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Special Feature Article

Basic Knowledge of Suicide among Children and Adolescents

Hirokazu TACHIKAWA
Department of Disaster and Community Psychiatry, University of Tsukuba
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Abstract

Although the number of suicides in Japan has decreased since 2008, that among teens has recently increased. In 2020, the annual suicide rate among all ages increased for the first time in 11 years due to the COVID-19 pandemic and that among teens was the highest on record. Thus, suicide prevention is especially important for children and adolescents. The aim of this review is to provide basic knowledge of suicide among children and adolescents.

The motives for suicide by children and adolescents include `school problems' and `family problems', but the motives in half of the cases are unknown. As interpersonal relationships while establishing one's identity may increase the suicide risk among youth, children and adolescents can be psychologically regarded as high-risk groups for suicide.

Effective suicide prevention or intervention strategies for children and adolescents include cognitive behavioral therapy, family therapy, dialectical behavioral therapy, and assertive case management. However, suicide prevention for children and adolescents is generally difficult because their self-stigma obstructs help-seeking behaviors. Therefore, 'How to put out SOS?' education programs were recently implemented at all schools in Japan to teach help-seeking skills, although these programs are not evidence-based. Moreover, the COVID-19 pandemic has limited healthy

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communication, thus inhibiting SOS signals and making it difficult to identify suicide risk.

Suicide among children and adolescents has markedly increased due to COVID-19, and strong family, school, and social support is needed in this field.

Keywords: suicide rate, number of suicides, children and adolescents, students, COVID-19

Introduction

The number of suicides in Japan had exceeded 30,000 per year for 14 consecutive years since 1998, but began to decline in 2009, reaching 20,000 in 2018, the same level as before the collapse of the bubble economy. However, the suicide rate among children under 20 years of age has decreased less than that of adults, and the suicide rate among children in their teens has, in fact, increased in recent years.

Under these circumstances, in 2020, the number of suicides among children increased for the first time in 11 years due to the spread of new coronavirus infection (COVID-19), becoming the worst numbers in the past 40 years[8]. However, there seems to be few reviews in Japan that discuss child suicide. The purpose of this review is to provide an overview of the current situation and psychosocial background of child suicide, measures to prevent child suicide, and the problem of child suicide and countermeasures for the COVID-19 pandemic in order to address the prevention of child suicide. It should be noted that this author is not a specialist in child and adolescent psychiatry, so this article is only a commentary from the perspective of suicide prevention.

I. Current Status of Suicide among Children

First, the number of suicides and the suicide rate for the Japanese population as a whole and for minors (19 years old and younger) are shown in Fig. 1 as line graphs based on data from the 2021 White Paper on Suicide Prevention [8. The total number of suicides had increased to over 30,000 per year since 1998; however, the suicide rate of over 25 per year per 100,000 population has been in continuous decline since 2009. On the other hand, the number of suicides among minors, after rising sharply to 720 per year in 1998, showed a downward trend, but rose again from 2016, reaching 777 in 2020, the worst in the past 40 years. The suicide rate for

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minors was 2.7 per 100,000 at the time of the 1998 increase, which was low compared to all generations, as shown in b. Since then, however, the rate has remained almost flat while other generations have been declining, and has even begun to rise since 2016.

Next, a bar graph of the number of suicides among students is shown in Figure 2, based on the "Survey on Student Guidance Issues, including Problematic Behavior and Absenteeism among Students"[11], conducted annually by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). Although the survey increased the total number of people surveyed in 2006 and 2013, indicated by the dotted lines, and thus requires caution in interpreting the results, it is easy to understand the trend in the student category. The graph shows that the number of student suicides has fluctuated somewhat since 2006, but has consistently increased among junior high school and especially high school students, reaching a record high of 415 in 2020.

The above figures show that the number of suicides among children and adolescents has been worsening over time compared to other generations, and that the number of suicides and the suicide rate will be the highest ever in 2020, the year of the COVID-19 pandemic, making suicide a priority issue in Japan.

What are the motives for child suicide? The table below shows the results of the same survey on the circumstances of students who committed suicide[11]. Although the proportion of respondents who reported problems with friends, excluding bullying, in elementary school (28.6%), reprimands from parents and others in junior high school (20.4%), and mental disorders in high school (13.1%) were relatively high, about half of the respondents from elementary school to high school reported unknown motives. The highest percentages of motive were unknown (52.5%), family discord (12.8%), mental disorder (11.1%), and career problems (10.6%), while bullying (2.9%) was not a high motive for suicide.

