "developmental disability" is a social construct. At the present time is included into DSM 5 (American Psychiatric Association, 2013) as well it is mentioned in ICF(WHO,2001). In accordance to DSM 5 the characteristic of Developmental disabilities as a group of conditions, typically lifelong, resulting from impairments in physical, learning, language, or behavioral areas. Developmental disability is described as a severe, chronic disability of an individual that is attributable to a mental or physical impairment or combination of mental and physical impairments that are manifested before the individual attains age 22 and are likely to continue indefinitely. Developmental disabilities are as a functional block for following functional areas: self-care, receptive and expressive language, learning, mobility, self-direction, capacity for independent living and economic self-sufficiency.

With reference to DSM 5 (American Psychiatric Association, 2013), for Autistic spectrum Disorder are established Diagnostic Criteria for Autism Spectrum Disorder (ASD). Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history. Deficits

in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions. Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication. Deficits in developing, maintaining, and understand relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.

Methodology

In consideration of the importance of school adaptation to pupils with developmental disabilities and the insufficient research situation on this topic in mainland China. A quantitative research based on questionnaire survey has been carried out in this study. The research questions and details about data collection are introduced in the following paragraphs.

This study aims at knowing the current status of school adaptation of pupils with developmental disabilities in mainland China and its differences between different groups of pupils with developmental disabilities. Taking school adaptation as dependent variable and students' gender, home location, types of disability, and age groups as independent variables, the research questions in this study are presented in the following part.

1. What is the general status of school adaptation of pupils with developmental disabilities in special schools in mainland China?
2. Is there significant gender difference of school adaptation among pupils with developmental disabilities in Chinese special schools?
3. Is there significant difference of school adaptation between pupils with developmental disabilities from urban and rural areas?
4. Are there significant differences of school adaptation among pupils with different types of disabilities?
5. Are there significant differences of school adaptation among pupils with developmental disabilities from different age groups?

Generally speaking, students' school adaptation grows with the accumulation of time spent in school environment. The students most likely to have difficulty in school adaptation are often those who have just entered school or at the begin-

ning years of school life. Hence, research participants in this study only include pupils from the first three grades in primary special schools. And according to the special educational school system, children with developmental disabilities are always placed in Peizhi department of comprehensive special school in Sichuan province. Therefore, the participants in this study were chosen from students at the first third grades in 9 special educational school in Sichuan province. The participants comprised a convenience sample of 197 pupils with developmental disabilities.

The 197 participants include 66 males (33.5%) and 131 females (66.5%). And 58 (29.4%) of them are from urban area and 139 (70.6%) are from rural area. The research participants consist of children with intellectual disabilities, autism, cerebral palsy, multiple disabilities, developmental delay, mental disabilities and other types of developmental disability with the age range of 6 to 17 years old.

The research instruments in this study includes two parts: Brief Demographic Questionnaire and School Adaptation Assessment Scale for Children with Disabilities. Questions about the students' age, gender, type of disabilities and home location were asked in the Brief Demographic Questionnaire. The School Adaptation Assessment Scale for Children with Disabilities was compiled and used by one Chinese researcher (Y. K. Wang 2013), which is comprised by five dimensions with a total number of 236 specific assessment items, plus 1 comprehensive evaluation question. The five dimensions include sensory & exercise (29 questions), self-care & simple labor (39 questions), academic activity & common-sense accumulation (67 questions), interpersonal communication & activity participation (70 questions), Resource Utilization & Rule Adaptation (31 questions). The Scale is rated on four levels: 0, 1, 2 and 3. 3 points indicates that the performance of the student is almost the best condition described by the content of the assessment item and the student can perform it independently. The student's score decreases with their performance, and 2 points indicates that the student can successfully perform the assessment item with a small amount of support, while 1 points means student could perform the item on the condition of a lot of support and 0 point indicates the performance of student is almost the worst case described by the evaluation content and student cannot perform the item even with a lot of support.

