

Inducers of Difficulty in Attending School (School Absenteeism) And Educational Evolution

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Children have major developmental challenges, and in order to achieve them, it is important to make their own efforts under support of their families, educational institutions, and communities surrounding them. Especially in Japan, in addition to the problem of the declining birthrate, socially attracted problems such as "truancy/withdrawal", "bullying/violence", "self-harm/suicide" of children have become so serious that they do not only distort the healthy growth of children but also ultimately undermine the free thinking as well as courage and passion of young people to take on new challenges, and hinder creative production activities. There is no doubt that this is a serious issue that could cast a dark shadow over international reputation of Japan.

Therefore, among the above problems, I would like to focus on the central problem "**truancy** or **school absenteeism**", investigate the characteristics of the inducers behind it, and point out that the education system in Japan that could exude the **Achievement Supremacism** exacerbates "truancy". Furthermore, we hope that the proposal of a new educational system in this paper will help children grow up freely and uprightly, and to realize a richer parenting environment for families and society that watch over children.

This paper consists of the following chapters:

Chapter 1: The Current Status of Difficulty in Attending School (DAS).

Looking back on the "truancy" problem that the author has been involved in for more than 20 years, we will introduce the current status in Japan. In particular, I would like to analyze the characteristics of the DAS experienced by about 1,000 children in medical care for the last 11 years.

The definition and classification of DAS status in this paper is as follows. DAS is defined as "Children feel a strong sense of resistance to going to school, regardless of whether they intend to go to school or not, but families, educational institutions, and communities want the children to attend school, and this conflict creates feuds between children and their families and related organizations, resulting in anxiety/depression, somatization, social withdrawal, self-harm/suicide behaviors, antisocial behavior, etc. A style of attendance that leads to chronic absenteeism by falling into a vicious cycle that

further exacerbates the DAS." This includes physical and/or mental illness of children and family members, abuse and violence, commuting problems such as inconvenient transportation of going to school, economic problems in the child-rearing environment, and social and ethnic prejudice. However, special attention should be paid to physical and/or mental illness. For example, even if it seems to be a physical illness, it may be a somatization phenomenon due to psychological conflict, or conversely, psychiatric symptoms such as anxiety and depression may be partial symptoms of various physical illness such as an endocrine disease. Therefore, this evaluation requires judgment by psychosomatic physicians or psychiatrists, and in principle, it is desirable that children who have DAS should receive medical examination. Recently, due to the "negative orientation" of children and families toward mental disorders and/or the "excessive consideration" of educational institutions, there are cases in which mental disorders are excluded from the cause of DAS, and there are cases where mental disorders are taken in dogmatically as a personal psychosocial problem.

DAS status is classified as follows: (1) reluctant school or kindergarten attendance (hereinafter referred to only as **reluctant attendance**), (2) **irregular attendance**, (3) **ectopic or off-class attendance** in a separate room, (4) **refusal attendance** (including truancy), (5) **mixed status**, are assumed. Reluctant school attendance can be a precursor to "truancy", but it can also be transient in early grades of elementary children. In the morning of school day, he/she sometimes reluctantly goes to school after rubbing with his/her parents, and when he/she is at school, he/she has a good time. Separation anxiety is often hidden in the background. Irregular school attendance is seen in the early stages of "truancy", and after a long vacation such as summer vacation, parents are surprised and angry at DAS of their child, they desperately urge him/her to go to school, and finally the child goes to school while struggling or sometimes misses school as if to relieve the fatigue accumulated from distressed commuting. The child develops tolerance for repeated parental stimuli to go to school, and he/she also becomes repulsive to his/her parents' incomprehension and intimidating attitude. Thereafter the number of days they miss school and the frequency of late attendance and early departure increase. Some students are forced to go to school, but they cannot enter the classroom, and some people go to the infirmary to spend time. However as they use the infirmary frequently for a long time, the function of the infirmary will be impaired, so that the school may prepare vacant rooms such as conference rooms for the students under the name of "Fureai Kyoushitsu (Friendship Classroom in English)" and in some schools may assign teachers.

Refusal attendance, including **chronic absenteeism**, shows complex features in the reality. For example, even if the child understands that he/she should go to school, or even if he/she understands that the parents want to go to school, the child may have no

intention of going to school or deny that he/she has no intention of going to school. When the parents ask in a high-handed manner why the child refuses to attend school, the child will usually answer "I want to go." However, this answer is opposite to his/her real intention, and means only the norm that "I should go". For this inconsistency between the answer and the behavior of the child, parents may be confused and they cannot gauge the true intentions of their children. The regulations of the Ministry of Education, Culture, Sports, Science and Technology define "Futoukou (i.e., truancy in English)" as being absent for more than 30 days a year, but setting this deadline may obscure the actual situation of truancy and make measures opportunistic. Therefore, it is only convenient to regulate truancy by the number of days, and it can be said that it is undesirable to grasp the actual situation. If the person has lost the intention to go to school and refuses to go to school, it may be considered that the refusal to go to school is one week or one month. From this point of view, in the case of irregular attendance, it is considered that there is an intention to go to school because they go to school from time to time, but if the cumulative number of absent days exceeds 30 days, it becomes "truant" like a student with chronic absenteeism who has lost the intention to go to school. For this reason, the author decided to call it DAS status in order to comprehensively grasp the fluidly changing attendance situation without relying on the number of days absent.

Under the definition of DAS, I would like to clarify the characteristics and background factors of the DAS from the author's medical records.

Chapter 2: Discussion on the process of establishing DAS. Based on the factors that make it difficult to attend school, we will clarify the characteristics of the children themselves, their families, and schools surrounding them. We will consider the revulsion of children toward learning and school environments based on the achievement supremacism, the competition between parents for higher education and famous universities, the rise of the education industry that piggybacks on the anxiety of parents and children, the opportunistic management of universities that promote amusement parks to attract students, and the expansion of educational institutions as a destination for retired education bureaucrats, which distort education of children behind.

Chapter 3: Proposals for overcoming DAS. It is not easy to overcome DAS in a simple way because widely various factors of DAS are multilayered, including individual factors, family factors, school factors, community /social factors, and educational policy factors in the background of DAS. However, by saying that it is not easy, it is no different from the current situation where we have overlooked the problem of DAS, and by focusing on the problems only at the individual level, we may distract from the serious social and educational problems behind DAS. Therefore, I think that we will list the issues that

need to be improved for each factor and seek a way to solve them from what is possible. The road to overcome will be long, so it will be necessary to be able to collaborate based on the knowledge and experience of many people and organizations. To that end, efforts should be made at the same time to build consensus on education. I hope that this paper will serve as a guidepost for consensus-building efforts.

Chapter 1

We opened Mental Clinic Rakkoring on September 5, 2011, which has been used by nearly 3,000 patients. Despite the great distress of children who have DAS (so-called "truancy") and their mothers, there are few psychiatric and psychosomatic medicine facilities that specialize in DAS, so Rakkoring decided to aim for specialized medical care for the children and women centered on DAS. Although it was not limited to children with DAS, many children who received medical examinations at Rakkoring complained DAS, and for a part of them interpersonal tension and developmental disabilities were hidden in the background.

Rakkoring was closed on November 16, 2022, but during these years, 971 children under the age of 18 at the time of the first visit [here's referred to as the **Rakkoring Young Examinee (RYE)** Group]. The RYE group included 354 (36.5%) boys and 617 (63.5%) girls, and by age, 214 (22.0%) children at elementary school age (6-12 years old), 414 (42.6%) at junior high school age (13~15 years old), and 343 (35.3%) at high school age (16~18 years old). Since Rakkoring was specialized in children and women, there was an increasing tendency for more girls. In addition, junior high school age is the most common age at the time of first visit, and it is likely that the number of consultations has increased as a result because it is easy to become mentally unstable during junior high school age during the developmental process. The reason why there are few elementary school students is firstly that the population rate by age is decreasing with the declining birthrate, and secondly from the standpoint of parents, there seems to be hesitation in having children in elementary school see psychosomatic or mental clinic, so resulting in the decrease in the number of elementary school children.

In terms of birth months, February and April had the highest number of births (10.5%), followed by November with 95 (9.8%), January with 88 (9.1%), and March with the lowest at 62 (6.4%). According to Fromport.com data, in 2016, September was the month with the most births, July and August were second, and June was third. On the other hand, the lowest month of birth was December. However, the ranking of the birth month fluctuates depending on the year, and the difference is small, and it is believed that there is substantially no special month of birth. However, the birth month of the

RYE group having DAS tended to be more common in the winter season of November to April. This does not mean that children born in winter are more likely to have mental problems in childhood and adolescence. However, children born in winter include children born at the end of the school year (in Japan April to March is the school year), so they enter elementary school at an earlier stage of growth. In other words, these children will experience mother-child separation earlier in their life. This difference is less than one year, but it may be necessary to consider that children grow faster than adults. In any case, it is necessary to investigate whether there is a tendency for children born early to have DAS, and if so, what factors cause this to happen.

The most frequent month of the first visits was October for 105 (10.8%) students, followed by June for 104 (10.7%) and July for 99 (10.2%), while the least frequent month is August for 59 (6.1%). October and June correspond to 1 to 2 months after the end (usually late August) of summer vacation and 1 to 2 months after enrollment and new semester (usually early April), so we need to think about what meanings of the lag of 1 to 2 months after the long vacation such as spring and summer vacation are. After enrollment or summer vacation, children are exhausted by excessive exams and/or homework, and the stress of children increases after the start of the new school year. Many children are aware of the strong resistance to going to school, and it is also at this time that DAS begins. Some children may complain of physical symptoms such as headaches and abdominal pain, fatigue, and delayed sleep phase (staying up late and oversleeping in the morning) as stress reactions due to DAS, but neither children nor their families know the cause, and the wait-and-see period while creating a parent-child feud may be a lag of 1 to 2 months. Secondly due to physical symptoms, children and their families may visit a pediatrician or internal medicine doctor and try drug treatment under a diagnosis such as "orthostatic dysregulation" and begin to seek a transfer because of the poor effect. Thirdly, the lag may be a period of "no question" in which both parents and children avoid facing the mental problems behind DAS by denial. Whatever the factor, the challenge is how to reduce this lag, given the magnitude of the loss caused by delaying the start of treatment, increasing DAS, and the loss of children owing to not attending school. Therefore, it is necessary to examine what factors are behind the occurrence of DAS after exposure to a new environment and the lag time of 1 to 2 months before visiting a psychosomatic or psychiatric clinic.

Of the 971 children in RYE group, 654 (67.4%) had DAS at their first visit [we will refer to it as the DAS group]. The remaining 317 children (32.6%) [referred as the **School Attendance (SCAT)** group] were not in a DAS status. As defined earlier, the DAS status includes not only "truancy" but also all conditions relating with DAS. The reason why I do not limit DAS students to children who are "truant" is that DAS status changes depending on the time of year. At one time, a complete refusal to attend school

may change to a reluctant or irregular attendance at another time, so it may lead to a mistaken understanding that deciding unambiguously as "truant" falls into all-or-none decision in which there is no problem unless it is "truant". In addition, about two-thirds of the RYE group had DAS, but this does not mean that two-thirds of the general public children have DAS. Our clinic specializes in children and women, and although it was not particularly limited to DAS, it seems that more children and families suffering from "truancy" visited the clinic than expected.

The frequency by gender in the DAS group was 213 boys (32.6%) and 441 girls (67.4%), with a boy-to-girl ratio of 0.48. The tendency to increase in number of girls is thought to be partially due to the fact that, as mentioned above, Rakkoring specializes in children and women. On the other hand, in the SCAT group, there were 141 boys (44.5%) and 175 girls (55.2%), with a boy-to-girl ratio of 0.81. The girl-dominance in the DAS group is expected to be due to addition of factors other than the clinic specialization. In other words, it is necessary to consider whether or not (1) girls are more likely to have DAS, (2) girls have fewer negative feelings about going to medical examinations, (3) gender characteristics, such as girls are perceived as going to school more seriously than boys, so they are more likely to be perceived as abnormal situations when they have DAS, and (4) their families are more likely to react more sensitively to DAS of girls than boys.

As for the frequency by age of the DAS group, 116 (17.7%) children were elementary school age (6 to 12 years old) at the time of the first visit, 306 children (46.8%) were junior high school age (13 to 15 years old), and 232 children (35.5%) were high school age (16 to 18 years old). On the other hand, in the SCAT group, there were 98 (30.9%) children of elementary school age, 108 (34.1%) of junior high school age, and 111 (35.0%) of high school age. The increase in number of children of junior high school age in the DAS group was not influenced by the age characteristics of the RYE group, but was thought to be due to the tendency of junior high school age to have DAS. For reference, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) estimated the rate of truancy by school type from the frequency of truant children and students by school and year in 2011-2022 during the opening period of Rakkoring to 10.93% in elementary school, 60.29% in junior high school, and 28.78% in high school. The difference in the frequency between "truant" and DAS students seems to reflect the difference in the definitions of truancy and DAS. In addition, elementary and high school students have milder DAS other than refusal to attend school, so the frequency of elementary and high school ages in the DAS group may be higher than the statistics of the MEXT. It is possible that mental instability in children of junior high school age increases more DAS, but it is necessary to consider what factors affect this age.

The frequency of children in the DAS group by school type and gender was 1.04 for 59 boys (50.9%) and 57 girls (49.1%) at elementary school age, 0.41 for 89 boys (29.1%)

and 217 girls (70.9%) at junior high school age, and 0.39 for 65 boys (28.0%) and 167 (72.0%) in high school age. In elementary school, the frequency was almost the same for boys and girls, but in junior high and high school, the proportion of girls was higher. On the other hand, in the SCAT group, 61 boys (62.2%) and 37 girls (37.8%) of elementary school age had a boy-to-girl ratio of 1.65, 40 boys (37.0%) and 68 girls (63.0%) of junior high school age had a boy-to-girl ratio of 0.59, and 40 boys (36.0%) and 71 girls (64.0%) of high school age had a boy-to-girl ratio of 0.56. As in the DAS group, there was a tendency for girls to be higher than boys at junior high and high school age, but the ratio was 0.5 or more compared to the boy-to-girl ratio of 0.5 or less in the DAS group. The girl-dominance of DAS was recognized as their age increased. However, there are not many surveys that consider difference between boys and girls, and it is said that the number of boys and girls remains almost equal in elementary and junior high schools, and that the number of high school girls increases in surveys by some municipalities. As for the results of the DAS group, even if we take into account the medical specialization of Rakkoring, at least as they get older, the DAS increases among girls, and it seems necessary to consider what are the factors behind this girl-dominance.

The results so far have highlighted the following challenges:

- (1) Why do children born in winter have more DAS?
- (2) Why is there a 1 to 2 month lag between the onset of DAS and mental consultation?
- (3) Why are junior high school students having more frequently DAS than other students?
- (4) Why do girls have more DAS as they advance in elementary, junior high to high school?

I would analyze the factors that make it difficult to attend school in DAS group. Table 1 shows the "Inventory on Factors Causing Possibly DAS" conducted for students with DAS. We asked the children to fill out the inventory by themselves without parent's assisting them. Of the 654 students with DAS, 250 (75 boys and 175 girls) were able to conduct the inventory [here, we refer to it as the **Factors Inventory Implementation (FI)** group]. The answer was classified into 4 responses: 1 "applicable", 2 "somewhat applicable", 3 "not very applicable", and 4 "not applicable". Factors causing possibly DAS are divided into five categories: "SCHOOL" is a category related to location and environment of school, "TEACHER" is a category related to teaching skills and attitudes of teachers, "CLASSMATES" is a category related to friendships and behaviors within classroom, "SELF" is a category related to self-confidence and learning ability of oneself, and "FAMILY" is a category related to expectation and excellent members of family. For factors that were not described, a child was asked to fill in the "Other" section. Fifty-four children filled in the "Other" section. I

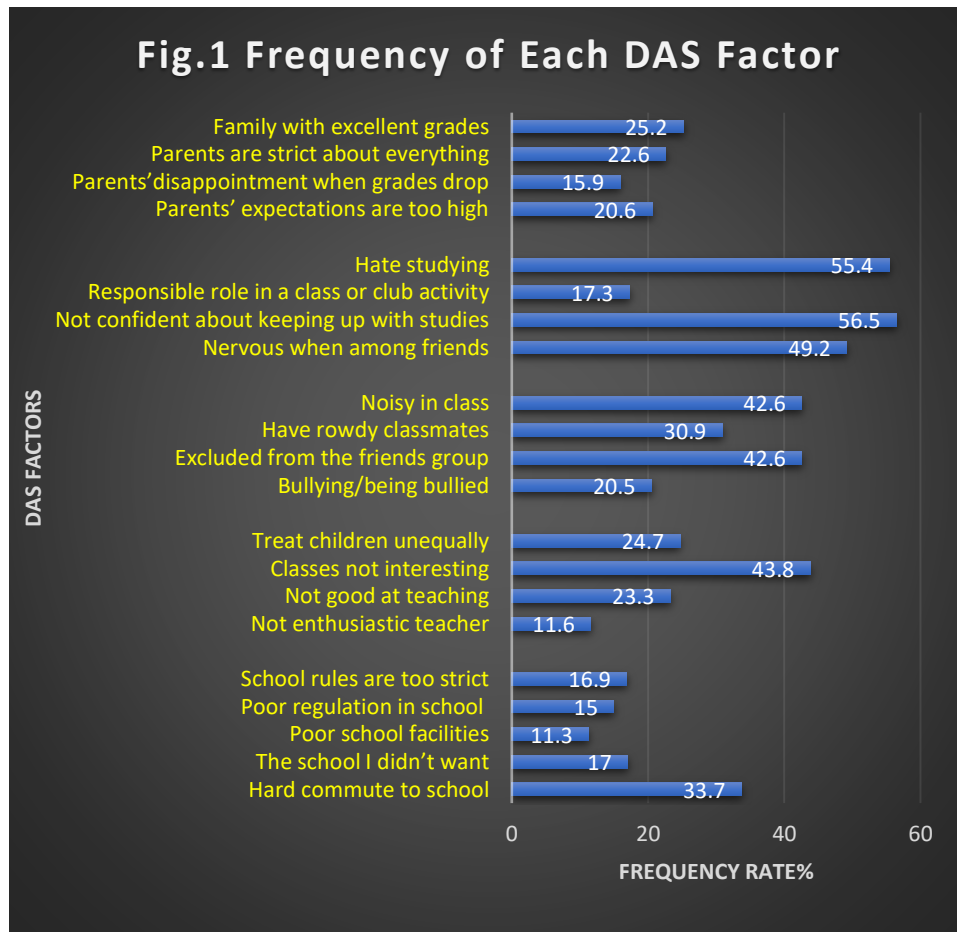
will show the results of this item later.