According to a review[6] of the worldwide literature on psychosocial factors of suicide among young people, the highest odds ratio (OR) for suicide was "not belonging to either work or school" (OR 44.1), followed by "mood disorder" (OR 25.2). Although it is difficult to make simple comparisons due to differences in the classification of motives between Europe and Japan, a characteristic of child suicide in Japan is that the motive is almost always unknown, perhaps due to bullying, psychosocial factor bias, or stigma.

II. Background of Child Suicide

In recent years, the stress vulnerability hypothesis has often been

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used as a psychological mechanism for suicide. Classically, as for children's psychosocial conflicts, a hint can be found by reviewing the psychological developmental stages of Erikson, E. H.[3] and the developmental tasks at each stage. As children grow from infancy, early childhood, late childhood, childhood, and adolescence, their important interpersonal relationships change from mother, parents, family, neighborhood/school, and peer group/leader, respectively, and when these interpersonal relationships do not get along well, psychological conflicts such as distrust, shame and suspicion, guilt, inferiority complex, and identity diffusion occur in each developmental stage. These conflicts seem to cumulatively overlap at each stage, increasing the child's suicide risk.

From the perspective of suicide prevention, it is important to identify risk factors that increase suicide risk and protective factors that decrease suicide risk. Risk factors for suicide among children and young adults include female gender, mental illness, history of suicide attempts, history of self-harm, isolation, family background (family history of suicide, discordant family relationships, abuse experiences), negative life events (school maladjustment, bullying, loss experiences), media influences (news reports, social networking services, animations). Protective factors for suicide include family cohesion and good interpersonal relationships at school[6].

Furthermore, in recent years, the hypothesis that suicide is redefined in terms of interpersonal problems has become widely accepted. The interpersonal theory of suicide[5] proposed by Joiner, T. E. Jr. et al. in the U.S. suggests that suicidal ideation increases due to an increased sense of self-burden that one is a burden to others and a weakened sense of self-affiliation that one does not belong anywhere, and that suicide occurs if the person is capable of committing suicide. When this is applied to children, as Erikson showed earlier, children with interpersonal conflicts as a major developmental issue are more likely to experience a sense of self-burden due to stress in family and friend relationships, and a weakened sense of self-belonging due to isolation and bullying. In the modern age of the Internet, children, who are more impulsive and have higher information-gathering abilities than adults, are at high risk for suicide.

III. Suicide Prevention Measures for Children

There is a wide range of interventions to prevent suicide in children. First, psychotherapeutic and psychotherapeutic interventions for

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children who are already at risk for suicide include integrated cognitive-behavioral therapy that combines cognitive-behavioral therapy for the child with cognitive-behavioral therapy for the family and parent training techniques,[4] attachment family therapy, which uses parent training and interpersonal therapy skills to adjust unstable attachments between family members,[2] dialectical behavior therapy,[10] post-emergency center interventions including case management, and online psychotherapeutic interventions. Crisis intervention programs for families, lifeline telephone services, and postvention programs are special programs and social resources for suicide prevention.

On the other hand, primary prevention interventions for children as a whole, including those who are not at risk for suicide, include suicide prevention education programs, various types of depression interventions, screening of high-risk individuals using psychological measures of suicidal ideation, QPR gatekeeper training programs that address high-risk individuals in the three stages of Question, Persuade, and Refer, and online counseling[1].

However, the evidence for these various approaches is still insufficient, and the prevention of suicide among children remains a challenge in practice. The reasons for this include the following problems: the causes are unknown, complex and psychosocial factors are significant, there are many uncontrollable factors such as the child-rearing environment, a great deal of time and effort is required, resources are insufficient, children are highly suggestible, the time leading up to a suicide crisis is rapid, and children do not ask for help due to self-stigma. Stigma here does not refer to social stigma (public stigma), such as prejudice against people with mental disabilities, but to self-stigma, in which people feel that their attributes are discriminated against by society, which increases shame and self-concealment, and reject help from others. The author has emphasized several times that self-stigma is a significant reason why suicide prevention for children is difficult[12].