During the compiling process of this scale, existing school adaptation scales, opinions from special educational experts and in-service special educational teachers were referenced to ensure it to be a reliable and valid instrument for assessing school adaptation of children with disabilities. According to previous study, the scale was proved to be with good reliability and validity. The Cronbach's alpha coefficient for the scale was 0.996 (Y.K. Wang 2013).

The survey was conducted in mainland China. The participants were selected from students at first to third grade in the special educational schools in Sichuan province. In consideration of the objective ability level, the survey of school adaptation adopted the method of others' evaluation. For the purpose of understanding the real situation of school adaptation of the participants, the scale of school adaptation was filled in by the main teacher one by one according to the actual situation of the pupils with developmental disabilities.

Prior to the actual evaluation, members of the research team communicated with the main teacher of the participants directly, explaining the assessment purpose, structure of the assessment instrument, items composition, scoring standards, and related precautions of the scale to ensure that assessors clearly understand the assessment criteria. Meanwhile, a detailed introduction of the study together with the intended use of the data, were provided to each assessor.

In the specific implementation process of the assessment, due to the large number of assessment items, the students may be difficult to cooperate for a long time and the assessors may be affected by the assessment result due to fatigue. Therefore, on the basis of requiring the main teacher to make a serious assessment based on the actual situation of the student, the assessor is allowed to complete the assessment of a child in multiple times within a certain period of time.

If the teacher cannot determine the child's performance on certain items, he/she needs to consult the parents of the child or other people who are familiar with the child's situation before scoring. After completing the assessment, the assessor is required to check again to ensure that there is no missing item.

Results

1. Characteristics of students with developmental disabilities from first to third grade in Sichuan province

The participants in this research were selected from special schools in Sichuan province. All of 197 participants are students with developmental disabilities from 1st to 3rd grade. According to the data from the brief demographic questionnaire, characteristics of the participants in terms of the age and types of disabilities are further illustrated in Table 1 and Figure 1.

Table 1. Distribution of disabilities types of the participants

	ID	ASD	CP	MD	Other types	Total
number	139	16	17	22	3	197
percentage	70.56	8.12	8.63	11.17	1.52	100

Note: ID=intellectual disability, ASD=autism spectrum disorder, CP=cerebral palsy, MD=multiple disability

Source: Own elaboration.

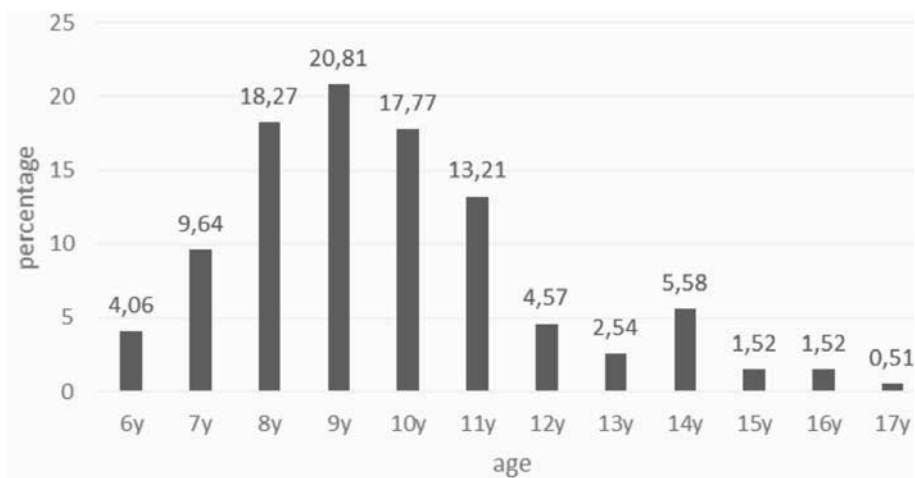


Figure 1. Age distribution of the participants

Source: Own elaboration.

