



Research article

Characteristics of students who require elementary school counselors' support owing to developmental disorders

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ABSTRACT

Awareness and support for developmental disorders are increasing in Japan. In the education field, support from school counselors for students with developmental disorders and their roles and responsibilities in elementary schools are on the rise. However, identifying and addressing specific conditions and developmental disorders that require school counselors' attention are not clearly planned. Therefore, this study explored the characteristics of students who require elementary school counselors' support owing to developmental disorders. The participants included 17 school counselors who were experienced in working at elementary schools. Through semi-structured interviews, 30 cases were discussed, examined, and categorized based on "case characteristics," "classification of the main complaint," "basic information on the diagnosis," and "type of support." The analysis included detailed viewpoints of 13 school counselors, a code frequency table, and contrast tables, focusing on the main complaint and diagnosis. Regarding the children whose main complaint was "school refusal," eight out of nine cases were in the fourth grade or above, with several cases of suspected developmental disorders or autism spectrum disorder. The number of children with comorbid attention-deficit hyperactivity disorder, including suspected cases, seemed to be higher, especially in Grades 3–5. The study highlighted the importance of assessing students' developmental characteristics related to the main complaint in the background of a secondary problem. Furthermore, early detection and interventions should be conducted in the first and second grades.

Abbreviations: ASD, autism spectrum disorder; ADHD, attention-deficit hyperactivity disorder; SC, school counselor.

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1. Introduction

1.1. Actual and current situation of children with developmental disorders

It has been pointed out that approximately 8.8% of children in Japanese schools have or are suspected to have a developmental disorder¹ [1]. In a recent survey conducted by the National Federation of Elementary School Associations in Japan, it was reported that approximately 6% of children with developmental disorders are enrolled in schools, and that children with developmental disorders have many difficulties not only in learning but also in controlling their emotions, communication, social skills, and other behavioral aspects. This is reported to be a challenge for them in their daily activities and learning [2]. Other literature studies have also been conducted on autism spectrum disorder (ASD), which investigated psychiatric comorbid disorders in childhood and adolescent ASD patients [3]. The results showed that the comorbid disorders of ASD were significantly higher in terms of developmental coordination and motor disorders and sleep disorders, compared to controls; the disorders with a 40% or higher rate of comorbidity with ASD were developmental coordination and motor disorders, attention-deficit hyperactivity disorder (ADHD), anxiety disorders, and sleep disorders. Many studies and reports suggest that children with or suspected to have developmental disorders are more likely to experience difficulties in school adjustment if there is no appropriate understanding of the related characteristics [4,5].

1.2. School counselors and developmental disorders

One of the non-teaching professional staff members in schools responsible for the care of developmentally disabled children is the school counselor² (SC). In Japan, SCs are specified in the 2016 revised Enforcement Regulations of the School Education Law as professional staff meant for supporting children [6]; since their introduction in schools in 1995 as part of a utilization project, their professional status within schools has finally been clarified in recent years. For supporting children with developmental disorders, SCs are expected to play the following roles: provide counseling to children on school education as psychological experts; implement educational programs that contribute to coping with difficulties and stress; give expert advice and assistance to teachers, staff, and parents on how to deal with children; and provide training to improve teachers' counseling skills [7].

1.3. Expansion and characteristics of school counseling activities in elementary schools

In recent years, a preventive, development-promoting perspective, an early detection, and early response approach to children's problems and challenges have become more required in student guidance [2]. Against this background, the government has been rapidly expanding the number of SCs assigned to elementary schools, including the scope of their duties [8]. In fact, the number of elementary schools with SCs assigned increased from 6412 in 2010 to 17,525 in 2020, an increase of nearly three times in 10 years [8].

A Japanese researcher pointed out the following as unique characteristics of SC activities in elementary schools: (1) paying attention to the developmental stage of childhood; (2) support for children with developmental disorders and other difficulties; (3) support for cooperation between preschool and elementary schools, and between elementary and junior high schools; (4) support and consultation for teachers who are aware of the classroom teacher system, (5) support, consultation, and counseling for parents; and (6) support for teachers who are aware of the classroom teacher system [9]. Additionally, particular emphasis has been placed on their support relationship with parents, coordination between the teachers and parents, and acknowledging parents' sense of trouble, tremors, and hesitations [10].

As for the actual content of their work, nearly half of the consultations given by SCs in elementary schools are related to children with developmental disorders [11]. According to a survey of elementary school principals, SCs accounted for 32.3% of the teachers providing special educational support other than homeroom teachers, an increase from 24.2% in the previous year [2], indicating the growing expectations for professional support. Elementary school in particular involves "the period of first contact with society" [12], wherein intellectual learning begins and children are expected to behave in accordance with group discipline; a mismatch between the characteristics required in groups and those of a child may lead to developmental disorders, particularly mild intellectual disorders,

¹ In Japan, "developmental disorder" in the field of education, as per the Developmental Disorders Support Act, includes ASD, Asperger's syndrome, and other pervasive developmental disorders; learning disabilities; attention deficit hyperactivity disorder; and other similar brain functioning disorders that are specified by a Cabinet Order as having symptoms that usually occur at a young age [79]. However, although the Developmental Disorders Support Act does not cover intellectual disabilities in Japan, the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition [62], which is used in many Japanese medical institutions, does. Therefore, there is a discrepancy between school personnel and practitioners over the term "developmental disorders" leading to confusion. Intellectual disability in a medical setting does not equate to developmental disorders in terms of administrative policy [79]. As intellectual disability and other diagnoses may overlap, intellectual disability is included in developmental disability in this study, as it is a practical point of view in school clinical situations, and because it is an introductory investigation in the field. The present paper focused on using "developmental disability" according to the DSM-V.

