

Receipt of Psychological or Emotional Counseling by Suicidal Adolescents

Jane E. Pirkis, PhD*‡; Charles E. Irwin Jr, MD*; Claire D. Brindis, DrPH*; Michael G. Sawyer, PhD§; Christine Friestad, PhD*; Michael Biehl, MA*; and George C. Patton, PhD||

ABSTRACT. *Objective.* This study examined utilization of psychological or emotional counseling by suicidal adolescents to answer questions about the extent to which health services can contribute to the prevention of adolescent suicide.

Method. The study used data from Wave 1 of the National Longitudinal Study of Adolescent Health, which involved a household-based interview with a nationally representative sample of 15 483 adolescents from grades 7 to 12. Of these, 2482 adolescents were classified as suicidal, as indicated by an affirmative response to the question "During the past 12 months, did you ever seriously think about committing suicide?" For this group, the study asked the following questions: 1) What proportion receives psychological or emotional counseling? 2) What are the sources of this counseling? 3) What factors are associated with receipt of such counseling?

Results. Less than one third (28%) of suicidal adolescents received psychological or emotional counseling. The most common sources of care were private doctors' offices (37%) and schools (34%). Factors associated with receipt of counseling in the past 12 months included age, race, degree of suicidality, depression status, and having had a physical examination during the same period.

Conclusions. Only one third of those who report suicidal ideation and behavior receive psychological or emotional counseling. Although not all of these young people may identify a need for counseling, this finding still suggests that many of those at risk of harming themselves do not receive professional help. However, on the positive side, those who do use counseling services tend to do so on the basis of their being in the greatest need, rather than their parents' capacity to pay for services. Counseling services have an important role to play in suicide prevention, and a variety of sources of care need to be available. Although counseling services are vital, a range of other strategies is necessary to reduce the youth suicide rate. *Pediatrics* 2003;111:e388–e393. URL: <http://www.pediatrics.org/cgi/content/full/111/4/e388>; *adolescent, suicide, counseling, utilization.*

ABBREVIATIONS. Add Health, National Longitudinal Study of Adolescent Health; OR, odds ratio; CI, confidence interval.

From the *Division of Adolescent Medicine, University of California San Francisco, San Francisco, California; ‡Centre for Health Program Evaluation, University of Melbourne, Melbourne, Australia; §Evaluation Unit, Women's and Children's Hospital, North Adelaide, Australia; and ||Centre for Adolescent Health, Melbourne, Australia.

The views presented in this study are those of the author and not necessarily those of the funding bodies, their directors, officers, or staff.

Received for publication Jun 14, 2002; accepted Dec 3, 2002.

Reprint requests to (J.E.P.) Centre for Health Program Evaluation, Box 477, West Heidelberg, Victoria, 3081, Australia. E-mail: j.pirkis@unimelb.edu.au
PEDIATRICS (ISSN 0031 4005). Copyright © 2003 by the American Academy of Pediatrics.

Suicide is a major cause of death among adolescents, not only affecting the adolescents themselves, but also having significant emotional sequelae for parents, other relatives, and friends, and substantial financial costs for society. In 1999, suicide was the third leading cause of death for young people living in the United States, occurring at a rate of 8.2 per 100 000 for those 15 years old to 19 years old (13.3 per 100 000 for males and 2.8 per 100 000 for females) and 12.7 per 100 000 for those 20 years old to 24 years old (21.6 per 100 000 for males and 3.5 per 100 000 for females).¹ In addition, in 1999, 19.3% of high school students reported seriously considering suicide over the previous 12 months (24.9% of females and 13.7% of males), and 8.3% reported making at least 1 suicide attempt (10.9% of females and 5.7% of males).²

