

The Onset of Suicidal Ideation in Childhood and Adolescence

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Event history analysis is used to address questions about the timing of first suicidal ideation during preadolescence and adolescence. Are suicidal thoughts atypical during development? Does the age trajectory of suicidal thoughts parallel that of suicidal actions? Do factors that moderate the risk of suicidal actions also moderate the risk of suicidal thoughts, and does their influence vary by developmental stage? Based on life history data from 364 college students, results indicate that suicidal thoughts in childhood are typical and that the risk of such thoughts begins to increase by age nine. Risk rates are affected by demographic factors (gender, race) and by the experience of parental absence. However, the influence of these factors depends on developmental stage, with whites being at increased risk only during adolescence, and parental absence having its strongest effect during preadolescence. In sum, this study suggests that many children and adolescents contemplate suicide, that the risk of doing so begins to increase at an early age, and that clear similarities exist between those groups at heightened risk for suicidal thought and those at heightened risk for suicidal action. Moreover, this study illustrates the power of employing an analytic technique suitable for model-

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ing transitions. Finally, it highlights the need to model differential influences on suicidal ideation at different stages in development.

INTRODUCTION

Suicidal behavior among the young has increased three fold since 1950 and stands today as the third leading cause of death among American adolescents (Holinger and Offer, 1986). This observation had prompted calls for the development of primary prevention programs (Gammon *et al.*, 1986). The effectiveness of such programs depends on knowledge of an antecedent event, the transition to thinking about suicide. Inevitably, such thoughts precede suicidal action, and thus may be important indicators of suicidal risk (Bonner and Rich, 1987; Paykel *et al.*, 1974). But information about when children begin to consider suicide is presently unavailable, underscoring a troublesome issue in designing youth suicide prevention programs—that of balancing the need to intervene to prevent suicide with the desire not to introduce naive children to the concept of suicide.

This concern is also reflected in the fact that most existing research has focused on factors that distinguish children who engage in suicidal behavior from those who do not, leaving the following questions unanswered: Are suicidal thoughts typical or atypical during childhood? Does the age trajectory of the onset of suicidal thought parallel the well-documented age trajectory of suicidal action? Are the factors that increase the risk of suicidal ideation similar to those that increase the risk of suicidal action? Do risk factors operate differently at different periods of childhood, specifically preadolescence and adolescence?

This paper addresses these questions with life history data obtained from a sample of college students. These data permit the use of an analytic technique, event history analysis (Tuma and Hannan, 1984), that is particularly well suited to modeling transitions (Griffin, 1987; Yamaguchi and Kandel, 1985). The transition of interest in this paper is the first occurrence of suicidal ideation.

Suicidal Ideation and Suicidal Behavior

Estimates of the prevalence rate of suicidal ideation show enormous variation, ranging from 10 to 75% (Bonner and Rich, 1987; Goldberg, 1981; Harkavy Friedman *et al.*, 1987; Paykel *et al.*, 1974; Ramsay and Bagley, 1985; Schotte and Clum, 1982; Schwab, *et al.*, 1972; Vandivort and Locke, 1979). This divergence reflects variation in sample selection, methodology, and in all likelihood, temporal shifts in suicidal ideation and willingness to report

such thoughts. Surveys reporting the lowest prevalence rates were conducted with community samples in the 1960s (e.g., Paykel *et al.*, 1974; Schwab *et al.*, 1972) and questions were asked within the context of extensive face-to-face interviews on mental health. The three studies yielding the highest rates were recently conducted with students (either college or high school) who completed anonymous questionnaires that focused primarily on suicidal ideation and behavior (Bonner and Rich, 1987; Harkavy Friedman *et al.*, 1987; Schotte and Clum, 1982).