Based on the same awareness of the problem, in the 2017 revision[7] of the Comprehensive National Suicide Prevention Strategy, the government has identified (i) prevention of suicide among children and adolescents due to bullying, (ii) enhancement of support for students and others, (iii) promotion of education on how to send an SOS, (iv) enhancement of support for children, (v) enhancement of support for young people, (vi) enhancement of support for

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the characteristics of young people, and (vii) support for acquaintances and others as priority measures against suicides among children and adolescents. Of these, education on how to send an SOS is a 50-minute class, completed once by a public health nurse, to cultivate a sense of self-esteem, "take care of yourself and others", and to acquire specific skills to ask for help from trusted adults around you when you are having a hard time. Although this is understandable as an awareness of the problem, there remains a concern that this type of education may require a set of education on the part of adults who receive those SOSs[13].

IV. The Problem of Child Suicide and Countermeasures During the COVID-19 Pandemic

In 2020, the number of suicides due to the COVID-19 pandemic was 21,081, an increase of 912 (4.5%) from the previous year for the first time in 11 years[8]. As mentioned earlier, the number of suicides among elementary, junior high, and senior high school students increased to 415 per year, the worst number of suicides in the past 40 years. As a background to this, it has been reported that the COVID-19 pandemic caused various serious problems in the minds of children[9]. For example, the self-restraint in behavior and school closure due to COVID-19 measures increased depression, anxiety, and isolation even among healthy children, and these symptoms were correlated with the length of time of isolation due to self-restraint. Symptoms persisted not only during, but also after, the self-restraint. School closure, restricted exercise, irregular sleep, and online dependence due to COVID-19 caused depression, emotionlessness, laziness, learning disparity, and self-injury in children, while abuse, violence, and viewing of pornography increased in the home. On the other hand, since the monthly number of suicides among children peaked when face-to-face classes resumed, it has been suggested that children who had been experiencing problems with friendships and academics at school may have experienced an increase in suicidal ideation when face-to-face classes resumed, as the stressors that had been alleviated through self-restraint increased. Furthermore, there is no doubt that the SOS, which are difficult for children to express in the first place, become even more invisible when communication is restricted due to the COVID-19 pandemic, making early detection of suicide risk even more difficult.

The first step in preventing suicide among children affected by the COVID-19 pandemic is to detect children at risk of suicide at an early stage and provide

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support for them. To this end, it is essential for adults to actively communicate with children in their daily lives, provide correct information to prevent excessive anxiety about COVID-19, and create a safe environment for children in which they can easily seek advice[15]. In addition, society must also take measures to support the psychological stress of parents under infection control, to prevent the creation of isolated families, to alleviate the impoverishment of families, to have administrative agencies watch over families with the possibility of domestic violence, and to prevent sensationalistic reporting of information on COVID-19 and suicide by the media[14].

The problem of child suicide is the greatest tragedy in human society, and it is in a critical situation in the wake of the COVID-19 pandemic. Strong social support for suicide prevention is needed, not only at home and at school, but also in society.

Conclusion

This paper has provided basic knowledge about the current status of child suicide, its background, suicide prevention measures, and the problem of child suicide and its countermeasures in the COVID-19 pandemic. Children, for whom interpersonal conflicts are a major developmental issue, are prone to suicidal ideation when they experience interpersonal stress and isolation. In the modern age of the internet, children, who are more impulsive and have higher information-gathering abilities than adults, are at high risk for suicide. In addition, changes in school life and limited means of communication in the COVID-19 pandemic have made it difficult to detect children's SOS.

Early detection of high-risk children, support, and the creation of a safe school environment in which children can easily seek advice are important measures for preventing child suicide. In addition to psychotherapy, crisis intervention, and SOS education for high-risk children, it is necessary to educate parents and guardians, reduce stress in the home, support isolated and needy families, collaborate with administrative agencies, and alert the media to suicide reports. Since the COVID-19 pandemic has severed various connections and increased the risk of suicide among children, strong social support beyond the family and school must be provided.

We have no conflicts of interest to disclose in connection with this paper.

