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ORIGINAL PAPER

Family Support and Mental Health Service Use Among Suicidal Adolescents

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Abstract Despite the fact that multiple evidence-based treatments exist for suicidal adolescents, these youth are unlikely to engage in mental health treatment. While family members can be influential in connecting adolescents to mental health care, suicidal youth are more likely to be exposed to family environments characterized by abuse, neglect, and to have poorer parent–child attachment quality than non-suicidal youth. This study analyzed data from the National Longitudinal Study of Adolescent to Adult Health (Add Health) to examine the relationships between perceived levels of parental support, symptom severity, and mental health service use in a nationally representative sample of suicidal adolescents in the U.S. (n = 1804). Higher levels of parental support were associated with a lower likelihood of mental health service use, lower levels of depression, and lower likelihood of an actual suicide attempt. Additionally, the presence of a suicide attempt and higher levels of depression were associated with a higher likelihood of mental health service use. When mediation effects were tested, the presence of a suicide attempt partially mediated the relationship between parental support and mental health service use. Implications discussed include the protective nature of parental support the need for more family-based interventions for this population.

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Introduction

Multiple evidence-based treatments have been shown to help ameliorate suicidal ideation and behaviors among adolescents. These include family-based treatments such as Attachment-Based Family Therapy (ABFT) and the Resourceful Adolescent Parent Program (RAP-P) (Brent et al. 2013), as well as individual therapies such as Mentalization-Based Therapy (MBT) (Brent et al. 2013), Dialectical Behavior Therapy for Adolescents (DBT-A), and Integrated Cognitive Behavior Therapy (I-CBT) (Singer and O'Brien 2015). Despite the fact that these treatments exist, recent national data from the U.S. indicates that 67.3 % of adolescents with suicidal ideation report not having had any contact with a mental health provider within the prior 12 months (Husky et al. 2012). This data is especially concerning given the fact that in 2012–2013, 17 % of adolescents in the U.S. reported seriously considering suicide, 13.6 % reported making a plan, and 8.0 % reported making an actual attempt (CDC 2014).

Multiple interpersonal and social barriers have been associated with the likelihood that suicidal adolescents will seek mental health treatment. These barriers include the fear that the disclosure of self-harm will cause emotional harm to others (Fortune et al. 2008a), fears of the consequences of seeking treatment, particularly hospitalization (Freedenthal and Stiffman 2007; Nada-Raja et al. 2003), concerns about the stigma associated with mental health service use (Arria et al. 2011; Fortune et al. 2008a, b;

Freedenthal et al. 2007; Nada-Raja et al. 2003), and perceptions of adults' reactions to suicide-related help-seeking behavior (Pisani et al. 2012).

Family members are an integral part of an adolescent's social network (Costello et al. 1998) and it has been proposed that social networks can influence mental health service use in specific ways. First, having a supportive social network can improve mental health status, thus decreasing the need for services. Secondly, social supports can act as substitutes for formal treatment by providing emotional and/or instrumental support. Thirdly, members of one's social network can also help people identify problems and locate services (Gourash 1978). From this perspective, the level of support adolescents receive from their family members could either increase or decrease the likelihood that they will use mental health services. More attuned family members may act as more efficient gatekeepers to care, thus increasing the likelihood of service use. Alternatively, higher levels of family support could decrease mental health service use because family members are acting as informal supports, thus decreasing the adolescent's need for services.

Unfortunately, however, it appears that suicidal adolescents are more likely to experience higher levels of family dysfunction and lower levels of parental support than their non-suicidal peers. Suicidal adolescents are more likely to be exposed to parental psychopathology, parental loss, a family history of suicidal behavior, and to have poorer parent–child attachment quality than non-suicidal adolescents (Bridge et al. 2006). Moreover, multiple studies have found significant relationships between the quality of parental support that adolescents experience and suicide risk (Hetrick et al. 2012; Thompson and Light 2011; Timmons et al. 2011; Winfree and Jiang 2010).

Additionally, adolescents appear to be much more reticent than other youth to seek support from family members regarding suicidal thoughts and behaviors. First, adolescents have been found to be less likely to seek informal help from family and friends for suicidal thoughts than for other types of emotional problems (Ciarrochi et al. 2002, 2003). Additionally, adolescents with a history of deliberate self-harm (with or without suicidal intent), have been found to be much less likely to turn to family than to friends (Evans et al. 2005) and to be more likely to tell their parents about self-harming behavior only *after* they had already self-harmed (Morey et al. 2008).