The accuracy of retrospective, life-history accounts had been of considerable concern to researchers. Kessler and Wethington (1988) show that the accuracy of reports about life events can be improved when the importance of a particular event is emphasized, when the particular life event is probed in depth, and when the information is less sensitive. In community studies, questions about suicide are usually part of a large survey, and thus are not highlighted as particularly important. Detailed information about specific episodes of suicidal thought or information that might help trigger memories about suicidal thoughts is not obtained. Overall, these factors suggest that the prevalence of suicidal thoughts may be underestimated in previous large-scale community studies and that figures based on more recent work using anonymous questionnaires may be more accurate. Another limitation of previous studies, for our purposes, is that no precise information was obtained about when respondents first began to consider suicide. Thus, these studies provide little information about whether and when children begin to contemplate suicide.

Several features of the present study aim to ensure an accurate reporting of thoughts about suicide. First, respondents were invited to participate in a study about the development of the concept of death and suicide. No questions were asked about actual suicidal behavior or mental health. Second, the study dealt specifically with suicide and death, thus focusing respondents' attention solely on these issues. Third, the questions were asked in an anonymous questionnaire that was self-administered in a group setting, thus minimizing concerns about reporting on sensitive issues. Finally, because ethical considerations impose restrictions on posing questions about suicide and death to children, an acceptable compromise, in our view, is to obtain retrospective accounts from young adults whose memories of such thoughts may be more accessible than older subjects, but who, presumably, will not be negatively influenced by answering questions about suicide. Accordingly, the present study used a sample of college students as informants about childhood suicidal thoughts.

Current information on the prevalence of suicidal thought during childhood comes primarily from child psychiatric populations, a group at heightened risk for suicidal behavior. The incidence of suicidal thought among children who attend psychiatric clinics appears quite high, with reports of

expressed suicidal thought or suicidal behavior in outpatients ranging from 10 to 33% (Pfeffer, 1981). However, the extent to which rates among a psychiatrically disturbed population are reflective of the general population is questionable. Achenbach and Edelbrock (1981), examining maladjustment in a nonclinical sample of 6- to 16-year-olds, found that mothers report that only a relatively small percentage of children express suicidal thoughts. But comparisons of mother's and children's rating of child adjustment indicate that mothers underestimate children's ideational symptoms (Mokros *et al.*, 1987). This suggests that many children who are contemplating suicide do not express these thoughts to family members. Thus, the true incidence of suicidal thoughts among the young is likely to be higher than that found by Achenbach and Edelbrock (1981).

Influences on Suicidal Behavior

Factors that have been implicated as markers of risk for youth suicide and parasuicide include a family history of suicidal behavior, demographic variables, and stressful life experiences (Pfeffer, 1981). This study focuses on *demographic risk factors*—specifically age, race, gender, and religion—and *precipitating life experiences*—specifically, contact with suicidal behavior, the experience of loss through the death of a family member, and parental absence during childhood—because previous research has identified them as risk factors for suicidal behavior in children and for suicidal ideation in adults. Are these markers of risk for suicidal behavior also associated with increased risk for suicidal thoughts among youth?

Demographic Risk Factors

The risk of attempted and completed suicides varies by age. Successful suicides are extremely rare prior to age 10. During adolescence rates of suicide and parasuicide increase sharply, displaying a qualitative shift that is unparalleled across the rest of the life span (Holinger and Luke, 1984; Weissman, 1974). Clinicians and researchers have become increasingly aware that even very young children display suicidal behavior (Pfeffer, 1981, 1984). A key issue for prevention programs is whether the age trajectory of suicidal thoughts parallels that of suicidal action. If that is the case, we would expect the number of children contemplating suicide to increase sharply from age 10 years through adolescence.

In all age groups, females are more likely to attempt suicide whereas males are more likely to succeed. Given that suicidal thought is conceptually more similar to attempted suicide than to completed suicide, we predict that

being female increases the risk of considering suicide. Although community studies of suicidal ideation do not consistently report sex differences, where found they favor females (Paykel *et al.*, 1974; Sorenson and Golding, 1987). Achenbach and Edelbrock (1981) report a similar pattern for a nonclinical sample of youth.