Recent policy documents, such as the Surgeon General's Mental Health Report,³ have suggested that services that provide psychological or emotional counseling have a key role to play in preventing adolescent suicide. This presupposes that suicidal adolescents come into contact with counseling services, because previous suicidal ideation and suicide attempts have consistently been shown to constitute risk factors for completed suicide.⁴ Yet there is a dearth of studies that examine the validity of this assumption. There is little work that specifically examines utilization of counseling services for this population. A few recently published studies have considered rates of generic mental health service utilization for groups of adolescents with mental health problems, although none that specifically consider utilization for suicidal adolescents. These studies have tended to define their denominator as adolescents who meet particular diagnostic criteria (usually for depression) or who identify themselves as having mental health or related problems (such as being victimized), and have examined the proportion who have sought and/or obtained mental health care in the previous year. Typically, the sources of mental health care and the reasons for presentation are not well-defined. Utilization rates have ranged from <25% to ~65%, depending on the characteristics of the sample, whether the information has come from adolescents or their parents, the geographical setting of the study, and the definition of mental health care.^{5–10}

Most studies that have considered mental health service utilization rates for groups of adolescents with mental health problems have examined factors

that are associated with service use. Again, the factors identified as being associated with adolescent mental health service use have varied, depending on definitional and other study design issues. These factors can be classified into 3 categories, using a taxonomy developed by Ford et al¹¹ in the adolescent general health literature. The first category includes factors related to the individual's predisposition to use services, such as age and gender^{5,6,12} and race/ethnicity.^{5,8,12} The second category includes variables that quantify the individual's need, such as level of depressive symptoms,^{6,12} degree of suicidality,^{6,8,12} and mental health status as perceived by the adolescent¹² or his/her parents.⁷ The third category includes factors related to the individual's ability to secure services, such as socioeconomic status,⁸ health insurance coverage,¹² and use of physical health services that might act as a referral source to mental health care.⁸

Our study offered a unique opportunity to examine the utilization of psychological or emotional counseling by a much more specific group than other studies have considered—suicidal adolescents, as opposed to adolescents with broader ranging mental health problems. By focusing on this group in a way in which previous studies have not done, we aimed to inform questions about the extent to which health services can screen for and prevent adolescent suicide.

Our specific objective was to answer 3 questions regarding the mental health service use of suicidal adolescents: 1) what proportion receives psychological or emotional counseling? 2) what are the sources of this counseling? 3) what factors are associated with receipt of such counseling? It was beyond the scope of our study to consider differences between suicidal and nonsuicidal adolescents in terms of their utilization of counseling services, because it has consistently been demonstrated that the former group make greater use of mental health care^{6,8,12} and this analysis would have been less relevant to the question of adolescent suicide prevention.

METHODS

Study Design and Sampling

This study used Wave 1 data from the National Longitudinal Study of Adolescent Health (Add Health), which employed a school-based sampling design to recruit US adolescents in grades 7 to 12 in 1994–1995 and involved in-home interviews supplemented by parental questionnaires and information from school administrators.¹³ Weights were applied to ensure that the sample was nationally representative. Complete data (including weights and parental and school administrator responses) were available for 15 483 adolescents. A total of 2482 of these were classified as suicidal by virtue of their responding “yes” to the question, “During the past 12 months, did you ever seriously think about committing suicide?”. The current study was restricted to these suicidal adolescents.

Measures

The analysis variables are outlined below, with additional detail provided where necessary. All variables were derived from the adolescent in-home interview except urbanicity (school administrator questionnaire) and health insurance status and income (parent in-home questionnaire).

Dependent Variable

Receipt of counseling was defined by an affirmative response to the question, “In the past year, have you received psychological or emotional counseling?”, supplemented by responses to questions about whether it was provided in a private doctor's office, community health clinic, school, hospital, or some other place. No information was available on the reason for this counseling, nor on when it occurred in relation to the adolescent's suicidal thoughts or attempt.

Independent Variables

Variables relating to a predisposition to use services included age, gender, and race/ethnicity.

Two variables related to level of need: degree of suicidality and depression status. Degree of suicidality was determined from the question, “During the past 12 months, how many times did you actually attempt suicide?”, with respondents classified as having made no attempts, 1 attempt, or multiple attempts. Depression status was determined from a modified, 18-item version of the Center for Epidemiologic Studies Depression Scale, scaled from 0–60 for comparability with the original Center for Epidemiologic Studies Depression Scale using a similar method to those employed by Goodman¹⁴ and Rushton et al.¹⁵ Following Roberts et al,¹⁶ scores of 24 or higher for females and 22 or higher for males were regarded as indicative of depression.

