Online Sexual Risk in Special Needs Schools: A Nationwide Survey to Inform Preventive Education for Students with Intellectual Disabilities in Japan

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ABSTRACT:
Students with intellectual disabilities may be especially vulnerable to online sexual trouble, yet little is known about how special needs schools address this issue through preventive education. This nationwide cross-sectional web survey, conducted in Japan from March to May 2024, examined the occurrence of online sexual incidents and school preparedness for prevention. Student-guidance coordinators from 260 special needs schools participated. The survey assessed 11 categories of online sexual incidents, incidents counted over the past 1 and 2 years, perceived need for school-based preventive education, current implementation, and staff training. Chi-square tests and multivariable logistic regression were used for analysis. Coordinators reported 109 incidents in the past year and 112 incidents over the past two years, with most incidents occurring in senior high divisions. Although 73.4% of respondents recognized the need for preventive education regarding online sexual trouble, only 35.4% reported implementation and 24.2% attended related training. Training participation was associated with greater perceived need for prevention, whereas older age was associated with lower perceived need. These findings indicate that special needs, particularly at the senior high level, require stronger disability-responsive preventive education to support students in recognizing online risk, maintaining personal boundaries, and seeking help appropriately. Although conducted in Japan, the findings highlight issues likely shared by special education systems internationally.

Keywords: intellectual disability; special education; online safety; preventive education; special needs schools; social media risk

1. Introduction

The expansion of Internet access and social networking services (SNS) has increased opportunities for online sexual trouble among adolescents. Such risks include coercive sexual messaging, privacy violations, and unwanted contact initiated online (Anne et al., 2018). These concerns may be particularly important for

students with intellectual and neurodevelopmental disabilities, who may have difficulty interpreting online social cues, recognizing unsafe situations, and responding appropriately (Hsieh et al., 2023; Murakami, 2023).

In this study, "online sexual trouble" refers to a range of SNS-mediated sexual problems, including harassment, unwanted solicitation, and risky offline encounters initiated online, as defined by the categories listed in Table 1. In Japan, the Ministry of Education's "Life Safety Education" (2023) addresses sexual violence and SNS-mediated harms, yet empirical evidence remains limited regarding how special needs schools encounter and respond to online sexual trouble (Ministry of Internal Affairs and Communications, 2022; National Police Agency, 2024). Studies from Europe and North America suggest that youth with disabilities experience higher rates of online sexual victimization than their typically developing peers (Sullivan & Knutson, 2000; Verrastro et al., 2023). Eda, Mori, and Hitotsuda (2010) noted that students with intellectual disabilities may have difficulty navigating abstract online social cues, which may increase their vulnerability to unwanted solicitation. These findings suggest that preventive education for this population may need to be explicit, concrete, and developmentally appropriate. In addition, previous research has identified a gap between educators' awareness of online sexual risks and the actual provision of preventive instruction, partly because of curricular constraints and limited staff training (Navarro-Prado et al., 2023). However, empirical evidence from non-Western special education systems remains limited, particularly regarding how schools identify and respond to such risks through preventive education.

Japan provides a useful case for examining these issues, given its nationwide system of special needs schools and increasing policy attention to online safety education. Taken together, these issues suggest the need to better understand how online sexual trouble is occurring in special needs schools and whether schools are adequately prepared to respond through preventive educational efforts. The purpose of this study was not to examine online sex education itself, but to clarify the school-based reality of online sexual trouble among students with intellectual and neurodevelopmental disabilities in Japan and to identify implications for preventive education. Importantly, the issue is not whether schools provide sex education online, but whether they are prepared to prevent online sexual trouble through accessible, school-based educational support. Specifically, this study aimed to: (i) quantify the distribution of online sexual incidents by educational stage; (ii) describe gaps between perceived need for preventive education, current implementation, and staff training; and (iii) examine school- and staff-related factors associated with perceived need for such education. By documenting these patterns, this study aims to contribute internationally relevant evidence on preventive educational needs in special needs school settings.