The suicide rate for whites currently stands at twice that of nonwhites (Centers for Disease Control, 1986; Holinger, 1979). Schwab *et al.* (1972) and Paykel *et al.* (1974) find a similar pattern of results for suicidal ideation in adults. On the basis of these results we predict that being white increases the risk of considering suicide.

Although religious differences in rates of suicidal thought and action have generated considerable theoretical interest in the study of adult suicide, there is surprisingly little discussion of this factor in relation to children. There is no reason, however, to suppose that children are less influenced by their religious background than are adults. In fact, religions that portray suicide as an avenue to further pain, rather than a solution to a stressful situation, may protect children from contemplating such an act. Accordingly, children from Catholic backgrounds may be less likely to consider suicide than those from other denominations, because of that religion's strong proscription of suicide.

Precipitating Life Experiences

The question of whether exposure to suicide, either directly through the behavior of relatives or friends, or indirectly through the media, increases the risk of suicide has generated considerable controversy, especially in relation to the media's treatment of such behavior (see Phillips, 1982, and Kessler and Stipp, 1984, for contrasting views). In a community study of lifetime prevalence of suicidal thoughts, Ramsay and Bagley (1985) found that contact with suicidal behavior placed respondents at increased risk for suicidal ideation. Previous research has shown that children of suicidal parents are more likely to engage in suicidal behavior themselves (Pfeffer *et al.*, 1979). Moreover, there has been much discussion in the media (e.g., Doan, 1984) and elsewhere (Robbins and Conroy, 1983) about the contagion effect of suicidal behavior among peers. Thus, we predict that exposure to suicidal threats and behaviors in friends or family members will increase the risk of suicidal thoughts among children and adolescents.

Theorists such as Freud (1955) and Bowlby (1969) have linked the loss of a loved one to the onset of depression and, indirectly, to increased risk of suicide. One way that exposure to death may increase the risk of suicidal thoughts is by making the concept of death and its possibilities as an escape from pain more salient in the child's mind. Furthermore, young children may

believe death provides a way of rejoining a loved one who has died. In the case of parental death due to suicide, the possibility exists that genetic similarities for depressive and suicidal tendencies may underlie any association with subsequent suicidal behavior (Plomin, 1986; Mann, 1987). These observations lead us to expect that those who have experienced a death in the family will be at higher risk for contemplating suicide.

A literature review by Lloyd (1980) provides support for this proposition: 10 out of 11 studies reviewed found elevated rates of childhood bereavement among suicide attempters. Lloyd (1980) also concluded that separation from parents in childhood is associated with subsequent risk for attempting suicide. This has also been implicated as a risk factor for lifetime prevalence of suicidal ideation (Ramsay and Bagley, 1985; Cook and Raskin, 1975; Adam *et al.*, 1982). Consequently, we postulate that parental absence during childhood places the child at risk for suicidal thought. Clearly the circumstances of the absence may affect its potency as a risk factor: absences due to marital discord may have a stronger negative effect on adjustment than absences due to illness or employment demands. However, in the present study we cannot distinguish among causes of parental absence. Thus, for the purposes of analysis, we combined all major absence of either parent and we hypothesize that these will increase the likelihood of contemplating suicide.

Developmental Issues in the Study of Risk Factors for Suicidal Ideation

A developmental approach leads us to predict that the impact of the demographic variables and life experiences on suicidal thoughts will vary by developmental stage. For example, preadolescent children are clearly more subject to family influences than are adolescents. By contrast, adolescents are more exposed to peers and the media than preadolescents. Thus, we predict that latency-aged children are more vulnerable to negative family events than adolescents because the family is their principal source of emotional support. Consequently, we expect that family-based loss events, specifically parental absence, will have a stronger effect on the risk of suicidal thought during preadolescence than during adolescence.

The literature provides less direction about the age dependencies of demographic risk factors. In general, we expect that their influence will be more evident during adolescence, a time when the prevalence of suicide is substantial; conversely, we expect that individual, idiosyncratic factors, such as parental absence or contact with suicide, places children at risk for suicide during preadolescence, when the prevalence of suicidal behavior is rare.

