## Epidemiology of Suicide Attempts among Korean Adolescents

Jung Ja Nam\* · Hee Soon Juon\*\* · Margaret E. Ensminger\*\*\*

We examined the prevalence of self-reported suicide attempts and the relationship between suicide attempts and background characteristics, social integration, stress at school, psychological distress, and suicidal thoughts in a nationally representative sample of Korean adolescents. As part of the Korea Institute for Health and Social Affairs' Adolescent Health Survey data were collected from 5,209 eighth graders and 4,677 eleventh graders from 70 junior high and senior high schools in Korea. Previous suicidal ideation was indicated by 38.5% of the 8th graders and 51.3% of the 11th graders, and 3.9% of the 8th graders and 4.9% of the 11th graders reported that they had attempted suicide. Results, for both 8th and 11th graders, showed that factors significantly associated with suicide attempts included suicidal thoughts, hostility, and depression. These results indicate that early identification and treatment of psychological distress may have potential for reducing suicidal ideation as well as possible future suicides and suicide attempts.

## Introduction

Adolescent suicide has become a major problem in Korea. The mass media have given the problem a great deal of attention, as have health professionals. A recent study shows that suicidal death among the youths aged 15-24 caused 13.14% of all death in

this age group and that suicide is the second leading cause of death. The youth suicide rate has risen from 22.96 in 1981 per 100,000 to 28.62 per 100,000 in 1983. This rate remains higher than the national rate for all ages 19.98 per 100,000 in 1983(Shim, 1986).

It is not known why there has been such an increasing number of suicides among the young. In contem-

<sup>\*</sup> Senior Researcher, KIHASA

<sup>\*\*</sup> Research Associate, Department of Health Policy and Management, Johns Hopkins University School of Hygiene and Public Health.

<sup>\*\*\*</sup> Associate Professor, Department of Health Policy and Management, Johns Hopkins University School of Hygiene and Public Health

porary Korea, educational achievement is highly valued and adolescents may now face greater social pressure in terms of academic performance. However, little is known about what factors may predispose to suicidality in adolescents who are so exposed. Study of youth suicide remains very few in Korea.

The purpose of this paper is to investigate the prevalence of self-reported suicidal attempts among Korean adolescents and to examine the relationship between suicidal attempts and family background, social integration, stress at school, psychological distress, and suicidal thoughts. The data were derived from an Adolescent Health Survey of the Korea Institute for Health and Social Affairs (KIHASA) in 1989.

## Theoretical orientation

The study of suicide and suicidal behavior in children and adolescents is relatively new. Recently there has been much interest in identifying the frequency, correlates, and predictors of suicidal attempts in adolescence (Garrison et al. 1991).

Hawton (1985) identified potential risk factors for suicidal attempts; they included depression, conduct disorder, disturbed family environment, stress, pressure, hopelessness, aggressive and violent conflict resolution strategies, impulsivity, anger and substance abuse.

Studies of suicide or suicidal attempts in a variety of settings and populations have indicated that, overall, loosening or breaking of family ties may be an important determinant of the varying prevalence of suicide among young people. Many researchers have cited factors in youth suicide that relate to the breakdown of the family (Shaffer 1974; Fogelman 1976; Clarkin et al., 1984). Serious family disturbances were often present in the families of those youth with sui-

cidal behavior in these studies. The death of a parent, alienation of the youngsters from the family, and vulnerability to rejection by others were all family problems that were cited.

Durkheim(1951) was the first to postulate that lack of social integration and social isolation might explain suicide. His social integration perspective on suicide continued to stimulate much sociological research in the 1970s. He argued that those who have social bonds to social institutions and society will be less likely to commit suicide. From this perspective, young people may be at special risk of suicide because they are making transitions out of the family and from school to work, they have loosened their ties to heir parents and school with out yet being strongly attached to a spouse and children or work. The social integration orientation has often used measures such as religion, migration, status integration, marital and parenting status, and patriotism.