2. Methodology

A cross-sectional web survey was conducted from March to May 2024. Of 821 special needs schools serving students with intellectual disabilities nationwide, 400 were randomly selected. Invitations and a QR-coded survey link were sent to school principals, who were asked to distribute the survey to student-guidance coordinators (teachers responsible for student welfare and behavioral support) in the elementary, junior high, and senior high divisions where applicable (maximum of three respondents per school; N = 1,200 invited). Student-guidance coordinators were selected as respondents because they are typically responsible for handling sensitive student issues, coordinating school responses, and liaising with external agencies. As such, they represent a key informant group for understanding how online sexual trouble is recognized and addressed at the school level. We received 260 valid responses (response rate 26.1 %). The questionnaire covered:

1. Demographics: age group, division, total and special-needs teaching experience.

2. Incident Categories: 11 categories of SNS-related sexual problems adapted from Takagishi (2018) (see Table 1).
3. Incident Counts: number of incidents handled in the past 1 and 2 years.
4. Preventive Educational Practices: perceived need for school-based preventive education regarding online sexual trouble and whether such education had been implemented.
5. Staff Training: attendance at training related to SNS-based sexual trouble or online sexual risk prevention.

Table 1：Categories of Sexual SNS Problems Reported by Student-Guidance Coordinators

Students who have written sexual slurs on internet bulletin boards, SNS or in emails
Students who were sexually defamed on internet bulletin boards, SNS or in emails
Students whose personal information or photos related to sex have been leaked or misused without permission
Students who leaked or misused personal information or photos related to sex without permission
Students who have received chain emails or unsolicited emails about sex
Students who received an invoice for a charge for a website about sex that they had no recollection of using
Students who are so absorbed in the Internet that they can't concentrate on their studies or get enough sleep
Students who took photos of some of the sexually explicit descriptions in the books in the store without permission using the camera on their mobile phone.
Students who are persistently sent emails or followed by others
Students who have been (almost) victimized by online dating or sexual websites
Students who have met people they met on the internet in real life

Table 2：Characteristics of respondents by school division in special needs schools (N = 260)