METHOD

Analytic Strategy

We are interested in describing the transition from never having considered suicide to having considered suicide at least once. A general class of techniques, called event-history analysis in sociology (see Allison, 1985; Tuma and Hannan, 1984) and proportional hazards models or survival analysis in biometrics (see Cox, 1972; Kalbfleisch and Prentice, 1980), is particularly appropriate for modeling such change. This technique can simultaneously identify factors that influence *whether* and *when* a transition occurs by asking: What is the probability of making the transition at a particular age or point in time? At any point in time, individuals who have not already made the transition are considered to have an instantaneous risk of doing so. Thus, the risk varies with time. This time-varying risk can be thought of as an instantaneous rate of change. Because the change in question is qualitative, the rate of change or hazard rate is the probability of making the transition per unit time, where the time interval over which this is calculated is infinitely small, i.e.,

$$h(t) = \lim_{s \rightarrow 0} p(t, t + s)/s \quad (1)$$

where $h(t)$ is the instantaneous hazard rate, p denotes probability, and s is an arbitrary time interval. If one has information on the timing of a transition for each subject then one can estimate the common hazard function underlying the transition times.

Note that the hazard function, as defined above, describes the trajectory of age-specific rates of change for the average person who has not already made the transition. However, we are also interested in accounting for the variation around that average. In a manner similar to the General Linear Model (GLM), we specify that individual differences in the hazard rate can be explained in the following manner:

$$\log h(t)_i = f(t) + bx_i \quad (2)$$

where i indexes individuals, $f(t)$ is some unknown function of time that is common to all individuals, b is a constant (to be estimated), and x_i is an individual difference variable that explains variation in $h(t)_i$. Unlike the GLM, the hazard rate equation specifies the hazard rate to be a log-linear function of time and an explanatory variable because this form constrains predicted

rates of transitions to be positive; by contrast, simple linear forms can predict an uninterpretable, negative rate. A further distinction between the above model and the GLM is the absence of an error term. Error terms are omitted in these models because by definition the model is already stochastic or probabilistic.

A key feature of this model is that the probability of making the transition depends on the time spent in the pretransition state and on individual difference risk factors (exemplified by the x variable in eq. [2]). In the present context, time dependence implies that the probability of experiencing a suicidal thought depends on age: specifically, it increases with age. Our statistical model distinguishes the effects of time or age on the hazard function from those of individual difference risk factors and provides estimates of the influence of these latter variables. Further, we expect that the effects of individual difference variables will depend on whether the child is in preadolescence (aged less than 13 years) or in adolescence (13 years and older). Thus, two effect parameters are estimated for each risk factor: a parameter describing the risk factor's effect during preadolescence and one describing its effect during adolescence. In statistical terms this implies that Eq. (2) above is modified to include interaction terms between age (expressed as a dichotomy—preadolescence vs. adolescence) and each risk factor (x variable).

Sample

Three hundred and sixty four undergraduates (mean age 20 years), recruited from introductory social science courses at a major university, completed a questionnaire on thoughts about death and suicide (refusal rate < 5%). The questionnaire took approximately 15 minutes to complete and was self-administered anonymously in a group setting.

Measures

Demographic risk factors included in the analysis were *sex* (female = 74%, *race* (white = 78%), and *religion* (non-Catholic = 71%).

Precipitating life experiences included in the analysis were as follows: *Contact with suicide*, which was coded 1 if respondents answered yes to either of the following questions: "Have any of your family members ever threatened or committed suicide?", "Have any of your friends ever threatened or committed suicide?" Sixty percent of respondents answered yes to one of these questions (Ramsay and Bagley (1985) found a similar incidence of contact with suicide in a Canadian community sample); *death of an immediate family member during childhood*, which was experienced by 9%; and *parental*

absence (either parent) for greater than two weeks during childhood, which was experienced by 27%. We selected two weeks as a cutoff point because pretests showed that this interval differentiated parental absences for vacations from those occurring for other reasons.

