

Help-seeking behavior among Japanese school students who self-harm: results from a self-report survey of 18,104 adolescents

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Background: The aim of this study was to determine the prevalence of and factors associated with poor help-seeking among adolescents who self-harm and to explore the resources used for help.

Methods: A cross-sectional survey using an anonymous questionnaire was conducted in 47 junior and 30 senior high schools in Japan. Adolescent self-harm was defined as an adolescent who had harmed himself or herself in the previous year, as in previous studies reported in Western countries. Poor help-seeking was defined as not consulting anyone despite reporting current psychological or somatic complaints. Information about sociodemographic and psychological factors possibly associated with help-seeking, such as suicidal thoughts, depression, anxiety, and psychotic-like experiences, was also collected. Regression analyses were performed to examine associated factors.

Results: A total of 18,104 students (8620 aged 12–15 years, 9484 aged 15–18 years), accounting for 93% of all students in the relevant student classes, participated in the study. Two hundred and seventy-six (3.3%) junior and 396 (4.3%) senior high school students reported having self-harmed. Of these, 40.6% of adolescents in junior and 37.6% in senior high schools were classified as poor help-seeking. Poor help-seeking with regard to self-harm was significantly more common in those who reported not having consulted anyone about psychological problems (odds ratio 9.2, 95% confidence interval 4.6–18.4 in juniors; odds ratio 9.9, confidence interval 5.5–17.9 in seniors) and in those with current suicidal ideation (odds ratio 2.0, confidence interval 1.0–3.7 in juniors; odds ratio 1.9, confidence interval 1.1–3.4 in seniors). Family members were approached significantly less often as a resource for help by students who self-harmed than by those who did not, and school nurses were more often consulted by those who did self-harm.

Conclusion: Around 40% of adolescents who self-harmed in the previous year did not seek help. School-based mental health should screen students at risk of self-harm, and educate school nurses about preventative care.

Keywords: self-harm, adolescence, help-seeking, prevention, Japan

Introduction

Suicide is the second leading cause of death in the 10–24-year age group throughout the world.¹ Self-harm encompasses a wide range of behaviors and intentions on the part of individuals to harm themselves, with or without suicidal intent,² and it has been reported that there may be up to 50–100 suicide attempts or self-harm behaviors for every completed adolescent suicide.^{3,4} Approximately 5%–10% of adolescents participating in self-report surveys in schools have reported an episode of self-harm in the previous 12 months in Western countries.^{5–8}

Adolescents who self-harm often deny or hide their suicidal ideation,⁹ but the existence of a plan for suicide is a poor predictor of self-harm, because many who self-harm report only fleeting ideation and no premeditated plan.¹⁰ A recent study has reported an average interval of only 10 minutes between onset of ideation and the act of self-harm.¹¹ Therefore, for the purpose of prevention of self-harm, it might not be feasible to intervene in adolescents with acute suicidal ideation, but an ongoing prevention program focusing on adolescents at potential risks of self-harm needs to be implemented.

In terms of prevention, because the majority of episodes of self-harm do not lead to hospital-based care,^{12,13} the focus should be on a school-based evaluation and prevention program for self-harm behavior in adolescents.⁷ The focus should be on views not only from adolescents presenting to hospital to seek help, but also from those in the community. However, to date, research on help-seeking among adolescents who self-harm in the community has been scarce. Friends and family members have been reported to be the main sources of support for adolescents who self-harm in previous studies.^{14,15} With regard to factors affecting help-seeking, older age,¹⁶ being in an ethnic majority,¹⁷ and a family history of self-harm were associated with an increase in help-seeking behaviors. However, to our knowledge, there have been no reports concerning help-seeking patterns among adolescents in non-Western communities.

The present study aims to elucidate the prevalence of poor help-seeking behavior and its associated factors in students aged 12–18 years who self-harm in Japan, and what resources for helping these students are available.

Materials and methods

Procedure

Public junior high schools with students aged 12–15 years (grades 7–9) and public senior high schools with students aged 16–18 years (grades 10–12) in Tsu City, Mie Prefecture, and Kochi Prefecture participated in this cross-sectional survey of psychopathology among young adolescents. Both of these prefectures are located in the central region of Japan, and Tsu-City are the prefectural capitals. The populations of Tsu City and Kochi Prefecture are approximately 287,000 and 796,000, respectively. Data were collected during November 2008 and March 2009.