References

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1) Cha, C. B., Franz, P. J., Guzmán, E. M., et al.: Annual research review: suicide among youth- epidemiology, (potential) etiology, and treatment. J Child Psychol Psychiatry, 59 (4); 460-482, 2018

2) Diamond, G. S., Wintersteen, M. B., Brown, G. K., et al.: Attachment-based family therapy for adolescents with suicidal ideation: a randomized controlled trial. J Am Acad Child Adolesc Psychiatry, 49 (2); 122-131, 2010

3) Erikson, E. H. (西平 直，中島由恵訳)：アイデンティティとライフサイクル．誠信書房，東京, 2011

4) Esposito-Smythers, C., Spirito, A., Kahler, C. W., et al.: Treatment of co-occurring substance abuse and suicidality among adolescents: a randomized trial. J Consult Clin Psychol, 79 (6); 728-739, 2011

5) Joiner, T. E. Jr., VanOrden, K. A., Whitte, T. K., et al.: 自殺の対人関係理論―予防・治療の実践マニュアル―. (北村俊則監修): 日本評論社，東京, 2011

6) 科学的根拠に基づく自殺予防総合対策推進コンソーシアム準備会若年者の自殺対策のあり方に関するワーキンググループ: 若年者の自殺対策のあり方に関する報告書．国立精神・神経医療研究センター精神保健研究所自殺予防総合対策センター，東京, 2015

7) 厚生労働省: 自殺総合対策大綱―誰も自殺に追い込まれることのない社会の実現を目指して―(平成 29 年 7 月 25 日閣議決定). (https://www.mhlw.go.jp/file/06-Seisakujouhou-12200000-Shakaiengokyokushougaihokenfukushibu/0000172329.pdf) (参照 2021-09-20)

8) 厚生労働省: 自殺対策白書令和 3 年版. 2021

9) Loades, M. E., Chatburn, E., Higson-Sweeney, N., et al.: Rapid systematic review: the impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. J Am Acad Child Adolesc Psychiatry, 59 (11); 1218-1239, 2020

10) Miller, A. L., Rathus, J. H., Linehan, M. M., et al.: Dialectical behavior therapy adapted for suicidal adolescents. J Psychiatr Pract, 3 (2); 78-86, 1997

11) 文部科学省初等中等教育局児童生徒課: 令和 2 年度児童生徒の問題行動・不登校等生徒指導上の諸課題に関する調査結果について(令和 3 年 10 月 13 日通知). (https://www.mext.go.jp/a_menu/shotou/seitoshidou/1302902.htm) (参照 2021-09-20)

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12) 太刀川弘和: つながりからみた自殺予防. 人文書院, 京都, 2019