Suicidal thoughts (dependent measure): Respondents were asked "Have you ever thought of committing suicide?" and if so, "At what age did the thought first occur to you?" In response to probes, all but three respondents could identify a specific precipitating event.

RESULTS

Figure 1 presents, as a function of age, the cumulative percentage of respondents who had made the transition to considering suicide. Seventy-five percent of respondents had considered suicide at least once. Note that the risk of suicidal thoughts increases sharply in adolescence relative to preadolescence.

Table I (panel a) presents parameter estimates from the event-history analysis for a main effects model, which constrains the influence of risk factors to be invariant across developmental stage. Table I (panel b) presents estimates for a model that allows the effects of the risk factors to vary by developmental stage and each of the risk factors. The EXP(Coeff) and column indicates that at any given age, persons in the relevant risk category are EXP(coeff) times more likely to contemplate suicide than those in the alternative category. Thus, across both developmental stages females are 27% more likely than males to consider suicide ($p = .05$, one tailed). Whites are 75% more likely to consider suicide than nonwhites, but only during adolescence; during preadolescence they are 15% less likely to consider suicide. This difference

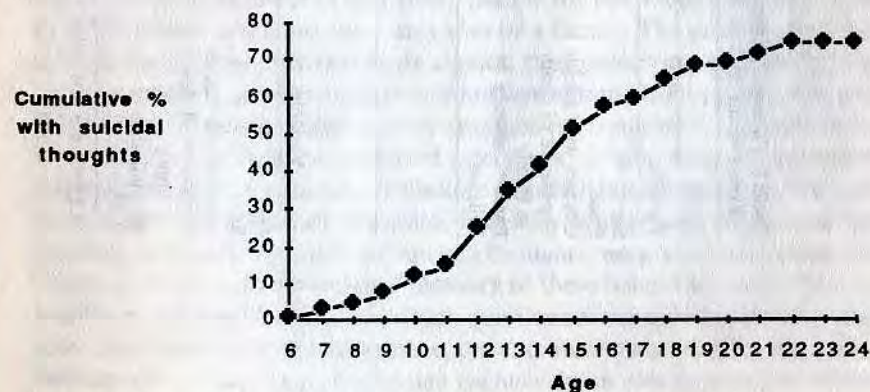


Fig. 1. Cumulative percentage having experienced suicidal thoughts by age.

Table 1. Parameter Estimates of Event History Model Relating Demographic Factors and Precipitating Life Events to the Risk of Having a First Suicidal Thought During Childhood and Adolescence ($n = 364$)^a

| a. Model with main effects only | | | | | |
|---------------------------------|-------------|------|-------|------------|-----|
| Variable | Coefficient | SE | t | EXP(Coeff) | p |
| Sex | 0.24 | 0.15 | 1.63 | 1.27 | .05 |
| Race | 0.27 | 0.20 | 1.35 | 1.31 | .09 |
| Contact with suicide | 0.11 | 0.13 | 0.87 | 1.12 | .19 |
| Experience of death | | | | | |
| in family | 0.11 | 0.20 | 0.55 | 1.12 | .30 |
| Parental absence | 0.28 | 0.14 | 2.05 | 1.33 | .02 |
| Religion | -0.06 | 0.14 | -0.45 | 0.94 | .32 |

| b. Model with interactions by developmental stage | | | | | | |
|---|----------------|------------|-------------|------------|--------------------|-----|
| Variable | Preadolescence | | Adolescence | | Test of Difference | |
| | Coefficient | EXP(Coeff) | Coefficient | EXP(Coeff) | t | p |
| Sex | 0.23 | 1.26 | 0.25 | 1.29 | 0.07 | .47 |
| Race | -0.16 | 0.85 | 0.56 | 1.75 | 1.77 | .04 |
| Contact with suicide | 0.07 | 1.07 | 0.14 | 1.16 | 0.28 | .39 |
| Experience of death | | | | | | |
| in family | -0.05 | 0.95 | 0.18 | 1.20 | 0.53 | .30 |
| Parental absence | 0.54 | 1.72 | 0.13 | 1.13 | -1.44 | .07 |
| Religion | 0.08 | 1.08 | -0.15 | 0.86 | 0.78 | .22 |

^aAll tests are one tailed.

in effect by developmental stage is statistically significant ($p < .04$, one tailed). Catholics were no less likely than non-Catholics to think about suicide.