Characteristics:	Elementary school (n = 67)				Junior high school (n = 59)				High school (n = 134)				Statistical test	*p* value[a]
	Mean	(SD)	n	(%)	Mean	(SD)	n	(%)	Mean	(SD)	n	(%)		
Gender													χ^2 (4) = 5.45	0.245
Men			34	(50.7)			39	(66.1)			89	(66.4)		
Women			28	(41.7)			17	(28.8)			42	(31.3)		
No response			5	(7.4)			3	(5.1)			3	(2.2)		
Age													χ^2 (8) = 23.10	0.003
<29			11	(16.4)			5	(8.5)			7	(5.2)		
<39			14	(20.9)			21	(35.6)			43	(32.1)		
<49			28	(41.8)			24	(40.7)			41	(30.6)		
<59			14	(20.9)			6	(10.2)			41	(30.6)		
60≦			0	(0.0)			3	(5.1)			2	(1.5)		
Teaching experience (years)	15.2	(8.7)			16.3	(9.0)			18.8	(9.5)			*f*(2) = 4.06	0.018
Experience as a special needs education teacher (years)	13.4	(8.1)			14.3	(8.2)			15.1	(9.5)			*f* (2) = 0.86	0.422
The need for you to provide guidance at school on SNS-related sexual harassment													χ^2 (2) = 12.4	< 0.001
Yes			38	(57.6)			46	(79.3)			107	(79.9)		
No			28	(42.4)			12	(20.7)			27	(20.1)		
Experience of attending training on SNS-related sexual harassment													χ^2 (2) = 4.44	0.108
Yes			10	(14.9)			15	(25.4)			38	(28.4)		
No			57	(85.1)			44	(74.6)			96	(71.6)		
Experience of dealing with student's internet-related sexual problems(This Year)														
Students who have written sexual slurs on internet bulletin boards, SNS or in emails			0	(0.0)			0	(37.8)			16	(11.9)	χ^2 (2) =16.0	<0.001
Students who were sexually defamed on internet bulletin boards, SNS or in emails			0	(0.0)			2	(3.4)			14	(10.4)	χ^2 (2) =9.45	0.009
Students whose personal information or photos related to sex have been leaked or misused without permission			0	(0.0)			0	(0.0)			5	(3.7)	χ^2 (2) =4.79	0.091
Students who leaked or misused personal information or photos related to sex without permission			1	(1.5)			0	(0.0)			3	(2.2)	χ^2 (2) =1.35	0.507
Students who have received chain emails or unsolicited emails about sex			1	(1.5)			1	(1.7)			8	(6.0)	χ^2 (2) = 3.37	0.185
Students who received an invoice for a charge for a website about sex that they had no recollection of using			0	(0.0)			0	(0.0)			1	(0.7)	χ^2 (2) =0.94	0.624
Students who are so absorbed in the Internet that they can't concentrate on their studies or get enough sleep			1	(1.5)			0	(0.0)			6	(4.5)	χ^2 (2) =3.63	0.163
Students who took photos of some of the sexually explicit descriptions in the books in the store without permission using the camera on their mobile phone.			0	(0.0)			0	(0.0)			0	(0.0)	-	-
Students who are persistently sent emails or followed by others			0	(0.0)			1	(1.7)			25	(18.7)	χ^2 (2) =23.12	<0.001
Students who have been (almost) victimized by online dating or sexual websites			0	(0.0)			1	(1.7)			4	(3.0)	χ^2 (2) =2.13	0.345
Students who have met people they met on the internet in real life			0	(0.0)			2	(3.4)			17	(12.7)	χ^2 (2) =12.3	0.002
Experience of dealing with student's internet-related sexual problems (last 2years)														
Students who have written sexual slurs on internet bulletin boards, SNS or in emails			1	(1.5)			1	(1.7)			13	(9.7)	χ^2 (2) =7.86	0.02
Students who were sexually defamed on internet bulletin boards, SNS or in emails			0	(0.0)			2	(3.4)			10	(7.5)	χ^2 (2) =5.91	0.052
Students whose personal information or photos related to sex have been leaked or misused without permission			0	(0.0)			0	(0.0)			5	(3.7)	χ^2 (2) =4.79	0.091
Students who leaked or misused personal information or photos related to sex without permission			0	(0.0)			0	(0.0)			6	(4.5)	χ^2 (2) =5.78	0.056
Students who have received chain emails or unsolicited emails about sex			1	(1.5)			3	(5.1)			7	(5.2)	χ^2 (2) =1.67	0.433
Students who received an invoice for a charge for a website about sex that they had no recollection of using			0	(0.0)			1	(1.7)			2	(1.5)	χ^2 (2) =1.07	0.586
Students who are so absorbed in the Internet that they can't concentrate on their studies or get enough sleep			1	(1.5)			1	(1.7)			7	(5.2)	χ^2 (2) =2.57	0.276
Students who took photos of some of the sexually explicit descriptions in the books in the store without permission using the camera on their mobile phone.			0	(0.0)			1	(1.7)			1	(0.7)	χ^2 (2) =1.18	0.554
Students who are persistently sent emails or followed by others			0	(0.0)			4	(6.8)			18	(13.4)	χ^2 (2) =10.68	0.005
Students who have been (almost) victimized by online dating or sexual websites			0	(0.0)			1	(1.7)			9	(6.7)	χ^2 (2) =6.40	0.041
Students who have met people they met on the internet in real life			0	(0.0)			1	(1.7)			16	(11.9)	χ^2 (2) =13.35	<0.001

Abbreviation: SD, Standard Deviation; SNS, Social Network Service

[a] *p* values were calculated by Student's *t*-test, Chi-square test, or Fisher's exact test.