Parents were informed of the project by letter and asked to notify the school if they did not want their child to participate. On the day of participation, students were given the choice of opting out and not participating. Each teacher reported

the total number of students present and absent on the day of the survey. To highlight that the survey was anonymous, all students were provided with an envelope into which to insert and seal their completed questionnaires. Ethical approval was obtained from the ethics committees at Kochi Medical University, Mie University School of Medicine, and the Tokyo Institute of Psychiatry, Japan.

Assessment of participants

The participants were asked to fill in a self-reported, anonymous questionnaire. The questionnaire included items regarding self-harm in the previous 12 months, current help-seeking behavior, and resources used for help. The questionnaires also included items intended to address potential factors associated with self-harm and help-seeking behavior, as demonstrated in previous literature, including current suicidal thoughts, physical health, gender,^{7,8} living situations,¹⁵ psychotic-like experiences,¹⁸ mental health status, such as depression and anxiety,^{7,8} substance use,^{7,8,19} alcohol use,^{20,21} bullying,^{8,22} victimization,²¹ and interpersonal attitudes.²³

Self-harm

In the questionnaire, self-harm behaviors in the previous 12 months were assessed using two questions. The first was “Have you intentionally hurt yourself within the past year?” Response options were “yes” and “no”. Respondents who answered “yes” were then asked to provide a brief written description of the actual act. Based on the definition used in a previous study⁷ and in a comparative study of seven countries,²⁴ self-harm was defined as an act with a nonfatal outcome in which an individual deliberately did one or more of the following: initiated behavior (eg, self-cutting, jumping from a height), which was intended to cause self-harm; ingested a substance in excess of the prescribed or generally recognized therapeutic dose; or ingested a noningestible substance or object. Classification of the episodes as self-harm or otherwise was based on independent ratings by two researchers using these criteria. The kappa value for agreement between the two raters was 0.83 (95% confidence interval [CI] 0.79–0.86). Any classification discrepancies between the two researchers were resolved upon discussion.

Help-seeking behavior and resources used for help

Help-seeking behaviors relating to the psychological stress of problems were assessed by asking “Are you currently consulting anyone to discuss your psychological stress or problems?” Possible responses included: “No, I do not need to consult because I have no psychological stress or

problems”, “No, I am not currently consulting anyone despite having some stress or psychological problems”, and “Yes, I am currently in discussion about my stress or psychological problems”. The second response option was defined as “poor help-seeking”, in that students felt a need for help but did not engage in actual help-seeking behavior. When the third response was obtained, all resources for consultation were identified from a list of six potential resources for help, including friends, family members, home room teachers, school nurses, and medical or mental health professionals, such as physicians, psychiatrists or counselors.

Suicidal thoughts

Information about the presence or absence of current suicidal thoughts was collected by asking the following question: “Do you currently have thoughts that your life is no longer worth living?” One of four possible responses was allowed to these questions, including “no”, “probably no”, “possibly yes”, and “yes”. A response of “yes” was regarded as the presence of suicidal thoughts. A response of “possibly yes” was not classified as the presence of suicidal thoughts, because the question asked in the present study did not ask about suicidal thoughts directly (eg, “do you currently want to die?”). The education boards of the participating schools did not permit us to ask this question. Therefore, we thought that we should not regard broader range of adolescents as having suicidal thoughts in consideration of the comparability with the definition employed in Western countries.

Psychotic-like experiences

Psychotic-like experiences were assessed using four items adopted from the schizophrenia section of the Diagnostic Interview Schedule for Children,²⁵ which has been used previously in a birth cohort study, and shown to contain items that are good predictors of psychotic disorders in adulthood.²⁶ A Japanese version was developed using a translation and back translation method,²⁷ and has been used in several previous studies conducted in Japan.^{28,29} The items were as follows: “Have other people ever read your thoughts?” (thoughts read); “Have you ever had messages sent especially to you through the television or radio?” (special messages); “Have you ever thought that people are following you or spying on you?” (spied upon); and “Have you ever heard voices that other people cannot hear?” (heard voices). Possible responses included “no”, “yes, likely”, “yes, only once”, and “yes, more than twice”. We defined “yes, more than twice” on at least one item as the presence of a psychotic-like experience and the others as no such experience.