² In Japan, an SC's job title signifies their psychological profession in schools. Related qualifications include being a certified psychologist, which is a national qualification for the psychological profession that has recently emerged; being in a psychological profession certified by a public-interest foundation; and being a clinical psychologist, which is currently included in the qualification requirements for the SC position in many municipalities and schools certified by a general incorporated association, such as School Psychologist [80], which is a certification for psycho-educational aid professionals in the field. It has been reported that 83% of SCs are clinical psychologists [81], and the majority of these SCs are clinicians with master's degrees.

ASD, and ADHD [13,14]. Additionally, regarding the number of consultations received by elementary SCs in 2021, those related to developmental disorders ranked second among all consultation types (15%), being almost double the consultations (7.6%) received in junior high schools [15]. If we include the possibility that developmental disability characteristics may exist in the background of consultations that are not counted as developmental disorders, such as truancy, bullying, and peer relationship problems, there is a high need for consultations on developmental disorders obtained by elementary school SCs.

The above findings indicate that a basic understanding of developmental disorders and knowledge of support methods are essential for SC activities in elementary schools. Expertise is also needed to assess children according to their conditions, identify their developmental biases, strengths and weaknesses, and have the ability to take the necessary measures [14].

However, research on elementary school SCs in Japan is limited [9,10]. There is not enough literature that identifies the characteristics and uniqueness of SC activities focusing on elementary schools [13,14]. According to a review study, of the 148 articles on school counseling for all school types (elementary, middle, and high school), those on elementary schools accounted for 15.5% (23 articles), although the trend has been increasing since 2008 [10]. Among them, studies related to developmental disorders are even fewer, with only some suggesting a large gap between practice and research on SC consultations in elementary schools [16–19]. Therefore, children's classroom behavior and the support provided by SCs need to be examined.

Practical Characteristics and Research Issues of School Counseling in Elementary Schools for Supporting Children with Developmental Disorders.

Case studies and practical research have been the focus of research on school counseling for children with developmental disorders in elementary schools [16,17]. Among these, studies that highlight the importance of comprehensive support, including the school as a whole and the actual activities and processes related to counseling services, have been discussed in detail; however, there has not been sufficient discussion related to developmental disorders and their characteristics. Additionally, research has indicated that the proportion of cases with developmental disorders in the SC self-examination cases at their own elementary school was 51% of the total; the main complaints of maladaptive conditions involved truancy (33%), delinquency and verbal violence (75%), and bullying (33%) [19]. However, this information on SC activities was only related to one elementary school. Bias in the sampling method can be raised as an issue.

Interestingly, SCs in elementary school are assumed to have different expertise compared to SCs in junior high schools [14]. According to a survey conducted on elementary school SCs, about twice as many respondents answered that there were "different (unique) parts" in counseling and support depending on the presence or absence of developmental disorders compared to those who answered "no differences from others" [18]. The results suggest that there are significant differences in the initial interview, responses after the assessment, and approaches and support methods of SCs.

In light of the above, the characteristics of consultations, support methods, and diagnoses related to developmental disorders that SCs actually experience in elementary schools have not been fully clarified, including SCs' needs and their specific activities. Therefore, to understand the role currently expected of SCs in elementary schools supporting children with developmental disorders, it is necessary to conduct an exploratory study involving the content of consultations, the student's main complaint, whether they have been diagnosed with a developmental disability, and the support provided by the SC.

1.4. Challenges for school counselors in supporting children with developmental disorders

There are also several challenges in training elementary school SCs to fulfill the role of specialists. In recent years, there has been an increasing number of inexperienced SCs [20]. Additionally, since school counseling has been introduced as from junior high schools in Japan and its placement in elementary schools has been rapidly promoted, as mentioned earlier, support and training for elementary school SCs in Japan are still insufficient; immediate action thus needs to be taken for inexperienced SCs. However, according to a review of SC training in Japan, the current training system is inadequate to meet the diversified needs of SCs [21]. Regarding the training content, only three local governments have addressed the issue of developmental disorders.

1.5. Positioning of this study in the research on ASD and school psychologists in the United States

Here, we turn to the U.S. with defined roles for psychologists³ in schools, as the rapid increase in ASD diagnosis in the U.S. has been witnessed by many practicing psychologists over the past several decades [22–24], with most recent estimates rising from approximately 1 in 68 children [25] to 1 in 54 children [26], and finally 1 in 44 children [27]. Therefore, the demands for psychologists across all settings to provide effective ASD assessments and interventions are high and exceed the available resources [23,24,28].

School psychologists are uniquely trained to identify developmental deviations in a child's natural setting—the school [29]. This makes school psychologists ideal for identifying children with ASD, who might have been missed in other medical settings; however, not all school psychologists feel confident in their skills for ASD assessment [22]. They often encounter other systematic barriers specific to the school setting, namely administrative barriers [29]. While there is an abundance of research on the assessment and evaluation of children with ASD in clinical settings, a limited number of publications are specific to schools [30,31].