Table 1: Inventory on Factors Causing Possibly DAS

Factors		Applicant	Somewhat	Not very	Not App
School	Hard commute to school	1	2	3	4
	The school I didn't want	1	2	3	4
	Poor school facilities	1	2	3	4
	Poor regulation in school	1	2	3	4
	School rules are too strict	1	2	3	4
	Other	1	2	3	4
Teacher	Not enthusiastic teacher	1	2	3	4
	Not good at teaching	1	2	3	4
	Classes not interesting	1	2	3	4
	Treat children unequally	1	2	3	4
	Other	1	2	3	4
Classmate	Bullying/being bullied	1	2	3	4
	Excluded from the friends group	1	2	3	4
	Have rowdy classmates	1	2	3	4
	Noisy in class	1	2	3	4
	Other	1	2	3	4
Self	Nervous when among friends	1	2	3	4
	Not confident about keeping up with studies	1	2	3	4
	Responsible role in a class or club activity	1	2	3	4
	Hate studying	1	2	3	4
	Other	1	2	3	4
Family	Parents' expectations are too high	1	2	3	4
	Parents' disappointment when grades drop	1	2	3	4
	Parents are strict about everything	1	2	3	4
	Family with excellent grades	1	2	3	4
	Other	1	2	3	4

The frequency in answer for each item except "Other" is shown in Figure 1. Here, I understood that both "applicable" in answer 1 and "Somewhat applicable" in answer 2 were interpreted as a response that affirmed the existence of the factor, while answers 3 and 4 were treated as a negative response. Figure 1 shows the frequency of positive response for each factor. In the figure, the order of difficulty factors is from bottom to top.

Fig.1 Frequency of Each DAS Factor



The bottom category is about SCHOOL. The most frequent response was commute time. The issue of convenience of commuting to school has become a major issue worldwide. In particular, children complained about long commutes, frequent transportation transfers, being caught in the morning rush hour, and getting tired of the road to school due to slopes. Forcing a time-consuming commute to school that is favorable to a child and his/her family may be a difficult factor in going to school. The second factor of SCHOOL is a school that a child does not want, and there may be various reasons behind this factor. For example, a child may not have the academic ability to enter the school of his/her choice, a child may have applied for a school that his/her friends from the previous school will go to but he/she did not succeed, or a family or teacher may recommend a child to a school based on his/her grades but he/she did not want to go the school. The third factor is close to the second one, but it is a matter of school rules. There are some schools that stipulate in detail everything from clothes to belongings, hairstyle and hair color, and even the color of underwear. Even if it is not so extreme, school rules that overly defensively restrict children's free activities, such as restricting mobile phones and illicit relations, are also offensive to children. At elementary schools in Vancouver, Canada, there is sometimes a special Friday called "X

Friday", and on that Friday, for example, students will be given tasks such as "dress as many colors as possible" or "get a strange hairstyle", thus they will learn expressing themselves and rearing originality. These are challenges in Japan that 'turns the school upside down'. The above factors teach us that:

- (1) Choose a school that is as easy as possible for children to go to school and that they want.
- (2) Review punitive and over-defensive school rules, and if possible, consider school rules with the participation of children and caregivers.

The second category concerns factors related to school teachers. By far the number one of these was "The class is not interesting." It has been supposed in any country or in any era that serious classes are not interesting for children. If a teacher misunderstands this fact and even appear in a class that fails to put first thing first such as acting out a farce in class to make it funny, we can no longer laugh and overlook. News programs sometimes show children in developing countries studying hard, but if this report is true, I don't think school teachers are pleasing children by giving farce lessons. I think they are studying hard because they are learning what they want to learn. If children can learn what they want to know, the class will inevitably become interesting. I sometimes hear that one of the reasons why history classes are not interesting is that they are made to study like memorizing chronology. Memorizing without understanding its meaning is not something that can be tolerated in other classes. History is essentially a human drama that depicts the lives of the people of that era, so it is more interesting than games of Sengoku in Japanese or Battle-world in English. If history becomes interesting, the chronology will follow on its own. It is necessary to reconsider what "interesting lessons" are like, which is different from achievement-supremacism education such as chronological memorization. The second rank is that "treat children unequally" It would be outrageous if teachers intentionally treated children differently, but I think that the teacher's attitude may make some children feel discriminated against, or they will misunderstand them. The "attitude that seems to be favoritism" is probably unconscious, but it may be because too busy work of teachers sometimes prevents them from adequately dealing with children. The teaching in too busy work, where one teacher bears everything, is nothing but rather negative for the sake of the children as well as the teachers themselves. I think it is urgent that teachers have enough time to concentrate on their lessons and children, and that teachers can simplify their complex tasks so that they can be shared to include staff other than teachers. It seems that the current state of teachers will make it increasingly difficult to obtain excellent human resources who aspire to become teachers. And it is not necessary to make the lesson funny, but to derive to make it as easy as possible for the children to understand. For this reason,

we should evaluate the volume of classes by the piece, not crammed classes. The third rank is "not good at teaching." This seems to be similar to the first and second issues mentioned earlier. This factor is as follows:

- (3) To reduce too busy work of teachers so that the relationship between teachers and students is enriched.
- (4) Rethink the way of teaching so that children can understand them

The first rank in the next CLASSMATES category were "Excluded from the friends group" and "Noisy in class." These two can be considered related or independent. In the former, for example, there may be a situation where a group of good friends gathers and makes noise, but the other students cannot enter the circle. Whether related or not, there is a problem of self-evaluation related to the SELF category hidden in the background. In addition, growing children, especially girls, tend to become homologous, and those who have or can pretend to have the same ideas and values unite and exclude heterogeneity. Children who are not good at assertiveness are excluded because they cannot appeal to their kinship with the group, even if they are not sincere. The tendency to exclude people from different 'tribes' has led to bullying, discrimination, and antisocial behavior such as human rights violations. Presentation skills are important and popular in Western education in order to reduce discrimination. Children should learn the importance of expressing their opinions in groups and respect for different opinions. In order to encourage group work in the classroom, the arrangement of seats should be more flexible rather than theater-style, and it is desirable that teachers are good at group management. The third rank, "Have rowdy classmates," is exactly the structure of bullying, and it can be said that it is the end stage of the previous factor. Of course, children who have verbal and/or physical violence because they have possibly some kind of mental disorder such as mood disorder and AD/HD should be dealt with in cooperation with their families, teachers, psychologists, medical professionals, and community officers.

- (5) Engage in activities that emphasize self-expression from early school age in order to learn interpersonal relationships.
- (6) Start with early education that recognizes, accepts, and cooperates with different peers so that we can improve each other.

In the fourth category SELF the first rank was "Not confident to keep up with my studies" and the second rank was "Hate studying." If a child has lost confidence in studies, it may be natural to hate studying. Then we need to think about why children hate studying. As I mentioned earlier, studying may primarily not be interesting as in the first rank, but if a child learns about what is interesting, he/she will naturally become enthusiastic and have confidence in studies. Losing confidence is due to the desire only

for the results of study. Academic ability is an individual treasure, not to be compared to others or imposed by others. When children find themselves learning because of interests, if someone put a damper by criticizing that their studies are not enough, urge them to do more, and thus children find themselves not living up to expectations of relevant persons, who can maintain confidence? In relation to the aforementioned factors, it seems that 'cramming education,' which is a byproduct of the achievement supremacism, is exacerbating DAS. And the achievement supremacism is also a source of bringing about academic cliques and factions. If we do not move away from the current educational system of Japan, the problem of DAS will only worsen, and eventually the Japanese people will be deprived of vitality and the national power will decline. The third rank, "Nervous when among friends," is also related to the factor of not being able to join the circle of friends. It shows a so-called state of strong interpersonal tension in addition to immaturity in social skills. Under various anxiety situations such as ① anxiety that one's human evaluation may be determined by test scores under the principle of achievement supremacism, ② anxiety of being branded as "dropout" due to poor grades, ③ anxiety that friends, teachers, family, and the community are constantly aware of "able" or "unable" and so on, children seem to be in an environment where they are forced to be overly aware of their own evaluation. As a result, a vicious cycle is created in which children are worried about the eyes of surrounding persons, they feel difficult to go to school, and as the missing school days increase, they become more and more worried about surrounding eyes.

(7) To make students understand that self-confidence in studying is not achieved by grades, but is an "asset" that is nurtured within themselves through effort.

(8) Shift from achievement supremacism to capability-centric principle that respects the abilities of each individual

In the fifth category of FAMILY, there were no outstanding factors, but the factors that ranked first to third were "Family with excellent grades," "Parents are strict about everything" and "Parents' expectations are too high." For example, if a sibling has good grades, parents will push their child in question to study so that such the child will not lose to the sibling, and as a result, they will be strict with the child. The rivalry with the sibling pushes the child more and more, but if the child does not get good results, self-evaluation of the child will decrease furthermore. Although the parents don't say anything about learning, the child knows what the parents want in their hearts, and if the child is fully aware of him/her not being able to respond to the parents' wishes, self-evaluation of the child will drop even more. This process creates a vicious cycle in which the child have DAS, feuds with his/her parents increase, and parents increase pressure on the child to lament parents' lack of understanding, further lowering his/her self-

esteem.

(9) Understand that parents do not lead their children's lives, but support them behind them.

(10) Parents should accept a child as he/she is, without comparing him/her with peers.

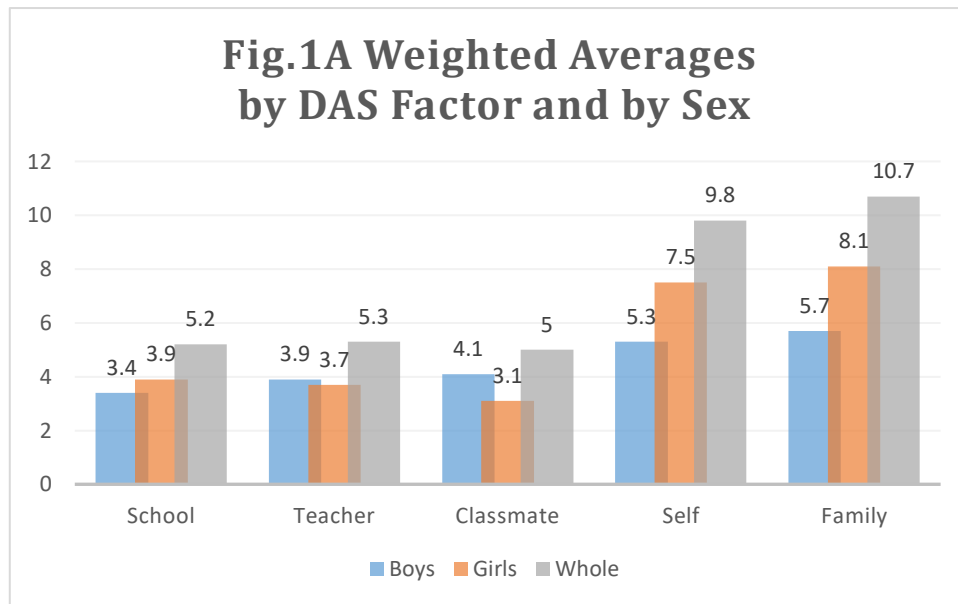


Figure 1A shows the weighted average of the number of the DAS factors for which answer 1 or 2 was selected by each category. Looking at the whole (gray bar graph), the weighted average values for SELF and FAMILY were around 10 and the highest 2 among 5 categories. The weighted averages of other categories were almost half of the above 2 categories. What the DAS group shows in common here is "low self-esteem". They are worried about the focus of surrounding attention and do not join the circle of their peers. They do not have the confidence to study, their family's expectations weigh heavily on them, and they debase themselves more and more for not meeting their expectations. In addition, SELF and FAMILY showed a marked gender difference compared to other categories, and the decline in self-esteem was noticeable among girls. In other words, the DAS was related to a decline in self-esteem, and were particularly prominent in girls.

Fifty-three children described their opinions at the item of "Other" that make it difficult to attend school. The answer of these descriptions was 1 or 2, which indicated the causation of DAS. Some of the content are duplicated, but here are some examples shown:

(1) Category of SCHOOL

- **Commuting:** The slope of the school is difficult / Classmates interfere on the way to school

- **Expectations:** High expectations from the school / Pressure
- **Fear:** I hate the atmosphere of the school / I'm afraid of the classroom / I have to pass in front of the ground when entering the school building / The classroom is too noisy / Fear / I don't like the atmosphere / Too many people / I hate teachers
- **Busy:** Club activities are on Saturdays and Sundays and there are no days off / Not useful despite having a lot of time / Too many assignments / Too few days off
- **Nervous:** Comparing myself to other students / Hierarchical relationships with seniors in the club / Friends are unique / Caring all day / Sexual harassment from seniors / Quite caring me
- **Academic ability:** I don't understand studying

There are no complaints about school facilities but about school routes and functions (e.g., study, collaboration and cooperation, activities, etc.), and ultimately the school itself is an object of fear. I am particularly worried about the "over-busyness" of children. Schools may be over-demanding, which is squeezing children into school phobia literally.

(2) Category of TEACHERS

- **Dislike:** There are teachers I don't like / There are quite a few troublesome teachers / Teacher at the infirmary is hard for me to deal with / The homeroom teacher is uncomfortable / I am disgusted / I have a teacher who is not good / I talk to the teacher alone / I hate some teachers / I often talk to them outside of classroom
- **Distrust:** My opinion is not understood / I distrust the homeroom teacher / I can't trust the teacher
- **High pressure:** Say something stupid to the student / There is some teacher who yell a lot / I feel overwhelmed / Some teacher call us out / Unreasonable / Some teacher get angry suddenly / The teacher yells loudly
- **Coercion:** There are many assignments / I am forced to study / I am asked questions frequently / I am talked about my future path

An expression of the teacher's high-pressure attitude or over-friendliness seems for the students to be unpleasant. There must be a strong relationship of trust between teachers and students, but it is also a big problem that there are students who are distrustful in this regard. If one of the factors that create distrust is an intimidating or high-pressure attitude, it is necessary to change it immediately. Some teachers may consciously change their weak attitude to an intimidating attitude in order to not be "slighted" by children, but I don't think that such intimidation makes the teacher "not slighted".

(3) Category of CLASSMATES

- **Avoidance:** I don't want to see anyone (if possible) / I'm worried about my classmates'

- eyes / I'm afraid of being in class / I can't fit in with the class / It's hard to be too busy
- **Hypersensitivity:** I feel like I'm being stared at / There is voyeurism or backbiting / I seem to be being told about myself / I often hear gossip about other students
 - **Attack:** Attack on SNS after returning home / Making fun of me
 - **Disgust:** There are ugly students / There are friends who I hate / Girls are strong / Many children are short-tempered and low consciousness / Boys are troublesome
 - **Inferiority:** Everyone is studying / Other students have high aspirations
 - **Eccentricity:** Shout loudly
 - **Compatibility:** There are few children who seem to match their personalities with me

Among classmates, there is a strong sense of tension in the said students, and they are worried about the gaze and evaluation of other students, and when this worry is excessive, surrounding students will seem “uzai” in Japanese (troublesome in English) or “shindoi” in Japanese (messy in English) for the said student. Achievement supremacism seems to realize higher goal through increasing competition with others, but in reality, it reinforces a selfish attitude that seeks a position where it can despise others, so it seems that the student becomes exclusive and overbearing, or the student avoids people and reinforce his/her inferiority complex through over-concerning with people's evaluations.