Depression and anxiety

Symptoms of depression and anxiety were assessed using the 12-item General Health Questionnaire (GHQ-12). The GHQ-12 is one of the most widely used self-report screening tools for nonpsychotic mental illnesses. The Japanese version of the GHQ-12 has been validated, with a Cronbach’s alpha coefficient of 0.83 for males and 0.85 for females, and has a corrected item-total correlation coefficient of at least 0.20 for both genders.³⁰

A four-point scale with binary scoring (0, 0, 1, 1), known as the GHQ method, was used to answer each question. Answers rated as 1 were then added together to form the total score, with a range of 0 (best possible) to 12 (worst possible). Subjects with a total GHQ-12 score ≥ 4 were considered to have poor mental health relating to depression and anxiety, according to previous studies.³¹

Other variables

In our questionnaire, items relating to other factors covered gender, age, living situation, and the experience of being bullied (within the previous year), bullying student peers (within the past year), violence from adults in the home (within the previous month), currently having someone to discuss psychological distress, feeling physically ill (within the previous month), feeling dissatisfied with current body weight, drinking alcohol (within the previous month), and use of recreational drugs (lifetime). Items concerning victimization (“being bullied” and “violence from adults in the home”) were answered as “yes” or “no”. The items on alcohol use and use of recreational drugs were answered as “not at all” or “once or more than once”.

Statistical analysis

Data from all participants who provided responses to the question about self-harming behavior in the previous year were included in the analysis. Prevalence of self-harm in the previous 12 months and prevalence of current help-seeking behavior were determined separately for junior and senior high school students. Univariate logistic regression analyses were performed to detect associations between students with psychological problems but not seeking help and possible associated variables. Crude odds ratios (ORs) and 95% CIs were calculated. Adjusted ORs and their 95% CIs were obtained from confirmatory multivariate logistic regression. First, factors with $P < 0.2$ were entered, as in a previous study, to avoid false negatives.³² In the multivariate analyses, backward selection using the Wald method was used to identify factors that were most important statistically in

distinguishing the presence or absence of help-seeking behavior. Prevalence of using resources for help-seeking behavior was calculated, separating students who self-harmed from those who did not. Chi-square tests were used to investigate whether there was any statistically significant difference in resources used between these two groups. $P < 0.05$ was considered to be statistically significant in all analyses. All statistical tests were conducted using SPSS version 18.0 for Windows (SPSS Inc, Chicago, IL).

Results

Of the 138 junior and 36 senior high schools invited, 47 (34%) junior and 30 (83%) senior high schools participated in the study. Of 19,436 students in the relevant classes invited to participate, 18,638 were approached at school (798 were absent), of whom 18,250 agreed to contribute to the survey. Of these, 18,104 students (93.1% of all students in the relevant classes), 8620 junior and 9484 high school students returned the questionnaire. Of the junior high school students, 190 (100 boys and 90 girls, 2.2% of total) did not provide data on self-harm and 243 senior high school students (91 boys and 152 girls, 2.6% of total) also did not provide self-harm data. Details of the characteristics of those who self-harmed have been published elsewhere.³³ Data from 8430 junior and 9241 senior high school students who responded to the question about presence or absence of self-harm were included in the analysis.

Poor help-seeking in adolescents who self-harmed because of psychological stress or associated problems

A history of self-harm in the previous 12 months was reported by 276 of 8430 (3.3%, 46 boys and 230 girls) junior high school students and by 396 of 9241 (4.2%, 65 boys and 331 girls) senior high school students. Of these, 271 of 276 junior (98.2%) and 383 of 396 senior (96.7%) high school students provided data on the presence or absence of help-seeking behavior. The number of adolescents who had psychological stress or problems but were not currently consulting anyone ("poor help-seeking") was 110 of 271 (40.6%) in junior and 144 of 383 (37.6%) in senior high school students (Table 1).