From 2002 to 2012, a structured review of the literature was conducted to determine the extent to which research on children and

³ Unlike school psychologists in the United States, Japanese school psychologists cannot provide a diagnosis and primarily assess the developmental characteristics of children. However, special education and some social services in Japan are available to individuals with and without a medical diagnosis, depending on their support needs.

adolescents with ASD was published in school psychology journals [30]. A total of 38 articles were identified and reviewed, which were published across six journals and seven categories: 1. Assessment and identification of ASD; 2. Investigation into a specific (intervention) technique; 3. Review of the state of the science regarding etiology of ASD or treatments; 4. Multiple concerns; 5. Consultation or other mechanisms of teacher support; 6. School psychologists' role in service delivery; and 7. Issues regarding broad-level service delivery, including legal challenges/controversies. It was emphasized that school psychology could contribute to overall ASD assessment by examining the important role of contextual influences on assessment and intervention outcomes; however, none of the reviews of intervention approaches published within school psychology journals were meta-analyses, indicating that primary interest in evaluating the state of ASD exists in related fields rather than within school psychology. This calls for further research in the field of school psychology on students with ASD.

A systematic review of publications in 10 school psychology journals from 2007 to 2017 to assess the current state of ASD assessment and evaluation research in the field of school psychology revealed that a total of 117 articles focused on ASD broadly, with 30 articles emphasizing ASD assessment and evaluation in their analyses [32]. Thematic analyses of ASD assessment and evaluation focused in the abstracts yielded 47 codes that were grouped into eight categories: (1) Knowledge, Practice, and Training; (2) Domains of Functioning; (3) Assessment Purpose; (4) Assessment for Intervention; (5) Measure Evaluation; (6) Factors Impacting Assessment; (7) Behavior; and (8) Method of Assessment.

There is thus a need for more research on ASD assessment in school psychology journals to address the research-to-practice gap [22, 33]. This study's location in current practice would be in (1) Knowledge, Practice, and Training [30,32]; this study could be positioned as (6). *School psychologists' role in service delivery*. Research on Japanese SC practice with developmentally challenged children, may contribute to this gap in practice and research. This helps relatively examine psychologists' role in ASD and special needs education, by comparing them from an international perspective.

1.6. Positioning of this study in the research on SCs in East and Southeast Asia

Here, we describe the position and contribution of this research on SCs in East and Southeast Asia. School counseling in East and Southeast Asia has experienced significant growth in recent years [34,35]. However, the professional identity of SCs in East and Southeast Asia is generally weak, and research on SC identity in the region is sparse [36]. Counsellors' roles have become more clearly defined as school counseling has evolved and become more professional in the U.S. and elsewhere [37,38]. While school counseling encompasses various roles across the East and Southeast Asian regions, which reflects its heterogeneous development, the proportion of time spent on different activities varies greatly across countries, education systems, and schools [36].

There is often a poor distinction between the roles of SCs and those of other professions. Counsellors perform roles that overlap with teaching [39,40], which is a significant issue in Asia where guidance or pastoral care is often part of teachers' remit [41]; guidance is also traditionally associated with discipline [42,43]. In practice, due to poor resources and school leaders, counsellors perform a wide range of duties, many of which are unrelated to counseling [44].

Given the above background, the present study clarified the needs of children with developmental disorders for elementary school SCs and showed the actual status of their activities, thereby providing a model, which may be applied to East and Southeast Asian settings where the roles are likely to be ambiguous. In particular, the data may be more applicable compared to models and activities conducted in Europe and the U.S. because of the close cultural proximity and grounded nature.

1.7. Suspicion of a developmental disorder

Several reasons prove the need for including a wide range of cases, including children with suspected developmental disorders, in the study. The Ministry of Education, Culture, Sports, Science and Technology surveyed teachers for the presence of "students with possible developmental disorders who are enrolled in regular classes and require special educational support." Including similar cases in this study will ensure close consistency with the current situation in Japanese schools [1]. According to MEXT guidelines, regular classroom teachers are required to provide support from the undiagnosed stage [45]. Therefore, it is important to consider children without diagnosed disability, who still require support. Furthermore, of the 8.8% of the children with special educational needs surveyed in this study, who are enrolled in regular classes and have probable developmental disorders, 70.6% were not determined to need support [1]. This supports previous research findings that ASD symptoms are continuously distributed in the general population, with no boundary between affected and unaffected areas, and with gradually increasing or decreasing severity [46,47]. Additionally, although the need for supporting Japan's children with developmental disorders is increasing, the number of medical institutions offering diagnosis and treatment is limited, resulting in waiting times ranging from one to several months for an initial consultation [48].

It was assumed that identifying the needs and characteristics of SCs in elementary schools attended by children with potential developmental disorders would be feasible. It would also be fruitful to examine the possibility of utilizing SCs in such Japanese schools in the future, including cases with suspected developmental disorders.

1.8. Purpose and significance of the study

This study explored the characteristics of students requiring elementary school counselors' support, owing to developmental disorders. We considered it desirable to select a research method suitable for obtaining exploratory findings due to the paucity of previous studies. Additionally, we considered that a detailed and thick description of each case would be required for this purpose. We

thus decided to conduct a qualitative analysis by collecting data using an interview survey method with SCs who actually have experience working at elementary schools. Consequently, practical and theoretical knowledge useful for the support and practice of SCs can be obtained from multiple perspectives, including the training of elementary school SCs in the future. Specifically, we thought that clarifying the content of consultations related to developmental disorders and the characteristics of students targeted by elementary school SCs, which have rapidly increased in Japan, would lead to (1) clarifying the role of school SCs in supporting children with developmental disorders and (2) suggestions regarding the training and development of SCs. Additionally, by clarifying these characteristics, a model for the support of children with developmental disorders in a school by psychologists will be presented. This model is expected to be used in other countries with different educational systems.

2. Methods

2.1. Design and participants

Qualitative research was adopted for this study. It involved a hypothesis-generating research method that is useful for examining the case characteristics of children with developmental disorders, yet involving SCs in an exploratory manner. Interviews were conducted with 17 SCs; all of them were clinical psychologists with experience in elementary schools (Table 1), yielding 30 case narratives. These SCs were participants whom the author could directly contact (e.g., by e-mail), explain the purpose of the survey and inclusion criteria, and interview after written informed consent was obtained.

