

The Relationship Between Parent-Child Relationships, Substance Use, and Suicide Activity Among Adolescents

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ABSTRACT

Suicide is a leading cause of death among adolescents in the United States. This study investigated the association between parent-child relationships and suicidal activity including ideation, attempt, and attempt requiring medical attention as well as the association between substance use, specifically alcohol and marijuana use, and suicidal activity among the adolescent population in the United States. The study participants (N= 12,105) were comprised from a nationally representative sample of adolescents in grades 7 through 12 from diverse ethnic and racial backgrounds. A series of independent T-tests and Chi-square tests were conducted. Results indicated that higher scores for quality of both mother-child relationship and father-child relationship were associated with lower rates of suicidal ideation. Additionally, results indicated there was a significant association between marijuana use and suicidal activity on all levels. Further, there was no significant association between alcohol use and suicidal attempt or suicidal attempt requiring medical attention, yet there was a significant association with a weak relationship between alcohol use and suicidal ideation. This study contributes to the social work field by highlighting the importance of relationship-based interventions, the significance of parent-child relationships, and the intersection of substance use and suicidality among the adolescent population.

INTRODUCTION

Significance of the Study

- In 2017, the rate of suicide among individuals aged 15 to 19 was at an all-time high, with an increase of 47% since 2001.
- In 2017 alone, there were 6,241 reported suicides among adolescents in the United States.

(Miron, Yu, Wilf-Miron, & Kohane, 2019)

Research Questions

- What is the relationship between parent-child relationships and suicidal activity among adolescents?
- What is the relationship between substance abuse and suicidal activity among adolescents?

Hypotheses

- Higher quality parent-child relationships will be associated with lower rates of suicidal activity in adolescents.
- Higher rates of substance use would be associated with higher rates of suicidal activity in adolescents.

LITERATURE REVIEW

Parent-Child Relationships

- Relationships within the family influence various aspects of an adolescent's mental health, such as depression, suicidality, and substance use behavior.

Substance Abuse Among Adolescents

- A study that found that marijuana and alcohol use were the most common substances among adolescents who engaged in self-harming behavior (Klassen, Hamza, & Stewart, 2018)

Suicidal Activity

- Social support is a protective factor for suicidal behavior, suggesting that high levels of social support would be associated with low suicidality among adolescents (Durkheim, 1951).

Parent-Child Relationships, Substance Abuse, and Suicidal Activity

- High levels of parental care and attachment are associated with lower rates of suicidal behavior (Raudino, Fergusson, & Horwood, 2013).
- The literature emphasizes that substance use is often associated with various adolescent outcomes including depressive symptoms, self-harming behaviors and suicidality.

METHODOLOGY

Research Design and Data Collection Procedures

- The current study is a secondary analysis of the data from the National Longitudinal Study of Adolescent to Adult Health (Add Health).
- Add Health is a longitudinal survey of adolescents beginning with an in-school questionnaire that was administered to 7th to 12th grade students.
- The current study will be a cross-sectional study utilizing the first wave of in-home interview data.
- Add Health utilized in-home interviews, which were in-person interviewers that took place in the respondent's homes and took one to two hours to complete.

Sample and Sampling Method

- There were a total of 12,105 participants from a nationally representative population of adolescents in grades 7 through 12.
- The sample was diverse in terms of ethnicity, race, gender and age.

Measures

- The quality of parent-child relationships is measured by two scales, one for mother and one for father. Each scale has three items with 5 response categories. A higher score indicates a more positive relationship characterized with higher levels of warmth, love, and communication.
- Marijuana use was assessed with one item asking, "During your life, how many times have you used marijuana?"
- Alcohol use was assessed with one item asking, "Over the past 12 months, on how many days have you gotten drunk or 'very, very high' on alcohol?"
- Suicidal behavior was analyzed as three separate items. Suicidal behavior was assessed at different severities including suicidal ideation with no attempts, suicidal attempt, and severe suicidal attempt that required medical treatment.

RESULTS

Independent T-Tests

- The mean mother-child relationship score of participants with suicide ideation was significantly lower than participants with no suicide ideation, $t(900.98) = 13.15, p < .001$.
- Similarly, a significant difference was found ($t(668.40) = 11.58, p < .001$) when analyzing father-child relationship.

Chi-Square Tests

Alcohol Use

- A significant association was found ($\chi^2(6) = 16.08, p = .01$) when analyzing alcohol use and suicide ideation, while a Cramer's V statistic suggested a weak relationship (.07).
- Based on the chi-square test, there was no significant relationship between alcohol use and suicide attempt ($\chi^2(6) = 8.73, p = .19$) or between between alcohol use and suicide attempt requiring medical attention ($\chi^2(6) = 9.37, p = .15$)

Marijuana Use

- A significant association was found when examining marijuana use and suicide ideation ($\chi^2(1) = 206.85, p < .001$). Participants with suicide ideation were significantly more likely to use marijuana (45.9%) versus participants who do not have suicide ideation (22.1%).
- A significant association was found ($\chi^2(1) = 13.68, p < .001$) for participants who use marijuana and have attempted suicide. Participants with a prior suicide attempt were more likely have used marijuana (56.6%) versus participants who have not had a prior suicide attempt (41.9%).
- A significant association was found ($\chi^2(1) = 13.68, p < .001$) for participants who use marijuana and have a prior suicide attempt resulting in medical attention. Participants with a prior suicide attempt requiring medical attention were more likely use marijuana (68.3%) versus participants with no attempt requiring medical attention (52.2%).