The unique nature and stigma related to suicidality may be one reason adolescents are reticent to seek help for this issue. Deane et al. (2001) describe the phenomenon of "help-negation," or "the process of refusal to accept or access available help" (p. 903), and note that suicidal individuals may be more likely to consider self-harm as a solution to their problems than to engage in more pro-social problem solving strategies, which may make them less likely to reach out to parents. The unique stigma attached to suicide (Stuart 2012) may also make it difficult for adolescents to disclose this behavior to family members, thus making help seeking from parents even more difficult for this group. In fact, several studies have found that perceptions of stigma around seeking mental health care are significant predictors of mental health service use among adolescents (Fortune et al. 2008b; Freedenthal et al. 2007; Gilchrist and Sullivan 2006; Nada-Raja et al. 2003).

Adolescents' perceptions of adults' beliefs and/or reactions also appear to impact the likelihood that they will seek help for suicidal thoughts. The odds of help-seeking behavior among adolescents have been found to increase along with the perception that adults will help suicidal youth (Pisani et al. 2012), and fears regarding family member's objections have been cited as a barrier to formal and informal help-seeking among adolescents (Nada-Raja et al. 2003). How positively a family talks about mental health has also been associated with adolescents' perceptions of mental illness and help-seeking (Chandra and Minkovitz 2007) and parental beliefs about the etiology of their child's mental health issues have been connected with the likelihood of follow-up with mental health referrals for children and adolescents involved in public mental health agencies (Yeh et al. 2005).

The reticence of adolescents to engage in help-seeking from family members regarding suicidal thoughts and behaviors is concerning, given that there is significant evidence that parents can act as gatekeepers for mental health services for suicidal and non-suicidal adolescents. Parental detection of self-harming behavior in adolescents has been associated with an increased likelihood of seeking professional help (Mojtabai and Olfson 2008) and one study found that hospital referrals for adolescents engaging in deliberate self-harm were three times as common for those who had sought help from their family prior to self-harming than for those who had not (Hawton et al. 2009). Another study found that, of those students who were identified as in need of mental health treatment as part of a school screening program, that those whose parents perceived a need were more likely to report mental health service use at follow-up than those who did not (Kataoka et al. 2007).

If parents are the main gatekeepers to mental health service use for adolescents, it would seem that a higher quality of parental support would lead to a higher likelihood of mental health service use because adolescents may feel more comfortable disclosing their needs. However, Sheffield et al. (2004) surveyed a sample of adolescents in Australia and found that while a higher level of social support was associated with willingness to seek help from informal sources, there was no relationship between social

support and willingness to seek help from formal sources (such as therapists). In fact, some studies have found that higher parental support is actually related to a lower likelihood of mental health service use among adolescents (Fettes 2009; Martinez and Lau 2011). In the Martinez et al. (2011) study, the authors also found that mental health status partially mediated the relationship between parental support and mental health service use, indicating that parental support may decrease mental health service use primarily by decreasing need among youth.

On the other hand, there is some evidence that not only do children and adolescents from more dysfunctional families have higher need for services, but may also be less likely to be receiving care. Thompson et al. (2007) studied children ages 6–10 who had a history of maltreatment or were at risk of being maltreated and found that factors related to a "vulnerable family environment," such as higher family conflict, lower cohesion, lower expressive support, and higher caregiver distress were related to an increased *need* for services but also predicted *decreased* mental health service use. This finding may particularly relevant for suicidal adolescents, as their families are more likely to be typified by dysfunction, abuse, and poor communication (Bridge et al. 2006).