13) 太刀川弘和:「SOS の出し方教育」と自殺予防教育. 社会と倫理, 34; 41-48, 2019

14) 田中恭子:【コロナ禍における】子どものこころのケア. 日本医師会雑誌, 150 (6); 1001-1005, 2021

15) 山田敦朗: 子どもの自殺. 精神医学, 63 (7); 1051-1061, 2021

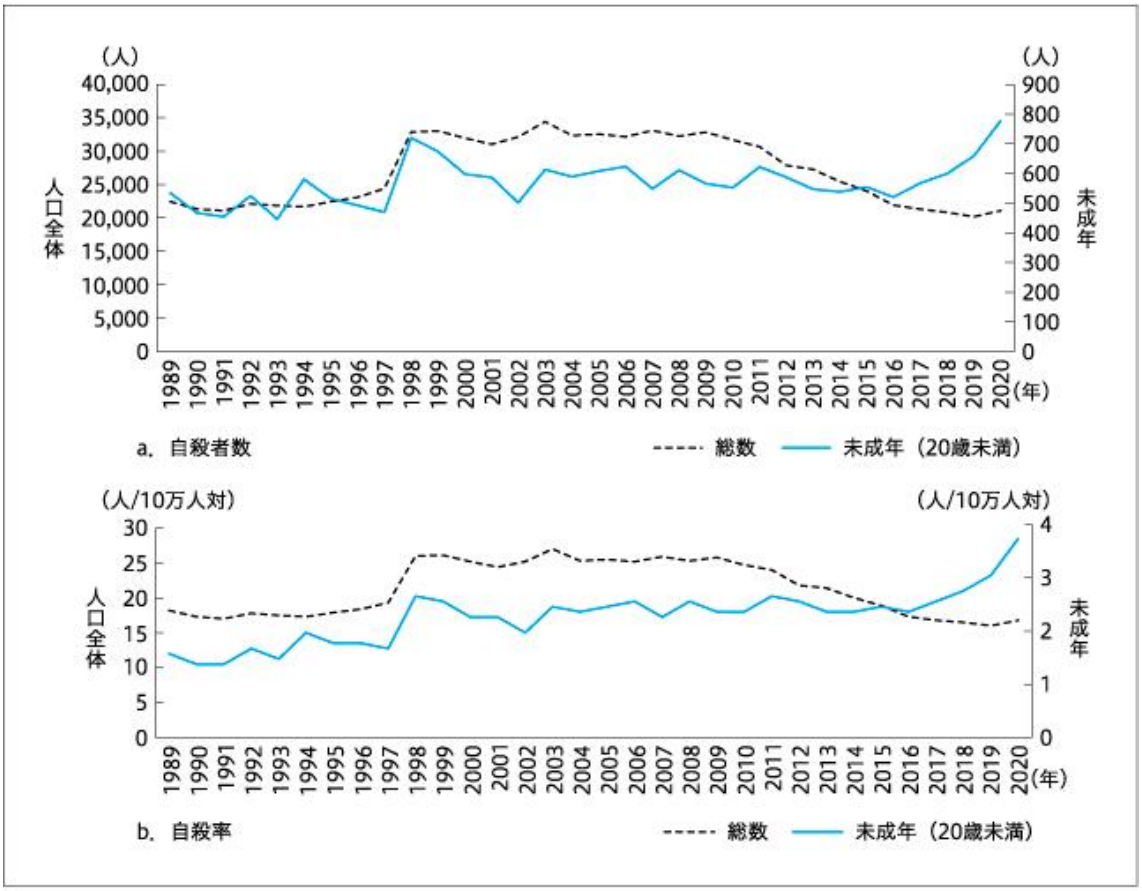

図 1　人口全体および未成年の自殺者数・自殺率推移

（文献 8 より作成）

Figure 1: Number of Suicides and Suicide Rates for the Population as a Whole and for Minors

(Compiled from Reference 8)

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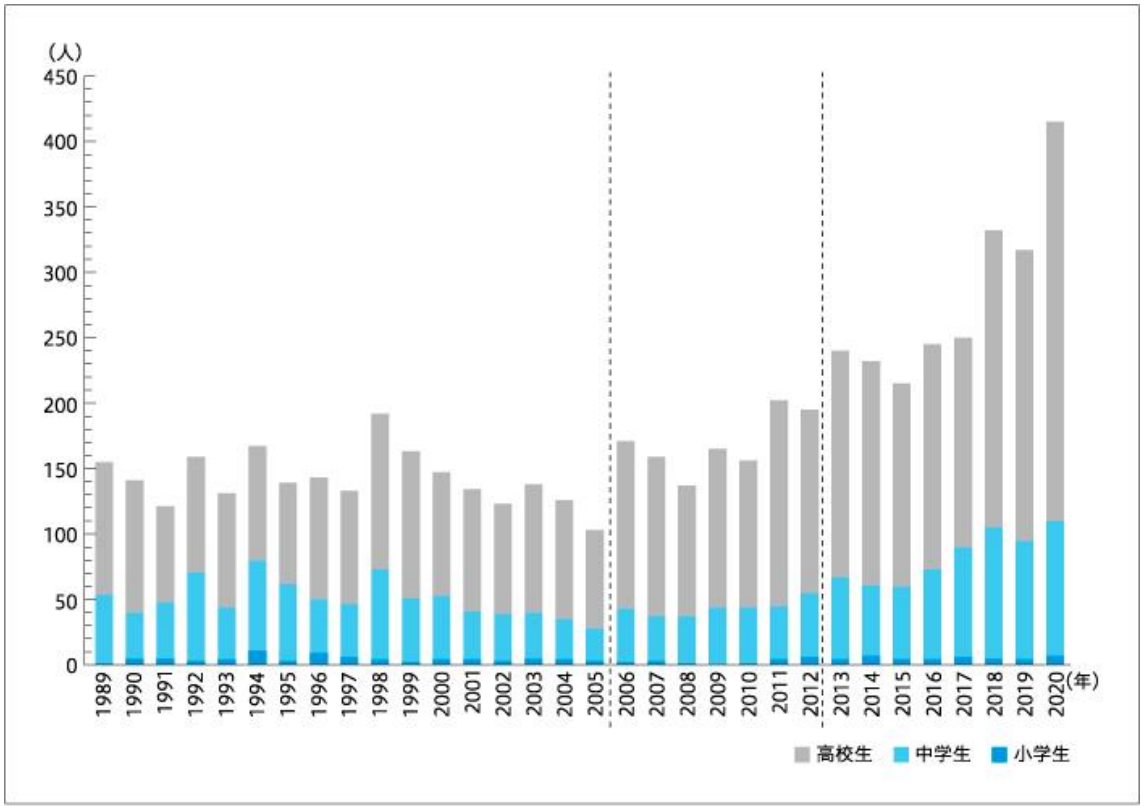