In univariate analysis, having no one to discuss psychological distress with was the strongest risk factor associated with poor help-seeking, with ORs of 9.51 in junior and 9.57 in senior high school students. Other variables having a statistically significant association with poor help-seeking behavior in both groups included current suicidal ideation (OR 3.05 for junior; 3.31 for senior), poor mental health (2.68 and 4.93, respectively)

and feeling ill within the previous month (1.76 and 1.58). Risk factors strongly associated with self-harm, such as female gender, psychotic-like experiences, and being bullied, were not associated with poor help-seeking behavior.

Multivariate logistic regression showed that having no one to discuss psychological distress with was most strongly associated with poor help-seeking behavior, both in junior (OR 9.16, CI 4.55–18.43, $P < 0.0005$) and in senior (OR 9.94, CI 5.52–17.92, $P < 0.0005$) high school students, after adjusting for possible confounders (Table 2). Other variables having a statistically significant association with poor help-seeking included poor mental health related to depression and anxiety (OR 2.30 for juniors and 6.65 for seniors) and current suicidal ideation (1.97 and 1.90, respectively).

Psychological help resources for adolescents who did or did not self-harm

For adolescents who reported having psychological stress or problems and consulting others for help currently (2364 juniors and 3107 seniors), resources for help are presented separately for students who self-harmed and those who did not (Figure 1). The most common source of help sought by adolescents for psychological distress was friends (approximately 75% of juniors and 80% of seniors contacted friends), with no differences between adolescents who self-harmed and those who did not. The second most common source was family members in all groups, but adolescents who self-harmed were significantly less likely to approach family members than those who did not self-harm (29% versus 46% for juniors, $P < 0.0005$; 23% versus 36% for seniors, $P < 0.0005$). In both school groups, adolescents who self-harmed were significantly more likely to contact school nurses (10% versus 5% in juniors, $P = 0.017$; 7% versus 3% in seniors, $P = 0.005$), physical or mental health professionals, such as physicians, psychiatrists, or counselors (14% versus 3% for juniors, $P < 0.0005$; 10% versus 3% for seniors, $P < 0.0005$), and other sources.

Discussion

Based on data from 17,671 adolescents, approximately 40% of those who had self-harmed in the previous year were aware of their psychological stress or problems but did not seek help. After adjusting for possible confounding variables, thoughts of having no one to discuss their problems with was most strongly associated with poor help-seeking (OR around 9–10). Other associated factors included poor mental health related to depression and anxiety as well as current suicidal ideation. Overall, no notable differences were identified with regard to

Table 1 Univariate logistic regression for prevalence of help-seeking behaviors among adolescents with deliberate self-harm in the previous year