Four variables related to the ability to secure services: urbanicity, physical examination, health insurance status, and income. The health insurance status variable categorized individuals as insured for all of, part of, or none of the 12-month period before interview. No information was available on whether coverage was specifically provided for mental health care. Following Goodman,¹⁴ income was classified in relation to 1994 poverty thresholds adjusted for household size: <1.5 times the poverty threshold (Class 1); 1.5 to <2.5 times the poverty threshold (Class 2); 2.5 to <4.0 times the poverty threshold (Class 3); 4.0 times the poverty threshold to less than the 95th household income percentile (Class 4); and ≥95th household income percentile (Class 5).

Data Analyses

Analyses were conducted using SUDAAN,¹⁷ which adjusted for the clustering and stratification employed in the sampling strategy of Add Health and incorporated the appropriate weights. Descriptive analyses calculated the weighted proportion of suicidal adolescents who received psychological or emotional counseling overall and from particular sources. A logistic regression analysis examined the factors associated with receipt of counseling by suicidal adolescents.

RESULTS

A Description of the Suicidal Adolescents

Table 1 shows the key demographic characteristics of the 2482 suicidal adolescents. Females accounted for 60% of the group. The adolescents were relatively evenly split across ages, with 13-year-olds constituting the smallest group at 14% and 15-year-olds making up the largest group at 19%. In terms of ethnic/racial mix, whites accounted for two thirds of all suicidal adolescents, and the majority of the remainder were blacks and Hispanics.

Table 1 also describes the suicidal adolescents in terms of their degree of suicidality in the 12 months before the survey. Approximately two thirds of these adolescents had only considered suicide, and had not made a suicide attempt. However, the remainder had made at least 1 attempt, with over one-tenth of the sample making >1 attempt.

Proportion of Suicidal Adolescents Receiving Psychological or Emotional Counseling

In total, 682 of the 2482 suicidal adolescents received psychological or emotional counseling in the

TABLE 1. Characteristics of Suicidal Adolescents (*n* = 2482)

	Frequency	Weighted %	95% CI
Gender			
Male	939	40.27	37.25–43.29
Female	1543	59.73	56.71–62.75
Age			
13 or younger	253	13.81	9.99–17.63
14	329	15.71	12.11–19.31
15	480	19.20	16.80–21.60
16	486	17.26	14.72–19.80
17	528	18.57	15.81–21.33
18 or older	406	15.45	12.77–18.13
Race/ethnicity			
Hispanic	437	11.81	8.47–15.15
Black	430	13.35	9.67–17.03
Asian	212	3.92	1.94–5.90
Native American	64	2.63	1.65–3.61
Other	28	0.94	0.40–1.48
White	1309	67.34	61.76–72.92
Degree of suicidality			
No attempt	1756	69.97	67.05–72.89
1 attempt	439	18.69	16.55–20.83
>1 attempt	282	11.34	9.48–13.20

12 months preceding the survey. This equated to a weighted population percentage of 28%.

Sources of Care for Suicidal Adolescents in Receipt of Psychological or Emotional Counseling

Table 2 shows the reported sources of care for the 682 suicidal adolescents who received psychological or emotional counseling. An individual could receive counseling from >1 source. Most commonly, these adolescents reported receiving counseling from a private doctor's office or from their school. Thirty-seven percent of suicidal adolescents endorsed the former source, and 34% of suicidal adolescents endorsed the latter. Eighteen percent of suicidal adolescents reported receiving counseling from a community health clinic. The least common source of counseling was a hospital, endorsed by 13% of suicidal adolescents. Nineteen percent of suicidal adolescents reported receiving counseling from some other source.

Factors Associated with Receipt of Psychological or Emotional Counseling by Suicidal Adolescents

Table 3 presents the results of the logistic regression analysis. Specifically, it shows adjusted odds ratios for variables posited to have a relationship with receipt of psychological or emotional counseling by suicidal adolescents.

Two factors related to adolescents' predisposition to use services were associated with receipt of counseling: age and race/ethnicity. Compared with those

TABLE 2. Sources of Care for Suicidal Individuals Who Received Psychological or Emotional Counseling (*n* = 682)*

	Frequency	Weighted %	95% CI
Private doctor's office	257	37.37	32.37–42.37
Community health clinic	103	18.14	13.18–23.1
School	229	33.72	28.02–39.42
Hospital	91	13.21	9.19–17.23
Other	131	19.11	14.05–24.17

* Multiple responses permitted.