Andersen's (1995) Behavioral Model of Health Services Use proposes that health service use is related to predisposing/demographic factors, enabling resources (related to health care access), and the need for services. The Children's Network Episode Model (C-NEM) (Costello et al. 1998), however, also proposes that mental health service use is closely impacted by the structure, quality and functions of an individual's social network and recognizes that family members are a crucial element of children and adolescents' social networks. The conceptual framework in this study asserts that, in addition to predisposing characteristics and need, parental support is a different type of "enabling resource," that influences mental health service use among adolescents. Based on this theoretical model, it was hypothesized that higher levels of family support would either increase the likelihood of mental health service because family members were acting as gatekeepers for services or, alternatively, decrease the likelihood of mental health service use because higher parental support would be associated with lower levels of symptom severity (i.e., "need"). Secondarily, this study examined the extent to which the relationship between parental support and mental health service use was impacted by symptom severity. It was hypothesized that, if higher parental support was related to a *lower* likelihood of mental health service use, that this would be because higher parental support is related to a lower level of symptom severity. Thus, it was hypothesized that symptom severity would mediate the relationship between parental support and mental health service use.

Method

Participants

The sample included all respondents from Wave I of Add Health who reported that they had "seriously thought about committing suicide" at any time in the previous 12 months and who had valid data for all of the study variables (n = 1804). The majority of the study sample identified as White (69.1 %), followed by Black/African American (12.3 %) and Hispanic/Latino (11.2 %). 4.0 % identified as Asian/Pacific Islander and 3.4 % identified as American Indian/Alaskan Native. The majority of the sample was female (62.3 %) and the mean age was M = 15.18, SE = .12. Most of the respondents did not have a parent receiving public assistance (90.6 %) (See Table 1).

Procedure

To address the research aims, secondary analyses were conducted of data from the first two waves of Add Health, which is a longitudinal panel study of a nationally representative sample of adolescents in the U.S. regarding a variety of topics related to social factors, health, and their environment. The first wave of data from the in-home survey for Add Health was collected in 1994–1995 and included respondents selected from a nationally representative stratified school-based cluster sample of youth in grades 7–12 (n = 20,745). These respondents were re-interviewed one year later at Wave II (n = 14,738). The Wave II sample did not include those respondents who were in grade 12 at the time of the Wave I survey administration (with the exception of 27 adolescents that were retained because they were part of a twin sample) as well as respondents who were part of a physically disabled sample (Harris et al. 2009). Data utilized for this study included both public use and restricted data from the in-home surveys conducted at Waves I and II. Prior to the study, a detailed data use agreement was completed with the designers of Add Health, and approval was obtained from the Human Subjects Review Board at Simmons College in Boston, Massachusetts.

Measures

Demographic Variables

Demographic variables included respondents' self-reported race (White, Hispanic/Latino, Black/African American, Asian/Pacific Islander, and American Indian/Alaskan Native), gender, age, and whether or not their families were receiving public assistance. Receipt of public assistance was measured by combining two items from the in-home

Table 1 Univariate descriptive statistics

	Sampled frequency	Weighted %	SE
Race/ethnicity			
White	978	69.1	.03
Hispanic/Latino	307	11.2	.02
Black/African American	306	12.3	.02
Asian/Pacific islander	145	4.0	.01
American Indian/Alaskan native	68	3.4	.01
Gender			
Female	1159	62.3	.02
Male	645	37.7	.02
Receipt of public assistance			
Yes	180	9.4	.01
No	1624	90.6	.01
Presence of a suicide attempt			
Yes	531	30.6	.02
No	1273	69.4	.02
Mental health service use (wave II)			
Yes	369	21.7	.01
No	1435	78.3	.01

parent questionnaire and the in-school questionnaire to create a dichotomous (yes/no) variable that indicated whether or not either of respondents' parents were receiving public assistance at Wave I.

Perceived Parental Support

Perceived parental support was measured with an average score from ten items that ask about respondents' perceptions of their relationship with the people they identified as residential "mother" and "father" figures. These could include biological mother/father, adoptive mother/father, step-mother/father or any other individual with whom respondents lived that they felt "acted as a mother/father towards them." The ten items asked how close respondents felt to mother/father figures, how much they believed mother/father figures cared about them, how warm and loving these individuals were towards them, how satisfied they were with their relationship with them, and how well they communicated with them. In order to generate an overall score, two separate averages for the mother-figure and father-figure items were computed, and then these were averaged to compute a final parental support score. Those individuals who reported having neither a mother figure nor a father figure in their lives were excluded from the analysis. This method of measuring parental support was drawn from Pearson and Wilkinson (2013), who found strong evidence for internal consistency for each parental scale ($\alpha = .84$ for the mother items, and $\alpha = .89$ for the father items).