	Junior high school (aged 12–15 years)			Senior high school (aged 15–18 years)			P value
	Those reporting self-harm, n	Poor help-seeking behavior, n (%)	Crude OR (95% CI)	Those reporting self-harm, n	Poor help-seeking behavior, n (%)	Crude OR (95% CI)	
Total	271	110 (40.6)		383	144 (37.6)		
Gender							
Male	44	20 (45.5)		60	26 (43.3)		
Female	227	90 (39.6)	0.79 (0.41–1.51)	323	118 (36.5)	0.75 (0.43–1.32)	0.32
Only child							
No	242	95 (39.3)		352	134 (38.1)		
Yes	29	15 (51.7)	1.66 (0.77–3.60)	31	10 (32.3)	0.78 (0.35–1.70)	0.52
Living situation							
With both parents	201	76 (37.8)		236	84 (35.6)		
With one parent	56	28 (50.0)	1.65 (0.91–2.99)	112	43 (38.4)	1.13 (0.71–1.80)	0.61
Apart from parents	14	6 (42.9)	1.23 (0.41–3.69)	35	17 (48.6)	1.71 (0.84–3.49)	0.14
Current suicidal ideation							
No	194	64 (33.0)		298	93 (31.2)		
Yes	75	45 (60.0)	3.05 (1.76–5.28)	85	51 (60.0)	3.31 (2.01–5.44)	<0.005
Psychotic-like experiences during lifetime							
No	182	67 (36.8)		281	108 (38.4)		
Yes (if any)	84	41 (48.8)	1.64 (0.97–2.76)	93	33 (35.5)	0.88 (0.54–1.44)	0.88
GHQ-12 score							
<4	36	8 (22.2)		41	5 (12.2)		
≥4	235	102 (43.4)	2.68 (1.17–6.14)	342	139 (40.6)	4.93 (1.89–12.88)	0.01
Being bullied within one year							
No	194	77 (39.7)		334	124 (37.1)		
Yes	75	31 (41.3)	1.07 (0.62–1.84)	46	18 (39.1)	1.09 (0.58–2.05)	0.79
Bullying others within one year							
No	197	80 (40.6)		348	132 (37.9)		
Yes	72	30 (41.7)	1.05 (0.60–1.81)	32	11 (34.4)	0.86 (0.40–1.84)	0.69
Violence from adults in the home within one month							
No	223	88 (39.5)		360	134 (37.2)		
Yes	45	20 (44.4)	1.23 (0.64–2.34)	22	10 (45.5)	1.41 (0.59–3.34)	0.44
Having someone to discuss psychological distress							
Yes, one or more	203	57 (28.1)		285	71 (24.9)		
None	66	52 (78.8)	9.51 (4.89–18.50)	96	73 (76.0)	9.57 (5.57–16.42)	<0.005
Feeling ill within one month							
No	139	47 (33.8)		208	68 (32.7)		
Yes	131	62 (47.3)	1.76 (1.08–2.87)	173	75 (43.4)	1.58 (1.04–2.39)	0.03
Dissatisfied with body weight currently							
No	180	63 (35.0)		218	81 (37.2)		
Yes	89	45 (50.6)	1.90 (1.13–3.18)	157	61 (38.9)	1.08 (0.70–1.64)	0.74

(Continued)

Table 1 (Continued)

	Junior high school (aged 12–15 years)			Senior high school (aged 15–18 years)			
	Those reporting self-harm, n	Poor help-seeking behavior, n (%)	Crude OR (95% CI)	Those reporting self-harm, n	Poor help-seeking behavior, n (%)	Crude OR (95% CI)	P value
Recreational drug use ever	372	139 (37.4)		256	101 (39.5)		
No	9	4 (44.4)	1.34 (0.35–5.08)	13	7 (53.8)	1.79 (0.59–5.48)	0.31
Yes	201	78 (38.8)		233	93 (39.9)		
Alcohol use within one month	67	30 (44.8)	1.28 (0.743–2.24)	138	46 (33.3)	0.75 (0.49–1.17)	0.75
No							
Yes							

Abbreviations: CI, confidence interval; OR, odds ratio.

factors associated with poor help-seeking between adolescents in junior high schools and those in senior high schools. Friends were first and family members were second among the most common resources sought for help in the present study.

We note that the prevalence of poor help-seeking in our study is lower than the 48% found in a previous study conducted in seven Western countries,³⁴ which is within range among the countries. In terms of resources used for help, our results are similar to data reported previously.^{14,35,36} However, in the present study, adolescents who self-harmed were not more likely to consult family members for psychological distress than those who did not self-harm. We cannot account adequately for this, but one can assume that this is probably because many adolescents fear that seeking help would create more problems for them and hurt people they cared about.¹⁴ Those who self-harmed were more likely to consult school nurses, which are present in all junior and senior high schools in the Japanese school system. Far fewer adolescents sought help from formal services or health professionals, as reported in a previous study.³⁶

Considering accessibility and possibilities for students, we performed additional post hoc analyses focusing on school nurses. In brief, self-harm was significantly associated with a visit to the nurse's office at least twice a month in junior high school students (OR 2.89, 95% CI 2.25–3.72, $P < 0.0005$), which was similar to that in senior high school students (OR 3.15, 2.53–3.94, $P < 0.0005$). However, only 10.8% of junior high school students who self-harmed and made frequent visits to the nurse's office discussed their psychological distress there. Similarly, only 10.6% of senior high school students discussed their psychological distress in the nurse's office.

