Teen Suicidal Behavior

A Survey of Oregon High School Students, 1997

Introduction, Endnotes and References

Published September 1998 / ISSN 1520-5681
Prepared by: David Hopkins
Desktop Publishing by: Melissa Grace Franklin

Acknowledgments: Many people reviewed and otherwise contributed to this report, including Tammis Alexander, Linda Duke, David Fleming, M.D., Joyce Grant-Worley, Elinor Hall, Grant Higginson, M.D., Tina Kent, David Lane, Phyllis Mason, Andy Osborn, Cathy Riddell, Ken Rosenberg, M.D., and Jill Skrezyna.

Suicidal Behavior, a Survey of Oregon High School Students, 1997

Introduction

I hate the world today. I feel so old inside. The tree of death is near, I don't know what to feel. The end is soon. I can't tell my parents, teachers, or friends. It's getting worse. Please help me. -statement by an Oregon student

During 1994-96, at least 97 Oregon youth 10 to 19 years old committed suicide; the youngest were two 10 year old boys who hanged themselves. [1] Suicide is the second leading cause of death of 10-19 year old Oregonians. (Unintentional injuries ranked first. [2]) In three and one-half decades, the suicide rate among the state's youth has increased more than five-fold. Between the periods 1959-61 and 1994-96, the suicide death rate for 15- to 19-year-olds soared from 2.8 to 15.1 per 100,000 population (Figure 1). [3, 4] Oregon's suicide rate for 15- to 19-year-olds was 29% higher than the nation's during 1993-95 and ranked 17th highest among the states. [5]

Through self-inflicted gunshot wounds,
and other injuries, almost 100
Oregon youth committed suicide
in just three years.

If this trend is to be reversed, it is essential to develop an understanding of characteristics, behaviors, and events associated with youth suicide -- factors that can be used to identify at-risk youth. One available tool is the 1997 Youth Risk Behavior Survey (YRBS). The survey included three questions regarding suicidal ideation and behavior:

1. During the past 12 months, did you ever seriously consider attempting suicide?

2. During the past 12 months, how many times did you actually attempt suicide?

3. If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?

This report focuses on the students who said they actually attempted suicide. A caveat: Recent research has

shown that only a small proportion of survey respondents who report having attempted suicide actually have taken substantive action to injure themselves. [6] Some students use a liberal definition of "suicide attempt" mistaking vivid ideation for an attempt. [7]

Highlights

Deaths

- During the past three and one-half decades, the suicide rate for Oregon 15- to 19-year-olds has increased more than five-fold.
- The long-term increase in Oregon's overall suicide rate has been driven almost entirely by the sharp increase in suicide by the state's adolescents and young adults.
- During the last three and one-half decades, the suicide by gun rate increased 4.3 times faster than did the rate for other methods.

Attempts

- Twenty-two percent of Oregon high school students reported considering suicide; 9% said they attempted suicide, and 2% said they were treated by a doctor or nurse for an attempt.
- Female high school students reported attempting suicide more than twice as often as did males (12% vs. 5%).
- Non-white and Hispanic students attempted suicide more often than did whites.
- Students enrolled in schools with a small student body were more likely to attempt suicide than were other students.
- Youth who had no caring adults to talk to were three times more likely to attempt suicide than were those who could go to at least two adults (16% vs. 5%).
- Physically abused students were five times more likely to try to kill themselves than were their non-abused counterparts (19% vs. 4%).
- Sexually abused students were almost four times more likely to try to kill themselves than were their non-abused counterparts (22% vs. 6%).
- Very overweight and very underweight youth were more likely to attempt suicide.
- Students who smoked more than a pack of cigarettes a day were nine times more apt to attempt to kill themselves than were non-smokers (45% vs. 5%).
- Frequent alcohol drinkers (20+ days of the previous 30) were seven times more likely to attempt suicide than were non-drinkers (29% vs. 4%).
- Students who abused inhalants (e.g., glue, spray paint) 10 or more times during the previous 30 days attempted suicide six times more often than non-abusers (46% vs. 8%).
- Teens who were sexually active, particularly at an early age, were more likely to report suicide attempts.
- Those who were pregnant (or caused a pregnancy) two or more times were eight times more likely to attempt suicide than were virgins (41% vs. 5%).
- The home environment is an important predictor of suicidal and other risky behavior among Oregon high school students.