(4) Category of SELF

- **Nervousness:** I get nervous when I'm in class / I'm afraid of people / I don't want to fail in front of people
- **Self-confidence:** Only I am weak / I am not confident in myself / Low self-esteem
- **Evaluation:** How I am perceived / I always want to be on top of various things / I am afraid of tests / I am afraid of my grades falling
- **Inertia:** I got a taste for a day off school / I can't make an effort
- **Slowness:** I can't make things with dispatch.
- **Purpose-loss:** I don't know why I go to school / It is more effective to study by myself / It's more important that I am studying for something
- **Somatization:** I feel abdominal pain and nausea when I am at school / I want to sleep, I am tired
- **Cooperation:** I am not good at group activities
- **Socialization:** I am not good at communication

Self-evaluation is low, resulting in the following states: lack of self-confidence, difficulty in communication to express one's opinion, and constant tension in public. When interpersonal tension increases, physical or autonomic reactions appear, masking psychological conflicts and plunging into a labyrinth, while some children lose their

purposes at school and approve of an easy way.

(5) Category of FAMILY

- **Interference:** I was forced to report what happened at school under over-interference of parents / Interfere so much
- **Discrimination:** Grandparents, especially grandfather are terrible for me
- **Excessive:** Parents are too smart / I am afraid of parents / I hate my father
- **Discord:** Siblings quarrel / Parents are unstable in marriage
- **High pressure:** feeling pressure / Noisy / Pressure / Rebellious period

Interference of the family, especially parents, is tormenting children. Or parents and grandparents seem arrogant, feel pressured, and rebellious against apparent authority. And we must not overlook the profound influence of discord within the family, especially between parents, on the psychological state of children.

The DAS factors are generally based on interpersonal relationships with classmates and teachers. Physical factors such as commuting to school and facilities are mild DAS, and can be expected to improve. Therefore it is necessary to consider them from the perspective of reducing difficult factors as much as possible. In relation to families, it seems that over-interference and high-pressure attitudes of families make it difficult for children to go to school. Parents need to be aware of this point, as it is easy to fall into a vicious cycle in which children's disregard for their parents' wishes makes the family more and more oppressive. We can see the shadow of the achievement supremacism in the background of feuds at school and home. In other words, both families and teachers consciously or unconsciously heat up pressure in the hope of improving their children, making families and teachers intimidating to children and unable to relax tension among their classmates because they are constantly concerned about how they are perceived.

Next, we analyzed the boy-to-girl ratio in each DAS category. In particular, girls tended to have more DAS as they got older, so I would try to reveal what factors behind this girl-predominance are. Since there was an impact of girl-predominance in the RYE group, the percentage of responses for each factor was calculated and compared by gender.

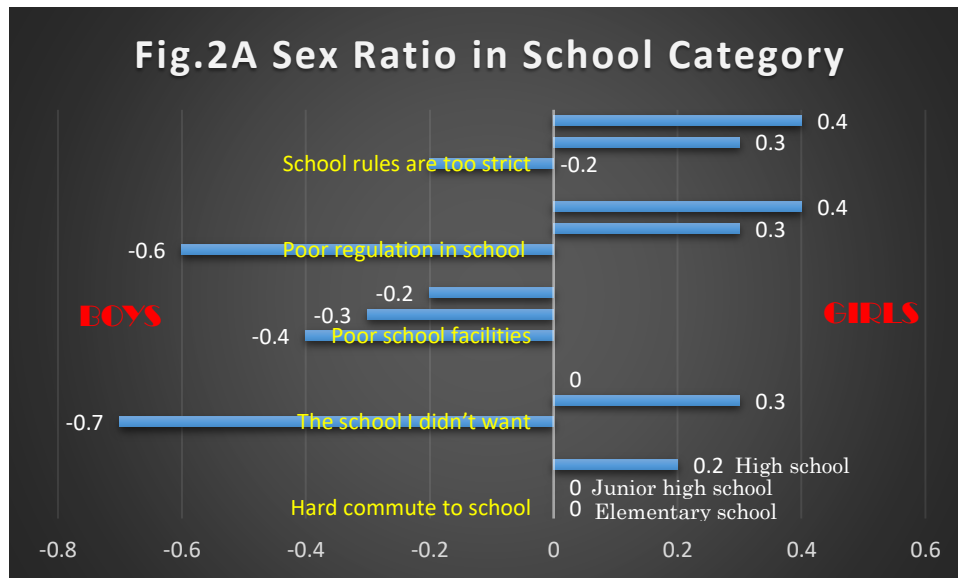
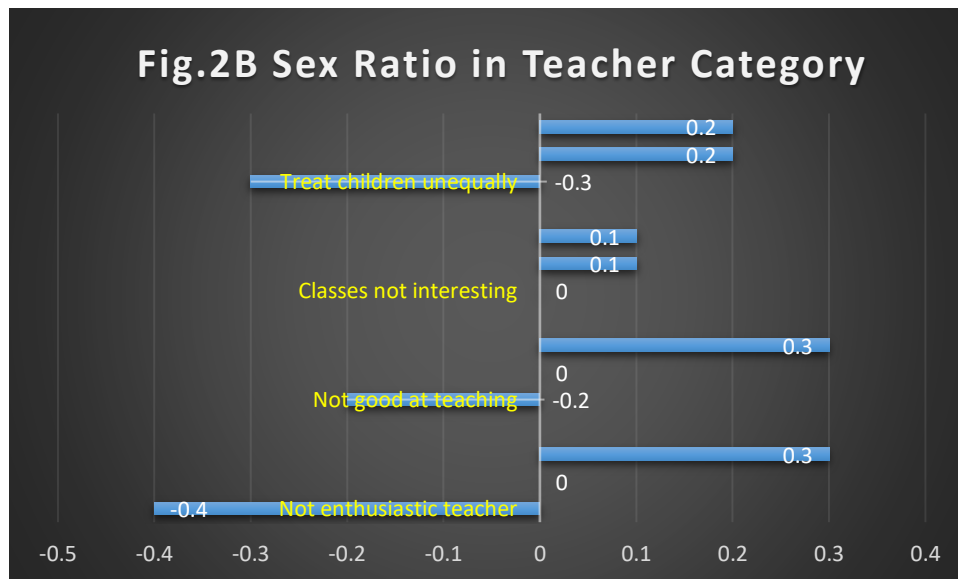


Figure 2A shows the sex ratio in SCHOOL category. The boy-to-girl ratio is calculated by the following formula.

$$\text{Boy-to-Girl Ratio} = (\text{girl frequency} - \text{boy frequency}) / (\text{girl frequency} + \text{boy frequency})$$

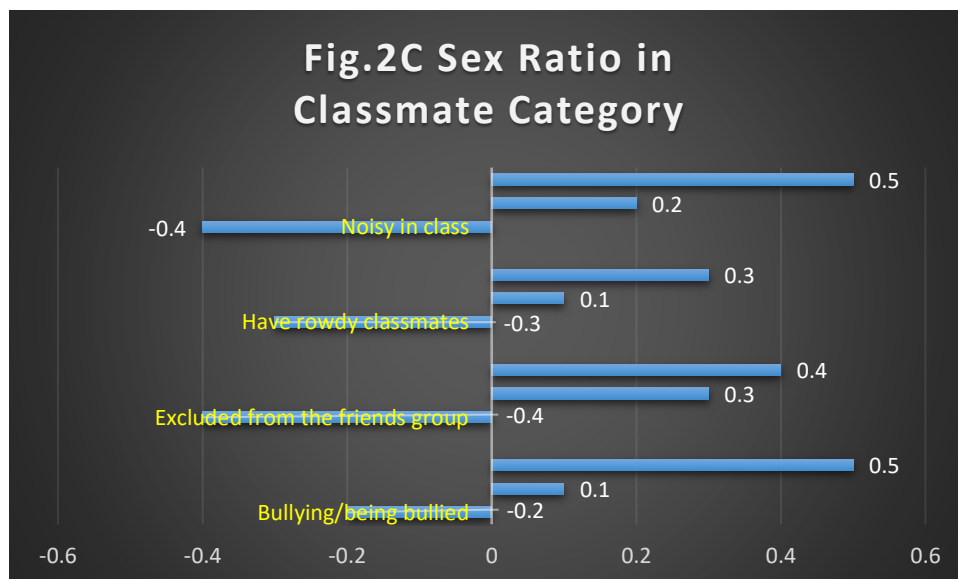
In this formula, the Boy-to-Girl Ratio (BGR) is expressed as a number between -1 and + 1. When BGR is positive, the frequency of girls is higher than boys, and when it is negative, the frequency of boys is higher. That is, when the bar graph is rightward (positive), the frequency of girls is higher, and when the bar graph is leftward (negative), the frequency of boys is higher. In addition, the bar graph is a set of three bars, and from the bottom the first bar means the elementary school age, the 2nd bar means junior high school age, and the 3rd bar means high school age. In the first factor of SCHOOL "Hard commute to school," the BGR of elementary and junior high school ages was 0, and the ratio of high school age was 0.2. In other words, in elementary and junior high school ages, boys and girls complained about the difficulty of commuting to school with the same frequency, but in high school age, girls complained about 20% more. The 2nd factor of SCHOOL "The school I didn't want" showed that more boys complained in elementary school age, more girls complained in junior high school age, and both boys and girls in high school age. The 3rd factor "Poor school facilities" was more common among boys in elementary, junior high, and high school ages, and the percentage approached to zero from elementary to high school. The remaining two factors are that the BGR of complaints shifts from boys to girls in order of elementary, junior high and high school age, and girls in high school are most common. One of the reasons why girls tend to have more DAS when they become high school students seems to be the poor regulation in school and the strictness of school rules. In particular, in some schools, girls are disgusted by discriminatory school rules that prohibit the length of girls' skirts, prohibit brown hair, and even determine the color of underwear.

Fig. 2B shows the sex ratio of TEACHER category.



Dissatisfaction with teachers is more common among boys in elementary school and girls in high school. This seems to be one of the factors that increases the girls with DAS in high school, but the BGR is in the range of -0.4 to +0.3, and there is no apparent difference between boys and girls, and it can be said that it is a category where both boys and girls have similar impression.

Figure 2C shows the BGR in the CLASSMATES category.



As for the CLASSMATES-related DAS factors, the girls increased in number as progression from elementary to high school age. Despite different factors such as bullying, interpersonal tension, school violence, and hustle and bustle, girls had

increased DAS in the progression of school.

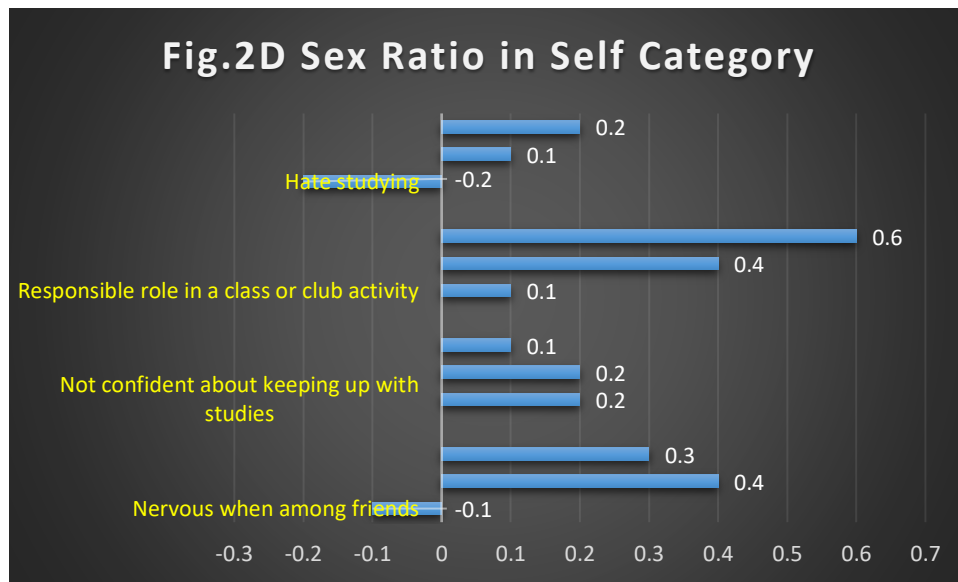
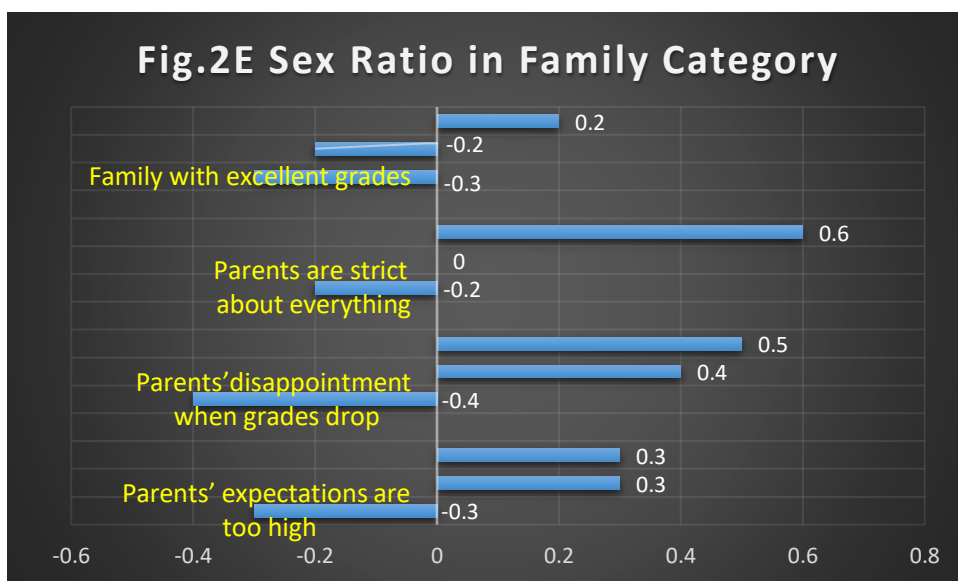


Figure 2D shows the BGR in SELF category. In general, girls are more likely to be dissatisfied with self-esteem, especially at junior high and high school ages. In particular, girls are more likely to realize difficult factors concerning with self-esteem, and the reason why girls increased the DAS at high school age is related to a decline in self-esteem, resulting in loss of self-confidence and inferiority. In some cases of girls, appointment as a responsible position in class or club activities is the DAS factor. Such position is to receive the attention and appreciation of classmates around the girl, and when her self-esteem drops, this position becomes unbearable.



In Figure 2E on FAMILY category, girls were more common than boys at high school

age, and are particularly pronounced in "Parents' disappointment when grades drop" and "Parents are strict about everything", suggesting a vicious cycle in which the girls are disappointed in themselves for not improving grades despite their efforts, making it even more difficult for them to go to school.

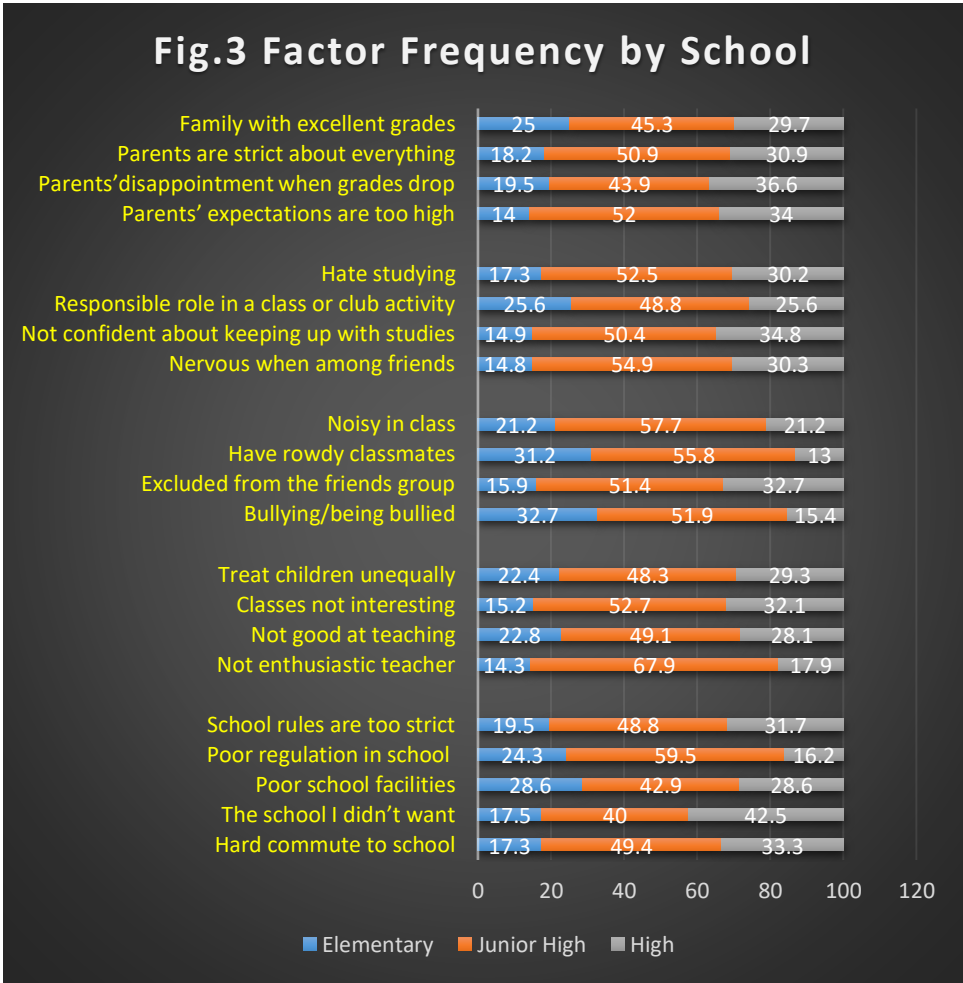
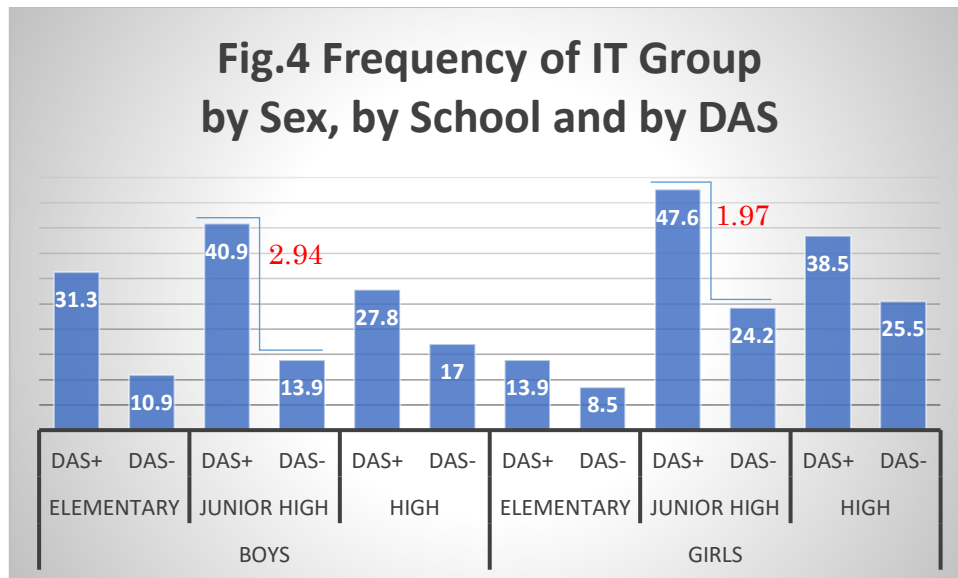