Much of the previous research on religion and suicide tend to indicate a negative relationship between religiosity and suicide(Lester & Lester, 1972). The basic rationale behind this relationship is that religious groups high in integration(in terms of the intensity of the collective belief and ritual) should have lower suicide rates. However, recent studies have produced conflicting results. A cross national study by Pope and Danigelis(1981) found religious affiliation was not related to suicide. These results may indicate that the integration level of Catholics and Protestants has converged over the 30 years since Durkheim's classic work and hence also their suicide rates.

Classic works on the relationship between poverty and suicide have generally contended that low income groups should have low suicide rates(Durkheim, 1951; Henry & Short, 1954). Research on income level and suicide in United States has also found a negative relationship (Hammermesh & Soss, 1974). In addition, the relationship has been supported by time series analyses, a study of the more than 3000 counties in the United States and a comparative study of Spain(Hammermesh & Soss, 1974; Barnes, 19 75). However, there are conflicting findings concerning the social class backgrounds of young suicidal attempters. In the United Kingdom, adolescent suicide attempters had a social class distribution similar to that of the general population (White, 1974; Hawton et al., 1982). From a seven-year review of parasuicide in Edinburgh, Holding et al. (1977) found that among young adults, higher rates of attempted suicide are found among those of lower compared with those of higher social class.

There are, of course, other factors that affect adolescent suicide such as perceiving the need to succeed and the fear of failure and experiencing stress. Many young suicide attempters have problems at school (Garfinkel et al., 1979; White, 1974). Although many studies stress the importance of academic pressure and frustration in the suicide of these young people, Richard Seiden (1966) summarized that increasing "pressure on the student to achieve and maintain" is responsible for student suicide. He predicts that such pressure is going to lead to a rising suicide rate among this population. Holinger (1987) also argued that "competition-in school, sports and jobs-may be the trigger for some young people who don't make the grade." Especially, in Asian countries, academic pressures reflecting familial and cultural demands for achievement may be primarily responsible. For example, in Japan, which has extremely high suicide

rates among the young, it has been argued by Iga (1981) that the intensely stressful preparation for the college entrance examination, the outcome of which virtually decides the individual's future, is a major factor in such suicides. This situation ominously resembles a suicidal problem which prevails among the youth of Korea, where there are tremendous pressures attend college, and those students who fail to gain entrance frequently turn to suicide as a solution to their failures.

Depression is commonly reported to be associated with suicidal behavior in adolescents, as it is in adults (Joffe et al., 1988; Petronis et al., 1990). Many studies reveal that depression appears to be an underlying factor in child and adolescent suicidal behavior and suicides (Carlson & Cantwell, 1982; Robbins & Alessi, 1985; Patros & Shamoo, 1989; Pfeffer et al., 1984, 1988; Trautman et al., 1991). In a study of 424 healthy college students 16-19 year old, Levy et al, (1989) found that major depression was an independent and interactive risk factor for suicidal ideation and suicide attempts. Garrison and associates (1991), in a 3-year prospective study of 1,073 of 7th and 8th grader, found that the best predictors of a given years' suicide score was the previous years' depression scores.

Evidence supports a continuum of suicidal behavior ranging from ideation to attempt(Brent et al., 1988; Pfeffer et al., 1979). In a longitudinal study, Pfeffer et al. (1991) found that preadolescents and young adolescents with a history of suicidal ideation and/or acts had an earlier episode of suicidal ideation, threats, or attempts during the follow-up period.

#### Method

By using a stratified systematic random sampling method, 5209 eighth grade students and 4677 eleventh grade students were sampled from each of 70 junior high and senior high schools located in Seoul city, Chungbuk and Junbuk province in Korea in 1989. The data were collected in classrooms where students completed a self-administered questionnaire that included demographic section, stress at school, psycho logical distress, suicidal ideation, and suicidal attempts.

#### Measurement

A suicidal attempt was defined as a nonfatal suicidal behavior of self-poisoning or self-injury. We measured suicidal attempts by asking the respondents "Have you ever attempted suicide?"

A suicidal ideation was defined as a person who seriously thought about committing suicide. We measured suicidal ideation by asking respondents "Have you thought a lot about killing yourself?"