Ethical Considerations

The study protocol was approved by the Research Ethics Review Committee of [Institution name masked for blind review] (Approval No. [masked]). Prior to beginning the survey, teachers received an online introduction explaining the purpose of the study and confidentiality of responses. Participation was voluntary, and informed consent was obtained electronically before respondents accessed the survey. All data were collected anonymously and analyzed in aggregate form.

Statistical Analysis

Statistical analyses included cross-tabulations and chi-square tests to compare incident patterns and preventive educational practices by school division. Unadjusted and multivariable logistic regression models were used to examine factors associated with perceived need for school-based preventive education regarding online sexual trouble. All analyses were conducted using SPSS version 29, and statistical significance was set at $p < .05$.

3. Results

Respondent Characteristics:

Of 260 coordinators, 67 (25.8 %) served elementary, 59 (22.7 %) junior high, and 134 (51.5 %) senior high divisions. The modal age group was 40s (35.8 %), followed by 30s (30.0 %). Senior high coordinators had significantly longer overall teaching experience ($p = .018$), but no division differences emerged for years in special-needs education.

Incident Counts and Distribution:

In Year 1, 109 online sexual incidents were reported: 99 (90.8%) in senior high, 7 (6.4%) in junior high, and 3 (2.8%) in elementary divisions (χ^2 = 28.7, p < .001). Persistent messaging/stalking (10.0 %) and in-person meetings with online contacts (7.3 %) were most frequent, both significantly concentrated in senior high (p < .01). Year 2 saw 112 incidents, 94 (87.0 %) in senior high (Table 3).

Perceived Need, Implementation, and Staff Training:

Although 191 coordinators (73.4%) recognized the need for school-based preventive education regarding online sexual trouble, only 92 (35.4%) had implemented such education in the past year, with higher endorsement in senior high divisions than in the other divisions (p < .001). Training attendance was low (63 coordinators, 24.2%), with no significant differences across school divisions.

Predictors of Perceived Necessity:

In the fully adjusted model, older age was associated with lower odds of perceiving school-based preventive education as necessary (OR = 0.49, 95% CI: 0.28–0.87), whereas greater experience in special needs education (OR = 1.06, 95% CI: 1.00–1.13) and prior training participation (OR = 2.61, 95% CI: 1.06–6.40) were associated with higher odds. Experience handling internet-related sexual problems in the current year was also significantly associated with perceived need (OR = 0.15, 95% CI: 0.03–0.73), although this finding should be interpreted in light of outcome coding.

Table 3：Distribution of Online Sexual Incidents by School Division Over the Past 1 and 2 Years

	OR	95% CI	*p*
Unadjusted model			
Type of school in charge of			
Elementary school			0.007
Junior High school	2.60	(1.15,5.89)	0.022
High school	2.80	(1.42, 5.53)	0.003
Demographic-adjusted model [b]			
Type of school in charge of			
Elementary			0.020
Junior High	2.41	(1.05, 5.57)	0.030
Senior	2.53	(1.26,5.07)	0.009
Gender			
Men			
Women	0.71	(0.41,1.19)	0.195
Age (years)	0.52	(0.31, 0.89)	0.018
Teaching experience(years)	1.03	(0.96, 1.10)	0.450
Experience as a special needs education teacher (years)	1.05	(0.99,1.10)	0.113
Experience of attending training on SNS-related sexual harassment	3.41	(1.43,8.13)	0.006
Fully-adjusted model [c]			
Type of school in charge of			
Elementary			0.150
Junior High	2.26	(0.97, 5.29)	0.060
Senior	1.63	(0.79,3.39)	0.189
Gender			
Men			
Women	0.71	(0.41,1.23)	0.222
Age (years)	0.49	(0.28, 0.87)	0.014
Teaching experience(years)	1.01	(0.95, 1.09)	0.659
Experience as a special needs education teacher (years)	1.06	(1.00,1.13)	0.042
Experience of attending training on SNS-related sexual harassment	2.61	(1.06,6.40)	0.036
Experience of dealing with student's internet-related sexual problems (This Year)[d]	0.15	(0.03, 0.73)	0.018
Experience of dealing with student's internet-related sexual problems (last 2 Years) [e]	0.38	(0.16, 1.31)	0.127