Of the loss risk factors, only parental absence during childhood has an effect on the likelihood of suicidal thought, but only in preadolescence. During this period, children who experienced parental absence are 72% more likely to consider suicide than those who did not experience such absence. In contrast, the impact of parental absence during childhood on the risk of suicidal thought in adolescence is comparatively small—an increase of 13% over the no-absence condition. This difference between the effect of parental absence in preadolescence and its effect in adolescence is marginally significant ($p = .07$, one tailed).

Similar variation in family influences is seen in the age distribution of precipitating events. Although in the total sample family events (including parental punishment, family deaths, and conflict) and nonfamily events (including peer rejection, school problems, and moving) were identified with equal frequency as precipitating factors, adolescents were more likely to identify a nonfamily precipitant (59 vs. 41%) whereas preadolescent were more likely to identify a family precipitant (65 vs. 41%) ($\chi^2 = 14.06$, $p < .01$).

DISCUSSION

Thoughts of suicide had occurred to the majority of respondents at some point in their life. That 75% of undergraduates have considered suicide at least once is consistent with estimates from recent studies of high school and college samples (Bonner and Rich, 1987; Harkavy Friedman *et al.*, 1987; Schotte and Clum, 1981). The difference between these estimates and the considerably lower rates found in earlier epidemiological studies may reflect a greater openness about suicide today than in the late 1960s and early 1970s. Confidentiality and anonymity may also be a factor. The present study was carried out in large undergraduate classes, thus preserving anonymity; further, no uniquely identifying information was obtained, thus preserving confidentiality. The community studies obtained information on suicide during in-depth, face-to-face, home-based interviews. Under such circumstances respondents may be reluctant to disclose stigmatizing information. Furthermore, our questionnaire's exclusive focus on suicide and death, and our probing of specific instances of suicidal thoughts, may have been more successful in triggering respondents' memory of these issues than were the community mental health surveys in which questions about suicide played a small role. Consistent with this assessment, the community survey with the highest estimate of suicidal ideation focused exclusively on suicide and probed suicidal behaviors in depth (Ramsay and Bagley, 1985).

Suicidal thoughts in our sample begin to increase about one year earlier than do completed suicides. Figure 1 shows that the risk of considering suicide begins to increase at about age 9; in the United States, completed suicides begin to rise at about age 10 (Holinger and Luke, 1984). Thus, our data support the thesis that the transition to thinking about suicide must precede observed increases in suicidal behavior. Further, the data suggest that many children are aware of the possibility of suicide at an early age, i.e., we find that 25% of preadolescents have considered suicide at least once.

A major concern of schools has been balancing the need to provide students with information about suicide prevention with the desire not to introduce the concept to naive children. That many of our respondents report having considered suicide at an early age bolsters Pfeffer's (1984) suggestion that this concern may be overstated. In fact, the failure to educate children and their adult caretakers about suicide because of a mistaken belief that children do not consider suicide may deprive children of access to the type of information and adult awareness that prevents suicidal thoughts from being translated into behavior. However, before drawing firm conclusions, it is important to obtain information from a more representative sample of children at different ages. Such a study would require innovative efforts on the part of investigators to circumvent concerns about asking young children directly about suicide.