Presence of a Suicide Attempt

Presence of a suicide attempt was measured recoding the item asking how many times participants attempted suicide within the previous 12 months into a dichotomous (yes/no) variable.

Level of Depression

Level of depression was measured with a summary score of 19 items from the Center for Epidemiological Studies Depression Scale (CES-D) (Radloff 1977) asked of respondents at Wave I. The full CES-D (Radloff 1977) is a 20-item scale that asks respondents rate how much they have experienced various symptoms of depression on a scale of 0–3 (0 = never, 3 = most of the time or all of the time). In Add Health, two items from the original scale regarding "sleep" and "crying spells" were removed and an additional item ("felt like life was not worth living") was added to make a final scale with 19 items.

The full version of the CES-D has been psychometrically tested with adolescents and found to have strong internal consistency ($\alpha = .88$) and moderate test–retest reliability ($\alpha = .66$) (Roberts et al. 1990). The CES-D has also demonstrated criterion and construct validity (Garrison et al. 1991). Because a modified version of the scale was included in the Add Health dataset, additional tests for reliability and validity were conducted. The 19-item version of the scale continued to demonstrate strong internal consistency ($\alpha = .88$) as well as construct validity, with

CES-D scores being significantly higher among sample respondents who reported a suicide attempt (M = 19.59, SE = .37) than among those who had not attempted (M = 16.41, SE = .53; $p < .001$).

Mental Health Service Use

Mental health service use at Wave II was measured by respondents' answer to a question asking them if they had received "emotional or psychological counseling" at any time during the previous 12 months.

Data Analyses

In order to examine the relationships between family support, symptom severity and mental health service use, two separate models with two different proxies for symptom severity were examined. The first model included the presence of a suicide attempt at Wave I as the proxy for symptom severity, and the second model included depression scores at Wave I as the proxy for symptom severity. These two proxies for symptom severity were chosen because they are clinical indicators for suicide risk and because they have been used as measures of psychiatric need in a previous study using Add Health (Pirkis et al. 2003). Each proxy was examined separately because it was hypothesized that suicide attempts (because of their lethality) may be more likely to receive immediate attention from family members than depressive symptoms alone, and as such, the relationship between family support, symptom severity and mental health service use may differ for these two measures.

To assess for initial relationships between variables, bivariate tests and logistic regression models were used to examine first whether parental support at Wave I was related to the presence of a suicide attempt at Wave I, whether the presence of a suicide attempt at Wave I was related to mental health service use at Wave II, and whether parental support at Wave I was related to mental health service use at Wave II. In a similar fashion, potential relationships between parental support at Wave I, depression scores at Wave I, and mental health service use at Wave II were also examined. Final regression models included demographic variables as controls in order to account for the impact of predisposing/demographic characteristics.

When appropriate, mediational analyses were completed in two ways. Logistic regressions were first conducted that included interaction terms between the symptom severity variable of interest (suicide attempt or CES-D scores) and parental support. Secondly, separate logistic regressions were conducted for suicide attempters versus non-suicide attempters and then for those respondents scoring above the clinical cutoff for the CES-D and those scoring below the cutoff. Cutoff scores for the CES-D were based on previous studies using the 19-item CES-D scale, which used a modified cutoff score of 21 for males and 23 for females (Lehrer et al. 2006; Needham 2009; Shrier et al. 2002). All bivariate and regression analyses were conducted using weights supplied by the Add Health designers.

Results

Preliminary analyses indicated that the sample had comparatively low levels of parental support and higher levels of symptom severity along with low levels of mental health service use. The mean score on the parental support measure in the study sample was M = 3.67, SE = .01, which was significantly lower than the mean score for parental support for non-suicidal respondents in the larger Add Health cohort (M = 3.90, SE = .01; F(1, 128) = 292.66, $p < .001$). A relatively high proportion of respondents in the sample reported at least one suicide attempt (30.6 %), and the mean score for the CES-D was M = 17.39, SE = .32, which was also substantially higher than the mean CES-D score for non-suicidal respondents in the larger Add Health cohort (M = 9.96, SE = .14; F(1, 128) = 611.94, $p < .001$). The majority of respondents who reported suicidal ideation at Wave I reported no mental health service use at Wave II (78.3 %) (See Table 1).