The specific inclusion criterion was that the SCs had provided support to the children directly, along with parents and teachers. We selected participants who were as diverse as possible in terms of age, gender, and experience. Additionally, since the SCs' background and type of work differed depending on the location, this study assessed school counseling surveys completed by SCs in multiple municipalities.

3. Data collection

The SCs were informed of the survey content and those who wanted to participate were encouraged in interviews regarding the "details about cases and support involving children with developmental disorders" and "their collaboration with teachers and legal guardians of children with developmental disorders." This aided us in investigating how SCs should support various students with varying disorders and needs, while including their guardians and teachers. The above-mentioned information was shared by e-mail in advance, ensuring that SCs could give us examples that matched our objectives and asked them to prepare for the interview accordingly. This was followed by a semi-structured, 60-min, face-to-face interview. Note that all semi-structured interviews were conducted individually, and group interview techniques were not used. No restriction was placed on the number of cases that an SC could discuss, which they had addressed across the entirety of their career. The study included cases that (1) were diagnosed prior to being assigned to an SC, (2) received a diagnosis of a developmental disorder and warranted SC support, and (3) were suspected of having a developmental disorder, however, with no diagnosis at that time. The cases, SCs, and schools were the focus of the analyses. A researcher transcribed all narratives.

Regarding ethical considerations, we informed the SCs that the identifiable details of the individual cases discussed should not be revealed. Additionally, the SCs provided informed consent to participate in the interviews and for them to be recorded. Clustering method was adopted to classify the data.

3.1. Data analysis

The interview data included 30 cases. Using a code frequency table [49] to explore the distribution of case details, data were organized into four categories (a-b) based on the following 13 viewpoints; a) "classification by main complaint": (1) type of teacher instruction (classification of the main complaint from the two main job divisions of teachers in Japan), (2) detailed classification of the main complaint (problems and challenges expressed by the children in consultation with the SCs), b) "case characteristics": (1) consultation request made to SCs (subject who requested SCs to provide consultation regarding children), (2) time when the SC became involved (first to sixth grades), (3) whether support from other institutions was sought by children and parents (whether the child or parent/guardian used an out-of-school facility for developmental disorder support), c) "basic information on diagnosis": (1) presence or absence of a diagnosis before the start of support, (2) presence or absence of a diagnosis after support, (3) diagnosis⁴ (the name of the diagnosis was mainly based on the DSM-5; if a sub classification was not obtained, it was coded as developmental disorder), and d) "type of support": (1) presence or absence of the implementation of consultation (whether SCs consulted with teachers and school officials about the children; if they did, it was coded as "Yes" and if not, "No." The following types of support were processed in the same way), (2) guardian interview conducted (whether SCs conducted interviews with the parents of the children), (3) presence or absence of the implementation of school adjustment (whether SCs coordinated with child-related personnel in the school or not), (4) presence or absence of collaboration with other institutions (whether SCs worked with the facilities that the children and their parents used), and (5) performing psychological intelligence tests and obtaining their results (whether SCs conducted intelligence and

⁴ We converted and coded DSM-IV-TR using the DSM-V. In the case of DSM-IV-TR [82], we coded it as intellectual disability. If there was an overlap with intellectual disability, it was coded as intellectual disability.

Table 1
Characteristics and activity frequency of school counselors (N = 17).

ID	Gender	Age (years)	Length of experience ^a	Local Area	Activity frequency in elementary schools ^b
1	Female	20s	2	Large City	On request
2	Female	20s	2	Large City	Biweekly, 8 h
3	Female	20s	2	(1) Large City (2) Small city	(1) On request (2) Weekly, 8 h
4	Male	30s	5	Small city	Weekly, 8 h
5	Female	30s	7	(1) Large City (2) Large City	(1) On request (2) Biweekly, 8 h
6	Female	30s	6	Large City	On request
7	Male	40s	1	Large City	On request
8	Female	20s	3	Large City	On request
9	Female	30s	3	Large City	On request
10	Female	20s	4	Large City	Monthly, 4 h
11	Male	30s	11	Small town	On request
12	Female	20s	3	(1) Large City (2) Large City	(1) On request (2) Monthly, 8 h
13	Female	30s	2	(1) Large City (2) Small city	(1) Biweekly, 4 h (2) weekly, 8 h
14	Female	40s	7	Large City	On request
15	Female	30s	6	Small town	On request
16	Male	30s	6	Large City	Weekly, 8 h
17	Female	20s	3	Large City	First year biweekly, 8 h; second year on request

^a years as an elementary school counselor.

^b According to the 2019 School Health Survey, the placement of SCs in elementary schools was 22.7% for 4 h or more per week, 31.5% for less than 4 h per week, 30.5% for irregular placement, and 15.3% for none.

psychological tests). There is a high demand for psychologists for the assessment of cognitive characteristics using psychological and intelligence tests, especially for children with developmental disorders in Japan [50]. A study reported that an intelligence test was conducted as part of a survey on special needs education with SCs at junior high schools; hence, this item was established [51].