TABLE 3. Logistic Regression Model for Receipt of Psychological or Emotional Counseling by Suicidal Adolescents

	OR	95% CI	<i>P</i>
Age			
13 or younger	2.14	1.21–3.77	0.0093
14	1.45	0.81–2.59	0.2117
15	0.97	0.57–1.64	0.9126
16	1.50	0.96–2.36	0.0760
17	1.68	1.04–2.72	0.0354
18 or older	1.00		
Gender			
Male	1.00		
Female	1.11	0.80–1.53	0.5304
Race/ethnicity			
Hispanic	0.73	0.45–1.16	0.1795
Black	0.71	0.37–1.34	0.2871
Asian	0.44	0.21–0.92	0.0293
Native American	1.20	0.54–2.65	0.6489
Other	1.34	0.45–4.01	0.6018
White	1.00		
Degree of suicidality			
No attempt	1.00		
1 attempt	1.81	1.17–2.79	0.0080
>1 attempt	2.59	1.74–3.86	0.0000
Depression status			
Not depressed	1.00		
Depressed	2.02	1.48–2.75	0.0000
Physical examination			
Physical examination	1.54	1.15–2.05	0.0040
No physical examination	1.00		
Insurance status			
Fully insured	1.11	0.57–2.14	0.7610
At least partially insured	1.42	0.64–3.13	0.3816
No insurance	1.00		
Income level			
1 (low)	1.00		
2	0.88	0.57–1.36	0.5549
3	0.83	0.51–1.35	0.4391
4	1.12	0.70–1.78	0.6275
5 (high)	1.41	0.65–3.09	0.3812
Urbanicity			
Urban	1.13	0.70–1.82	0.6137
Suburban	1.18	0.79–1.75	0.4124
Rural	1.00		

18 years old or older, adolescents in the youngest age group (13 or younger) were more likely to receive counseling (odds ratio [OR] = 2.14; 95% confidence interval [CI] = 1.21–3.77), as were those 17 years old (OR = 1.68; 95% CI = 1.04–2.72). Asian adolescents were significantly less likely to receive counseling than white adolescents (OR = 0.44; 95% CI = 0.21–0.92).

The 2 levels of need variables—degree of suicidality and depression status—were also strongly and positively associated with the likelihood of receiving counseling, with the former showing a dose-response effect. Compared with adolescents who had considered suicide in the past year but made no suicide attempt, those who had made 1 attempt were 1.81 times more likely to have received counseling (95% CI = 1.17–2.29), and those who had made >1 attempt were 2.59 times as likely to have received counseling (95% CI = 1.74–3.86). Depressed adolescents were 2.02 times more likely than their nondepressed counterparts to have received counseling (95% CI = 1.48–2.75).

Only 1 variable associated with the suicidal adolescents' ability to secure services was associated with receipt of counseling. Those who had had a

physical examination in the past year were 1.54 times more likely than those who had not done so to have received counseling (95% CI = 1.15–2.05).

DISCUSSION

Interpreting the Findings

This study had a much more specific remit than others of its ilk. It looked at the use of counseling services by suicidal adolescents as a discrete group, rather than as part of a broader group of young people with mental health problems. This afforded us the unique opportunity to consider the potential role of psychological and emotional counseling services in suicide prevention.

The results demonstrate a mixed picture of the use of counseling services by suicidal adolescents. Less than one third of suicidal adolescents receive any psychological or emotional counseling—in other words, more than two thirds do not receive such counseling. This has implications for the prevention of youth suicide, in that it is clear that while counseling services may be well placed to intervene with adolescents who come through their doors, alternative strategies will be necessary for those who do not attend services. Such strategies might include targeted recruitment of these adolescents by existing mental health counseling services, but also broader, population-based approaches aimed at identifying those at risk.¹⁸

The most encouraging finding, and one which has not been demonstrated in the broader literature, is that most factors related to the adolescent's ability to secure services, such as income level and health insurance status, had no bearing on the likelihood of receiving counseling. This finding runs contrary to those from more generic studies of utilization of mental health services, which have suggested that those of high socioeconomic status are significantly more likely to be able to access counseling.^{8,12} In the current study, those in most need were more likely to receive help in that degree of suicidality and depression status were the strongest predictors of receipt of counseling. It may be that socioeconomic status exerts an influence when a broad group of potential service users is considered, but when the analysis is restricted to those at the severe end of the spectrum (ie, those who are suicidal), it is encouraging to find that level of need is key.