Bivariate and Regression Analyses: Model 1

For the model investigating the relationships between perceived parental support, the presence of a suicide attempt at Wave I, and mental health service at Wave II, initial bivariate analyses indicated that all three variables were significantly related. Respondents who reported mental health service use at Wave II had lower parental support scores (M = 3.60, SE = .03) than those who did not report mental health service use (M = 3.69, SE = .02; F(1, 128) = 7.34, $p < .05$). Those respondents who reported a suicide attempt at Wave I also had lower mean parental support scores (M = 3.61, SE = .03) than those who did not report a suicide attempt (M = 3.70, SE = .02; F(1, 128) = 7.34, $p < .01$). Finally, a higher proportion of those individuals who reported a suicide attempt (28.8 %, SE = .03) reported mental health service use at Wave II than did those who did not report a suicide attempt (18.6 %, SE = .02; F(1, 128) = 10.42, $p < .01$). When parental support scores and presence of a suicide attempt were entered as single predictors into separate logistic regression models, they continued to significantly predict

mental health service use at Wave II. Higher parental support scores were associated with lower odds of utilizing mental health services (OR .63, 95 % CI .44–.92; $p < .05$), and the presence of a suicide attempt was related to higher odds of utilizing mental health services (OR 1.77, 95 % CI 1.24–2.51; $p < .01$).

When both parental support scores and the presence of a suicide attempt were entered into a single logistic regression model, they continued to be significant predictors of mental health service use, with higher parental support scores being associated with a lower likelihood of mental health service use (OR .67, 95 % CI .47–.96; $p < .05$), and the presence of a suicide attempt predicting a higher likelihood of mental health service use (OR 1.71, 95 % CI 1.20–2.42; $p < 01$). Parental support and the presence of a suicide attempt at Wave I continued to significantly predict mental health service use at Wave II even when race/ethnicity, gender, age and receipt of public assistance were entered into the model as covariates (see Table 2).

Mediational Analyses: Model 1

Mediational analyses demonstrated that the presence of a suicide attempt partially mediated the relationship between parental support and mental health service use. When the interaction term (parental support x suicide attempt) was included in the model, both the interaction term (OR .49, 95 % CI .24–.99; $p < .05$) and the presence of a suicide attempt (OR 22.87, 95 % CI 1.74–301.12; $p < .05$) continued to be significant predictors of mental health service use (see Table 3). Parental support scores by themselves, however, became non-significant.

Results from the separate logistic regression models run for those respondents who had reported a suicide attempt versus those who had not also supported this finding. For those respondents who reported a suicide attempt, higher parental support scores were associated with a lower likelihood of mental health service use (OR .43, 95 % CI .24–.77; $p < .01$). In the model including only those respondents who had not attempted suicide, however, parental support did not significantly predict mental health service use (see Tables 4, 5).

Bivariate and Regression Analyses: Model 2

Bivariate analyses also demonstrated that depression scores were significantly associated with parental support and mental health service use. CES- D scores were negatively correlated with parental support scores, r (128) = −.26, $p < .001$. Those individuals who utilized mental health services also had significantly higher mean CES-D scores (M = 19.92, SE = .70) than those who did not use services (M = 16.68, SE = .37; F(1, 128) = 172.83, $p < .001$). Additionally, when CES-D scores were entered into a separate logistic regression models as the sole predictor, higher CES-D scores were associated with a higher odds of mental health service use (OR 1.04, 95 % CI 1.02–1.06; $p < .001$).

When both CES-D scores and parental support scores were included in a single regression model, depression scores continued to predict mental health service use at Wave II (OR 1.04, 95 % CI 1.02–1.05; $p < .001$), but parental support was not a significant predictor. Again, in order to control for demographic variables, race/ethnicity, gender, age, and the receipt of public assistance at Wave I were entered into a regression model along with parental

Table 2 Logistic regression for Model 1 with all predictors

	95 % CI for odds ratio		
	Lower	OR	Upper
Race/ethnicity			
Hispanic/Latino	.60	.96	1.54
Black/African American	.24	.42*	.74
Asian/Pacific islander	.67	1.26	2.39
American Indian/Alaskan native	.86	1.95	4.43
Gender	.77	1.06	1.47
Age	.83	.91	1.01
Receipt of public assistance	.40	.78	1.51
Parental support scores	.45	.65*	.93
Presence of a suicide attempt	1.22	1.72**	2.41

