

## ABSTRACT

Adolescent suicide rates are steadily increasing, as is the ratio of suicide to suicide attempts. Suicide is currently the second leading cause of death for children between the ages of 12-18. Exploring some of the factors that are associated with suicidal behaviors may help bring light to the mechanisms that reduce suicidality in adolescents. Suicidal ideation is a precursor to suicidal behaviors. The purpose of this study is to analyze how caregiver relationships and religious connectivity affect suicide ideation in adolescents in hopes to inform the current body of knowledge on these subjects. This study examined secondary data from the ADD HEALTH longitudinal study of adolescent health by using inferential statistics to provide data relating to the labeled research variables. Results from the Mann-Whitney U test indicated that participants who perceived their relationship with a caregiver as strong were less likely to have indicated having suicide ideation within the past year. Results from the Chi-Square test showed that individuals that indicated more religious connectivity also were less likely to have reported suicide ideation in the past year. Findings from this study helps to identify future research opportunities as well as identify protective factors to help mitigate adolescent suicide deaths.

## INTRODUCTION

### Significance of the Study

- Suicide is currently the second leading cause of death among adolescents (National Institute of Mental Health, 2019).
- Suicide ideation is believed to be on the rise as evidenced by the increase of affective disorders and self-harm practices. (Bould et al, 2019).
- An exploration of the factors that influence suicide ideation would inform the existing body of research to understand the mechanisms that lead adolescents to suicide.

### Purpose of Research

- To study how perceived parental support and religious connectivity are potential protective/risk factors for adolescents considering suicide.

### Research Questions

- How does religious connectivity affect suicide ideation in adolescents?
- How does the perceived relationship between caregivers and their dependents affect suicide ideation in adolescents.

### Hypotheses

- There is an inverse relationship between adolescents who have strong religious connectivity and suicide ideation.
- Among adolescents, suicide ideation and positive caregiver relationships are negatively correlated.

## LITERATURE REVIEW

### Suicide Ideation in Adolescent Youth

- The effects of ACEs, depression, substance abuse, and social pressures can all compound to plague the mental health of American youth.
- Major risk factors for suicide in adolescence are past suicide attempts, past/current suicide ideation, mood disorders, substance abuse, psychosis, male gender, a history of violent self-harm and lack of family support (Shain, 2018).

### Perceived Caregiver Support and Suicide Ideation

- In examining the duality of perception in relationships, perception plays an important role in predicting behavior (Lipschitz, Yen, Weinstock & Spirito, 2012; Susukida, Wilcox & Mendelson, 2016).
- In one study, suicidal adolescents perceived their family functioning significantly more negatively than their caregivers (Lipschitz, Yen, Weinstock & Spirito, 2012).

### Religious Connectivity and Suicide Ideation

- Synthesis of the literature suggests mixed results of the mitigating influence of religious connectivity on suicide ideation when controlling for different operational definitions of terms.
- Current research indicates that religious involvement is more of a protective factor than a risk factor in relation to suicidal ideation

### Interpersonal Theory of Suicide Ideation and Mattering

- The interpersonal theory of suicide suggests that suicidal ideation is caused by "thwarted belongingness and perceived burdensomeness" (Choi et al, pp 253, 2017).
- The idea of *Mattering* incorporates three concepts (awareness, importance, and reliance) integral to constructing self-worth.
- Without evidence supporting a person's value individuals can lose motivation (Elliott, Colangelo & Gelles, 2005).

### Gaps and Limitations

- While adverse life events are mentioned at length, a scarce amount of research controlled for variables such as ethnicity and sexual orientation.
- Statistics representing adolescent populations and suicide ideation are less prevalent.
- Research limited in validity due to self-reporting biases and need to control for vague operationally defined religious variables.

## 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).
- The study was funded by the National Institute of Child Health and Human Development and mandated by the US congress in order to study adolescent health.
- The ADD Health study surveyed a cohort of adolescents who were enrolled in 7<sup>th</sup>-12<sup>th</sup> grade for the 1994-1995 academic school year and surveyed their social, economic, psychological, and physical well-being through adulthood.
- A cross sectional research design was used by using data exclusively pulled from the first wave of four data collection points.
- Data was collected via a self-administered in-school questionnaire and followed up by a series of in-home interviews/questionnaires.