Abbreviation: OR, Odds Ratio; CI, Confidential Interbal; SNS, Social Network Service

a Binary logistic regression analysis were used. OR, odds ratio; CI, confidence interval. Estimates for demographic variables were not shown. *p<0.05, **p<0.01.

b Adjusted for school type, gender, age, years of teaching experience, years of special needs education teaching experience, and experience of participating in SNS-related training sessions on sexual harassment.

c Added this year and the past two years for experience of dealing with students regarding sexual issues on the internet

d This year, we determined whether or not the respondent answered 'yes' to at least one of the 11 items in Table 1 related to internet-related sexual problems

e In the past two years, we determined whether or not the respondent answered 'yes' to at least one of the 11 items in Table 1 related to internet-related sexual problems.

(N = 260)

4. Discussion

While the data reflect the Japanese special education context, the observed concentration of incidents in senior high divisions and the gap between awareness and implementation may reflect challenges common to special education systems internationally. This nationwide survey provides one of the first comprehensive descriptions of online sexual incidents and school-based preventive educational practices in Japan's special needs schools. Our finding that senior high divisions accounted for the vast majority of reported incidents underscores the intersection of adolescent developmental changes and increased digital engagement (Sullivan & Knutson, 2000; Verrastro et al., 2023). The predominance of persistent unsolicited messaging and offline meetings initiated online indicates that students with intellectual disabilities are not only exposed to covert forms of harassment but also to risks that transcend virtual boundaries. These results echo international observations of elevated victimization rates among youth with cognitive disabilities and highlight the critical need for targeted preventive strategies (Hsieh et al., 2023). Although educational systems differ across countries, The structural challenges identified in this study—such as limited staff training, delayed implementation of preventive education, and increased risk during late adolescence—are likely to be shared by many special education settings where students with intellectual disabilities increasingly engage in online environments.

Implications for School-Based Prevention：

Three implications emerge from the findings. First, preventive efforts may need to prioritize senior high divisions, where online sexual trouble was most frequently reported. Second, staff training appears important, given its association with perceived need for prevention. Third, schools may benefit from feasible preventive practices that can be integrated into existing educational routines. These implications align with international calls for disability-responsive online safety education that is concrete, developmentally appropriate, and embedded within everyday school practices.

Value of This Research:

By illuminating both the scope of online sexual trouble among students with intellectual disabilities and the disconnect between educators' awareness and actual preventive practice, this study lays the groundwork for evidence-informed school-based prevention and curriculum development. The use of a standardized, multi-item incident checklist (Takagishi.2018) across a large, randomly selected sample enhances the generalizability of findings and provides a replicable model for international comparisons.

Implications for Help-Seeking and School Response：

Because online sexual trouble is sensitive and potentially distressing, schools should ensure that students have clear and accessible help-seeking routes and that staff respond in supportive and consistent ways.

Limitations and Future Directions:

Several limitations warrant consideration. First, reliance on self-reported web surveys may underrepresent true incident prevalence due to underreporting or variability in coordinators' definitions of "handling" a case. Second, focusing solely on student-guidance coordinators omits perspectives of general teachers, parents, and students themselves, potentially biasing understanding of needs and resource adequacy. Third, the cross-sectional design precludes causal inferences; dynamic changes in digital behaviors and educator training over time remain unexamined. Despite these limitations, the large national sample provides a valuable baseline for future cross-national research.

Implications for Material Development and School Procedures.

The next practical step is to develop and pilot accessible preventive teaching materials and school response procedures that fit the routines of special needs schools. Such materials may include a minimum core set of lessons and help-

seeking guidance that can be adapted to local contexts.

To build on these findings, future research should:

1. Employ longitudinal designs to track incident trends and evaluate the sustained impact of preventive educational interventions regarding online sexual trouble.