White is reference category for race/ethnicity; male is reference category for gender

* $p < .05$, ** $p < .01$

Table 3 Logistic regression for Model 1 with all predictors and interaction term for parental support and suicide attempt

	95 % CI for odds ratio		
	Lower	OR	Upper
Race/ethnicity			
Hispanic/Latino	.59	.94	1.52
Black/African American	.24	.42*	.72
Asian/Pacific Islander	.67	1.28	2.44
American Indian/Alaskan Native	.89	2.02	4.59
Gender	.77	1.07	1.49
Age	.83	.91	1.01
Receipt of public assistance	.42	.81	1.57
Parental support scores	.56	.90	1.43
Presence of a suicide attempt	1.74	22.87*	301.12
Parental support X suicide attempt	.24	.49*	.99

White is reference category for race/ethnicity; male is reference category for gender

* $p < .05$

Table 4 Logistic regression with all predictors including only those individuals who attempted suicide

	95 % CI for odds ratio		
	Lower	OR	Upper
Race/ethnicity			
Hispanic/Latino	.38	.83	1.82
Black/African American	.24	.54	1.19
Asian/Pacific islander	.25	.78	2.45
American Indian/Alaskan Native	.50	1.92	7.46
Gender	.55	.89	1.47
Age	.77	.90	1.05
Receipt of public assistance	.49	1.33	3.65
Parental support scores	.24	.43**	.77

White is reference category for race/ethnicity; male is reference category for gender

* $p < .05$, ** $p < .01$

Table 5 Logistic regression with all predictors including only those individuals who did not attempt suicide

	95 % CI for odds ratio		
	Lower	OR	Upper
Race/ethnicity			
Hispanic/Latino	.56	1.05	1.96
Black/African American	.16	.33*	.71
Asian/Pacific Islander	.70	1.54	3.36
American Indian/Alaskan Native	.81	2.16	5.79
Gender	.78	1.19	1.81
Age	.80	.92	1.05
Receipt of public assistance	.18	.48	1.28
Parental support scores	.56	.90	1.43

White is reference category for race/ethnicity; male is reference category for gender

* $p < .05$, ** $p < .01$

support and depression scores. CES-D scores continued to be significant predictors of mental health service use (OR 1.04, 95 % CI 1.02–1.06; $p < .001$), but parental support scores were not (See Table 6). Parental support scores remained insignificant predictors for mental health service use in both of the mediational analyses.

Discussion

First and foremost, these results replicate those from other studies that indicate that adolescents in the U.S. who report suicidal ideation are not only at high risk for co-morbid

Table 6 Logistic regression for Model 2 with all predictors

	95 % CI for odds ratio		
	Lower	OR	Upper
Race/ethnicity			
Hispanic/Latino	.55	.88	1.41
Black/African American	.22	.39*	.68
Asian/Pacific Islander	.63	1.20	2.30
American Indian/Alaskan native	.71	1.70	4.10
Gender	.77	1.05	1.44
Age	.81	.89*	.98
Receipt of public assistance	.38	.76	1.49
Parental support scores	.51	.75	1.09
CES-D scores	1.02	1.04**	1.06

White is reference category for race/ethnicity; male is reference category for gender

* $p < .05$, ** $p < .001$

depressive symptomatology and actual suicide attempts (Brezo et al. 2008; Thompson et al. 2011; Winfree et al. 2010), but are also unlikely to have contact with mental health service providers (Husky et al. 2009; Husky et al. 2012; Saunders et al. 1994). Approximately 30 % of this sample also reported a suicide attempt within the same year that they reported "seriously considering suicide," and their depression scores were markedly higher than their non-suicidal counterparts. Moreover, almost 80 % reported no contact with mental health providers during that same time period.

The findings in this study regarding parental relationships give strong evidence for the need for additional family-based interventions for this population. First of all, the scores for parental support were significantly lower for those individuals in the study sample when compared their non-suicidal counterparts. Additionally, low levels of parental support were associated with higher levels of depression and a higher probability of an actual suicide attempt. These findings are consistent with previous research that has demonstrated that lower levels of parental support and less secure parental attachment are associated with higher risk of suicide attempts in adolescents (Borowsky et al. 2001; Donath et al. 2014; Shpigel et al. 2012). Finally, the likelihood of mental health service use decreased with higher levels of parental support and, when the presence of a suicide attempt was used as the proxy of symptom severity, this relationship appeared to be primarily related to a lower level of need. These findings suggest while parental support may tend to be lower in this population, it can still be protective against suicide attempts, which indicates that the family network is a crucial intervention point for suicide prevention.