It can be seen from Table 1 that the disabilities types of students with developmental disabilities from the first to third grade in the special schools in Sichuan province are relatively diverse, covering intellectual disabilities, autism, cerebral palsy, multiple disabilities etc. Nearly 70% of the students are with intellectual disabilities, accounting for the vast majority, followed by multiple disabilities. In addition, autism, cerebral palsy and other disabilities also accounts for nearly 10% of the proportion and become one part of the educational subjects that cannot be ignored. The results show that at present, the teaching objects of special schools are in line with the basic trend of the development of special education in the whole country that the disabilities types of students are gradually enriched, and the degree of disabilities is getting heavier. However, as there is still certain gap of the development of special education between Sichuan province and developed regions, the teaching objects is still dominated by students with intellectual disabilities. This characteristic of students' disabilities type reminds us that more atten-

tion should be paid to the school adaptation of children with intellectual disabilities and targeted training should be considered to improve their adaptation situation. At the same time, it is also necessary to consider the school adaptation situation of students with autism, cerebral palsy, or other types of disabilities, and to consider the transformation of physical and human environments on campus to improve their school adaptation.

According to Figure 1, the age distribution of students with developmental disabilities in first to third grades in special schools is relatively complex, which spans 11 years. Most of the students from first to third grades are at the age range of 7–11 years old, accounting for 79.7% of all students of the three grades. And the number of students less than 7 years old or older than 12 years old are relatively small, accounting for 4.1% and 16.2%, respectively. There are both young children under 7 years old who are below school age and 17-year-old children who are close to adults. This data is in line with the field research of special education in Sichuan province. Most children with disabilities in the city area can enter school at appropriate age, but there are also some children with disabilities in rural areas who are delayed for enrollment due to remote place of residence, guardians' neglects of their duties or other reasons. However, in the process of class placement in special schools, many older students are still placed in the low section of primary school, that is grade 1–3, because of the lack of educational experience and limited abilities of the students.

2. The general status of school adaptation of students with developmental disabilities

The scale used in this study is a four-level scale. The sum of all the items in each dimension is the school's adaptation score in this dimension. Adding the scores of the five dimensions results in the total score of school adaptive. The descriptive statistics of the average scores of each dimension and the whole scale were calculated as shown in Table 2.

Based on the scoring standards of the investigation instrument, 3 points has been taken as the expected average score on each item, which means students can successfully adapted to the school life independently, while 2 points has been taken as the minimum requirement of average score on each item, which means students can successfully adapted to school life with limited support. And average score on each item less than 2 points means students cannot successfully adapted to school life. Further calculate the average score of the total scale and five dimensions on each item according to the M and number of items from table 2 and compared these average scores with the scoring standard of the scale to know the overall situation of school adaptation for pupils with developmental disabilities. And results are shown in Table 3.

Table 2. The description statistics of school adaptation ($N = 197$)

	<i>M</i>	<i>SD</i>	Number of items
Sensory & movement	57.25	22.64	29
Self-care & simple labor	81.44	33.22	39
Academic activity & common sense	87.79	64.98	67
Communication & participation	110.94	66.20	70
Resource utilization & rules adaptation	54.66	26.71	31
Overall scale	392.08	204.10	236

Source: Own elaboration.

Table 3. The overall situation of school adaptation ($N = 197$)

	<i>M'</i>	<i>SD'</i>	Compare to 1.66 (<i>t</i>)	Compare to 2 (<i>t</i>)	Compare to 3 (<i>t</i>)	<i>CV</i> (%)
Sensory & movement	1.97	0.78	5.647***	-0.466	-18.445***	39.59
Self-care & simple labor	2.09	0.85	7.056***	1.454	-15.023***	40.67
Academic activity & common sense	1.31	0.97	-5.062***	-9.982***	-24.455***	74.05
Communication & participation	1.58	0.95	-1.114	-6.161***	-21.002***	60.13
Resource utilization & rules adaptation	1.76	0.86	1.681	-3.856***	-20.144***	48.86
Overall scale	1.66	0.86		-5.496***	-21.725***	51.81

Note: *M'* – means average score on each item, *SD'* – means SD of average score on each item.