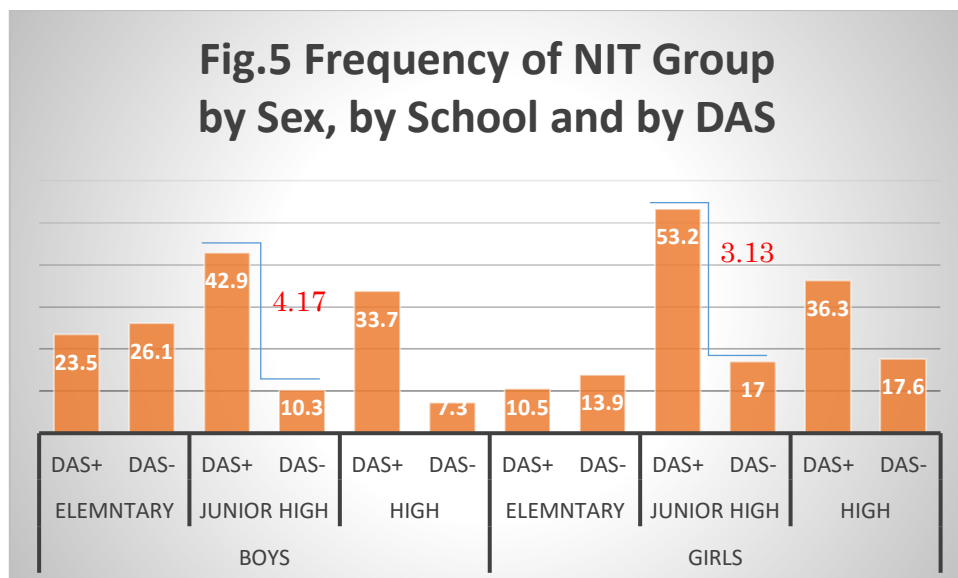
Figure 3 shows the frequency of the DAS children for each factor by age of elementary, junior high, and high schools. As for all categories, junior high school age was the most prominent. The first rank factors in the SCHOOL category were "Poor school facilities" at elementary, "Poor regulation in school" such as hustle and bustle in classrooms at junior high, and "The school I didn't want" at high school age. The first rank factors in the TEACHER category were "Not good at teaching" at elementary, "Not enthusiastic teacher" at junior high, and "Classes not interesting" at high school age. The first rank factors at the CLASSMATES category were "Bullying/being bullied" at elementary, "Noisy in class" at junior high, and "Excluded from the friends group" at high school age. The most frequent factors for the SELF category were "Responsible role in a class or club activity" at elementary, "Nervous when among friends" at junior high, and "Not confident

about keeping up with studies” at high school age. The first rank factor in the FAMILY category was “Family with excellent grades” at elementary, “Parents’ expectations are too high” at junior high, and “Parents’ disappointment when grades drop” at high school age. In elementary school, a child is compared to his/her older siblings, in junior high school, his/her parents' expectations may increase due to the preparation for the high school entrance exam, and in high school, both parents and child are hypersensitive to their grades in preparation for university entrance exams.

Interpersonal tension was seen as a relatively important factor among those that made it difficult to go to school. Therefore, we analyzed the relationship between DAS and interpersonal tension. The number of children who complained of interpersonal tension at the first visit was 597 (61.5% of the RYE group) [referred to here as the **Interpersonal Tension (IT)** group]. I think that children apt to increase tension under interpersonal situations in modern times, but the IT group is presumed to show higher frequency than IT children in the general population because the IT group visited our clinic for interpersonal tension. Of the IT group, 184 (30.8%) were boys and 413 (69.2%) were girls. On the other hand, the number of children who did not complain of interpersonal tension at the first visit (referred to here as the **Non-Interpersonal Tension (NIT)** group) was 374, 170 boys (45.5%) and 204 girls (54.5%). According to the literature, the annual prevalence of social anxiety is 9% for women and 7% for men, and the lifetime prevalence is said to be more than 13%, and disorders involving interpersonal tension are not uncommon. In addition, the median age of onset of social anxiety is around 13 years old, and it is said that 3/4 develop at 8~13 years old. This age is from the upper grades of elementary school to the first or second grades of junior high school, and it is also the age when we begin to worry about the gaze and self-evaluation of others as we develop a self-consciousness. Figure 4 shows the percentage of students by gender, school type, and DAS.



As shown in Figure 4, the frequency of DAS students in the IT group was (1) higher for both of boys and girls at junior high school age among schools and (2) higher for girls than boys at junior high and high school ages.



On the other hand, as shown in Fig. 5, the NIT group also showed similar results (1) and (2) above mentioned for the IT group. Although it seemed that interpersonal tension was one of the factors that deteriorated DAS, in reality, deterioration of DAS by interpersonal tension happened only in boys of elementary school age. Girls in IT group conversely reduced difficulties in going to school. In addition, students of junior high school age and boys of high school age in IT group decreased difficulty going to school, while only girls of high school age had increased DAS. The gender gap was clear in junior high and high school, regardless of whether there was interpersonal tension or not. In

other words, in junior high and high school students, the effect of exacerbating difficulty in school due to interpersonal tension was limited, namely interpersonal tension acts possibly as an ignition device for DAS, and factors other than interpersonal tension may have increased and maintained DAS. On the other hand, high school girls increased in frequency of DAS by interpersonal tension. The girls of this age tend to throng into one tribe, in which only 'like-minded' girls gather and exclude 'heterogeneous' girls, may exacerbate interpersonal tension and activate tension as a serious DAS factor. Jo Magne Ingul and Hans M Nordahl (2013) of Norway compared high school students with high anxiety who had difficulty going to school with high school students who continued to attend school despite high anxiety, and found that the latter had higher resistance to social anxiety and panic disorder. They suggested personal factors that reduce resilience, such as negative personality traits, interpersonal tension, panic symptoms, and behavioral problems, as well as psychosocial factors including fewer close friends and low sense of self-health. However, the high-anxious students were bullied infrequently, and they were treated with respect at school. As shown in Figure 3, interpersonal tension was up to the junior high school age and decreased slightly in the high school age. Thus it is necessary to consider the reason why interpersonal tension reduced DAS even though junior high and high school students are aware of interpersonal tension. In junior high school age children, the difference between DAS group[DAS+] and SCAT group[DAS-] widened three times for boys and twice for girls in IT group, and four times and three times in NIT group, respectively.

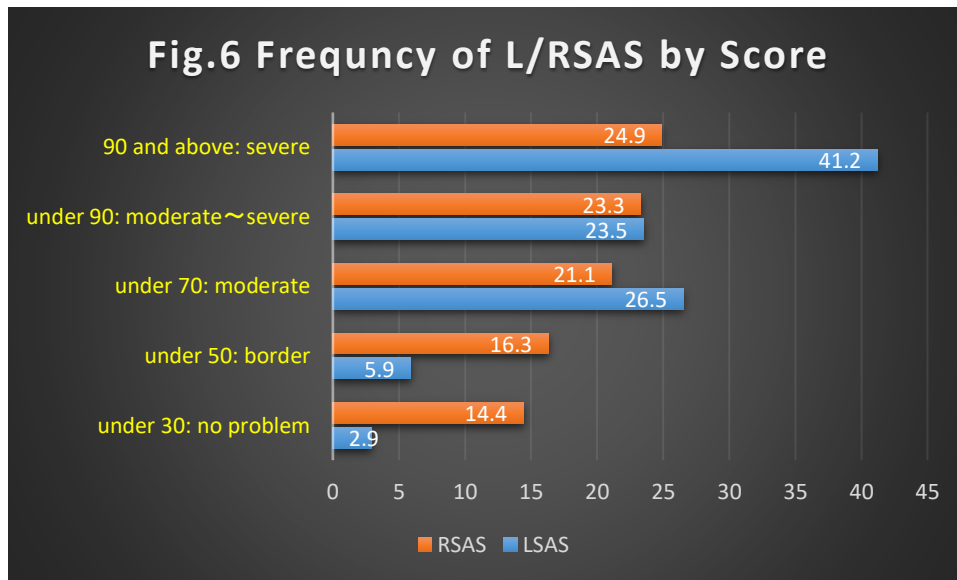
Interpersonal tension is also a common phenomenon in developmental disorders, social anxiety disorder, avoidant personality and so on. The Liebowitz Social Anxiety Scale (LSAS) was first administered to some children, thereafter the Rakkoring Social Anxiety Scale (RSAS) was modified for school-age children based on LSAS and administered to residual children, although RSAS was not tested for reliability or validity. We analyzed the results of RSAS.

Table 2 Rakkoring Social Anxiety Scale (RSAS)

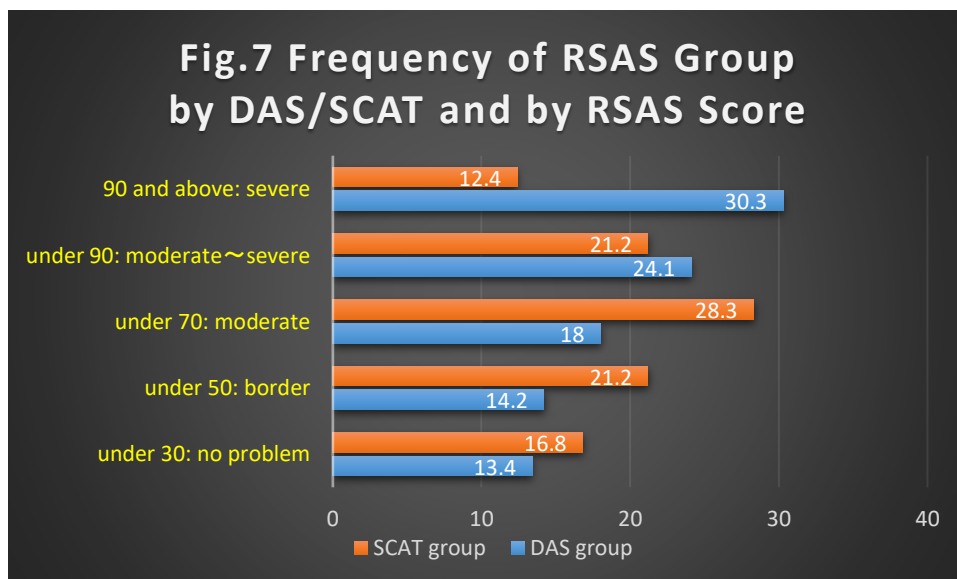
Social Anxiety-Provoking Situations		Fear/Anxiety				Avoidance			
1	Make a phone call in front of not very close friends.	0	1	2	3	0	1	2	3
2	Participate in small group activities.	0	1	2	3	0	1	2	3
3	Eat lunch with a large number of classmates in the classroom.	0	1	2	3	0	1	2	3
4	Eat at an eatery with friends.	0	1	2	3	0	1	2	3
5	Talk to the principal.	0	1	2	3	0	1	2	3
6	Stand at the pulpit and speak to the class.	0	1	2	3	0	1	2	3
7	Attend a friend's birthday party.	0	1	2	3	0	1	2	3
8	Study where everyone is watching.	0	1	2	3	0	1	2	3
9	Write on the board in the presence of classmates.	0	1	2	3	0	1	2	3
10	Call a person you don't know well.	0	1	2	3	0	1	2	3
11	Have discussions with classmates you don't know well.	0	1	2	3	0	1	2	3
12	Meet people you meet for the first time.	0	1	2	3	0	1	2	3
13	Go to the school washroom.	0	1	2	3	0	1	2	3
14	Enter the classroom late.	0	1	2	3	0	1	2	3
15	Make a statement in front of everyone in class.	0	1	2	3	0	1	2	3
16	Give your opinion in homeroom or class meetings.	0	1	2	3	0	1	2	3
17	Take the exam.	0	1	2	3	0	1	2	3
18	Disagree with the opinion of friends.	0	1	2	3	0	1	2	3
19	Make eye contact with people you don't know very well.	0	1	2	3	0	1	2	3
20	Report in a crowded place.	0	1	2	3	0	1	2	3
21	Talk to your friends to play with them.	0	1	2	3	0	1	2	3
22	Return the goods to the store.	0	1	2	3	0	1	2	3
23	You are tasked with preparing a friend's birthday party.	0	1	2	3	0	1	2	3
24	Keep refusing forcible invitations to join the club.	0	1	2	3	0	1	2	3
		0: no feeling				0: not avoiding			
		1: a little feeling				1: avoid(below1/3)			
		2: definitely feeling				2: avoid(about1/2)			
		3: very strongly				3: avoid(over2/3)			

408 children underwent the Social Anxiety Scale (SAS). Initially, LSAS was used, but since LSAS was revised into Rakkoring Social Anxiety Scale (RSAS) for Japanese students under age of 18years, RSAS was mainly used. Thus only 34 children underwent LSAS, and the remaining 374 children underwent RSAS. Since there are few LSAS practitioners, only RSAS data is analyzed here. In addition, RSAS items have been replaced with a school scene to match the anxiety-provoking situations of LSAS as much as possible, but it was not statistically tested, I use RSAS data as a reference source.

RSAS, like LSAS, is rated on two sub-items: fear/anxiety and avoidance. The sum of the two sub-scores indicates the severity of social anxiety, and the LSAS score is classified into 30-49 as border, 50~69 as moderate, 70-89 as moderate to severe, and 90 or higher as severe.



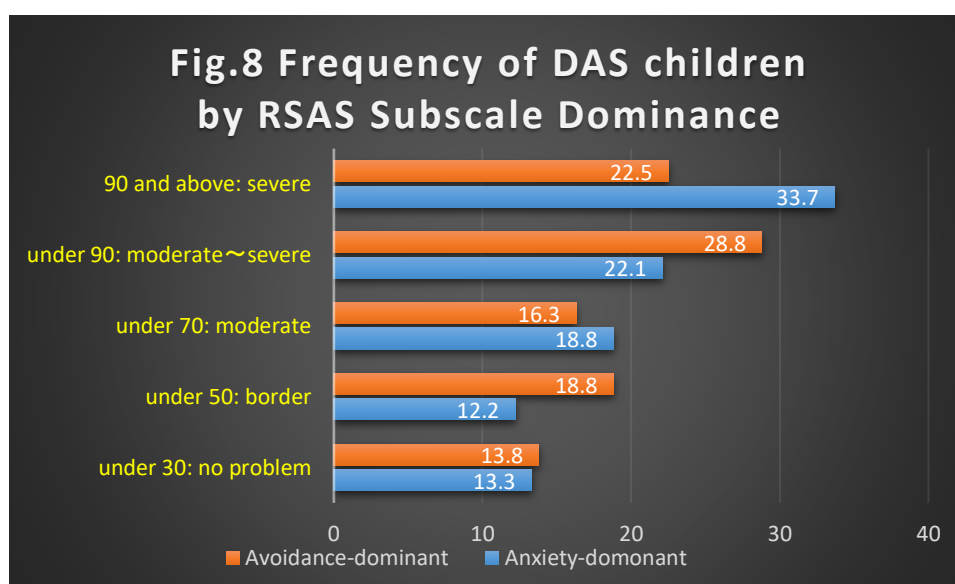
As shown in Figure 6, LSAS and RSAS showed similar patterns. However, while the children with moderate or over score of LSAS were more frequent in DAS group and those with below border score of LSAS were less frequent, the children estimated by RSAS were widely distributed among no problem to severe score and thus the slope is gentle. This is probably due to the large number of children who have undergone RSAS, which has led to an increase in the number under moderate anxiety. In addition, both LSAS and RSAS captured the characteristics of the target group of severe social anxiety, and it was estimated that the sensitivity of RSAS was relatively good. Considering that about two-thirds of the RYE group have DAS, and more than half of them show moderate or higher social anxiety, it is presumed that social anxiety is related to DAS



As shown in Figure 7, the frequency of children undergoing RSAS increased gradually

from the no problem to severe group in RSAS. On the other hand, in SCAT group, the frequency of children increased as the score increased up to a moderate score of less than 70 points, but decreased suddenly when it exceeded 70 points. In other words, the frequency of children increased up to a moderate RSAS score or less than 70 points in both DAS and SCAT groups, but when they scored 70 or higher, the frequency of the DAS children increased as it was, while the frequency of the SCAT children decreased. With the 70 points as a turning point, it is necessary to consider what is acting before and after the turning point to make it difficult for some children to go to school, and for others to continue to go to school.