Owing to the importance of examining the main complaint regarding supporting children with developmental disorders in elementary schools, further classification was made from multiple perspectives [18,52]. The content included in the main complaints was organized into three perspectives. First, main complaints were further classified into student guidance and learning instruction as the main types of guidance when the main complaint came from a teacher. Second, those that were difficult to classify were coded as “other.” This was because a Japanese teacher’s role can be divided into learning instruction and student guidance. Specifically, learning instruction entails providing basic knowledge and skills within the framework of a subject and helping students develop the ability to use what they learn to solve problems. For example, students may acquire the knowledge of History and Geography or the skills to be able to perform calculations using mathematical formulas. At the core of student guidance are activities that foster qualities and abilities necessary for teachers to provide learning instruction and are fundamental to social interactions. For example, students may interfere with other students’ learning, fail to comply with class or school rules or obligations, or behave in a way that violates the law. Student guidance also informs them about how they can address problems.

Furthermore, we classified the main complaints in two ways: first, by “type of teacher instruction,” which included (1) school guidance, (2) learning instruction, and (3) other; and second, by “detailed classification of the main complaint”; the main complaints identified from the interviews were categorized, and similar complaints were grouped together as (1) school refusal, (2) academic abilities, (3) social adjustment abilities, (4) antisocial behavior, or (5) other (e.g., guardian correspondence). If there was an overlap, we coded the one considered more difficult (e.g., Antisocial behavior > Social adjustment difficulties or School refusal > Social adjustment difficulties). Other researchers experienced in qualitative analysis verified the category assignment based on content.

3.2. Ethical considerations

This study was approved by the Ethics Committee of Kagoshima University Faculty of Law, Economics, and Humanities (approval no. 7).

The SCs were informed in writing about the purpose and background of the study and ethical considerations. Specifically, all names of schools and individuals were anonymized and the SCs themselves were asked to talk so that individuals would not be identified. All information that might lead to the identification of individuals, including the SCs themselves, was anonymized when the interview data were converted verbatim. Regarding consent from the students and their parents, we informed the SCs that the researcher would obtain consent addressed to the school principal and to the individual and his/her parents, and left the decision regarding the necessity of such consent to the respective SCs, who were the direct interviewees.

4. Results

A code frequency table was created for all cases according to their respective variables (Table 2) [49]. All items in each category

were counted to categorize them under similar concepts using the clustering method. The 30 cases obtained were surveyed and searched for overall trends.

As Table 2 shows, type of teacher instruction comprised 83.3% of the cases for student guidance. The following diagnoses were observed, in descending order: school refusal (30.0%), social adjustment difficulties (26.0%), antisocial behavior (23.3%), academic difficulties (10.0%), and other (10.0%). Overall, 70% of the cases for consultation were reported solely by homeroom teachers and 87% by school staff members. The grades showed no significant bias within the cases collected, with four to six cases per grade. Overall, 73.3% of the parents and children received support from other agencies. Additionally, 79.3% were suspected of having, but not diagnosed with, a developmental disorder before SC involvement (“I often met with parents who had not yet been diagnosed, so I provided them with information that the school and parents were having problems, and that it might not be the child’s problem, but the background of the problem [Info. 17]”). After SC involvement, 60.0% were suspected of having, but not diagnosed with, a developmental disorder. The following diagnoses were primarily observed: ASD (40%), ADHD (23.3%), developmental disorder (23.3%), and intellectual disability (13.3%). Based on support type, it was revealed that although consultations (90.0%; “The SCs themselves go around the class and look at the various children, and if they find something that concerns them, they share that information with the homeroom teachers and provide support [Info.11]”), parent interviews (73.3%; “The mother herself was able to sort out some of his characteristics, put the SC’s advice into practice for now, and had a sense that it was okay to consult with others [Info.15]”), and school adjustment (73.3%; “The SC will tell the parents about the teacher’s efforts and hardships, and the mother and teacher himself will tell them about his efforts and feelings, and then the distrust between the two will subside [Info.3]”) were conducted in most cases, psychological and intelligence tests were rarely only implemented (6.7%; “Some municipalities have testing available at school, so we can connect the child’s difficulties at home with the testing, and clearly convey the child’s sense of difficulty, which may be difficult to see, and the measures we can take to address it [Info.13]”). Cooperation with other organizations (36.7%; “There was a high need from the teachers to connect to a specialized agency, or to meet the pace of the mother’s feelings [Info.7]”) was

Table 2
Case characteristics of elementary school children with developmental disorders (N = 30).

	Variable		n	%
Classification by main complaint	Type of teacher instruction	Learning instruction	3	10.0
		Student guidance	25	83.3
		Other	2	6.7
	Detailed classification of main complaint	School refusal	9	30.0
		Academic difficulties	3	10.0
		Social adjustment difficulties	8	26.0
		Anti-social behavior	7	23.3
		Other	3	10.0
Case characteristics	Consultation request to SC	Homeroom teacher	21	70.0
		Guardian	3	10.0
		School’s nurse	2	6.7
		School administrator	3	10.0
		Other	1	3.3
	Time when SC became involved	First Grade	4	13.3
		Second Grade	4	13.3
		Third Grade	5	16.7
		Fourth Grade	5	16.7
		Fifth Grade	6	20.0
		Sixth Grade	5	16.7
		Unknown	1	3.3
	Children and guardians use other institutions	Yes	21	72.4
		No	8	27.6
	Basic information on diagnosis	Diagnosis before support	Yes	6
No			23	79.3
Diagnosis after support		Yes	12	40.0
		No	18	60.0
Diagnosis (Includes suspected)		Developmental Disorder	7	23.3
		Intellectual Disability	4	13.3
	ADHD	7	23.3	
Type of support	Consultation	Implemented	27	90.0
		Not Implemented	3	10.0
	Parent interview	Implemented	22	73.3
		Not Implemented	8	26.7
	School adjustment	Implemented	22	73.3
		Not Implemented	8	26.7
	Cooperation with other organizations	Implemented	11	36.7
		Not Implemented	19	63.3
	Intelligence/psychological test	Implemented	2	6.7
		Not Implemented	28	93.3

Note. Some categorical data had missing values, the reason is that the SC did not hear certain information during the interview, resulting in 29 data in two categories instead of 30. SC = school counselor; ASD = autism spectrum disorder; ADHD = attention-deficit hyperactivity disorder.