Source: Own elaboration.

From Table 3, we can see that the overall average score of school adaptation for children with developmental disabilities on each item is 1.66, in which the self-care & simple labor dimension gets the highest score of 2.09; followed by sensory & movement dimension, with an average score of 1.97.

Single-sample T-test had also been done to know the differences between sub-dimensions and the whole scale. It was found out that the average scores on each item of these two dimensions are significantly higher than the overall average score on each item. But the average scores of two dimensions in terms of academic activities & common sense accumulation and interpersonal communication & participation are relatively low, with the number of 1.31 and 1.58. Both are lower than the overall average score on each item and the difference between academic activities & common-sense accumulation and the overall average score is significant. Moreover, the average score of each item in the resource utilization

and rule adaptation dimension is 1.76, slightly higher than the overall average score on each item, but without significant difference. It shows that the scores of school adaptation on each dimension are not balanced.

Using the single-sample T-test, the average scores of each item in the five sub-dimensions and the whole scale were tested with the minimum requirement of 2 points, and the expected value of 3 points respectively (see Table 3). It was found that the average score on each item of the whole scale was significantly lower than the acceptable value of 2 points, indicating that the overall situation of school adaptation for children with developmental disabilities in Sichuan Province is worse than the minimum requirement and needed to be improved urgently.

Among them, no significant difference has been found out between the acceptable value of 2 point and the scores of two dimensions in terms of sensory& movement, and self-care & simple labor, which means that children with developmental disabilities do well of the adaptation in these two areas. On the contrary, the average scores of the other three sub-dimensions are significantly lower than 2 points with extreme significance, indicating that situation of pupils' school adaptation in these areas is really poor and requires extra attention. In addition, the average scores on each item of the overall scale and five sub-dimension are significantly lower than the expected value of 3 points, indicating that school adaptation of children with developmental disabilities is not ideal and there is still room for improvement.

The coefficient of variation (CV) of the scores for the overall scale and each dimension were further calculated. As shown in table 3, the internal differences of the average scores for the whole scale and five sub-dimensions are out of the acceptable range ($5% < CV < 35%$), which means that the disparity of the average scores of the overall school adaptation and also each dimension for children with developmental disabilities is too large. It means obvious differences of school adaptation are existed among children with developmental disabilities. Among them, the most obvious difference is in the area of academic activity& common sense accumulation with the CV of 74.05%, indicating that polarization of school adaptation is common in this area among children with developmental disabilities.

3. Differences of school adaptation between children with different genders

Independent sample T test was used to analyze the gender differences of school adaptation among children with developmental disabilities. As it shown in Table 4, boys' scores of school adaptation in the whole scale and all dimensions are higher than girls'. There are significant differences in the scores of sensory & movement areas, while the differences in the other four areas and the overall scale are not significant.

Table 4. Gender differences of school adaptation ($N = 197$)

	Sensory & movement	Self-care & simple labor	Academic activity & common sense	Communication & participation	Resource utilization & rules adaptation	Overall scale
Mean of males	59.94	84.26	92.94	116.04	56.39	409.56
Mean of females	51.91	75.85	77.56	100.83	51.23	357.38
T	2.378	1.591	1.574	1.527	1.282	1.702
P	0.018*	0.114	0.117	0.128	0.201	0.090

Source: Own elaboration.

4. Differences of school adaptation between children with different home locations

According to Table 5, there is no significant difference of the scores for the whole scale and each dimension between children from urban and rural area, which means home location has no significant effect on school adaptation for children with developmental disabilities.