### Sample and Sampling Method

- At Wave I of data collection, 90,000 adolescents were surveyed using a stratified random sampling method of all qualifying high schools in the United States.
- Of the original sample, approximately 12,000 students were selected using unequal probability by stratifying students in each school by grade and sex, and then randomly choosing 17 students from each band to produce a representative sample of 200 students from each participating pair of schools to complete follow up in-home interviews.
- 6,504 of those participants responded to questions related to the dependent variables being examined in the current analysis and make up the sub sample used for this research.

### Measures

- The dependent variable studied in this research is Suicide Ideation (SI). SI was measured by one question asking whether or not a participant had experienced having serious suicidal thoughts in the past year.
- One independent variable is the relationship a participant had with their mother and/or father. This concept is measured by using two items for each relationship. This variable is a construct that is limited to the perception of the participant in this study.
- The other independent variable chosen is religious connectivity. Religious connectivity is a concept that will be measured in this study by three nominal variables. These variables are intended to measure the level of connection and involvement a participant has to their religious beliefs and/or community.

## RESULTS

### Mann-Whitney U Test

- A Mann-Whitney U test was used to examine the difference in the perceived support from caregiver relationships among participants who identified as having suicide ideation as opposed to those who did not.
- Participants who reported no thoughts of suicide in the past year had higher scores (*Mean rank*=3134.50) than those who did report suicide ideation in relation to the quality of their relationship they felt they had with their mother (*Mean rank* = 2382.61;  $U=1,528,086, p<.001$ ). Shown in figure 1.
- Participants who reported no thoughts of suicide in the past year had higher scores (*Mean rank*=2339.22) than those who did report suicide ideation in relation to the quality of their relationship they felt they had with their father (*Mean rank*= 1682.47;  $U=790,699, p<.001$ ). Shown in figure 2.

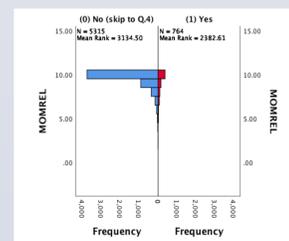


Figure 1. Suicide ideation frequency in participants with relation to the quality of relationship they feel they have with their mother.

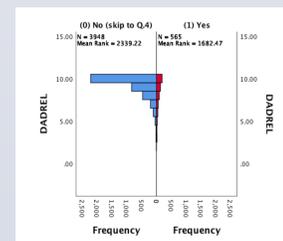


Figure 2. Suicide ideation frequency in participants with relation to the quality of relationship they feel they have with their father.

### Chi-Square Test

- A Chi-Square test was calculated to compare suicide ideation and its relationship with variables relating to religious connectivity. Among those variables are religious service attendance, prayer frequency, and religious importance to participants.
- When calculating religious service attendance, a significant association was found between it and suicide ideation ( $\chi^2(3) = 33.50, p<.001$ ), while a Cramer's V statistic suggested a weak relationship (.078). Results are displayed in Table 3.
- Calculations to compare frequency of prayer and suicidal ideation indicated a significant correlation ( $\chi^2(3) = 38.65, p<.001$ ), while a Cramer's V statistic suggested another weak relationship (.083). Results are displayed in Table 4.
- When calculating the significance of how participants viewed the importance of their religious affiliation and the association with suicidal ideation a significant correlation was found between the two ( $\chi^2(4) = 34.77, p<.001$ ), but again a Cramer's V statistic suggested a weak relationship (.079). Results are displayed in Table 5.