Psychological distress was measured in terms of depression, anxiety, and hostility originally developed by Petersen and Kellam(1977) in the Woodlawn study. In this study 15 items were chosen to measure three dimensions: Hostility(5 items), Anxiety(4 items), and Depression(6 items). response range in five levels from "not at all" to "very, very much."

A factor analysis was computed on all the psychological distress items. Three identifiable factors with 55 percent of variance were elicited in the principal components. The factor loadings from a varimax rotation for the individual items were all .49 or above. The resulting lists of items resemble closely the original constructs in the Woodlawn study. One item in

depression factor(i.e., feel sad) and one item in anxiety factor(i.e., feel nervous) were deleted because they overlapped two factors. Therefore, 13 items were used from the original set for the analysis.

A reliability coefficient for three dimensions was computed separately: Hostility(alpha=.74), Anxiety(alpha=.68), and Depression(alpha=.80). These reliability coefficients in this sample were higher than original constructs from Woodlawn data(69 for hostility, .68 for anxiety, and .69 for depression).

Stress at school was obtained by asking whether or not they feel any stress regarding academic performances.

## Statistical analysis

We explored the relationship of various sociodemographic, stress at school, psychological distress, and suicidal ideation to the dichotomized suicidal attempts by logistic regression. Separate analyses were performed for 8th graders and 11thgraders. First, we examined crude odds ratio between each variable and whether suicide attempts were reported. Next we conducted multiple logistic regression to examine the odds ratio for each variable with other covariates held constant.

#### Result

#### **Subjects**

The eligible students were 5,314 eighth graders and 4,858 eleventhgraders from the sampling frame. Thirty three of the 8th and 9 of the 11th graders were excluded from the analyses because of substantial noncompletion of items or apparent random res-

ponding. On the day of questionnaire administration, 72 of the 8th and 172 of the 11th graders were absent from school. Thus, the participation rate for the 8th graders was 98% and 96% for the 11th graders.

Of the eighth graders, 2673(51.3%) were boys and 2536(48.7%) were girls. About 47.5% were living in Seoul metropolitan area, 22.8% were living in an urban area, and 29.7% were living in a rural area. The mean age was  $13.50(\pm 0.59 \text{ years SD})$ .

Of the eleventh graders, 2336(49.9%) were boys and 2341(50.1%) were girls. About 42.6% were living in Seoul metropolitan area, 24.8% in urban, and 32.6% in rural area. The mean $\pm$  SD age was 16.55( $\pm$ 0.69 years SD).

Religion was categorized into five: 38.3% of the 8th and 35.0% of the 11th graders were Protestant, 20.5% of the 8th and 13.9% of 11th graders were Buddhist, 10.3% of the 8th and 8.3% of the 11th graders were Catholic, and 29.4% of the 8th and 41.4% of the 11th graders had no religion. About one fifth of students(22.3% of the 8th and 20.6% of the 11th graders) reported that their father had graduated college.

One third of students(34.1% of the 8th and 31.7% of the 11th) were the first born or only child. More than half(55.8% of the 8th and 56.6% of the 11th graders) of respondents reported that their mothers were working. Two thirds of 8th graders(61.9%) and half of 11th graders(49.3%) reported having less than two siblings.

Most of the respondents(89.5% of the 8th and 87.1% of the 11th graders) reported living with both parents. Only a small proportion lived with mother only(5.7% of the 8th and 8.3% of the 11th graders) and even fewer reported living with father only(0.8% and 1.0% respectively). A small percentages of res-

pondents(3.4% of the 8th and 3.3% of the 11th graders) reported that their parents were separated or divorced.

Most of students reported stress at school(89.9% of the 8th and 93.9% of the 11th graders). Previous suicidal ideation were described by 38.5% of the 8th graders and 51.3% of the 11th graders (see Table 1).