Table 5. Geographical differences of school adaptation ($N = 197$)

	Sensory & movement	Self-care & simple labor	Academic activity & common sense	Communication & participation	Resource utilization & rules adaptation	Overall scale
M of urban	59.07	84.12	87.52	107.55	54.43	392.69
M of rural	56.49	80.32	87.89	112.36	54.76	391.83
T	0.728	0.730	-0.038	-0.464	-0.077	0.027
P	0.467	0.446	0.970	0.643	0.938	0.979

Source: Own elaboration

5. Differences of school adaptation among children with different disabilities

The 197 participants in the survey covered more than three types of disorders. Therefore, using the type of disability of participants as independent variable, the variance of the scores for children with different types of disabilities was analyzed using one-way ANOVA. The results are shown in Table 6. Since the number of other types of disabilities is too small, this part is excluded as it is not suitable for performing this statistic analysis.

Table 6. School adaptation among pupils with different types of disabilities ($N = 197$)

Dimensions	Mean of different groups				F	P
	ID	ASD	CP	MD		
Sensory & movement	61.18	58.19	51.59	35.36	7.346	0.001***
Self-care & simple labor	87.05	86.38	78.41	44.73	9.131	0.001***
Academic activity & common sense	95.69	89.63	92.76	30.00	5.406	0.001***
Communication & participation	121.22	95.94	117.53	49.82	6.460	0.001***
Resource utilization & rules adaptation	59.33	49.88	59.00	25.59	9.116	0.001***
Overall scale	424.47	380.00	399.29	185.50	7.412	0.001***

Note: 1) ID = Intellectual Disability, ASD = Autistic Spectrum Disorder, CP = Cerebral Palsy, MD = Multiple Disability; 2) as number of some types of disabilities is too small, they are excluded from analysis

Source: Own elaboration.

According to the table above, there are extremely significant differences of pupils' school adaptation on the overall scale and each dimension among children with different disabilities. For example, children with intellectual disabilities have the highest scores of the overall scale, while children with multiple disabilities have the lowest scores. Moreover, In order to know exactly between which groups these significant differences exist, multiple comparison has been done to gain further information of the differences of school adaptation among children with different disabilities (the results are in Table 7).

Table 7. Multiple comparison of School adaptation among different types of disabilities ($N = 197$)

Dimensions	MD		
	ID	ASD	CP
Sensory & movement	0.000***	0.001**	0.019*
Self-care & simple labor	0.000***	0.000***	0.001**
Academic activity & common sense	0.000***	0.004**	0.002**
Communication & participation	0.000***	0.027*	0.001**
Resource utilization & rules adaptation	0.000***	0.003**	0.001**
Overall scale	0.000***	0.002**	0.001**

Source: Own elaboration.

Children with autistic spectrum disorder do better than children with cerebral palsy in two areas in terms of sensory & movement and self-care & simple labor. But they are worse than them in the areas of academic activity & common-sense accumulation, interpersonal communication & activity participation, and resource utilization & regular adaptation.

Combining tables 6 and 7, it can be found that there are significant differences in scores of school adaptation of the whole scale and also each dimension between children with multiple disabilities and other three types of disabilities. To be specifically, children with multiple disabilities are significantly poor than the other three types of children in terms of the general school adaptation and also its five sub-dimensions. In addition, no significant difference of school adaptation was found among children with other three types of disabilities.

6. Differences of school adaptation among children with different ages

The 197 participants in this survey were with a large age span and covered 11 years from 6 to 17 years old. In order to facilitate statistical analysis, taking into account the actual situation of special children's class placement, all participants were divided into six age groups: 6-7 years old, 8 years old, 9 years old, 10 years old, 11-12 years old, and 13-17 years old. Then, there are 27 pupils in the age range of 6-7 years old, 36 were 8 years old, 41 were 9 years old, 35 were 10 years old, and 58 were in the age range 11-17 years old. Then, using age as the independent variable, the analysis of variance was performed to know the differences of school adaptation among children with different age groups.