Table 1
Sample Characteristics (N = 6,504)

Characteristic	f	%
Gender		
Male	3147	48.5
Female	3356	51.6
Grade		
7 th grade	979	15.1
8 th grade	992	15.3
9 th grade	1107	17.0
10 th grade	1144	17.6
11 th grade	1122	17.3
12 th grade	993	15.3
Racial origin		
Hispanic	743	11.4
White	4294	66.0
Black/African American	1619	24.9
American Indian/ Pacific Islander	236	3.6
Asian	270	4.2
Other	425	6.5
Language spoken at home		
English	6046	93.0
Spanish	314	4.8
Other	141	2.2
Born in the United States		
Yes	6100	73.9
No	399	6.1
Mother's Education Level		
Less than high school	831	12.7
High school graduate/GED	2028	31.1
Trade/Vocational school	467	7.1
Some college/did not graduate	770	11.8
Graduated from college/university	1241	19.1
Professional training beyond college	512	7.9
Did not go to school/does not know	228	3.5
Father's Education Level		
Less than high school	598	9.2
High school graduate/GED	1432	22.0
Trade/Vocational school	281	4.3
Some college/did not graduate	512	7.9
Graduated from college/university	922	14.2
Professional training beyond college	535	8.2
Did not go to school/does not know	214	3.3

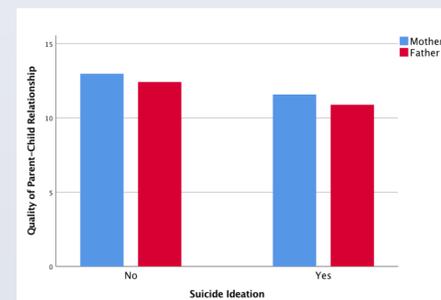


Figure 1. Bar graph of quality of parent-child relationships in participants with and without suicide ideation.

Table 3
Results of T-Test Comparing Mother-Child Relationship and Father-Child Relationship between Participants with and without Suicide Ideation

	Suicide ideation		No suicide ideation		t	df	p
	M	SD	M	SD			
Mother-Child relationship	11.50	2.86	12.92	2.24	13.15	900.98	< .00*
Father-Child relationship	10.79	3.17	12.40	2.52	11.58	668.40	< .00*

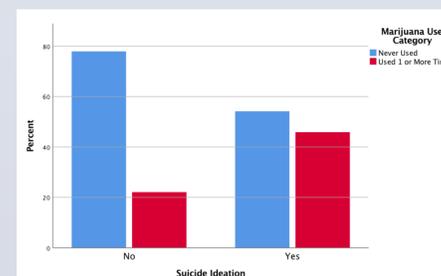


Figure 2. Marijuana use among participants with and without suicide ideation.

DISCUSSION

Key Findings

- Results demonstrated that there is a significant relationship between high quality parent-child relationships for both mother-child relationships and father-child relationships and lower rates of suicide ideation.
- This study revealed that alcohol use among adolescents was not significantly associated with suicidal activity.
 - The only significant association between alcohol use and suicidal activity was found among adolescents with suicidal ideation and no attempt, yet even this association proves to be weak after further analysis.
- This study revealed a significant association between marijuana use and suicidal activity among adolescents.
 - Individuals who have experienced suicidal activity on any level, ideation, attempt, or attempt requiring medical attention, were more likely to have also used marijuana at least once in their lifetime.

Strengths and Limitations

Strengths

- The study utilized a large sample size with individuals from diverse racial and ethnic backgrounds.
- This study was able to evaluate mother-child relationships and father-child relationships separately to accurately analyze parent-child relationships as a whole while also differentiating between parents.

Limitations

- One limitation is this study's cross-sectional design, which only allows for analysis of data for one point in time.
- This study does not differentiate between the levels of use for marijuana use.
- Data collection in the form of in-person interviews allows for the possibility of error in participants not accurately reporting or being dishonest in their responses.

Implications for Research and Practice

- Future research can further analyze the frequency of marijuana use and how that impacts suicidal activity among the adolescent population.
- On a clinical level, these findings highlight the importance of parental involvement in adolescent mental health treatment, as well as the importance of strengthening familial relationships and bonds.
- The association between marijuana use and suicidal activity points to the need for prevention efforts to address marijuana use among the adolescents.
- On a policy level, this research calls attention to the intersection of substance use and mental health concerns among the adolescent population.

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