The finding that parental support, specifically, appeared to be protective against suicide risk suggests that family interventions for suicidal youth should include techniques that increase the ability of parents and primary caregivers to act in supportive and attuned ways. In this way, increasing parents' abilities to provide a more secure attachment base may increase help-seeking behaviors in a population that is typically reticent to reach out to family members for support (Ciarrochi et al. 2002, 2003; Evans et al. 2005; Morey et al. 2008). While findings regarding the efficacy of family-based interventions in decreasing suicidal ideation and behaviors among adolescents have found mixed results (O'Brien et al. 2014), family-based interventions such as Attachment-Based Family Therapy (ABFT) (Diamond et al. 2010; Diamond, 2013), that attempt to increase the attachment-quality of the parent-adolescent relationship may be particularly beneficial to this population.

A secondary implication of this study relates to fact that the relationship between parental support, symptom severity, and mental health service use differed depending on the proxy of symptom severity being examined. While there was strong evidence that the presence of a suicide attempt partially mediated the relationship between parental support and mental health service use, levels of depression were such a strong predictor for mental health service use that parental support became non-significant in the multivariate analyses.

It may be that the presence of a suicide attempt is more strongly related to parental support and mental health service use because of the medical and risk issues inherent in lethal self-harm. That is, parents may be more likely to act as gate-keepers to care *because* they have observed the behavior directly. In contrast, depressive symptomatology that is not accompanied with acting out or externalizing behavior tends to garner less immediate attention from parents (Wahlin and Deane 2012) and a lower likelihood of mental health service use (Merikangas et al. 2010; Merikangas et al. 2011). Thus, the fact that a higher level of depression among suicidal adolescents is associated with a higher likelihood of mental health service use may less related to parental influence than it is to other factors.

This finding is somewhat concerning, especially given the strong associations that have been found between depressive symptomatology and suicide risk among adolescents (O'Brien et al. 2014). If parents tend to be more likely to refer adolescents to care only *after* an observable suicidal event has occurred, it is likely that there is a significant proportion of adolescents who are at risk that are not being identified by caregivers. Given the fact that any suicide attempt can potentially lethal, it is crucial to help parents and caregivers identify warning signs in at-risk teens before an actual attempt occurs. Thus, a second focus of family-based prevention work may need to involve helping parents to identify warning signs of depression and suicide in their teens before an actual attempt is made.

This study did have some limitations that should be noted. First, mental health service use was measured only in regards to whether or not respondents reported "any emotional or psychological counseling" within the past year. As such, it is impossible to know anything about frequency, quality, or type of care. Secondly, while this study attempted to use a prospective design by using mental health service use at Wave II as the dependent variable, because of the way questions were worded it is impossible to know for certain whether parental support and symptom severity ratings preceded actual mental health service use.

Another limitation relates to the fact that the parental support measure only investigated family support in relation to primary parents (and parental caregivers) living in the home. It is possible that other extended family relationships also have a significant relationship to symptom severity and mental health service use, and future studies could attempt to examine this further. In addition, there may be (and likely are) many other dimensions of parental relationships that have a significant impact upon depression, the likelihood of an adolescent actually attempting suicide, and mental health service use. Finally, because the sample of participants in this study represents a nationally representative cohort of suicidal youth from the U.S., these results may not be generalizable to other countries and cultural contexts.

Overall, however, the results of this study highlight the importance of family members in addressing adolescent suicide risk and point out a number of areas for future study. Future research should examine the implementation of specific family-based intervention strategies that focus on building upon attunement, identifying warning signs, and improving the attachment base between adolescents and their primary caregivers. Additionally, the relationship between other aspects of family functioning (such as cohesion, conflict, and communication), suicidal behaviors, and mental health service use may also be informative in developing suicide prevention initiatives for this population. Finally, in an effort to promote global suicide prevention, the relationship between family factors, symptom severity and mental health service use among suicidal adolescents should be explored within other cultural and global contexts.

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