#### Description of suicidal attempts

Of the sample, 3.9% of the 8th graders and 4.9% of the 11th graders reported that they had attempted suicide. For 8th graders, 84 males(3.2%) and 119 females(4.7%) showed suicidal attempts; the gender difference was significant.  $\chi^2(1)=8.27$ , P<0.05. For 11th graders, 119 males(5.1%) and 111 females (4.8%) showed these tendencies; the gender difference was not significant.  $\chi^2(1)=0.33$ , P>0.57.

## Univariate Analyses

The results for univariate logistic regression model for the 8th graders are in Table 2 and for the 11th graders are in Table 3 respectively. For 8th graders, gender, mother's employment, and parental marital status were associated with suicidal attempts. For 11th graders, only birth order was associated with suicidal attempts.

Neither residential area nor SES were associated with suicidal attempts for 8th graders. However, there was a tendency toward reduced self-report of suicidal attempts among 8th-grade members of religious groups (i.e., being a Protestant or Buddhist). Eighth graders who are Protestants or Buddhists had two-thirds odds ratio of suicidal attempts, as compared to non-Protestants (OR=0.69;

 $P \le 0.05$ ) or non-Buddhists(OR = 0.63;  $P \le 0.05$ ).

Table 1. Percent Distribution of Sociodemographic Variables by Grade

Characteristics	8th	11th
	(N=5209)	(N=4677)
Sex		
Males	51.3	49.9
Females	48.7	50.1
Area		
Metropolitan	47.5	42.6
Urban	22.8	24.8
Rural	29.7	32.6
Religion		
Buddhism	20.5	13.9
Protestant	38.3	35.0
Catholic	10.3	8.3
Others	1.5	1.4
No religion	29.4	41.4
Father's Education		
<high school<="" td=""><td>45.7</td><td>50.4</td></high>	45.7	50.4
High school graduate	32.0	28.9
>College	22.3	20.6
Birth Order		
First born/Only child	34.1	31.7
Later born	65.9	68.3
# of Siblings		
Less than two	61.9	49.3
More than three	38.1	50.7
Mother's Employment		
Not working	55.8	56.6
Working	44.2	43.4
Parental Marital Status		
Both living together	89.5	87.1
Separated	2.4	2.5
Divorced	1.0	0.8
Mother only	5.7	8.3
Father only	0.8	1.0
Both parents deceased	0.5	0.3
Stress at School		
Yes	89.9	93.9
No	10.1	6.1
Type of school		
Academic	- ·	72.4
Vocational	-	27.6
Suicidal Ideation		
Yes	38.5	51.3
No	61.5	48.7

Eleventh graders who lived in an urban area had higher risk of suicidal attempts than those who live in rural areas(OR=1.33; P<0.05).

Stress at school was associated with 8th-grade suicidal attempts but was not associated with 11th-grade suicidal attempts. Younger students who felt any stress regarding academic performances were about four times more likely to attempt suicide, compared to those who did not feel stress(OR=3. 80; P<0.001).

For both 8th and 11th graders, all measures of psychological distress were associated with suicidal

attempts in the univariate models(P < 0.001). Students who reported high scores of psychological distress(i.e., hostility, anxiety, depression) were more likely to attempt suicide than those who reported low scores of psychological distress.

Suicidal thoughts were associated with suicidal attempts for both 8th and 11th graders. Students who reported suicidal ideation were more likely to attempt suicide, as compared to others (OR=10. 55 for 8th-and 6.60 for 11th-graders; P<0.001). Students, who thought that people would be better without them, were about 4 times more likely to

Table 2. Major Characteristics of Suicidal Attempts Among 8th graders, based on Univariate Logistic Regression