Therefore, based on the sub-scores of fear/anxiety and avoidance of the RSAS (each maximum sub-score 72 points on both subscales), we divided the RSAS group into anxiety-dominance (anxiety sub-score \geq avoidance sub-score) and avoidance-dominance (anxiety sub-score $<$ avoidance sub-score).



As shown in Figure 8, the anxiety-dominant group had increased DAS as the RSAS score hierarchy increased. In other words, the anxiety-dominant group of RSAS was shown to be one of the exacerbating DAS factors. Almost half of children with moderate to severe RSAS score in both anxiety- and avoidance-groups have DAS and RSAS measurement is considered to be one of the important indicators for predicting DAS. On the other hand, in the avoidance-dominant group, as in the anxiety-dominant group, DAS deteriorated with the increase in RSAS scores, but the frequency of children with DAS unexpectedly decreased when the RSAS score was severe with 70 points or more. Since the avoidance-dominant group is originally people with a strong tendency to avoid anxiety situations, it is no wonder that avoidance of going to school has become prominent, but the data shows that this was not the case.

Based on the above, the relationship between DAS and social anxiety can be summarized as follows:

- (1) In children of elementary school age, interpersonal tension is one of the obvious factors that make it difficult to attend school.
- (2) In children of junior high and high school ages, interpersonal tension plays a role as a fuse for DAS.
- (3) When SAS score exceeds 70 points, anxiety itself is more of DAS factor than avoidance aspects.
- (4) SAS score of 70 is considered to be an important turning point in preventing DAS.

Based on this result, the following story can be considered: "In children of elementary school age, interpersonal tension exists as a spark or fuse for DAS. When encounters a situation where interpersonal tension heightens in the new school year, the RSAS avoidance factor works with other avoidance factors (for example, avoidant personality and developmental disorders) to develop and maintain DAS. In junior high school, social anxiety is combined with other anxiety factors (for example, anxiety about studying and taking exams, anxiety about the expectations of others, and anxiety about friendships), which rekindles anxiety and exacerbates DAS. Anxiety factors increase girls' DAS due to their somatic and mental characteristics, their tendency to throng into one tribe and their social bias toward gender, so that DAS becomes dominant for girls at high school age."

The next challenge is to analyze the X and Y of avoidance (avoidance factor of social anxiety + other difficulty factor X with avoidance tendency) and anxiety tendency (anxiety factor of social anxiety + other difficulty factor Y with anxiety tendency) in children with RSAS score less than 70 points. Regarding Y, please refer to the explanation of DAS factors (SCHOOL-related, TEACHER-related, CLASSMATES-related, SELF-related, FAMILY-related) as already mentioned. Finally, we analyzed developmental disorders as one of the factors X. Pervasive developmental disorders are targeted here, but learning disabilities are not included. If the possibility of autistic spectrum disorder (ASD) or attention deficit hyperactive disorder (AD/HD) is recognized at the first visit, it is considered "developmental disorder" (referred to here as the **Developmental Disorder (DD)** group). Mothers of some children in DD group were asked to fill out a partially modified developmental questionnaire and Connor's Pediatric Behavior Evaluation Sheet, the former of which partially revised the "Tsuujou no gakkyyuu ni zaisekisuru tokubetuna kyouikuteki-sien wo hituyotosuru jidouseito ni kansuru zenkokujisshi chousa: taijinnkankei ya kodawari tou ni kansuru sitsumon koumoku 2003 in Japanese (Nationwide Survey on Students with Special Educational Support Needs Enrolled in Regular Classes: Questions on Interpersonal Relationships

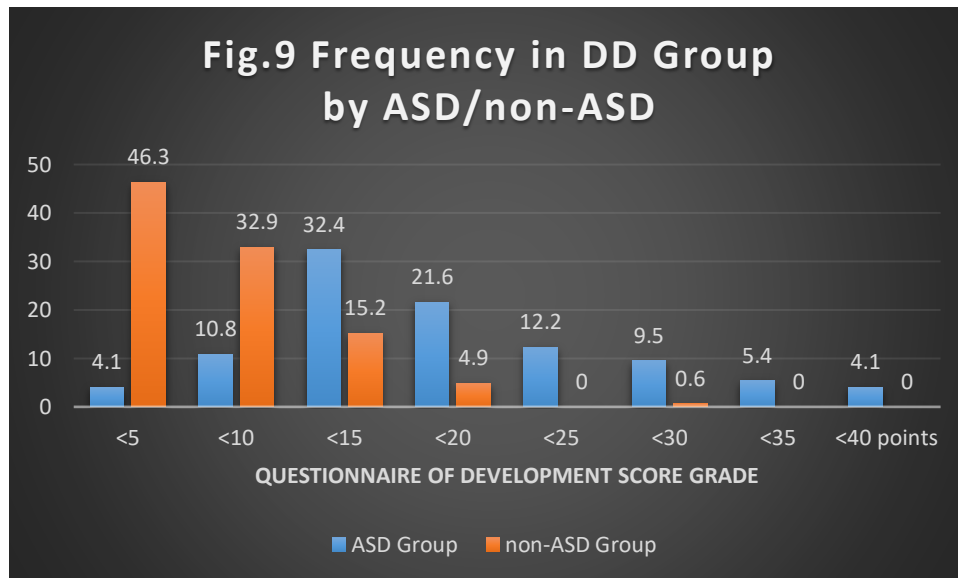
and Commitments 2003 in English of tentative translation)" in Table 3. Based on the results of these questionnaires and clinical questions, we diagnosed DD. In addition, children who have been diagnosed with DD at other DD-specialized facilities before visiting Rakkoring were included in DD group. The developmental questionnaire was used qualitatively in clinical evaluation. For conducting quantitative analysis in this study, we tentatively distributed a weighted score of 0 points for "no", 1 point for "somewhat", and 2 points for "yes". We also examined the sensitivity and specificity of the questionnaire by using this tentative weighted scores.

In DD group, 210 of 971 children in RYE group were 21.6% (120 boys in 12.4% and 90 girls in 9.3%). Of the children with DD, 113 children in 11.6% (62 boys in 6.4% and 51 girls in 5.3%) were diagnosed to have ASD, and 97 children in 10.0% (58 boys in 6.0% and 39 girls in 4.0%) were diagnosed to have AD/HD. Despite the slanted samples that there were much more girls than boys in RYE group, there were more boys rather than girls in the DD group, especially the AD/HD group, and the gender difference in the DD group seemed to reflect this results. The frequency of developmental disabilities was 9.5% (70 boys in 7.2% and 22 girls in 2.3%) in elementary school age, 84 students in 8.7% (33 boys in 3.4% and 51 girls in 5.3%) in junior high school age, and 34 students in 3.5% high school age (17 boys in 1.8% and 17 girls in 1.8%). The boy-to-girl ratio by age was boy-dominant at elementary school age, girl-dominant at junior high school age, and equal by gender at high school age. The reason for the predominance of girls in junior high school age is unknown, but one possibility is that boys with DD have become more likely to have difficulties such as behavioral problems at junior high school age, and they have more opportunities to use other medical institutions and specialized consultation organizations, resulting in a relative increase in the number of girls.

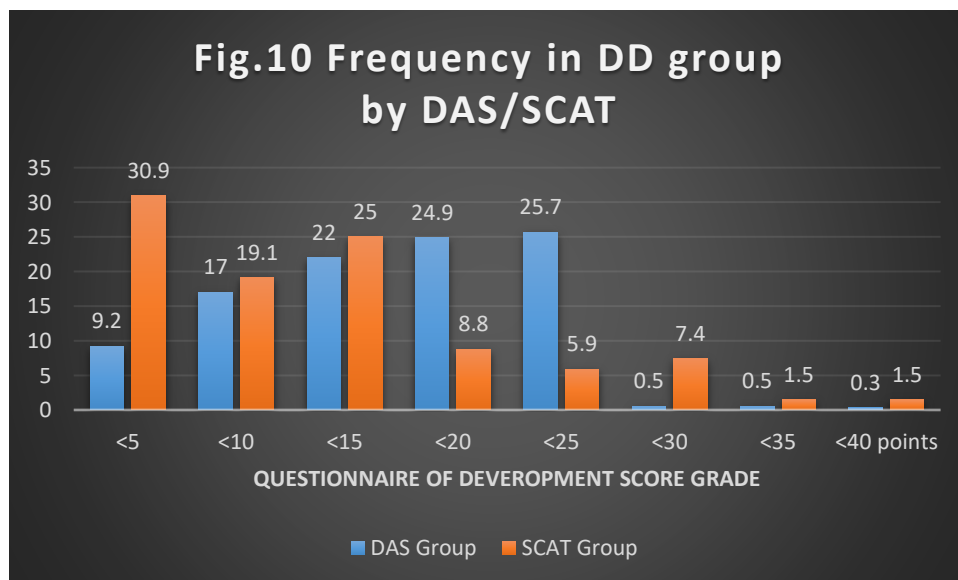
Table 3 Questionnaire for Development (Tentative Title by Author)

Questions of Interpersonal Relation and Tenacity		No	Somewhat	Yes
1	Grown-up, precocious.	0	1	2
2	Everyone thinks of him/her as "Dr. " or "Professor" (e.g. Dr. Calendar).	0	1	2
3	He/She is interested in things that other children are not interested in, and have his/her own "world of knowledge."	0	1	2
4	He/She has knowledge in a specific field, but he/she is rote learning and do not understand the meaning properly.	0	1	2
5	Even if someone says implicit words or sarcasm, he/she may not understand and take it as the words spoken.	0	1	2
6	The way of conversation is formal, and he/she may speak without inflection or be unable to make a pause.	0	1	2
7	Combine words to create neologisms that only he/she can understand.	0	1	2
8	He/She may speak in a unique voice.	0	1	2
9	Even if he/she doesn't have the purpose to tell someone, speak out regardless of the situation (e.g. lip ringing, coughing, purring, shouting)	0	1	2
10	While there are things that he/she are very good at, there are things that he/she are extremely bad at.	0	1	2
11	He/She talks about various things, but he/she does not understand the situation at that time, the feelings and positions of the other person.	0	1	2
12	Poor empathy.	0	1	2
13	He/She says things that confuse people without consideration.	0	1	2
14	He/She may have unique eyes.	0	1	2
15	He/She wants to get along with his/her friends, but he/she can't build friendships well.	0	1	2
16	He/She is close to his/her friends, but he/she plays alone.	0	1	2
17	He/She doesn't have good friends.	0	1	2
18	When he/she plays a ball game or game, he/she can't think about cooperating with his/her peers.	0	1	2
19	His/Her movements and gestures can be clumsy and awkward.	0	1	2
20	Sticking too certain actions or thoughts can prevent him/her from doing simple daily activities.	0	1	2
21	He/She has his/her own unique routines and procedures and is reluctant to change.	0	1	2
22	He/She is tenacious of certain objects.	0	1	2
23	Other children can bully him/her.	0	1	2
24	He/She may have a unique facial expression.	0	1	2
25	He/She may have a unique posture.	0	1	2
26	Sensitivity or insensitivity to certain visual, smelly, auditory, tactile stimuli. (author's additional item)	0	1	2

Figure 9 shows the frequency of occurrence of the ASD group and the non-ASD group, the latter group of which was judged to have less possibility of ASD at the first visit, along the score-grades of the Questionnaire for Development divided into five-point categories.



The ASD group showed the maximum frequency (32.4%) at grade <15 points (10-14 points) on the Questionnaire, while the non-ASD group showed the maximum frequency (46.3%) in grade <5 points (0-4 points). If the cut-off value is placed at the score grade <15 points, A = positive 85.2%, D = negative 79.2%, B = false positive 20.7%, C = false negative 14.9%, thus sensitivity $A/(A + C) = 85.2\%$, specificity $D/(B + D) = 79.2\%$.



As shown in Figure 10, the frequency of students in the DAS group increased as the score grade of the Questionnaire increased, but the frequency decreased sharply immediately after reaching the maximum (25.7%) at grade <25 points (20-24 points). This may be because the degree of developmental disability has become stronger and the child is referred to another facility, or because the motivation for receiving a

medical examination is no longer for DAS. On the other hand, the frequency of student in the SCAT group was the highest (30.9%) at the grade <5 points, and it decreased as the score grade increased.

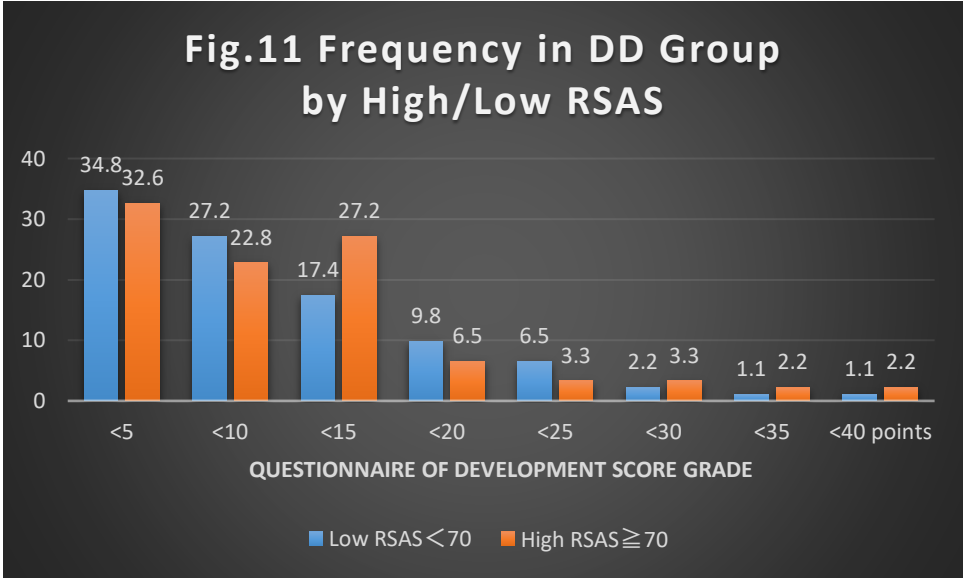


Figure 11 shows the relationship between the low RSAS group with a score of less than 70 and the high RSAS group with a score of 70 or more along the Questionnaire score grade. Except when the high RSAS group increased at the grade <15 points (10-14 points), both of high and low groups showed similar attenuation curves from the first grade. It is speculated that interpersonal difficulties caused by ASD are of a different nature than social anxiety. However, why did only the high RSAS group deviate from the attenuation curve and increase at the grade <15 points (10-14 points)? The grade <15 points is the border between the non-DD group and the DD group, and it seems that the grade <15 points is in the limit zone where the characteristics of DD can be still controlled. We looked at how two subscales of SAS—fear/ anxiety and avoidance—are involved.