The finding that health insurance status was unrelated to likelihood of receiving counseling warrants special consideration. Historically, health insurers and employers have been less inclined to provide coverage for mental health care than for physical health care. This has been a particular problem for children and adolescents. A number of states have now enacted parity legislation in an effort to redress this imbalance, but it is still a significant issue.¹⁹ In the current study, the ascertainment of health insurance status did not permit an examination of whether the adolescent had coverage for mental health care. The impact of more specific mental health care coverage on suicidal adolescents' likelihood of receiving counseling bears further study.

The finding that having had a physical examination is associated with use of counseling services may also be related to the above phenomenon, although it is acknowledged that the time sequence of the physical examination and the use of counseling services is not known. A primary care physician may be ideally placed to detect physical symptoms that may point to suicidality (eg, sleep disturbances, weight loss, sadness, lethargy, etc.), particularly if it is severe, and to refer the adolescent to counseling services. For adolescents who may find approaching services by themselves daunting, a direct referral may facilitate the process. Alternatively, it may simply be the case that adolescents who use 1 type of service are more likely to use another type of service. Either way, the finding suggests that clinicians responsible for the physical health care of adolescents also have an important role to play in their mental health care.

Age was related to utilization of counseling services. Compared with those 18 years old or over, those 13 years old or under and 17 years old were more likely to access counseling. The bimodal nature of this finding is somewhat anomalous, but may perhaps be explained by the fact that suicidal thoughts and behaviors may be particularly apparent in very young adolescents and in older adolescents who have experienced symptoms for some time. In addition, those <18 years old have greater access to school-based counseling services, may still be covered by their parents' health insurance, and may be more likely to attend such services at the suggestion of an adult (either a parent or a teacher). This complex relationship clearly warrants further study.

A second sociodemographic factor was also related to use of counseling services, namely race. Compared with white adolescents, those from Asian backgrounds were least likely to use services. Cultural factors, including the interpretation of symptoms of suicidality and the perceived appropriateness of counseling services, may play a role here.^{20,21}

The sources of care are worthy of consideration. Most commonly, suicidal adolescents who received psychological or emotional counseling did so from a private doctor's office or from their school. Other studies that have considered sources of mental health care for groups of depressed adolescents have reported similar findings.⁶

The Add Health data does not provide a breakdown on private doctors by specialty, making it impossible to determine if they were psychiatrists or primary care physicians. Both are well-placed to provide counseling: psychiatrists because of their specialist skills in the area, and primary care physicians because of their being in a position to opportunistically detect suicidality in adolescents presenting physical health problems. The latter is supported by the finding that having had a physical examination was predictive of receipt of psychological or emotional counseling.

A recent review of school-based mental health and social services suggested that counseling is primarily provided by school counselors, school psychologists,

and school social workers.²² Seventy-seven percent of schools have access to a school counselor, 66% to a school psychologist, and 44% to a social worker, although the amount of time each of these is available varies considerably.²² School counselors assist with problem-solving in various facets of life. School psychologists deal with social, behavioral, emotional, and learning difficulties, either directly (eg, through individual and group sessions) or indirectly (eg, by consulting with teachers and others). School social workers provide practical and emotional support, offer counseling and case management, and act as a link between the home, the school, and the community.²² Psychological and emotional counseling is delivered under different models by these professionals, including through school-based health centers in ~10% of schools. School-based health centers deliver these services within the context of primary care.²² Counseling provided in schools may be a particularly important source of mental health care, because this setting is not associated with many of the traditional barriers to access for adolescents, such as stigma and cost.²³ School counselors, school psychologists, and school social workers may be able to collaborate with teachers who can play an important role in detecting depression in vulnerable students and helping them to seek care. Likewise, they may be able to work in concert with students who can identify warning signs among their peers.