References and Endnotes

1. The number of suicides may be larger; medical examiners were unable to determine whether the death was intentional or unintentional for ten 10- to 19-year-olds. In addition, some suicides committed by crashing a motor vehicle may not be recognized; an estimated 1.6% to 5.0% of vehicular fatalities are believed to be suicides that escaped detection. (Peck DL, Warner K. Accident or suicide? Single-vehicle car accidents and the intent hypothesis. Adolescence. 1995. 30:463-472; Schmidt CW, et. al. Suicide by vehicular crash. Am J Psych. 1977; 134:175-178).

2. During 1994-1996, unintentional injuries claimed 360 10- to 19-year-olds; 247 of these resulted from motor vehicle crashes.

3. These rates are based on relatively few events and therefore are subject to considerable random statistical variation.

4. Personal communication. There has been no change in how suicides are classified over the past several decades. Karen Gunson, MD, Oregon Deputy State Medical Examiner.

5. These data are based on the CDC's WONDER (Wide-ranging On-line Data for Epidemiological Research) system. Because the National Center for Health Statistics (NCHS) does not include updated cause of death data available to the Oregon Center for Health Statistics (OCHS), the Oregon rate in WONDER is under-stated.

6. Meehan PJ, et al. Attempted suicide among young adults: Progress towards a meaningful estimate of prevalence. Am J Psychiatry 1992.: 149: 41-44. Another Health Division dataset, the Adolescent Suicide Attempts Data System (ASADS), a hospital based reporting system of attempts by youth under 18 years-old also indicates that there are fewer suicide attempts than YRBS data would suggest. The ASADS data are published annually by the OCHS in the Oregon Vital Statistics Annual Report.

7. Moscicki EK, O'Carrol PW, Rae DS, et al. Suicidal ideation and attempts: the epidemiological catchment area study. In: Report of the Secretary's Task force on Youth Suicide, Vol. 4. (DHHS Pub. No. ADM 89-1624). Washington, DC. 1989.

8. Oregon Center for Health Statistics. Suicide and Suicidal Thoughts by Oregonians. Health Services. Oregon Department of Human Resources. 1997. Portland, Oregon.

9. Osborn A. 1997 Oregon Youth Risk Behavior Survey, Summary Report. Center for Health Statistics. Health Services. Oregon Department of Human Resources. [1998]. Portland, Oregon.

10. Robins LN. Suicide attempts in teen-aged medical patients. In: Report of the Secretary's Task Force on Youth Suicide, Vol. 4. (DHHS Pub. No. ADM 89-1624). Washington DC. 1989.

11. Garnefski N, Diekstra RFW, de Heus P. A population-based survey of the characteristics of high school students with and without a history of suicidal behavior. ACTA Psychiatr Scand. 1992; 86:189-196.

12. Socioeconomic rank was based on the percent of students eligible for free or reduced price lunch, student mobility rate, student attendance rate, and the level of education of the most educated parent, as determined by the Department of Education (DOE Statewide Assessment).

13. Oregon Center for Health Statistics. Oregon Vital Statistics Annual Report, 1995. Health Services. Oregon Department of Human Resources 1998. Portland, Oregon.

14. Oregon Center for Health Statistics. Multicultural Health: Mortality Patterns by Race and Ethnicity, Oregon 1986-1994. Oregon Center for Health Statistics. Health Services. Oregon Department of Human Resources. 1997. Portland, Oregon.

15. Paulus N. Dropout Rates in Oregon High Schools, 1996-1997. Oregon Department of Education. 1998.

16. Oregon Center for Health Statistics. 1995 Oregon Youth Risk Behavior Survey: Alternative School Students. Health Services. Oregon Department of Human Resources. Unpublished data.

17. Oregon Center for Health Statistics. 1995 Oregon Youth Risk Behavior Survey: Incarcerated Students. Health Services. Oregon Department of Human Resources. Unpublished data.

18. Bolt DH. Oregon Department of Education. Personal communication. May 8, 1998. Salem, Oregon.

19. Roady P, Noell J. Depression and Suicidal Behavior in Homeless Adolescents: Prevalence, Correlates and Consequences. Oregon Research Institute. 1998.

20. Responses to the physical abuse question were missing or invalid for 22 percent of the cases, by far the highest for any of the survey questions; therefore, these data should be used with caution. Responses to the sexual abuse question were missing for 10 percent of the cases, the third highest value recorded for the survey questions discussed herein.