2. Integrate qualitative methods—such as focus groups with students, parents, and multiple educator roles—to capture nuanced experiences and barriers to reporting.

3. Test intervention efficacy by piloting structured, disability-adapted preventive education modules regarding online sexual trouble and measuring changes in incident rates, digital resilience, and educator confidence.

4. Explore technology-mediated supports (e.g., interactive mobile apps) co-designed with students with intellectual disabilities to foster engagement and practical skill acquisition.

5. Evaluate school response procedures, including time-to-response, disclosure quality, and staff confidence.

6. Conduct hybrid effectiveness-implementation trials (e.g., cluster or stepped-wedge designs) comparing preventive education packages versus usual practice, including cost-effectiveness.

5. Conclusion

Online sexual trouble represents an under addressed educational challenge in Japanese special needs schools, particularly at the senior high level. Although many educators recognized the need for prevention, actual implementation of school-based preventive education and related staff training remained limited. These findings support the development of disability-responsive preventive education that helps students recognize risk, maintain personal boundaries, and seek help appropriately, not only in Japan but also in other special education contexts facing similar digital risk environments.

6. References

Anne, S., Smith, X., Brown, Y., & Johnson, Z. (2018). Sexting, risk behavior, and mental health in adolescents: An examination of 2015 Pennsylvania Youth Risk Behavior Survey data. Journal of School Health, 88(3), 190–199. https://doi.org/10.1111/josh.12596

Eda, Y., Mori, C., & Hitotsuda, H. (2010). The usage of computers and mobile phones by students with intellectual disabilities in special needs schools. Bulletin of the Center for Educational Practice, Faculty of Education, Chubu University, 11, 45–52.

Hsieh, Y. P., Wei, H. S., Lin, Y. S., & Ma, J. K. (2023). Understanding the dynamics of unwanted online sexual solicitation among youth in Taiwan: Vulnerability and resilience factors. Archives of Sexual Behavior, 52(7), 2799–2810. https://doi.org/10.1007/s10508-023-02719-y

Ministry of Internal Affairs and Communications. (2022). Survey results on youth internet literacy indicators and related topics. https://www.soumu.go.jp/menu_news/s-news/01kiban08_03000366.html

Murakami, H. (2023). Practice of information education in special needs schools. Bulletin of the Center for Comprehensive Educational Practice, 2, 1–9.

National Police Agency. (2024). Report on the increase of crimes related to social media. https://www.npa.go.jp/publications/statistics/

Navarro-Prado, S., Tovar-Gálvez, M. I., Sánchez-Ojeda, M. A., Luque-Vara, T., Fernández-Gómez, E., Martín-Salvador, A., & Marín-Jiménez, A. E. (2023). Type of sex education in childhood and adolescence: Influence on young people's sexual experimentation, risk and satisfaction: The necessity of establishing school nursing as a pillar. Healthcare (Basel), 11(12), 1668. https://doi.org/10.3390/healthcare11121668

Sullivan, P. M., & Knutson, J. F. (2000). Maltreatment and disabilities: A population-based epidemiological study. Child Abuse & Neglect, 24(10), 1257–1273. https://doi.org/10.1016/S0145-2134(00)00190-3

Takagishi, Y. (2018). A study on sexting experiences among university students. Kumamoto Daigaku Kyoiku Gakubu Kiyo, 67, 127–132. http://hdl.handle.net/2298/41466

Verrastro, V., Saladino, V., Eleuteri, S., Barberis, N., & Cuzzocrea, F. (2023). Sexting, self-esteem, and social media: A comparison among frequent, occasional, and non-sexting Italian adolescent girls. Psychology in Russia, 16(4), 3–20. https://doi.org/10.11621/pir.2023.0401

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8. Author Declaration

The authors declare that this manuscript is original, has not been published previously, and is not under consideration for publication elsewhere. All authors have read and approved the final manuscript. The authors declare no conflicts of interest.