Considering these findings, school-based programs including screening and education for adolescents at risk of self-harm should be developed, with information provided about resources for help. School nurses could potentially be the best resource in this regard for the following reasons. Adolescents who self-harm perceive barriers to seeking help not only from outside professionals but also from family members, and use of friends as the main source of support may seem to be developmentally appropriate but this creates a paradox among young people who self-harm because of the strong direct association existing between individual and peer self-harm.³⁷ Further, self-harming behavior represents a transient period of distress,³⁸ and the school nurse's office is generally an easy resource for students to approach for help, and where school nurses could identify students at risk of self-harm by careful observation and intervene appropriately.

Table 2 Multivariate logistic regression for prevalence of help-seeking behaviors among adolescents with a history of deliberate self-harm in the previous year

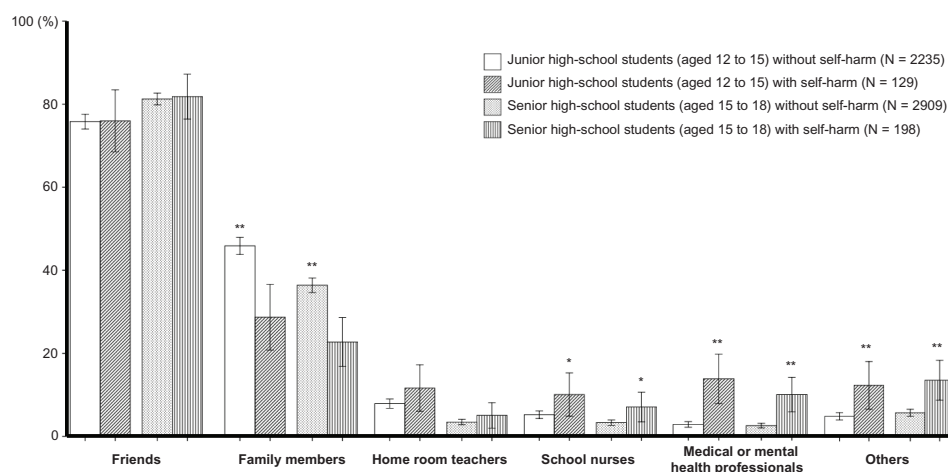
	Junior high school (aged 12–15 years)		Senior high school (aged 15–18 years)	
	Adjusted OR (95% CI)	P value	Adjusted OR (95% CI)	P value
Living situation				
With both parents/with one parent	NA		NA	
With both parents/apart from parents	NA		NA	
Current suicidal ideation				
No/yes	1.97 (1.04–3.71)	0.037	1.90 (1.07–3.40)	0.030
Psychotic-like experience in the lifetime				
No/yes (if any)	NA		NA	
GHQ-12 score				
<4 and ≥4	2.30 (0.88–6.04)	0.091	6.65 (2.26–19.56)	0.001
Having someone to discuss psychological distress				
Yes, one or more/none	9.16 (4.55–18.43)	<0.0005	9.94 (5.52–17.92)	<0.0005
Feeling ill within previous month				
No/yes	NA		NA	
Dissatisfied with body weight currently				
No/yes	NA		NA	

Abbreviations: CI, confidence interval; GHQ-12, 12-item General Health Questionnaire; OR, odds ratio; NA, not applicable.

In terms of psychosocial interventions for adolescents who self-harm, there is a very limited evidence base in the literature.³⁹ Several effective psychosocial interventions for self-harm by experienced therapists have been reported,^{40–42} but these resources are scarce in practice and the effectiveness of these interventions has not been reproduced in subsequent research.³⁹ Several studies have reported that school interventions provided by specialists without professional training in mental health are effective in terms of reducing the severity of depression⁴³ and the risk of self-harm.⁴⁴ The intervention was primarily delivered by school pupils in the latter study,⁴⁴ so students as well as school nurses can be a useful resource for help and worthy of intervention. Therapeutic assessment based on cognitive analytic therapy may also be helpful for adolescents

who self-harm as part of helping them to engage in follow-up sessions⁴⁵ and for global improvement among those who self-harm without nonsuicidal intent.⁴⁶ The appropriateness and effectiveness of these interventions should be confirmed by replicate studies, and if evidence for these interventions is built in a rigorous manner, education of school nurses to be able to administer effective intervention should be promoted.