Suspected risk factors	Reference	Odds ratio	95%	% C.I.	P-value
	Category		<del></del>		
Background:					
Female	Male	1.51	1.14	2.01	0.004
No. of siblings(4+)	<=3	1.12	0.84	1.50	0.425
Working mother	Not working	0.65	0.49	0.86	0.003
Not married parents	Married	1.77	1.21	2.59	0.003
First born/only child	Later born	0.81	0.59	1.10	0.174
Social Integration:					
Urban	Rural	0.99	0.73	1.35	0.959
Working	Middle	0.74	0.51	1.08	0.123
Religion					
Protestant	Not Protestant	0.69	0.49	0.98	0.036
Catholic	Not Catholic	1.22	0.74	2.02	0.432
Buddhism	Not Buddhism	0.63	0.42	0.95	0.027
Stress at School:	Absent	3.80	1.68	8.60	0.001
Vocational	Academic	-	- ,	-	· . —
Psychological Distress:					
High hostility(17+)	Low	3.24	2.44	4.30	< 0.001
High anxiety(10+)	Low	2.04	1.52	2.75	< 0.001
High depression(15+)	Low	4.24	1.16	5.65	< 0.001
Suicidal Thoughts:					
Suicidal ideation	Absent	10.55	6.31	17.63	< 0.001
People would be better		4			1. 1. 1. 1. 1. 1.
without me(4+)	1-3	3.80	2.85	5.06	< 0.001

attempt suicide, as compared to others(OR=3.80 for 8th-and 3.93 for 11th-graders; P<0.001). (See Table 3).

#### **Multivariate Analyses**

In order to assess the joint effects of the various characteristics, multiple logistic regression was performed. For the approach, backward elimination was used. Variables are selected for exclusion from the model in a sequential fashion based on a criter-

ion for entry of p-value less than 0.05, Table 4 presents the resulting model for both 8th and 11th graders with observed significance levels, and odds ratio estimates for each qualifying covariance (adjusting for all other covariates included in the model).

For 8th graders, there was association between suicidal attempts and mother's employment. Students whose mothers were working were less likely to attempt suicide compared to students with nonworking mothers (OR=0.67, P<0.05). for 11th

Table 3. Major Characteristics of Suicidal Attempts Among 11th graders, based on Univariate Logistic Regression

Supported with factors	Reference	Odds ratio	95% C.I.		D1	
Suspected risk factors	Category	Odds ratio			P-value	
Background:						
Female	Male	0.94	0.72	1.23	0.651	
No. of siblings(4+)	<=3	1.11	0.85	1.44	0.457	
Working mother	Not working	0.91	0.70	1.19	0.492	
Not married parents	Married	1.34	0.93	1.93	0.113	
First born/only child	Later born	0.73	0.53	0.97	0.030	
Social Integration:						
Urban	Rural	1.33	1.01	1.75	0.043	
Working class	Middle	0.97	0.69	1.35	0.853	
Religion						
Protestant	Not Protestant	1.25	0.88	1.78	0.218	
Catholic	Not Catholic	1.00	0.62	1.63	0.994	
Buddhism	Not Buddhism	0.75	0.49	1.15	0.186	
Stress at School:	Absent	1.28	0.69	2.38	0.428	
Vocational	Academic	0.98	0.72	1.34	0.922	
Psychological Distress:						
High hostility(17+)	Low	2.51	1.91	3.29	< 0.001	
High anxiety(11+)	Low	2.75	2.09	3.62	< 0.001	
High depression(17+)	Low	3.17	2.42	4.16	< 0.001	
Suicidal Thoughts:						
Suicidal ideation	Absent	6.60	3.06	11.60	< 0.001	
People would be better						
without me(4+)	1-3	3.93	2.99	5.18	< 0.001	

graders, gender and birth order were associated with suicidal attempt. Female students were less likely to attempt suicide than males (OR=0.68, P<0.05). As compared to later born 11th graders, first born or only child were less likely to attempt suicide (OR=0.68; P<0.05).

This multivariate model also showed four factors (i.e., hostility, depression, suicidal ideation, and feelings of worthlessness) were consistently associated with increased risk of suicidal attempts for both 8th and 11th graders. Suicidal ideation was the strongest risk factor for suicidal attempts: Students with suicidal ideation were more likely to attempt suicides than those who reported no suicidal ideation (OR=6.58 for the 8th and OR=5.23 for the 11th). Students with high score of hostility were more likely to attempt suicides (OR=1.76 for the 8th and OR=1.50 for the 11th; P<0.001), as

were those with high score of depression (OR=1.92 for the 8th and OR=1.77 for the 11th; P<0.001). There also was an association with having the thought of "People would be better without me." (OR=1.55; P<0.05 for the 8th and OR=2. 19 for the 11th; P<0.001).