Table 3
Contrast table for detailed classification of main complaint (N = 30).

Complaint	Grade					
	First (age 6–7)	Second (age 7–8)	Third (age 8–9)	Fourth (age 9–10)	Fifth (age 10–11)	Sixth (age 11–12)
School Refusal (n = 9)			DD (Sus)	ASD (Sus) DD (Sus)	ASD ASD (Sus)	ASD ASD (Sus) ASD (Sus) DD (Sus)
Antisocial Behavior (n = 7)		ID + ADHD (Sus) ADHD ASD (Sus)	ADHD (Sus)	ADHD (OSP)	ID + HD (Sus) ASD (OSP)	
Social Adjustment Difficulties (n = 8)	ASD (OSP)		DD (OSP)	ADHD ADHD (OSP)		
Academic Difficulties (n = 3)	ID (Sus) DD (Sus)		ASD	ADHD (Sus)	DD (Sus) DD (Sus)	ID + ASD (Sus)
Other (n = 3^a)	ASD	ADHD (OSP)				

Note. DD = developmental disorder; ASD = autism spectrum disorder; ID = intellectual disability; ADHD = attention-deficit hyperactivity disorder; HD = hyperactivity disorder; Sus = suspected; OSP = on the support process. ^aThe grade is unknown for students classified as “other.”

low compared to the percentage of children and parents using other institutions (72.4%; “When the diagnosis was made and then the medication was also given, I was referred to a hospital, where I was involved with the hospital, the school counselor, and the child welfare ministry for family issues [Info.5]”).

To further clarify the above results, understand the meaning of the variables, and capture possible outcomes of the study and how they are replicated across different cases, a qualitative matrix was created. This matrix focused on the characteristics of students who required school counseling (i.e., the main purpose of this study), diagnoses considered important in supporting children with developmental disorders, and the grade level at which SC support should be provided, based on results in Table 2. A contrast table (Table 3) was created centering on the “main complaint” from the dimensions obtained from the examples [49].

Specifically, the problem types based on the teachers’ viewpoints were as follows: “school refusal group,” “academic difficulty group,” “social adjustment difficulty group,” “antisocial behavior group,” and “other.” As displayed in Table 3, an exploratory analysis was conducted regarding the relationship between “when the SC became involved” and “diagnosis (including suspected).” Regarding cases of children where the main complaint was school refusal, Table 3 shows that eight out of nine cases were in grades four through six. Additionally, many cases of suspected developmental disorders, including ASD, were present among children who refused to attend school. Furthermore, several first graders had learning difficulties as the main complaint. Cases with the main complaint of difficulties with social adaptation included students predominantly from third to fifth grades.

Next, another contrast table (Table 4) was created, focusing on “diagnosis (including suspected)” from each dimension obtained from the cases. Specifically, cases were first divided into four groups: “intellectual disability group,” “developmental disability group,” “ASD group,” and “ADHD group.” Then, we examined the relationships between each group in terms of “when the SC became involved” and “the main complaint,” as displayed in Table 4.

Focusing on classification by diagnosis, six out of 12 cases in the ASD group were in the fourth and sixth grades. Additionally, six out of 12 cases in this group displayed school refusal and related tendencies. For fifth and sixth graders, school refusal was found in five out of six cases. All the seven cases in the ADHD group were in the second to fourth grades. Six out of seven cases in the ADHD group showed social adjustment difficulties and antisocial behavior.

Table 4
Contrast of diagnostic classification (N = 30).

Diagnostic Group	Grade					
	First	Second	Third	Fourth	Fifth	Sixth
ASD^a (n = 12)	SAD OT	ASB	SAD	SR	SR SR ASB	SR SR SR
ADHD (n = 7)		OT ASB	SAD ASB	SAD SAD ASB		
Intellectual Disability (n = 4)	AD	ASB			ASB	AD
Developmental Disorder (n = 7)	AD		SR SAD	SR	SAD SAD	SR

Note. SR = school refusal (e.g., school refusal, school refusal tendency, poor attendance); ASB = anti-social behavior (e.g., stealing/picking, class interruption, violence, class disruption); SAD = social adjustment difficulty (e.g., walking around classroom during class time, leaving seat and restlessness, interpersonal trouble); AD = academic difficulties (e.g., academic difficulty, difficulty keeping up with lessons); OT = other (e.g., autism tendency, the child the teacher cares about); ^aGrade level unknown for this student with ASD.

5. Discussion

This study explored the characteristics of students and cases requiring support from elementary SCs owing to developmental disorders. Overall, 90% of the consultations sent to SCs were from school personnel. The main complaint in these consultations that led to the visit was regarding student guidance. It was observed that SCs are dealing with various cases centering on school refusal and social adjustment difficulties related to developmental disorders, especially for cases at the stage of doubt. Therefore, it can be concluded that the roles of SCs at various grades of elementary school are related to student guidance, as requested by school personnel, before receiving a diagnosis of developmental disorders. One of the diagnostic features in the current study was the category of developmental disorders. Previous reviews have reported that 30–80% of children with ASD meet the criteria for ADHD, and 20–50% of children with ADHD meet the criteria for ASD [53].