21. Nine percent of students reported being both physically and sexually abused.

22. Sedlack AJ, Broadhurst DD. Third National Incidence Study of Child Abuse and Neglect. US DHHS, Administration for Children and Families. Washington, DC. 1996.

23. Three percent of males and 14% of females reported being both physically and sexually abused. Just 73% of males and 61% of females reported neither type of abuse. For both sexes combined, the figure was 67%.

24. Riggs S, Alario AJ, McHorney C. Health risk behaviors and attempted suicide in adolescents who report prior maltreatment. J Pediatr 1990; 116:815-821.

25. Silverman AB, Reinherz HZ, Giaconia RM. The long-term sequelae of child and adolescent abuse: a longitudinal community study. Child Abuse and Neglect. 1996; 20:709-723.

26. Brent DA, Perper JA, Goldstein CE, et al. Risk factors for adolescent suicide: A comparison of adolescent suicide victims with suicidal inpatients. Arch Gen Psychiatry. 1988; 45:581-588.

27. Shaffer D, Gould MS. Progress report: Study of completed and attempted suicides in adolescents (Contract No. R01-MH-38198). NIMH. Bethesda, MD.

28. Oregon Center for Health Statistics. Tobacco, Oregonians, and Health. Oregon Health Trends, No. 40. Health Services. Oregon Department of Human Resources. April 1995. Portland, Oregon.

29. In 37% of all households with a high school student, someone smoked, 19% in the home and an additional 18% outside the home.

30. Females were four times more likely to use extreme measures for weight control (8% vs. 2% of males).

However, both genders using these weight control measures were three and one-half times more likely to attempt suicide than were their peers who abstained from these methods.

31. Included were marijuana, cocaine, steroids (without a prescription), inhalants (e.g., glue, spray paint) injection drugs, and other drugs (e.g., LSD, PCP).

32. Befrienders. http://www.jaring.y/befrienders/youth1.htm

33. Greene JM, Ringwalt CL. Youth and familial substance use's association with suicide attempts among runaway and homeless youth. Substance Use and Misuse. 1996; 31:1041-1058. 34. The increasing risk of suicidal behavior with earlier sexual initiation occurred for both sexually abused and nonabused youth.

35. Remafedi G, French S, Story M, et al. The relationship between suicide risk and sexual orientation: Results of a population-based study. Am J Public Health. 1998; 88:57-60.

36. Litman RE. Suicidology: A look backward and ahead. Suicide and Life-Threatening Behavior. 1996; 26:1-7.

37. Neeleman J, Wessely S, Wadsworth M. Predictors of suicide, accidental death, and premature natural death in a general-population birth cohort. Lancet. 1998; 351:93-97.

38. Fully 27% of the students who said they were treated for a suicide attempt by a doctor or nurse within the last year, when asked later in the survey when they last saw a doctor or nurse, said they had not seen these medical providers during the previous year. This suggests that perhaps as few as 1.6%, or 2,524, (rather than 2.2%, or 3,470) made an attempt that required care by medical personnel, and given the findings of Meehan et al, this figure may still be inflated. However, it is unknown how students interpreted the second question (i.e., whether they responded that they had not seen a doctor or nurse during the prior 12 months because they had already stated that they had been treated for an attempted suicide within the past year). Oregon, unlike other states, has a hospital-based suicide attempt reporting system for youth under 18 years old (however, some hospitals do not provide complete data). The true number of attempts requiring professional medical care probably lies between the 736 attempts reported by hospitals during 1997 and the figures estimated from the YRBS.

39. Hewitt PL, Newton J, Flett GL, et al. Perfectionism and suicide ideation in adolescent psychiatric patients. J Abnorm Child Psychol. 1997; 25:95-101.

40. Hendin H. Suicide in America. W.W. Norton and Co. New York, New York. 1995.

41. Roy A. Possible biologic determinants of suicide. *In*: Current Concepts of Suicide. D. Lester, ed. The Charles Press. Philadelphia. 1990.

42. Hirschfeld RMA, Russell JM. Assessment and Treatments of Suicidal Patients. N Eng J Med. 1997; 337:910-915.

43. Frances A, Blumenthal S. Personality as a predictor of youthful suicide. *In:* Report of the Secretary's Task Force on Youth Suicide, Vol.2 (DHHS Pub. No. ADM89-1624). Washington, DC. 1989.