A second goal of this paper was to identify factors that increase the risk of suicidal ideation. We found that, at all ages, females were at higher risk for considering suicide than males. This concurs with evidence that females are more likely to threaten and attempt suicide (Weissman, 1974) and with the community surveys that found a higher lifetime prevalence of suicidal ideation among females (Paykel *et al.*, 1974). The trend in the data for whites to show higher rates than nonwhites in adolescence is consistent with the higher rate of completed suicides and suicidal ideation among whites reported in the literature (Centers for Disease Control, 1986; Holinger, 1979; Paykel *et al.*, 1974; Schwab *et al.*, 1971). Finally, as was the case in the Paykel *et al.* (1974) study, our hypothesis about religious background was not confirmed: Non-Catholics were no more likely than Catholics to consider suicide.

The argument that exposure to suicidal behavior increases risk for subsequent suicidal thought and action has received considerable attention in the research literature and in the popular press (e.g., Gould and Shaffer, 1986). We found no evidence that contact with suicidal behavior increases the risk of suicidal thoughts. Note, though, that the level of contact with suicidal behavior is very high in this sample (60%). Thus we obtain a picture of the college undergraduate as someone who has been exposed to suicidal behavior in others and who has personally considered suicide.

Previous work (see Pfeffer, 1981; Shaffer, 1974) has indicated that those who attempt or complete suicide have a history of disrupted family life. Our study focused on only one dimension of family functioning, significant parental absences in childhood. We do not know whether cause of absence or sex of parent matters, or whether our choice of two weeks as a minimum period of absence was optimal. Nonetheless, we found that those who experienced such absences were at increased risk for suicidal thought in preadolescence. The restriction of elevated risk to preadolescence suggests that the negative effects of parental absence are relatively immediate rather than delayed. Given that parental absence is by far the strongest risk factor for suicidal thought in preadolescence, this phenomenon warrants further explication in terms of the circumstances surrounding the absence, the effects of its length, and sex of the absent parent.

One limitation of this study is the retrospective nature of our research design. An alternative approach would be to interview samples of children of different ages, and to ask them whether and when they had thought of suicide, but ethical issues precluded this option. Several factors, however, suggest that we can be reasonably confident that our respondents were correctly remembering and reporting suicide-related events.

First, the transition to thinking about suicide is a major event and, for that reason, more likely to be remembered accurately. Second, none of our respondents reported finding the task difficult to complete. Third, the low refusal rate in this study indicates that subjects were comfortable with issues of confidentiality and therefore less likely to distort their responses. Finally, even allowing that recall of the timing of first suicidal ideation may not be very accurate, our data indicate that children probably begin to think about suicide earlier and in greater numbers than common wisdom dictates is the case. Our finding that many young adults report thinking about suicide at an early age concurs with the growing consensus among clinicians that depression and suicidal ideation are much more common among preadolescents than previously suspected (Pfeffer, 1984). Furthermore, a recent study, which found that between 65 and 70% of respondents in two independent samples of high school students had considered suicide (Harkavy Friedman *et al.*, 1987), provides additional support for the notion that most high school children would benefit from suicide prevention programs.

A second limitation of the study is its generalizability. Note that our sample necessarily excludes those who have committed suicide or who are not attending college because of suicidal behavior. This will result in an underestimate, albeit small, of the lifetime prevalence of suicidal ideation. Furthermore, the respondents in this study are clearly not a random sample of young adults. They are wealthier, more intelligent, more achievement oriented, and more likely to come from urban areas. However, our estimates are

similar to others based on school and college samples. At most, then, we can reasonably generalize to the population of youth that reach college. Because this is the first large-sample study of the timing of first suicidal ideation, we therefore regard our findings as tentative and exploratory.

Overall, this study demonstrates the importance of examining patterns of suicidal ideation in nonclinical samples in order to provide a basis for targeting primary prevention efforts. Although the data are retrospective and based on a relatively homogeneous sample of college students, they strongly suggest that many children contemplate suicide, that the risk of doing so begins to increase approximately one year earlier than observed increases in completed suicides, and that clear similarities exist between those groups at heightened risk for suicidal thought and those at heightened risk for suicidal action. Finally, this study alerts us to the fact that we must allow for varying influences on suicidal ideation as a function of developmental stage.

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