#### Gender differences in suicidal attempts

One other finding deserves mention. In univariate model, gender was associated with suicidal attempts for the 8th but not for 11th. When adjusting for the other variables in the multivariate model, gender was no longer associated with suicidal behavior in the 8th grader but was significant for 11th graders with males being more likely to commit suicide than females. Both these findings may be due to that females, in general, having higher

Table 4 Multiple Logistic Regression Analyses of Background, Social Integration, Stress at School, Psychological Distress, and Suicidal Thoughts Variables on Suicidal Attempt

Suspected risk factors	Reference Category	Odds ratio	95%	% C.I.	P-value
8th Graders					
Working mother	Not working	0.67	0.50	0.91	0.010
High hostility	Low	1.76	1.28	2.43	< 0.001
High depression	Low	1.92	1.33	2.79	< 0.001
Suicidal ideation	Absent	6.58	3.89	11.14	< 0.001
People would be better					
without me(4+)	1-3	1.55	1.07	2.25	0.022
11th Graders					
Female	Male	0.68	0.51	0.91	0.011
First born/Only child	Later born	0.68	0.49	0.94	0.021
High hostility	Low	1.50	1.10	2.05	0.010
High depression	Low	1.77	1.19	2.64	0.005
Suicidal ideation	Absent	5.23	2.81	9.74	< 0.001
People would be better					
without me(4+)	1-3	2.19	1.47	3.27	< 0.001

psychological distress than males. Because of this close link between gender and psychological distress, we explored further the interrelationships of gender, suicidal attempts, and psychological distress. Means of psychological distress were computed by gender and suicidal attempts (see Table 5).

Among 11th graders, females who have attempted have higher scores of anxiety and depression than males. However, among 8th graders, males have higher scores of hostility and anxiety than females in the presence of suicidal attempts, whereas females have higher scores of three measures of distress than males in the absence of suicidal attempts.

## **Discussion**

These results support previous reports indicating suicidal ideation is a very important risk factor for

suicidal attempts. The proportion of children with suicidal ideation from American community studies has varied across studies from a low of 2% to a high of 60% (Kashani et al., 1989; Levy & Deykin, 1989; Joffe et al., 1988; Pfeffer et al., 1984). The difference in the rates observed may be the result of several factors as follows: (1) variation in demographic profile(age, race, gender, SES, and geographic locations) of the population sampled; (2) variation in the time frame assessed(current, last week, past year, and lifetime); and variation in the nature of the question asked(general thought about death versus specific and persistent suicidal thought and plans) and the manner in which suicidal ideation is defined(Garrison et al., 1991). By comparison, in the present Korean sample approximately 40% of 8th graders and 50% of 11th graders had recurrent thoughts of committing suicide. The number of Korean schoolchildren who appear to

Table 5. Means of Psychological Distress by Gender and Suicidal Attempts

Suicidal	Psychological	Psychological Gender	
attempts	distress	Males	Females
8th graders			
	Hostility	16.60	15.90
Yes	Anxiety	9.43	8.94
	Depression	14.94 (n=84)	15.91 (n=119)
	Hostility	13.90	14.17
No	Anxiety	7.38	7.69
	Depression	11.29 (n=2569)	12.61 (n=2407)
11th graders			
	Hostility	16.86	16.31
Yes	Anxiety	9.95	10.23
	Depression	15.99 (n=119)	17.09 (n=108)
	Hostility	14.40	14.58
No	Anxiety	8.27	8.86
	Depression	12.58 (n=2198)	13.98 (n=2215)

have serious suicidal ideation is quite large and disturbing.

The finding that depression is associated with suicidal attempts is consistent with a number of previous adolescent studies (e.g., Pfeffer et al., 1984, 1988; Trautman et al., 1991). Others have noted that the relationship between depression and suicidal feelings or behavior is not simple or linear (e.g., Carlson & Cantwell, 1982). Other factors such as anger may be involved in the determination of suicidal behaviors, but depression is clearly significant.