To our knowledge, this is the largest study on help-seeking behavior among school-aged adolescents who self-harm. However, our study is not without methodological limitations. First, despite endeavoring to include as many adolescents as possible from the target population in the survey, we cannot rule out the impact of absenteeism and nonresponders to the question about self-harm. It is known that self-harm

**Figure 1** Prevalence of using resources for help-seeking among adolescents who did and did not self-harm.

Notes: An error bar indicates 95% confidence intervals for prevalence. * $P < 0.05$; ** $P < 0.005$.

is more common in those with truant behavior.⁴⁷ Although the response rate in our study was much higher than that in a previous one,¹⁴ it is probable that we did not include adolescents who had self-harmed in a severe way. Second, help-seeking behavior was defined as consulting anyone about psychological stress or problems in the present study, whereas several previous studies have used different definitions, eg, consultation after self-harm.⁴⁸ We defined help-seeking behavior as consulting anyone about psychological stress or problems because we intended to compare the frequency and source of help-seeking behavior between students who self-harmed and those who did not; however, interpretation of help-seeking behavior among those who self-harmed may not be straightforward. Third, although previous studies have reported several risk factors associated with self-harm, such as self-harm by family members and friends,^{5,7,8} we were not able to include these factors in our questionnaire. Regrettably, we had to exclude these because the boards of the participating schools did not permit us to include such questions, on the grounds that they were intrusive in light of Japanese culture, in which the preferred method of getting a message across is by artful indirect speaking and hinting at the issue. For the same reason, the question about suicidal ideation in our questionnaire (“Do you currently have thoughts that your life is no longer worth living?”) was not directly asked.

Conclusion

Approximately 40% of adolescents who self-harmed were aware of their psychological distress or problems, but did not seek help. Adolescents who self-harmed were not more likely to consult family members than those who did not self-harm, but were more likely to consult school nurses. Considering the barriers to help-seeking by adolescents who self-harm, school-based mental health intervention may be needed, including screening for school students at risk, and education of school nurses in the prevention of self-harm.

Acknowledgments

This study was funded by a grant-in-aid for scientific research (#H19-kokoro-ippa-012) from the Ministry of Health, Labor, and Welfare of Japan and a grant-in-aid from the Research Group for Schizophrenia in Japan. NW has research funds from the Japanese Ministry of Health Labor and Welfare and the Japanese Ministry of Education, Science, and Technology. AN acknowledges the support of the Research Group for Schizophrenia in Japan, Award for Research Excellence. SS has received research funds from the Japanese Ministry of Education, Science, and Technology. TAF has

research funding from the Japanese Ministry of Education, Science, and Technology and the Japanese Ministry of Health, Labor, and Welfare.

Disclosure

NW has received speaking fees and research funds from Asahi Kasei, Dai-Nippon Sumitomo, Eli Lilly, GlaxoSmithKline, Janssen, Otsuka, Pfizer, and Schering-Plough. SS has received speaking fees from Asahi Kasei, Dai-Nippon Sumitomo, GlaxoSmithKline, Astellas, Eli Lilly, Janssen, Meiji, Otsuka, Pfizer, and Schering-Plough. TA has received speaking fees and/or research funds from Astellas, Astra-Zeneca, Daiichi-Sankyo, Dainippon-Sumitomo, Eisai, GlaxoSmithKline, Janssen, Kyowa-Hakko-Kirin, Meiji, Otsuka, Pfizer, Sanofi-Aventis, Shionogi, and Yakult. TAF has received honoraria for speaking at continuing medical education meetings sponsored by Astellas, Dai-Nippon Sumitomo, Eli Lilly, GlaxoSmithKline, Janssen, Kyorin, MDS, Meiji, Otsuka, Pfizer, Shionogi, and Yoshitomi. He is on the advisory board for Sekisui Chemicals and Takeda Science Foundation. He has received royalties from Igaku-Shoin, Seiwa-Shoten, Nihon Bunka Kagaku-sha, and the American Psychiatric Association. The other authors report no conflicts of interest in this work.

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