図 2　学生・生徒等の自殺推移

学生・生徒等の年間自殺者数推移を，積み上げ縦棒グラフで示す．灰色は高校生，薄青色は中学生，青色は小学生を表す．横軸は年（1989～2020 年），縦軸は年間自殺者数を表す．縦の点線は集計方法の変更時点を表す．2006 年度以降国私立学校，2013 年度以降高等学校通信制課程も調査に加えた．（文献 11 より作成）

Figure 2 Suicide Among Students

The vertical bar graph shows the annual number of suicides among students. Gray represents high school students, light blue junior high school students, and blue elementary school students. The horizontal axis indicates the year (1989-2020), and the vertical axis indicates the annual number of suicides. The vertical dotted lines indicate the times of change in the tabulation method: national and private schools have been included in the survey since 2006, and correspondence high schools since 2013.（Compiled from Reference 11）

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表　自殺した児童生徒がおかれていた状況

校種 / 項目	小学校		中学校		高等学校		計	
	人数（人）	構成比（%）	人数（人）	構成比（%）	人数（人）	構成比（%）	人数（人）	構成比（%）
家庭不和	0	0.0	17	16.5	36	11.8	53	12.8
父母等の叱責	1	14.3	21	20.4	11	3.6	33	8.0
学業等不振	0	0.0	9	8.7	11	3.6	20	4.8
進路問題	0	0.0	10	9.7	34	11.1	44	10.6
教職員との関係での悩み	0	0.0	2	1.9	2	0.7	4	1.0
友人関係での悩み（いじめを除く）	2	28.6	9	8.7	14	4.6	25	6.0
いじめの問題	1	14.3	5	4.9	6	2.0	12	2.9
病弱等による悲観	0	0.0	3	2.9	10	3.3	13	3.1
えん世	0	0.0	6	5.8	16	5.2	22	5.3
異性問題	0	0.0	0	0.0	11	3.6	11	2.7
精神障害	0	0.0	6	5.8	40	13.1	46	11.1
動機不明	5	71.4	50	48.5	163	53.4	218	52.5
その他	0	0.0	10	9.7	6	2.0	16	3.9

（文献 11 より作成）

Table Situation of Students who Committed Suicide
School Type
Item Elementary school Junior high school High school Total
Number of students (persons)
(persons) Ratio (%)
(%) Number of persons
(persons) Ratio (%)
(%) Number of people (persons) Ratio (%)
(persons) Ratio (%)
(Number of persons (persons) Ratio (%)
(persons) Ratio (%)
(Number (persons) Ratio (%)
Family discord 0 0.0 17 16.5 36 11.8 53 12.8
Parental reprimand 1 14.3 21 20.4 11 3.6 33 8.0
Academic failure 0 0.0 9 8.7 11 3.6 20 4.8
Career problems 0 0.0 10 9.7 34 11.1 44 10.6

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Relationship problems with faculty 0 0.0 2 1.9 2 0.7 4 1.0
Concerns about friendships
(excluding bullying) 2 28.6 9 8.7 14 4.6 25 6.0
Bullying problems 1 14.3 5 4.9 6 2.0 12 2.9
Pessimism due to infirmity, etc. 0 0.0 3 2.9 10 3.3 13 3.1
Eunice 0 0.0 6 5.8 16 5.2 22 5.3
Heterosexual problems 0 0.0 0 0.0 11 3.6 11 2.7
Mental disorder 0 0.0 6 5.8 40 13.1 46 11.1
Unknown motive 5 71.4 50 48.5 163 53.4 218 52.5
Other 0 0.0 10 9.7 6 2.0 16 3.9
(Compiled from Reference 11)

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