In many cases, parent interviews, consultations, and school adjustment were conducted. Despite the low demand for SC consultations from parents, several parent interviews were conducted. This is consistent with the findings of previous studies on the necessity for supporting children with developmental disorders [22,54], suggesting that support with eclectic approaches is currently being provided. Additionally, although students and parents often received services from other institutions, there was limited cooperation between these institutions and the elementary SCs. This could be related to the working pattern of SCs [55]. Intelligence tests were rarely conducted, and thus, the primary type of support provided for children with developmental disorders in elementary schools was SC consultations based on informal assessment. As pointed out by researchers, the topic of SCs conducting intelligence/psychological tests in schools must be further discussed based on the uniqueness of the SCs (e.g., the working patterns and history of SCs in Japan) [22,29].

Centered on these features and focusing on the details of the main complaint, five main groups were created, and the developmental characteristics and grades of students were compared. Regarding the children whose main complaint was “school refusal,” eight out of nine cases were in the fourth grade or above, with several cases of suspected developmental disorders or ASD. Thus, school refusal was a common and evident concern among children with developmental disorders, including ASD, fourth grade onward. Therefore, this study can be considered a valuable source of information regarding the difficulties experienced by school-age children with ASD. Additionally, ASD has been found to be associated with other mental disorders, including anxiety disorders (42%), which are most prevalent among individuals with ASD [56]. In a previous meta-analysis of comorbid disorders, developmental coordination disorder and sleep disorders were significantly more prevalent among children and adolescents with ASD than in controls [3]. Considering that 78% of children with ASD have co-occurring mental health problems, including previous studies’ results [57], children who choose to withdraw from school to avoid interactions might be experiencing interpersonal difficulties that are caused by ASD or other comorbid disorders. Assessment of developmental characteristics in conjunction with secondary problems may allow for more comprehensive assessment and support.

The cases in which the main complaints were social adjustment and antisocial behavior were particularly evident among third to fifth graders. The prevalence of oppositional defiant disorder in children with ASD has previously been reported to be 6.9–45% [3], whereas that of ADHD to be 30–45% [58,59]. In this study, the number of children with comorbid ADHD, including suspected cases, seems to be higher, especially in Grades 3–5. This can be attributed to children in higher grades learning more difficult content than in the first and second grades and an increase in the level of required group cooperation. In Japan, the expression “the 10-year-old barrier” is used to indicate the difficulty of adaptation experienced after the third grade of elementary school [60]. Furthermore, maladaptive behaviors and inflexible identity-congruent thoughts and actions in the case of individuals with ASD are misunderstood as intentional defiance [61]. Especially in the case of children who are suspected to have a developmental disorder, teachers may struggle to understand the students’ behaviors or how to approach them. These findings, therefore, suggest that in case of antisocial and adaptive difficulties, regardless of a medical diagnosis, sharing SCs’ assessments that highlight any ADHD/ASD characteristics or behaviors in the child with their teachers and parents can help prevent the development of defiant disorder-like behaviors. In fact, the lowest reported prevalence of oppositional defiant disorder in children with ASD was among students in developmental support groups and special needs schools [3]. Most cases in which learning difficulties were the primary complaint were in the first or sixth grade. Thus, homeroom teachers were aware of the tendency to face more challenges before and after the transition from kindergarten or preschool to elementary school, and from elementary to middle school, leading them to consult with the SC. Thus, SCs need to be more proactive in helping children make a seamless transition to school.

Additionally, in 79.3% of the cases, developmental disorders were suspected before an SC became involved. As there are few hospitals that specialize in developmental disorders and their wait times are long, obtaining a medical diagnosis may be difficult, even if school personnel require one [48]. Consequently, many suspected cases get referred to psychologists, resulting in a situation similar to that in the U.S [23,24,28]. The findings suggest that when developmental disorders are suspected, Japanese SCs can help by carefully assessing the early stages. In the future, necessity may arise for examining the role of SCs and school psychologists in the early detection and intervention stages, as the support provided by them to elementary school children in this stage may differ from region to region.

As Table 4 demonstrates, difficulties related to different developmental disorders might become apparent at differing grade levels. Particularly, students who had or were suspected of having ASD tended to connect with SCs because of the school refusal complaint; this issue was clearly more common in higher level grades. Initial evaluations for ASD eligibility may be required for school-age students, considering how some children do not show significant signs of social impairments associated with ASD until social expectations exceed their abilities [62]. Hence, early detection may become difficult. Current Japanese large-scale data indicate an ASD prevalence of 3.22% among preschool 5-year-old children [63]. Therefore, in a class of 40 students, one child could possess ASD. This indicates the crucial need of creating a school environment sensitive to children with ASD, especially in the higher-level grades. In

Japan, school refusal is the most common reason (18%) for consultation with the SC in elementary schools [15]. Therefore, it is important to not overlook truancy and to consider whether there is a developmental disorder underlying truant behavior among students in upper grades. Furthermore, the ADHD group, among the second to fourth graders, may experience difficulties in school adaptation, including difficulty in social adjustment and antisocial behavior, partly due to their high rates of disruptive, noncompliant, and intrusive social behavior; this is because students with ADHD also experience significant difficulties building positive relationships with peers and adults [64]. Approximately 50–70% of children with ADHD have comorbid oppositional defiant disorder, although this varies across countries [65,66]. Additionally, oppositional defiant disorder is a critical point in halting the DBD shift—the transition from ADHD to oppositional defiant disorder and conduct disorder is likely as the child gets older, if appropriate measures are not taken [67]. In this study, the same tendency—that is, the link between ADHD and conduct disorder in school-age children—was observed in the data for cases assessed by the SCs. The results also suggest the need to increase sensitivity toward early detection and adoption of preventive measures for children in the first and second grades of elementary school with suspected ADHD before the consultations with the SC leads to medical support.