It is clearly important that a range of options exists (both within and outside the school setting) to maximize the likelihood of suicidal adolescents seeking and receiving counseling. Doctors, and in particular primary care physicians, need to be adequately trained in recognizing and managing suicidal symptoms, and in referring on to specialists. Likewise, it is important that school counselors, school psychologists, and school social workers providing these multi-entry points into counseling services have adequate initial and ongoing training, and that they have adequate back-up. These steps are necessary to ensure that adolescents receive the care that they need.

Study Limitations

Our study had several limitations that must be acknowledged. First, the stigma associated with suicide may have led participating adolescents to under-report suicidal thoughts and behaviors, although it is encouraging to note that 92% of the suicidal adolescents reported that they responded "very honestly" or "completely honestly" to the survey. Second, adolescents' interpretation of suicidality may have varied from "transient notions about life being meaningless to intense preoccupation with taking one's own life,"²⁴ resulting in some adolescents being included for whom formal psychological or emotional counseling would not have been required. Third, a proportion of these adolescents, despite indicating that they had suicidal thoughts, may not have perceived that they had any need for counseling (although they too might have needed some understanding of these thoughts and concerns).

Fourth, the study assumes that most health service utilization occurred during or after the period in which the adolescent felt suicidal (indeed, that it occurred in response to it), but for some adolescents, counseling may have occurred before their feeling suicidal and may not have been related to suicidal thoughts and behaviors (although it may still have been a point for early intervention). Finally, no evidence was available from Add Health regarding other interventions (eg, pharmacological treatment for depression), the quality of counseling received by suicidal adolescents, and the outcomes of that counseling.

CONCLUSION

Only one third of those who report suicidal ideation and behavior receive psychological or emotional counseling. Although not all of these young people may identify a need for counseling, this finding still suggests that many of those at risk of harming themselves do not receive professional help. However, on the positive side, those who do use counseling services tend to do so on the basis of their being in the greatest need, rather than on the basis of their parents' capacity to pay for services. Counseling services have an important role to play in suicide prevention, and a variety of sources of care need to be available. Although counseling services are vital, a range of other strategies is necessary to reduce the youth suicide rate, including education, early screening, and intervention services.

ACKNOWLEDGMENTS

This study was supported by The Commonwealth Fund, a New York City-based private independent foundation, and by grants from the Maternal and Child Health Bureau, Health Resources and Services Administration, Department of Health and Human Services (MC0003, 4H06-MC00002, and 2U93-MC00023-06).

REFERENCES

1. Anderson RN. Deaths: leading causes for 1999. *Natl Vital Stat Rep.* 2001;49:1-88
2. Kann LL, Kinchen SA, Williams BI, et al. Youth Risk Behavior Surveillance-United States, 1999. State and local YRBSS Coordinators. *J Sch Health.* 2000;70:271-285
3. Office of the Surgeon General. *Mental Health: A Report of the Surgeon General.* Rockville, MD: Office of the Surgeon General; 1999
4. Beautrais AL. Risk factors for suicide and attempted suicide among young people. *Aust N Z J Psychiatry.* 2000;34:420-436
5. Cuffe SP, Waller J, Addy CL, et al. A longitudinal study of adolescent mental health service use. *J Behav Health Serv Res.* 2001;28:1-11
6. Lewinsohn PM, Rohde P, Seeley JR. Treatment of adolescent depression: frequency of services and impact on functioning in young adulthood. *Depress Anxiety.* 1998;7:47-52
7. Wu P, Hoven CW, Cohen P, et al. Factors associated with use of mental health services for depression by children and adolescents. *Psychiatr Serv.* 2001;52:189-195
8. Saunders SM, Resnick MD, Hoberman HM, Blum RW. Formal help-seeking behavior of adolescents identifying themselves as having mental health problems. *J Am Acad Child Adolesc Psychiatry.* 1994;33:718-728
9. Leaf PJ, Alegria M, Cohen P, et al. Mental health service use in the community and schools: results from the Four-Community MECA Study. *J Am Acad Child Adolesc Psychiatry.* 1996;35:889-897
10. Gutterman NB, Hahn HC, Cameron M. Adolescent victimization and subsequent use of mental health counseling services. *J Adolesc Health.* 2002;30:336-345
11. Ford CA, Bearman PS, Moody J. Foregone health care among adolescents. *J Am Med Assoc.* 1999;282:2227-2234
12. Kodjo C, Atuinger P, Ryan S. Barriers to adolescents accessing mental