Table 8. Differences of school adaptation among different age groups ($N = 197$)

	Mean of different age groups					F	P
	6-7(Y)	8(Y)	9(Y)	10(Y)	11-17(Y)		
Sensory & movement	48.78	56.31	58.29	56.26	61.64	1.562	0.186
Self-care & simple labor	68.85	80.53	77.61	80.80	90.97	2.372	0.054
Academic activity & common sense	64.19	82.19	82.12	84.20	108.41	2.606	0.037*
Communication & participation	86.15	109.25	96.34	113.63	132.24	3.094	0.017*
Resource utilization & rules adaptation	43.33	53.44	52.02	54.29	62.78	2.768	0.029*
Overall scale	311.30	381.72	366.39	389.17	456.03	2.765	0.029*

Source: Own elaboration.

As shown in Table 8, except the fluctuation in the scores of the whole scale and several dimensions between the age groups of 8-year-old and 9-year-old, the scores of school adaptation in the overall scale and all sub-scales show an increase trend along with the increase of ages. Children in different age groups have significant differences in scores of the whole scale and dimensions of resource utilization & rules, interpersonal communication & participation, and academic activities & common-sense accumulation. No significant difference exist in the areas of sensory & movement, self-care & simple labor among different age groups.

Multiple comparison had been done to get further information of the differences of school adaptation between age groups and the results are shown in Table 9. According to Table 8 and Table 9, we can see that children with developmental disabilities in the age group of 11–17 years old score significantly higher than children in the age group of 6–7 years old or 9 years old on the overall scale and three sub-dimensions in terms of resource utilization & rules, interpersonal communication & activity participation, and academic activity and &common sense accumulation. In addition, although no significant difference of school adaptation in the other two sub-dimensions had been found among different age groups, pupils with developmental disabilities in the age group of 11–17 years old have got higher scores than pupils in the age groups of 6–7 years old and 9 years old in the sub-dimensions of self-care & simple labor with significant differences. Similar difference of school adaptation also exists in the sub-dimension of sensory & movement between children in the age groups of 11–17 years old and 6–7 years old.

Table 9. Multiple comparison of school adaptation among different age groups ($N = 197$)

	11–17 years	
	6–7 years	9 years
Sensory & movement	0.015**	0.467
Self-care & simple labor	0.004**	0.047*
Academic activity & common sense	0.003**	0.045*
Communication & participation	0.003**	0.007**
Resource utilization & rules adaptation	0.002**	0.046*
Overall scale	0.002**	0.030*

Source: Own elaboration.

Discussion

1. Characteristics of disability types and age span among students

Traditionally, the students in Chinese special schools are mainly children with hearing impairment, visual impairment, and intellectual disabilities. And corresponding special schools or teaching departments are set up for the three types of children according to their actual needs. Along with the development of special education in China, the teaching objects of special education has been greatly expanded. In addition to the traditional three types of children, a large number of disabled children with various special education needs are also included in the special schools, such as autism, cerebral palsy, and development delay and so on. At the same time, along with the promotion of learning in regular classroom in China, more and more children with mild disabilities have been placed in general schools for study, while those who stay in special schools are more often children with severe disabilities or multiple disabilities who have more complicated special educational needs.

According to this study, the teaching objects in the first three grades of special schools are complicated. In terms of disability types, children with intellectual disabilities are still the main body, accounting for the vast majority. And children with multiple disabilities, autism, and cerebral palsy are also important components. In terms of age distribution, the age difference of students in grades 1-3 is too large, and many over-aged children are still placed in the lower grades.

This situation shows that on one hand, some children with disabilities in Sichuan province still cannot have access to school at a proper age, delayed enrollment into school, making some disabled children who are too old to start adaptation to school life. On the other hand, it also prompts careful consideration of students' age characteristics in the placement of students into special schools. Children with developmental disabilities should be placed in suitable grades according to their actual ability level, so as to ensure them to grow up and study with children at similar competence level.