Owing to the increasing cases of students with developmental disorders, additional research is needed to provide a more comprehensive list of elementary SCs' activities and duties. In the future, we must consider students' developmental traits and main complaints, as well as SCs' approaches. Furthermore, conducting future studies with a larger sample is vital to ensure greater generalizability of the findings. The results of this study create a platform for future researchers to investigate the relationship between grade level and the expression of developmental disorders assisted by SCs. Moreover, additional case studies must be conducted to allow for meta-analyses and program evaluations on elementary school counseling for students with developmental disorders. In this study, to clarify the characteristics of SC activities for children with developmental disorders in Japanese elementary schools, a wide range of case studies, including cases at the stage of doubt, were included. However, future research should further clarify the requirements of SCs and the characteristics of their activities by exploring their role in supporting students with a more formal diagnosis. This study has its limitations in terms of internal and external validity. Two aspects of data collection may be considered problematic for this study. The first is the issue of target population for data collection. To clarify the needs and roles of SCs, this study firstly adopted the method of interviewing SCs to generate hypotheses in this area, where there have been few previous studies. However, it is necessary to collect data not only from SCs but also from multiple aspects, such as what kinds of teacher observations are obtained by the target children and their ability to cope with problems they face in class; through this, it is possible to further clarify the needs of SCs in supporting children with developmental disorders. In the future, the validity of the data could be enhanced by combining official records and other information, along with reports recalled by the SCs. The second is the data collection method. Except for a few cases in this study, none of the data collected from SCs involved the evaluation of target children using intelligence tests or questionnaires. This is due to the fact that in Japan, SCs often do not conduct in-school assessments using psychological tests [68], and there are regional agreements on whether or not to conduct such assessments [54]. However, in some cases, intelligence tests such as the Wechsler Intelligence Scale for Children (WISC) were administered, or SCs were aware of the results of tests administered by other organizations. As it was difficult to collect these data in other cases, whether or not intelligence tests were administered was included in the items this time. We considered it difficult to analyze the information as quantitative data that would lead to subject classification and excluded them from the items for analysis. However, given the importance of evidence-based assessment [22,29], it is necessary to conduct a multidimensional assessment of developmental disorders and their characteristics for SCs using quantitative data in the future. It is also important for research to use quantitative data for subject classification and qualitative findings. In the future, the mixed research methodology proposed in some studies [69,70] to collect and analyze quantitative and qualitative data, including of teachers and parents, will help clarify the characteristics of and support for children with special needs, as well as SCs' roles.

6. Conclusions

There has been no study in Japan to date that has conducted a meta-analysis of cases of SCs experienced in working at elementary schools. Through the present analysis, we believe that we have found a new relationship between the grades, primary and secondary problems, and developmental characteristics of the cases targeted by the SCs. Based on the results of our study, two suggestions can be considered suitable for elementary SCs. First, the viewpoint of assessing students' developmental characteristics related to their main complaints, considering the presence of other problems, is important. The needs of students were not only related to developmental disorders but were also associated with other problems along with them and many cases did not receive a diagnosis. The importance of developing a system to support children with developmental disorders within communities outside of medical institutions has been previously highlighted [48]; psychologists in schools can play a significant part in this, as they can offer and coordinate support within the context of the child's life [30,32]. Second, Table 3 shows that early detection and intervention, according to developmental characteristics, in the first and second grades, are required. In the case of SCs in Japan, the level of psycho-educational support is mainly related to tertiary support services. Barring some exceptions, discussions regarding how school counseling is positioned in special education as a primary or secondary service and how it relates to children with developmental disorders are inadequate [18, 51]. In the future, it will be necessary to develop activities, such as support for developmental disorders, according to the level of service. Moreover, further focus on the need for evidence-based assessments and utilizing these assessments for early detection within the school context is required [22,29,71]. Given SCs' access to observing students in a natural, classroom setting, it is possible that school psychologists will find informal assessment information more useful than formal assessment information when determining ASD eligibility for special education services [22]. However, these interventions should be intended to prevent secondary problems.

Finally, school counseling in East and Southeast Asia has enormous potential for assisting children in these regions who struggle with poor mental health [72,73]. The wide variety of roles that school counseling encompasses across the East and Southeast Asian

region reflects its heterogeneous development, with the time spent on different activities varying widely across countries, education systems, and schools [36]. When considering the role of the SC as a leader in mental health problems, the developmental characteristics underlying various maladaptive behaviors, as found in this study and previous research showing that 78% of children with ASD have co-occurring mental health problems [57], suggest the importance of a more comprehensive assessment and evaluation of SCs.

In particular, the White Paper on the World of Children warns that children and adolescents may continue to suffer the mental health consequences of novel coronavirus infections (COVID-19) for many years to come [74]. Additionally, the psychological impact on teachers and administrators is also significant [75,76]; it can thus be assumed that the vicious cycle of COVID-19 among the entire school community will affect children. The occurrence of COVID-19 can also cause various effects on physical and mental health, especially in children with special needs [77], which can be exacerbated by separation from school, peer groups, and support services [78]. Considering the above, multifaceted assessment for supporting both mental health and developmental disorders, is an important perspective for psychologists in East Asia, Southeast Asia, and the United States. Further research on culturally contextualized surveys and support approaches is expected in the future.

Author contribution statement

Yutaro Hirata: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper. Eiji Ozawa: Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data.

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Data availability statement

Data will be made available on request.

Declaration of interest's statement

The authors declare no competing interests.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.heliyon.2023.e13791>.

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