- health services. Paper presented at: Society for Adolescent Medicine Conference, March 6–9, 2002; Boston, MA
13. Bearman PS, Jones J, Udry JR. The National Longitudinal Study of Adolescent Health: Research Design. Chapel Hill, NC: Carolina Population Center; 1997
 14. Goodman E. The role of socioeconomic status gradients in explaining differences in US adolescents' health. *Am J Public Health.* 1999;89:1522–1528
 15. Rushton JL, Forcier M, Schectman RM. Epidemiology of depressive symptoms in the National Longitudinal Study of Adolescent Health. *J Am Acad Child Adolesc Psychiatry.* 2002;41:199–205
 16. Roberts RE, Lewisoyn PM, Seeley JR. Screening for adolescent depression: a comparison of depression scales. *J Am Acad Child Adolesc Psychiatry.* 1991;30:58–66
 17. Research Triangle Institute. *SUDAAN [Computer Program] Version 8.0.* Research Triangle Park: Research Triangle Institute; 2000
 18. Shaffer D, Craft L. Methods of adolescent suicide prevention. *J Clin Psychiatry.* 1999;60(suppl 2):70–76, 113–116
 19. Peck MC. Mental health parity for children in California. *Psychiatr Serv.* 2001;52:743–768
 20. Fan C. A comparison of attitudes towards mental illness and knowledge of mental health services between Australian and Asian students. *Community Ment Health J.* 1999;35:47–56
 21. Zane N, Sue S. Health issues of Asian Pacific American adolescents. In: Kagawa-Singer M, Katz PA, eds. *Health Issues for Minority Adolescents.* Lincoln, NE: University of Nebraska Press; 1996
 22. Brener ND, Martindale J, Weist MD. Mental health and social services: results from the School Health Policies and Programs Study 2000. *J Sch Health.* 2001;71:305–312
 23. Pastore DR, Juszczak L, Fisher MM, Friedman SB. School-based health center utilization: a survey of users and nonusers. *Arch Pediatr Adolesc Med.* 1998;152:763–767
 24. Goldney R, Winefield AH, Tiggemann M, Winefield HR, Smith S. Suicidal ideation in a young adult population. *Acta Psychiatr Scand.* 1989;79:481–489

Receipt of Psychological or Emotional Counseling by Suicidal Adolescents
Jane E. Pirkis, Charles E. Irwin Jr, Claire D. Brindis, Michael G. Sawyer, Christine
Friestad, Michael Biehl and George C. Patton
Pediatrics 2003;111;e388
DOI: 10.1542/peds.111.4.e388

Updated Information & Services

including high resolution figures, can be found at:
<http://pediatrics.aappublications.org/content/111/4/e388>

References

This article cites 19 articles, 0 of which you can access for free at:
<http://pediatrics.aappublications.org/content/111/4/e388#BIBL>

Subspecialty Collections

This article, along with others on similar topics, appears in the following collection(s):
Adolescent Health/Medicine
http://www.aappublications.org/cgi/collection/adolescent_health:medicine_sub

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
<http://www.aappublications.org/site/misc/Permissions.xhtml>

Reprints

Information about ordering reprints can be found online:
<http://www.aappublications.org/site/misc/reprints.xhtml>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Receipt of Psychological or Emotional Counseling by Suicidal Adolescents
Jane E. Pirkis, Charles E. Irwin Jr, Claire D. Brindis, Michael G. Sawyer, Christine
Friestad, Michael Biehl and George C. Patton
Pediatrics 2003;111:e388
DOI: 10.1542/peds.111.4.e388

The online version of this article, along with updated information and services, is
located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/111/4/e388>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 345 Park Avenue, Itasca, Illinois, 60143. Copyright © 2003 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®