44. In a study of adolescent attempters, Stephens distinguished two polar opposite groups of female attempters:

1) those characterized by a pattern of defiance, rebelliousness, acting-out, drug use, and indiscriminate sexuality; and 2) those characterized by overconformity, docility, passivity, and emotional submergence. (Stephens J. Cheap thrills and humble pie: The adolescence of female suicide attempters. Suicide and Life-Threatening Behavior. 1985; 17:107-118.)

45. Brent DA, Perper J, Moritz G, et al. Psychiatric effects of exposure to suicide among friends and acquaintances of adolescent suicide victims. J Am Acad Child Adolesc Psychiatry. 1992; 31:629-640.

46. Berman AL, Jobes DA. Adolescent Suicide Assessment and Intervention. American Psychological Association. Washington, DC. 1991.

47. Mokros HB, Poznanski E, Grossman JA, Freeman LN. A comparison of child and parent ratings of depression for normal and clinically referred children. J Child Psychol Psychiatry. 1987; 28:

48. Kashani JH, Goddare P, Reid JC. Correlates of suicidal ideation in community sample of children and adolescents. J Am Acad Child Adol Psychol. 1989; 28:912-917.

49. Walker M, Moreau D, Weissman MM. Parents' awareness of children's suicide attempts. Am J Psychiatry. 1990; 147:1364-1366.

50. Slap GB, Vorters DF, Chaudhuri S, et al. Risk factors for attempted suicide during adolescence. Pediat. 1989; 84:762-72.

51. Hawton K, Cole D, O'Grady J, et al. Motivational aspects of deliberate self-poisoning in adolescents. Br J Psychiatry. 1982; 141:286-91.

52. Slap GB, Vorters DF, Khalid N, et al. Adolescent suicide attempters: Do physicians recognize them? J Adol Health. 1992.; 13:286-292.

53. Oregon Center for Health Statistics. Oregon Vital Statistics Annual Report, 1997. Vol. 2. Health Services. Oregon Department of Human Resources. In press.

54. Hirshfeld RMA, Davidson L. Risk factors for suicide. In: Amer Psych Rev of Psych, vol. 7. Frances AJ, Hales RE, eds. Washington. Amer Psych Press; 1988:289-306.

55. Myers WC, Otto TA, Harris E, et al. Acetaminophen overdose as a suicidal gesture: a survey of adolescents' knowledge of its potential for toxicity. J Am Acad Child Adolesc Psychiatry. 1992; 31:686-690.

56. The attempt method data are from the 1994-96 ASADS; the mortality data are from 1994-96 death certificates.

57. Oregon Center for Health Statistics. Fatal Behavior. Oregon Health Trends, Number 44. Health Services. Oregon Department of Human Resources. December 1995. Portland, Oregon.

58. Berman AL, Schwartz R. Suicide attempts among adolescent drug users. Suicide and Life-Threatening Behavior. 1990; 24:88-99.

59. American Academy of Pediatrics. Injury Prevention and Control for Children and Youth. MD Widome,

MD, ed. Am Acad Pediat. 1997. Elk Grove Village, Illinois.

60. Oregon law (ORS 441.750) requires that youths (under 18 years of age) who are treated by hospital for a suicide attempt be referred for appropriate intervention. However, the degree of compliance, availability of resources and follow-up is unknown.

61. American Academy of Child and Adolescent Psychiatry. http://www.cmhc.com/factsfam/suicide.htm.

62. Adapted from American Association of Suicidology. http://www.cyberpsych.org/aashelp.htm and the San Pedro Youth Coalition. http://www.sanpedro.com/spyc/talks.htm

63. Low BP, Andrew SF. Adolescent Suicide. Med Clinics N Amer. 1990; 74:1251-1264.

64. The NIS-3 found that 72% of physically abused children were abused by their natural parents while other parents and parent substitutes (e.g., boyfriend or girlfriend of parent) accounted for 21%. Among sexually abused children, 29% were abused by their natural parents and 25% by other parents or parent substitutes.

65. These percentages, and others showing the percentage of attempts resulting in death, represent maximum values because an unknown number of attempts may have been unreported.

66. All seasonal and other temporal data are for youth suicide are for the years 1987-96.

67. Most of Appendix E was drawn from two Oregon Health Services publications: School-based Health Centers. No. 1, General Information, and No. 3, Mental Health Care.

68. Centers for Disease Control. Suicide contagion and the reporting of suicide: Recommendations from a national workshop. MMWR. 1994; 43, RR-6:13-17.