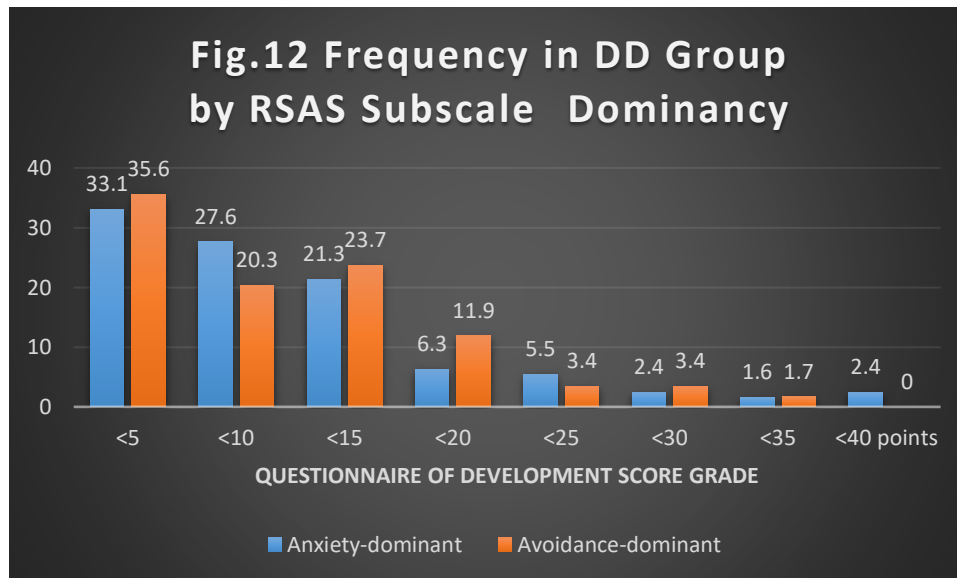
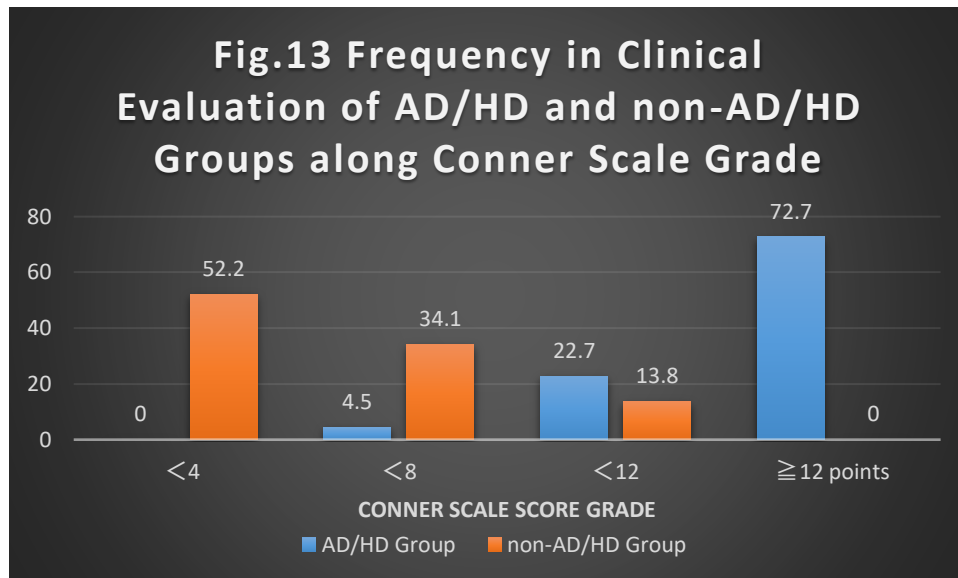


Figure 12 shows that comparing the subscales of fear/anxiety and avoidance in RSAS, the difference between both subscales [referred as the **Anxiety-Avoidance Difference (AAD)**] is positive ($AAD \geq 0$), namely higher subscale of fear/anxiety than that of avoidance which is called as the anxiety-dominant group, and vice versa ($AAD < 0$) as the avoidance-dominant group, and shows that each frequency of anxiety-dominant and avoidance-dominant children in RSAS is calculated according to the Questionnaire score grade. Children in the anxiety-dominant group drew a simple decay curve as the score grade increased, but in the avoidance-dominant group, they deviated from the decay curve at the grade <15 points and showed high values (23.7%) as high RSAS group indicated in Fig.11. In other words, it was shown that the avoidance tendency aggravates when the ASD characteristics are manifested by increasing the score up to the border grade <15 points, and this suggests that there is an interaction that worsens the avoidance of going to school in children with the RSAS avoidance dominancy + ASD border zone.

Finally, we will analyze the relationship between AD/HD and DAS. In addition to the clinical evaluation of AD/HD at the first visit, mothers of some children were requested to evaluate the revised Connor Pediatric Behavior Evaluation Scale. This Connor scale can judge a score of 12 or more as the group with a high probability of AD/HD. Therefore, we divided the Connor scale into grades of less than 4 points, less than 8 points, less than 12 points, and 12 points or more. Figure 13 illustrates the relationship between clinical evaluation at the first visit and the Connor scale.



In the AD/HD group including children with AD/HD suspected in clinical evaluation, the maximum frequency was 72.7% at the grade 12 or higher on the Connor scale, while for the non-AD/HD group, the maximum frequency was 52.2% at the grade <4 points. The AD/HD group and the non-AD/HD group intersect at the grade <12 points (8-11 points), and the sensitivity is 95.4% and the specificity is 86.3% when the cutoff value is at this grade. Therefore, the grade <12 points in the Connor scale can be referred as border AD/HD.

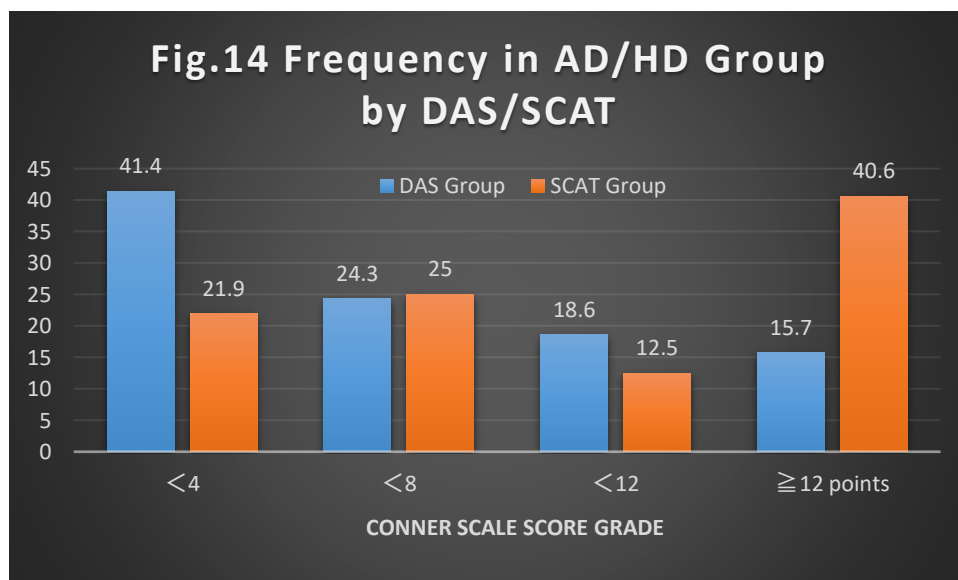


Figure 14 shows the frequency of the DAS and SCAT groups along the score grade of the Connor scale. 53.1% (34/64) of the AD/HD group including the border AD/HD group attended school, and 34.3% (48/140) had DAS. On the other hand, 65.7% (92/140) of the non-AD/HD group had DAS, and 46.9% (30/64) attended school. Compared to the ASD

group (73.9%), the AD/HD group tended to have fewer DAS. ASD seemed to relate to more problematic DAS factor.

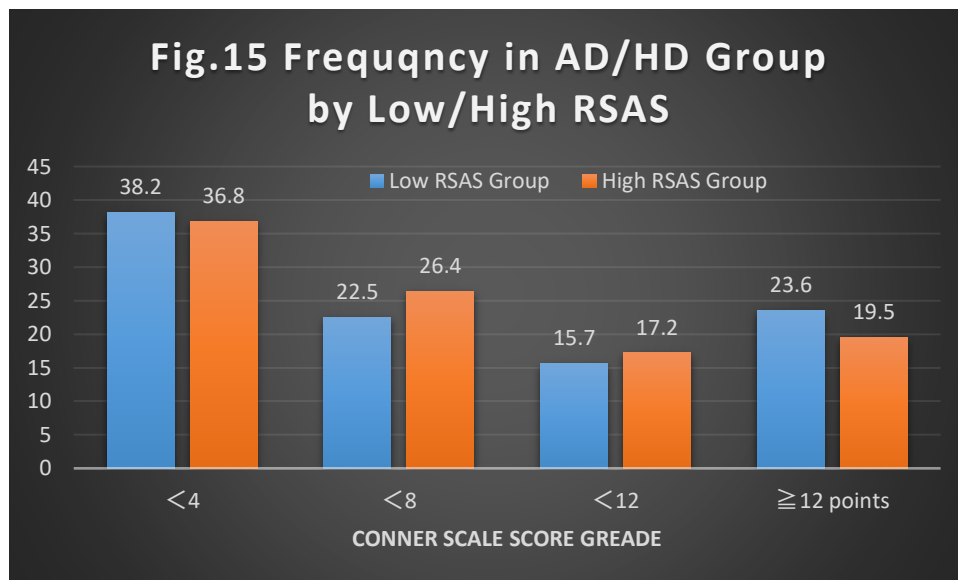


Figure 15 shows the frequency of children in the low and high RSAS groups along the score grade of the Connor’s Scale. As the score grade increased, the two groups with high and low RSAS decreased in parallel. The frequencies in both the high and low RSAS groups increase slightly at the score grade of 12 points or more, but this slight increment may occur because the score grade of 12 points or more covers wider range than the other grades. In other words, RSAS and AD/HD showed a negative correlation of the more pronounced the characteristics of AD/HD, the less RSAS decreased.

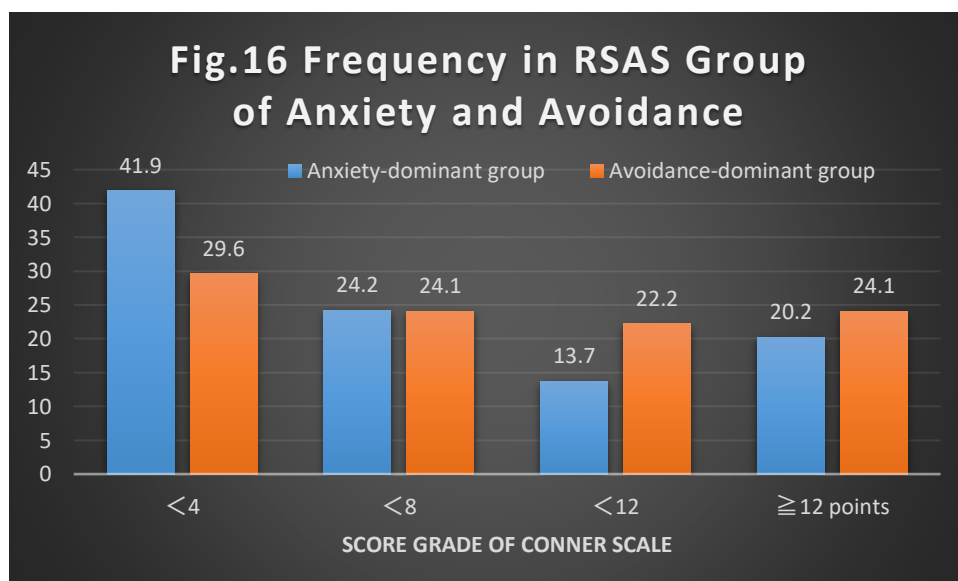
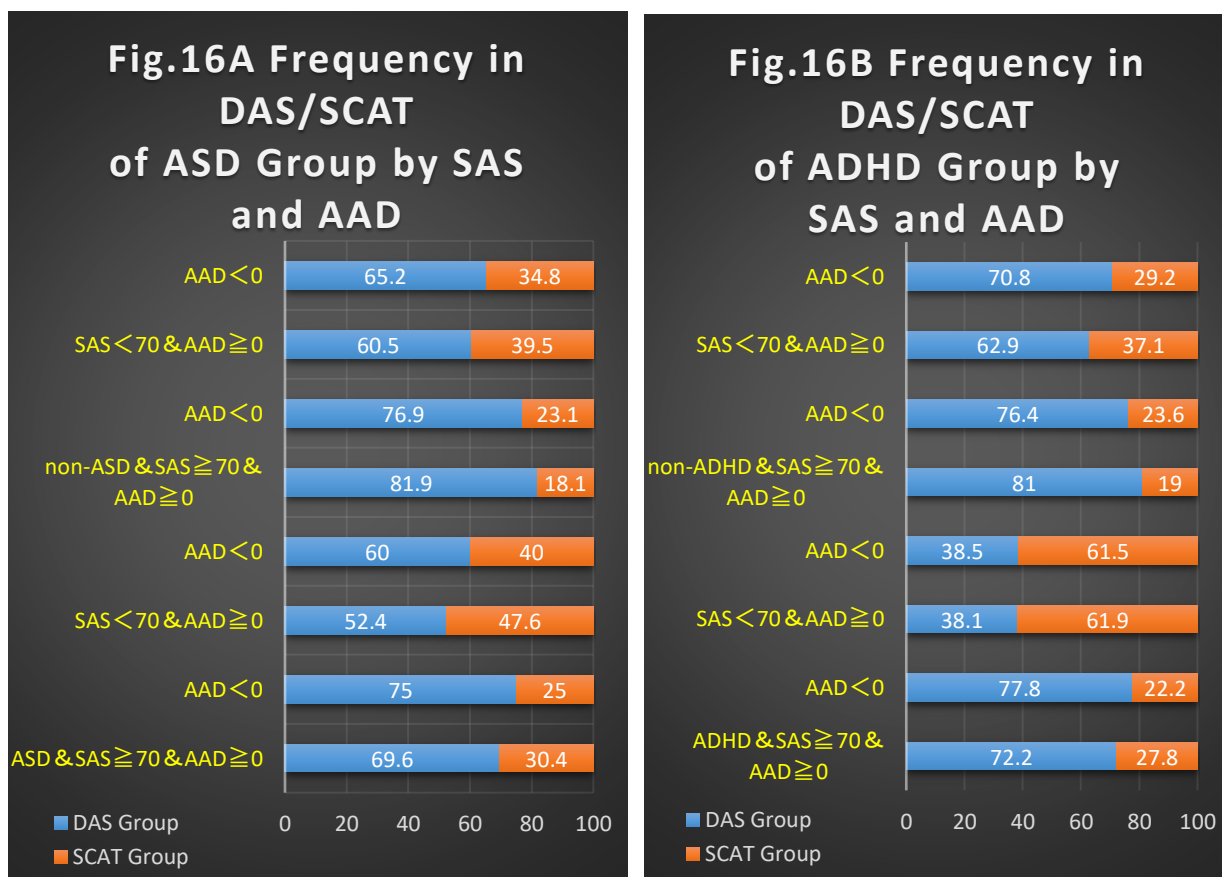


Figure 16 shows the frequency in RSAS group by anxiety-dominance and avoidance-

dominance along the score grade of the Connor's scale. Similar to the RSAS score in Figure 15, the anxiety-dominant group showed a negative correlation with the score grade of the Connor's scale but the avoidance-dominant group had a slower slope of the regression line than the anxiety-dominant group, thus the avoidance score was almost constant regardless of the degree of AD/HD characteristics. In other words, the avoidance-dominance group seemed to be a phenomenon independent of AD/HD characteristics.



Figures 16A and 16B illustrate how DAS is affected by social anxiety and social avoidance in children in the ASD and AD/HD groups. The SAS in Figures 16A and 16B includes LSAS and RSAS. AAD is initials of the anxiety-avoidance difference, $AAD \geq 0$ is the anxiety dominant group, and $AAD < 0$ is the avoidance dominant group. Students with SAS scores of 70 or higher were more likely to have DAS in both the ASD and non-ASD groups, but the ASD group had less DAS than the non-ASD group. In other words, it was estimated that ① students with anxiety-dominance or avoidance-dominance of SAS have increased DAS, ② ASD may have a suppressive effect on DAS due to the anxiety-dominance and avoidance-advantage of SAS. Furthermore, in the ASD group, the DAS increased due to the avoidance-dominance, and in the non-ASD group, the

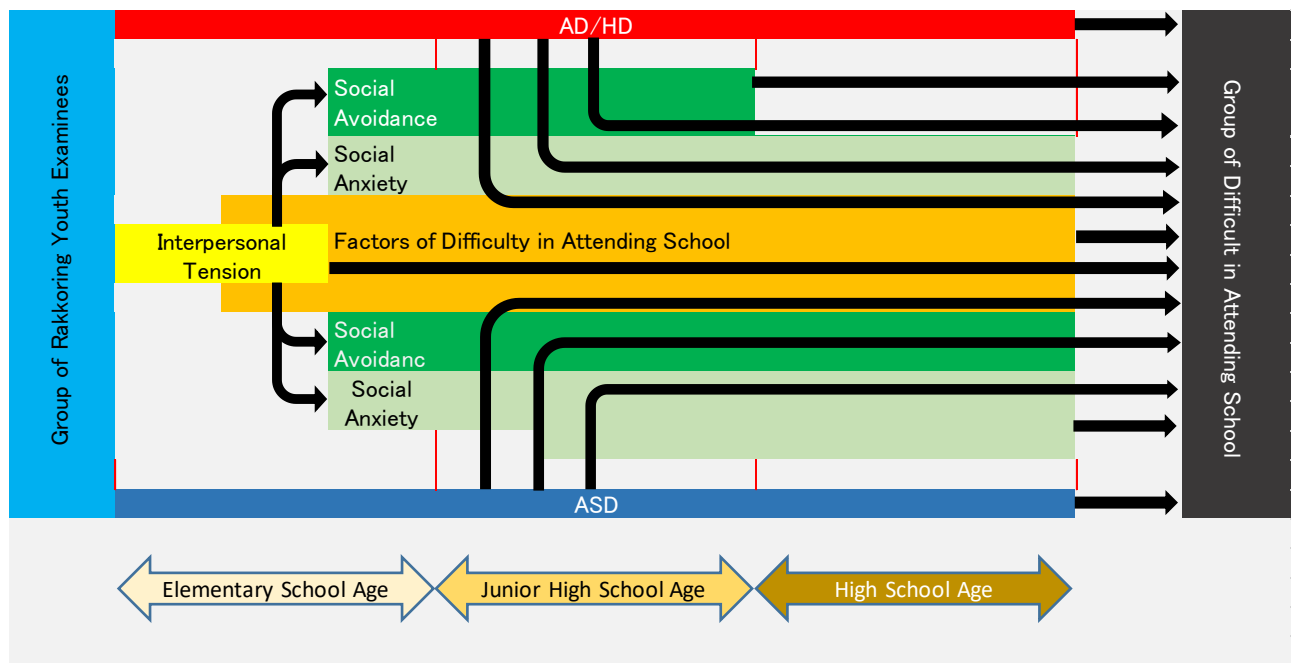
DAS increased due to the anxiety-dominance. In other words, it was estimated that ③ in the ASD group, the avoidance-dominance of SAS was a factor in the DAS.