Table 3  
Suicide ideation \*Attend Religious Services category Crosstabulation

Suicide Ideation (past year)	n (% within population)			
	Once a Week	Once a Month or more	Less than once a Month	Never
Yes	261 (38.4)	150 (22.1)	148 (21.8)	120 (17.7)
No	2294 (46.9)	1114 (22.8)	949 (19.4)	539 (11.0)

Table 4  
Suicide Ideation \* Prayer Frequency category Crosstabulation

Suicide Ideation (past year)	n (% within population)				
	Once a Day	Once a Week	Once a Month	Less than Once a Month	Never
Yes	265 (39.0)	186 (27.4)	74 (10.9)	76 (11.2)	78 (11.5)
No	2435 (49.7)	1176 (24.0)	509 (10.4)	418 (8.5)	360 (7.3)

Table 5  
Suicide Ideation \* Importance of Religion category Crosstabulation

Suicide Ideation (past year)	n (% within population)			
	Very Important	Fairly Important	Fairly Unimportant	Not Important
Yes	273 (40.1)	304 (44.7)	64 (9.4)	39 (5.7)
No	2515 (51.3)	1905 (38.9)	326 (6.7)	152 (3.1)

Table 1  
Sample Characteristics (N = 6,504)

Characteristic	f	%
Sex		
Male	3147	48.4
Female	3356	51.6
Age	M=16.04 SD=1.773	
Grade		
7th	979	15.4
8th	992	15.7
9th	1107	17.5
10th	1144	18.1
11th	1122	17.7
12th	993	15.7
General Health		
Excellent	1847	28.4
Very Good	2608	40.1
Good	1605	24.7
Fair	408	6.3
Poor	28	0.4
Racial origin		
White	134	43.2
Black/African American	94	30.3
American Indian	33	10.6
Asian/Pacific Islander	24	7.7
Other	25	8.1
Religious Affiliation		
Religiously Affiliated	5614	86.4
None	751	11.8
Refused/Missed	139	2.1

Table 2  
Descriptive Statistics: Study Variables (N = 6,504)

Variables	f	%
Suicide Ideation		
Yes	821	12.8
No	5614	87.2
Relationships		
Mom	M = 9.40 SD = 1.115	
Dad	M = 9.03 SD = 1.421	
Importance of Religion		
Very important	2812	50.1
Fairly important	2218	39.5
Fairly unimportant	391	7.0
Not important at all	193	3.4
Frequency of Prayer		
Once a day	2722	48.5
Once a week	1370	24.4
Once a month	586	10.4
Less than once a month	496	8.8
Never	440	7.8
Frequency of Attending Religious Services		
Once a week	2567	45.8
Once a month	1274	22.7
Less than once a month	1105	19.7
Never	664	10.2

## DISCUSSION

### Key Findings

- Adolescents' perception of family functioning (including caregiver support) is a contributing factor and predictor of suicidal ideation (Lipschitz, Yen, Weinstock & Spirito, 2012).
- Participants who reported having suicide ideation had significantly lower perceived caregiver relationship scores than those who reported no suicide ideation.
- When separating the caregiver roles between Mother and Father, results indicated a statistically significant correlation between lower scores of perceived caregiver relationships and suicide ideation with both relationships.
- Findings between religious connectivity and suicide ideation proved to be significant, however, all findings were reported to have a weak relationship between each individual measure.
- Adolescent participants were less likely to have suicide ideation when they indicated stronger religious connectivity.
- Participants who attended religious services weekly, prayed at least once a day, and marked that their religion was "Very Important" to them, were less likely to express having had suicide ideation.

### Strengths and Limitations

#### Strengths:

- Large national representative sample
- Study was expertly constructed, carried out, vetted and supported.
- Unique measures were constructed to use specifically with this population.

#### Limitations:

- Generalizability might be low due to 25-year-old data.
- The operationalized definition of religious connectivity is difficult to measure.
- The original study was intended to be a longitudinal study, pulling information from one data wave limits the amount of contextual information on each participant.

### Implications for Future Research and Practice

- Using this research on how relationships can mitigate the affects of suicide ideation in adolescents could help inform practitioners when assessing clients in systems across health and behavioral programs so that early intervention might be implemented.
- Further research into the influence of specific relationships between suicide ideation among adolescents, gender, and the different parental roles would help inform practitioners on prevention measures.

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