2. The general situation of school adaptation for pupils with developmental disabilities

Students' performance is closely related to their adaptation to school life. This survey finds out that the overall situation of school adaptation for pupils with developmental disabilities in special schools is not satisfying with lower score than minimal requirement, which needs to be improved urgently. And the developments of the five sub-dimensions are not balanced. To be specifically, children

with developmental disabilities have better perform of school adaptation in the areas of sensory & movement, self-care & simple labor, while their performance in the areas of resource utilization & rule adaptation, interpersonal communication & activity participation needs substantially improvement. Moreover, their performance in the area of academic activities & common sense is the poorest and needs extra attention and urgently intervention.

3. Gender and geographical differences of school adaptation

Gender is a factor that is often considered in the comparison of children with disabilities. Whether there are differences of school adaptation between different genders is a question worth exploring. Based on this study, for children with developmental disabilities, no significant difference of school adaption exists between gender, which is consistent with the findings of recent researches (Q. Wang 2008; Y.K. Wang 2013; R. Sun 2015).

Children from different regions may have differences in school adaptation due to their previous life experience. This survey found that there is no significant difference of school adaptation between children with developmental disabilities from urban and rural areas. However, the recent researches find out that disabled children from urban area in general classrooms and special schools have better performances of school adaptation than those from rural areas (Y.K. Wang 2013; R. Sun 2015). Possible reason for the in-consistence between this study of the previous studies is that the participants from rural areas in this study involved a large number of older children.

4. Differences of school adaptation among different types of disabilities

According to recent study, school adaptation of children with disabilities is related to their type of disabilities, which means children with intellectual disabilities are the best, followed by children with cerebral palsy, and children with autism are the worst (Y.K. Wang 2013). The findings from this study also support that school adaptation of children with different types of disabilities are significantly different, and children with intellectual disabilities do the best in adaptation to school life. However, unlike the previous study, children with multiple disabilities are the most vulnerable group for school adaptation with significant variances to children with other disabilities. Meanwhile, children with autism are better than children with cerebral palsy in the area of sensory & movement, self-care & simple labor, but in the areas of academic activities & common sense accumulation, interpersonal communication & activity participation, resource utilization & rule adaptation are worse than that of children with cerebral palsy. These findings show that children's types of disabilities and the differences of school ad-

aptation in five sub-areas should be taken into consideration in the process of coming up targeted intervention strategies to improve their adaptation to school life. Relatively more attention should be paid to children with complex special needs such as multiple disabilities and autism.

5. Age differences of school adaptation

Usually, level of school adaptation increases with students' age. Recent study also points out that there are age differences in the adaptation to school life for children with disabilities. Being similar to the previous research, significant differences of school adaptation among children of different ages have also been founded in this study. The school adaptation of older children is significantly better than that of younger children.

Moreover, this age differences are mainly reflected in the areas of academic activities & common sense accumulation, interpersonal communication & activity participation, resource utilization & rule adaptation, and there is no significant age difference in the areas of sensory & movement, self-care & simple labor in the overall level. This shows that school adaptation of children with developmental disabilities is co-related with their natural maturation and the richness of their past experience, which supports the value of intervention of school adaptation for children with disabilities.

Conclusions

This study helps to understand the current situation of school adaptation of pupils in Peizhi department in special schools of mainland China. In conclusion, diverse disability types and large age span are the basic characteristics of pupils in Peizhi department of Chinese special schools. The overall situation of their' school adaptation is not satisfying and with unbalanced levels among sub-dimensions. Urgent improvement in the dimensions of resource utilization & rule adaptation, interpersonal communication & activity participation, and academic activities & common-sense accumulation are necessary for pupils' adaptation to school life.

There is no significant gender or geographical differences of school adaptation among children with developmental disabilities. However, significant variances are existing among children with different types of disabilities with the best school adaptation among children with intellectual disabilities and worst among children with multiple disabilities. And there are significant differences in school adaptation among children at different ages. The adaptation of older children is significantly better than that of younger children.

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