On the other hand, the AD/HD group showed the same pattern as the ASD group, and the estimation of ①~③ was common to the AD/HD group. To summarize the above, it is as follows:

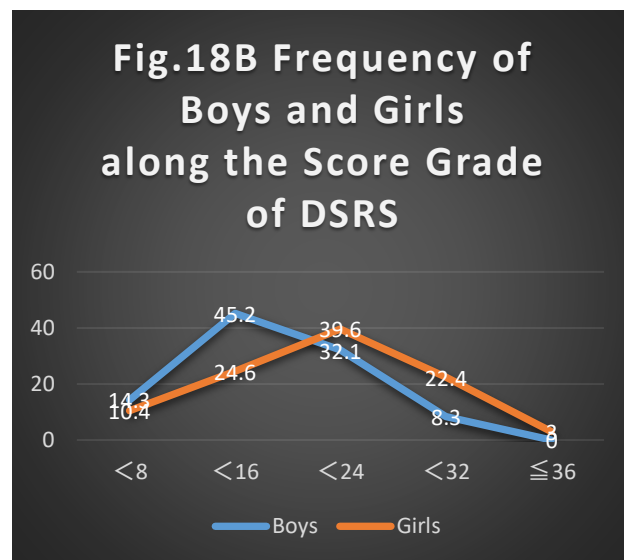
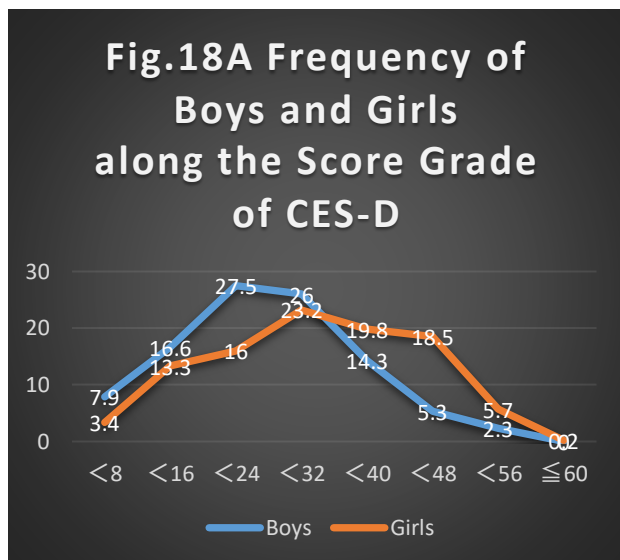
- (1) Developmental Disorders are one of the DAS factors, and ASD may affect more strongly than AD/HD.
- (2) The 10-14 points grade of the Questionnaire for Development (untested) is the cut-off value for ASD.
- (3) The DAS is worsened as its characteristics of mild (15-24 points grade) ASD are enhanced.
- (4) Moderate or higher (25 points or more) ASD may be mainly targeted at medical treatment for ASD itself rather than DAS.
- (5) Border (10-14 points grade) ASD may make avoidance of RSAS aggravate DAS.

Starting with interpersonal tension, we have investigated 971 children of RYE group on factors that make it difficult to attend school, social anxiety and its subscales of anxiety-dominance and avoidance-dominance, and pervasive developmental disorder. Figure 17 summarizes the relationship between each factor and DAS. It illustrates how each factor relates to DAS in progression of elementary, junior high to high school age. When children have DAS, refer to this diagram of mutual relationships to consider the factors that cause their DAS. I think it would be good if we could discuss with the factors that can be solved with the child and the caregivers, preferably school officials, or with how to accept the factors that are difficult to solve (what are the negative and positive aspects of the factors, and how much can be accepted in them) and if we could decide what to try to deal with, for instance how to mitigate the factors, and if not, how to face them. What we must not forget is that DAS is one of the ways to 'attend school.' This does not mean to affirm the DAS. DAS is not a desirable way of going to school, but it should be dealt with from the perspective of a temporary way to continue going to school. The important thing is not to prolong the DAS. If it is prolonged, children will suffer immeasurable losses in study and socializing, so we should think about how to finish it in a short period of time without denying the DAS.

Fig.17 Correlations among Factors causing DAS



At the end of Part 1, I would like to consider a depressive state that tends to be complicated by DAS. Depressive states include depression, which is a mental illness, but many children with DAS show a reactive depressive state (not only in the category of adjustment disorder). In other words, the child him/herself does not approve of not being able to go to school. This leads to feelings of guilt for bothering and impatient family and school-related persons, a sense of self-ineffectiveness that prevents them from coping, feuds with parents, and feelings of inferiority to their siblings and friends. Depressive reaction provoked in these situations suppresses energy and activity, strengthens the sense of self-denial, obstructs the rhythm of life, and makes it increasingly difficult to go to school. Both of the depressive states and the aforementioned social anxiety disorder function as vicious cycles of DAS. Since depression and social anxiety may be improved by psychiatric treatment, it is in the interests of children to visit psychosomatic medicine and psychiatrists at an early stage and to disrupt the vicious cycle at least for suppressing the deterioration. Therefore, I would like to examine the depressive state of the RYE group and investigate the effect of depressive state on DAS.



Figures 18A and 18B show the frequency of boys and girls who applied two types of depression scales, respectively. CES-D abbreviates Center for Epidemiologic Studies-Depressive Scale of the National Institute of Mental Health (NIMH). Examinees aged 15 years and over are asked to self-evaluate in the past week, with scores below 16 being normal, 16 to 30 points mild, 31 to 45 points moderate, and 46 to 60 points being severe. On the other hand, DSRS is an abbreviation of the Depression Self-Rating Scale for Children, published by Birmaher in 1981, which targets children aged 7 to 13. Thereafter, Satoshi Nagai (2008) reported that DSRS can also be applied to junior high school students. A score of less than 16 is considered normal.

Rakkoring initially had used CES-D and later introduced DSRS. Since it was not used with strict age restrictions, the age of the target examinees was spread from elementary school age to high school age. First, we analyzed the distribution by sex. 19.5% (144/740) of children in the normal range according to CES-D and 44.5% (97/218) of children under DSRS, more than double that of CES-D. Therefore, when the DSRS cutoff value was set to 12 points, it was 28.0% (61/218 students). Based on the CES-D results, the DSRS cutoff value of 16 points is too high, so the original cutoff value seems to be between 8 and 12 points, and in this paper, 12 points is the cutoff value. The highest frequency for boys was 27.5% at a score grade <24 in CES-D, 26.2% at a DSRS score grade <12, and the highest frequency for girls was 23.2% at the score grade <32 on CES-D and 24.6% at the DSRS score grade <20. Depressed children were in 75.5% of boys and 83.4% of girls by using CES-D, and 59.5% of boys and 79.9% of girls by DSRS, indicating that the girls were more depressed than the boys.

Fig.19A Frequency of Children in Each School Age on CES-D Grade

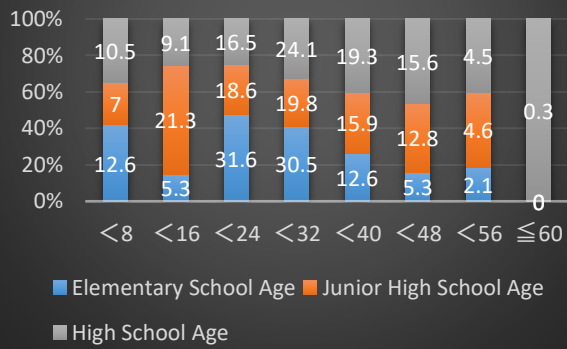
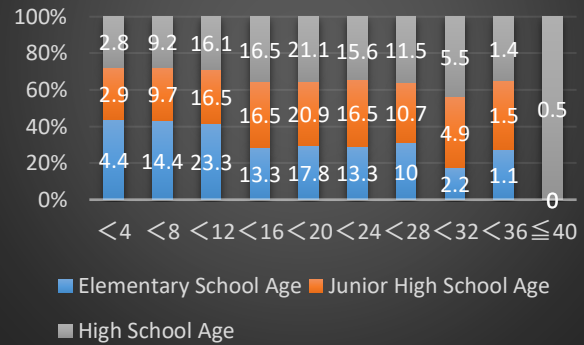
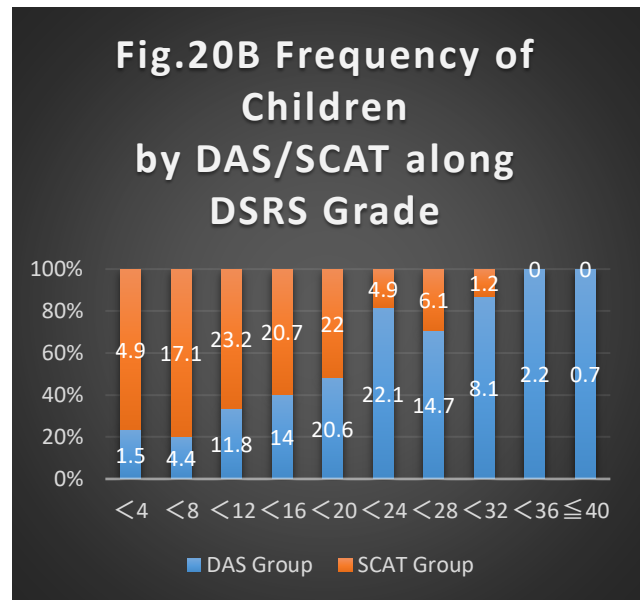
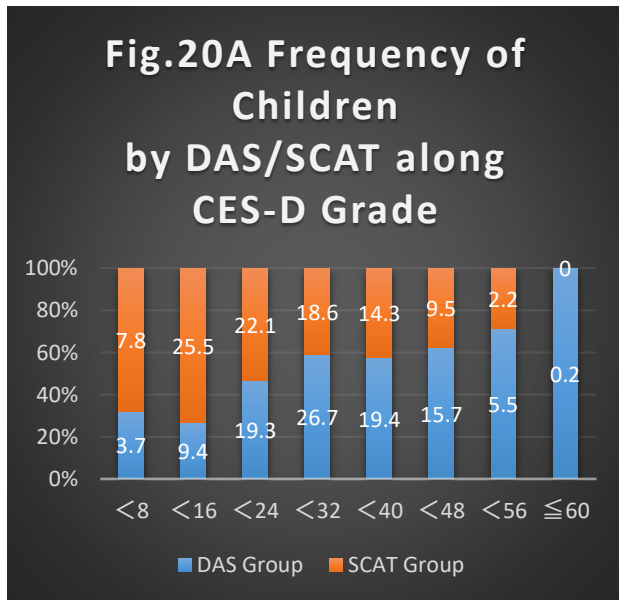


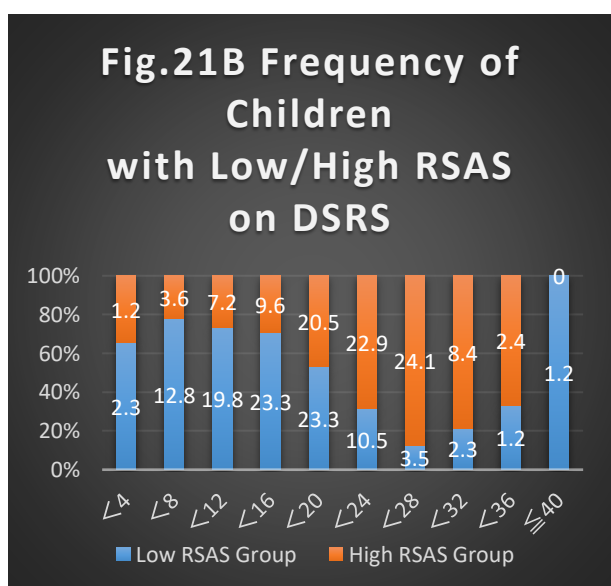
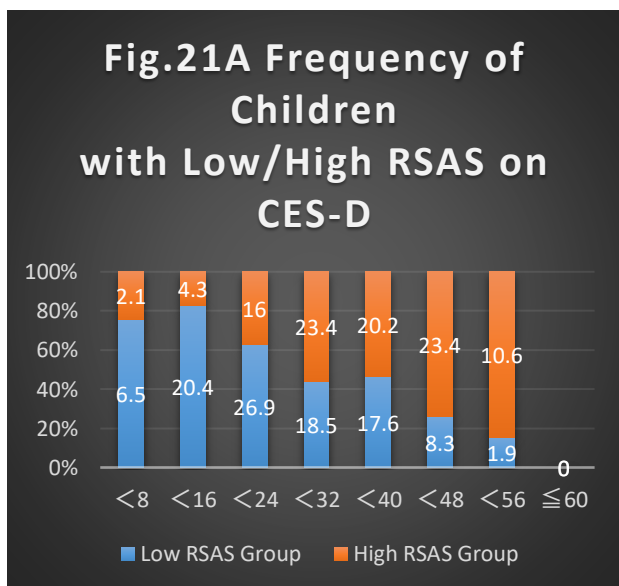
Fig.19B Frequency of Children in Each School Age on DSRS Grade



As shown in Figures 19A and 19B, the frequency of children in each school age was calculated for each score grade of the two depression scales. In case of CES-D, the most frequency at elementary school age was 31.6% at the score grade <24 points, followed by 30.5% at the score grade <32 points. The most frequency at junior high school age was 21.3% at the score grade <16 points, but the frequency gradually decreased as the depression became more severe for children with 16 points or more (Figure 19A). Among students of high school age, the highest frequency was 24.1% at the score grade <32 points, followed by 19.3% at the score grade <40 points. Depression was a more severe at the high school age than at elementary and junior high school ages. On the other hand, in case of DSRS, the highest frequency at elementary school age was 24.4% at the score grade <8 points, and the frequency decreased as the depression became more severe (Figure 19B). The DSRS pattern may differ from the CES-D pattern, it is why CES-D may be more sensitive to higher age than DSRS. The highest frequency of children at junior high school age was 20.9% at the score grade <20 points, and the next frequency was 16.5%, which was before and after the score grade <20 points. In other words, many junior high school students gathered in the mild depression range of 12 to 24 points. The most frequency at high school age was 21.1% at the score grade <20 points, and they were in a state of mild depression, similar to children of junior high school age. CES-D revealed that 60% of children at elementary school age and 40% of junior high and high school age were depressed, and also DSRS did that about 50% of children at elementary, junior of children at high school age were in a mild state of depression, and almost half of the DAS children were depressed.

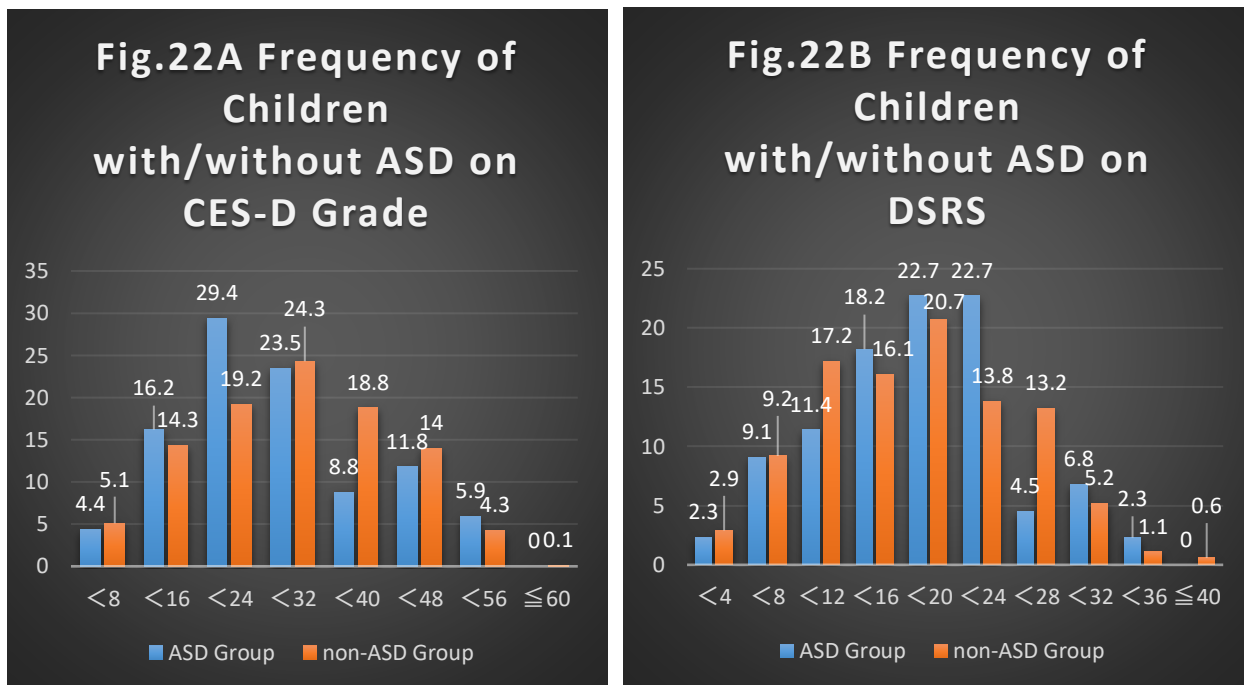


Figures 20A and 20B show how school attendance changes along the hierarchy of depression. In both of CES-D and DSRS, the DAS students increased as the depression became more severe, and the score grade where the frequency of DAS group exceeded that of the SCAT group was <32 points in CES-D and <24 points in DSRS (Figures 20A and 20B). Namely, students with mild to moderate depression have more DAS. This result suggests that DAS is related to depressive state, and it is thought that depressive state becomes a vicious cycle of DAS.