High score of anger also elevates the risk of suicidal attempts. Others have also shown the importance of anger in suicide(e.g., Weissman et al, 1973; Garfinkel et al., 1982). Recent aggressive behavior was also found to be strongly associated with suicide attempts among female psychiatric inpatients(Pfeffer et al., 1988).

Two measures of psychological distress(i.e., depression, hostility) are related to suicidal attempts, whereas anxiety is not related to attempts. This result is consistent with the study of Mattison (1988) who concluded that there is no relationship between anxiety disorders and suicidality.

While the gender difference in suicidal attempts among Korean adolescents is not a major focus of this paper, our results are nonetheless interesting. Gender differences in suicidal attempts were significant in the multiple regression analysis for the 11th but not for the 8th graders. In virtually all studies of attempted suicide among teenagers, girls have outnumbered boys, with the ratio usually being in the range 3 to 1 to 9 to 1(Hawton et al., 1982: White, 1974). The crude odds ratio shows younger females at higher risk of suicidal attempts than younger males. However, this gender difference disappears when the covariates are taken into

account. It might be the possible explanations for the higher means of psychological distress of young male attempters than young male attempters. On the other hand, there is no gender difference in suicidal attempts for older students in the univariate analysis. When controlling for all the covariates, older females are lower risk of suicidal attempts than older males. Thus, the lower rates of suicidal attempts seem to reflect higher means of psychological distress among older females. These initial findings concerning gender differences may be a fruitful area of subsequent investigation.

Identifying those children and adolescents who are considered to be at high risk for suicide remains a difficult task. This study suggests that early identification of schoolchildren who appear to have suicidal ideation, feelings of worthlessness, depression, and anger is needed so that treatment aimed at preventing later suicide can be implemented.

Our cross-sectional data do not allow us to understand the exact nature of the association between risk factors and suicidal attempts. Thus, longitudinal study or careful retrospective histories with corroboration by parents or schools would be needed to better define the variables that identify the attempters at greatest future risk.

This study of the young who are suicidal cannot definitively resolve the question of relative importance of these factors, but providing a picture of who these young people are and what they can give us some necessary guidelines for understanding the problem. As the most efficient treatment for suicides would be to prevent it in family as well as in school, educating parents and school personnel should be the first step to prevention and intervention.

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## 《국문초록》

# 한국 청소년의 자살기도에 관한 역학적 연구

남정자\*·전희순\*\*·M. E. Ensminger \*\*\*

본 연구에서는 우리나라 중·고등학생의 자살기 도율을 파악하고 자살기도와 사회경제적 특성, 사 회통합, 학교에서의 스트레스, 정신건강상의 문제 및 자살충동과의 관계를 검토하였다.

연구대상은 서울, 충북, 전북의 3개지역에 거주하는 중·고등학교 2학년에 재학 중인 학생을 모집단으로 하여 표본으로 추출한 중학생 5,209명과고등학생 4,677명으로 총 9,886명이었다.

연구결과 자살충동경험율은 중학생은 38.5%, 고 등학생은 51.3%로 나타났으며 중학생의 3.9%와 고등학생의 4.9%가 자살기도를 경험했던 것으로 나타났다. 자살기도율과 가장 관련이 깊은 요인은 자살하고 싶은 충동, 공격성향, 우울성향과 같은 정신건강상의 문제들이었다.

이와같은 연구결과는 중·고등학생의 잠재적 자 살과 자살충동 또는 자살기도를 예방하기 위해서는 정신건강에 관한 문제를 조기에 발견하고 치료하는 것이 무엇보다도 중요함을 시사하는 것이라고 하 겠다.

<sup>\*</sup> 책임연구원, 한국보건사회연구원

<sup>\*\*</sup> 주임연구원, 美國 죤스홉킨스大

<sup>\*\*\*</sup> 부교수, 美國 죤스홉킨스大