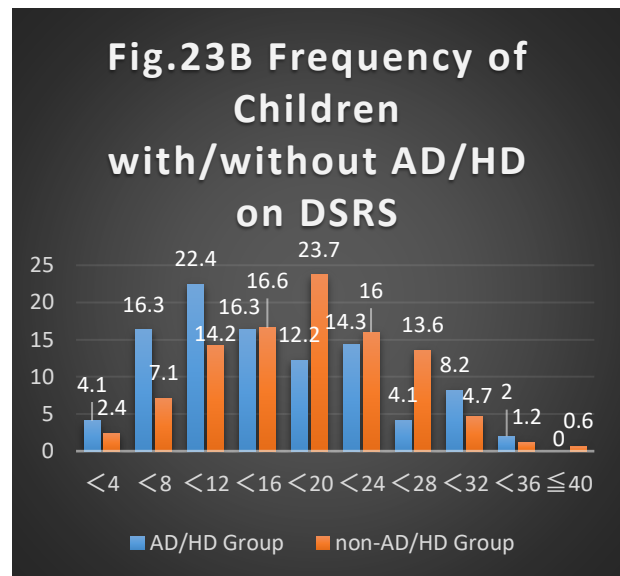
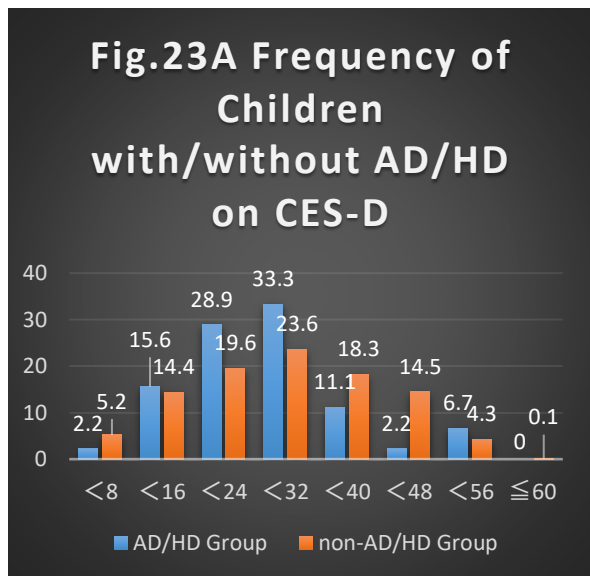


Figures 21A and 21B show the relationship between RSAS and depressive states. The frequency of children in the high RSAS group increases with aggravation of depressive

state. In particular, the majority of children with moderate or higher depression were in the high RSAS group. The relationship between social anxiety and depression has been pointed out in the past studies, but our result also clearly shows a relationship between the both. In other words, there is an association among DAS, depression, and moderate or higher social anxiety, and these are considered to be factors that promote DAS.



Figures 22A and 22B show the relationship between ASD and depressive states. By using CES-D (Figure 22A), the highest frequency of children in the ASD group was 29.4% at the score grade <24 points, and the highest frequency in the non-ASD group was 24.3% at the grade <32 points. Both groups had a similar overall pattern, but the ASD group shifted toward less depression than the non-ASD group. Namely, the ASD group might suppress weakly depression. On the other hand, DSRS (Fig. 22B) showed a similar distribution pattern for both ASD and non-ASD groups, and the highest frequency of children was at the score grade <20 points in both groups. The DSRS showed no difference in depressive tendencies between ASD and non-ASD groups.



Figures 23A and 23B show the relationship between AD/HD and depression. When using CES-D (Figure 23A), the highest frequency of children was observed at the score grade <32 for both of AD/HD and non-AD/HD groups, with 33.3% in the AD/HD group and 23.6% in the non-AD/HD group. The non-AD/HD group showed an almost normal distribution, while the AD/HD group gradually increased up to the highest frequency grade, and thereafter showed a marked decrease, resulting in distribution like a Poisson-type. Namely, the AD/HD group had mainly mild depression, and few moderate to severe depression. In DSRS (Figure 23B), the non-AD/HD group showed a normal distribution as in CES-D, but the AD/HD group also had a distorted normal distribution. Therefore, the highest frequency of the AD/HD group was at the score grade <12 points (22.4%), and the highest frequency of the non-AD/HD group was at the score grade <20 points (23.7%), shifting the non-AD/HD group toward severe depression. From these results, except for DSRS in the ASD group, mild depression is mainly observed in both of ASD and AD/HD groups, and moderate to severe depression is reduced compared to the non-ASD group and non-AD/HD group, and pervasive developmental disorder may have an effect on suppressing the occurrence of severe depression. Therefore, we investigated whether there is a difference in the depressive distribution between the ASD group and the AD/HD group.

Fig.24A Frequency of Children in ASD and AD/HD Groups on CES-D

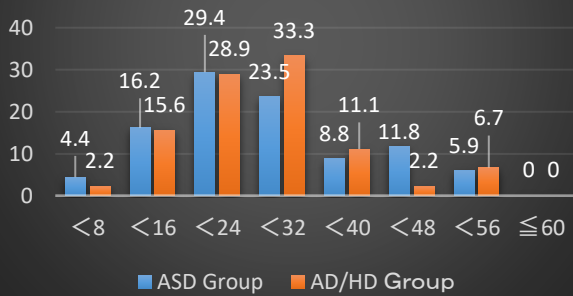
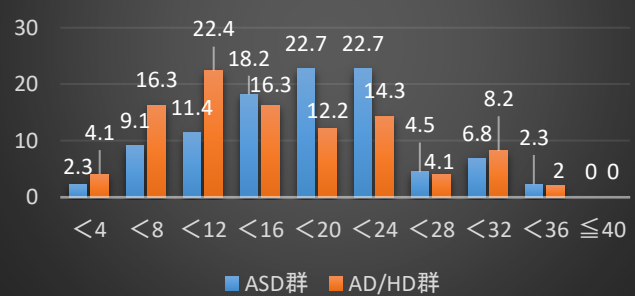


Fig.24B Frequency of Children in ASD and AD/HD Groups on DSRS



As shown in Figure 24A, in case of applying CES-D to children, the highest frequency of children in the ASD group was 29.4% at the score grade <24 points, and 33.3% in the AD/HD group at the score grade <32 points, while at the score grade 16 points or more 79.4% in the ASD group and 82.2% in the AD/HD group were depressed. On the other hand, as shown in Figure 24B, in case of applying DSRS to children, the highest frequency of children in the ASD group was 22.7% at the score grade <24 points, and in the AD/HD group was 22.4% at the score grade <12 points. When the cutoff value was set to 12 points, 77.2% of the ASD group and 57.2% of the AD/HD group were depressed. The difference between CES-D and DSRS may reflect the difference in the characteristics of the two scales, as CES-D is intended primarily for children aged 15 years and older, while DSRS is intended for children aged 7-15 years. In this sense, if we focus on the results of DSRS, it is possible that the ASD group promotes DAS by accompanying depression compared to the AD/HD group. Therefore, it is necessary to investigate the proportion of students with or without depression in the ASD group.

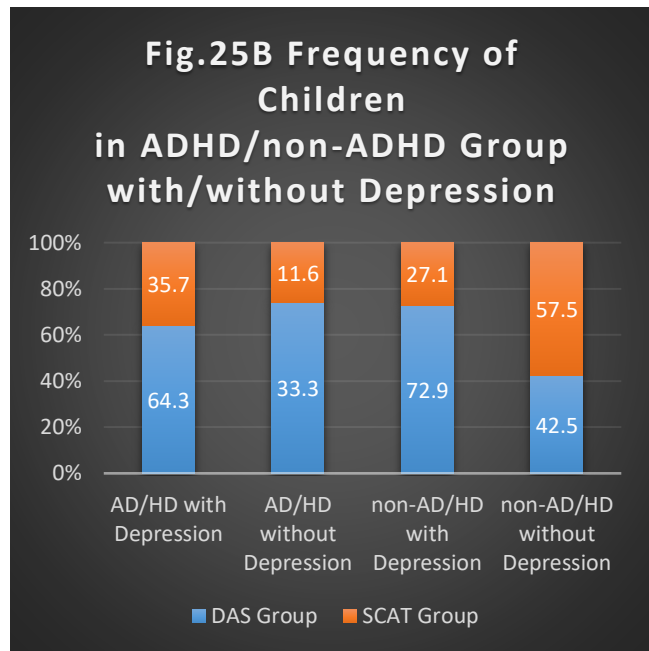
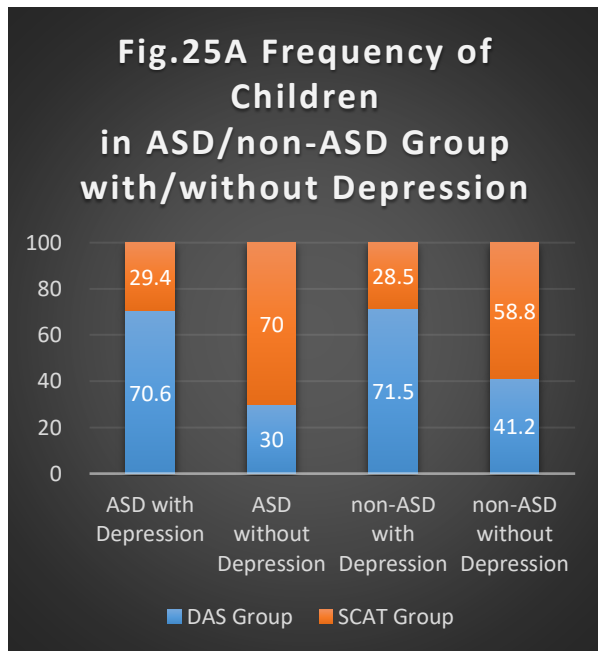


Figure 25A shows how DAS is affected in the presence of ASD and depressive states. Depressive state is indicated when the cut-off value is set to 12 points based on DSRS. The addition of depression to ASD has more than doubled the frequency of DAS. On the other hand, as shown in Fig. 25B, the addition of depression to the AD/HD group had almost no effect on the DAS. On the other hand, even in the absence of ASD or AD/HD, depression nearly doubled the DAS.

Fig.26 Relaton Map among Factors aggrevating DAS

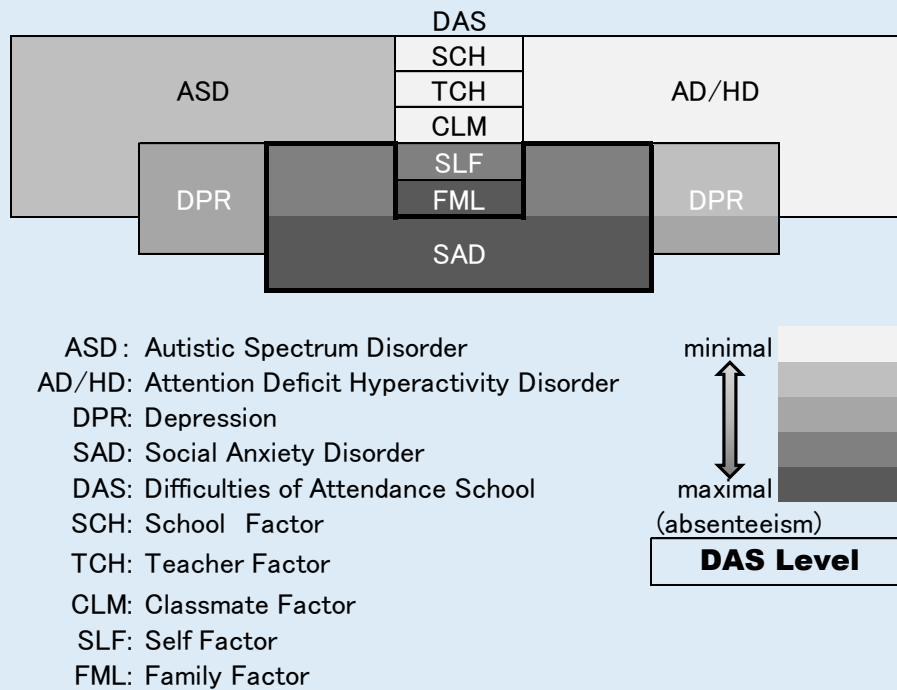


Figure 26 shows the relationship among factors that aggravate the DAS based on the previous results. The shades of gray indicate the degree of deteriorating the DAS on a scale from minute to maximum. Since there are various factors that can exacerbate the DAS, and their manifestations and associations differ from person to person, it is not possible to create a relationship diagram that can be explained uniformly. Here, the combination of factors that seem typical and representative and their effects are schematically shown.

Finally, I would like to summarize the results in Part 1.

- (1) Among the 971 RYEs, many were born early in November to April (except December and March).
- (2) The largest one among the first visit months was October and June, and there was a lag of 1 to 2 months between the end of the long vacation and the first visit month, and usually DAS occurred during the lag.
- (3) Two-thirds (654 children) of the RYE group had DAS, and furthermore two-thirds of them were girls.
- (4) Twenty percent of those who had DAS were at elementary school age, 50% were at junior high school age, and 30% were at high school age, while the frequency of those who attended school was almost equal in each school.
- (5) The frequency of girls who had DAS was 50% at elementary school age and 70% at

junior high school and high school age, and 40% and 60% of girls who attended school, respectively.

(6) The most frequent DAS factor was commuting time in the SCHOOL category, not interesting classes in the TEACHER category, noisy class and not joining the circle of friends in the CLASSMATES category, unconfident attitude to keep up with the studies in the SELF category, and some family members with excellent grades in the FAMILY category.

(7) The number of factors in each category that children themselves are aware of as a factor causing the DAS is high in the FAMILY and SELF categories, and this tendency was particularly noticeable among girls.

(8) Among the other factors that made it difficult to attend school, the most prominent were busyness due to club activities and cram teaching, high-pressure by teachers, aggressive classmates, low self-esteem, and excessive parental interference.

(9) The number of factors that made it difficult to attend school was higher for the girls at junior high school and high school ages.

(10) The most frequent factor in each category of SCHOOL, TEACHER, CLADSSMATES, SELF, and FAMILY that made it difficult to attend school was poor school facilities, insufficient teaching, bullying, and excellent family member at elementary school age.

(11) The most frequent factor similar to the above at junior high school age was school lacking in discipline, unenthusiastic teacher, hustle and bustle in class, interpersonal tension, and excessive parental interference.

(12) The most frequent factor of the above at high school age was school that a child didn't want to go to, uninteresting classes, interpersonal tension, lack of confidence in studying, and parental disappointment at a child's grade.

(13) Sixty percent of the RYE group complained of interpersonal tension, and seventy percent of them were girls, but the boy-to-girl ratio was almost equal among those who did not complain of interpersonal tension.

(14) The children who had DAS due to interpersonal tension was more common at junior high school age, and more girls were at junior high school and high school ages.

(15) The school pattern of children who had DAS without interpersonal tension was the same as that of those with interpersonal tension, but the ratio of the children with DAS to ones without DAS increased at junior high and high school ages.

(16) The frequency of DAS increased in those with interpersonal tension at elementary school age, but the frequency did not increase in those without interpersonal tension.

(17) Interpersonal tension is a factor that makes it difficult to attend school at elementary school age, but other difficult factors were important at junior high school and high school ages, even if interpersonal tension played a role as a fuse to DAS.

(18) Those who scored 70 points or more on the Liebowitz or Rakkoring Social Anxiety

Scale and whose fear and anxiety prevailed over avoidance had exacerbated their DAS.

(19) Twenty percent of RYE group were suspected of having developmental disorders, ASD and AD/HD were almost equal in frequency, and AD/HD was dominated by boys with a ratio of 3 to 2.

(20) When ASD characteristics became more pronounced as they reached the border zone, the avoidance of the Social Anxiety Scale was enhanced, exacerbating the DAS.

(21) AD/HD was negatively correlated with the Social Anxiety Scale, and the more pronounced the AD/HD characteristics, the more difficult it was to attend school.

(22) About 80% of children assessed by CES-D or 70% of those assessed by DSRs were judged to be depressed, and on both scales, 80% of girls showed depressed states, which was higher frequently than boys.

(23) Almost half of children who had DAS were depressed, and as the degree of depression intensified, the DAS worsened.

(24) Depression was often mild in the children with developmental disabilities, but overlapping depressive states in children with ASD had the effect of worsening DAS.