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# Adolescent and Parent Attitudes Toward Screening for Suicide Risk and Mental Health Problems in the Pediatric Emergency Department

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# Abstract

**Objective**—The objective of this study was to investigate adolescent and parent attitudes toward screening adolescents for suicide risk and other mental health problems in the emergency department (ED).

**Methods**—Two hundred ninety-four adolescents and 300 parents completed questionnaires about the importance of screening for suicide risk and other mental health problems in the ED, what would be helpful if the screen was positive, their concerns about screening in the ED, whether they believe screening should be a routine part of an ED visit, and whether they would complete a screening during the current visit if offered the opportunity.

**Results**—Overall, parents and adolescents reported positive attitudes toward screening for suicide risk and other mental health problems in the ED, with the majority responding that it should be a routine part of ED care. Suicide risk and drug and alcohol misuse were rated as more important to screen for than any of the other mental health problems by both parents and adolescents. Adolescent females and mothers were more supportive of screening for suicide risk and mental health problems in the ED than male adolescents and fathers. Descriptive data regarding screening concerns and follow-up preferences are reported.

**Conclusions**—Study results suggest overall positive support for screening for suicide risk and other mental health problems in the ED, with some important preferences, concerns, and parent versus adolescent and male versus female differences.

#### Keywords

adolescents; parents; suicide risk; screening; mental health

Suicide is the third leading cause of death among adolescents and young adults in the United States, with an annual rate of 6.03 per 100,000 between 2000 and 2007.<sup>1</sup> In addition to the

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Page 2

tragedy of suicide, suicidal ideation, suicidal plans, and suicide attempts are significant public health problems among adolescents.<sup>2</sup> The Surgeon General's Call to Action to Prevent Suicide<sup>3</sup> recommends screening for specific disorders associated with suicide (eg, depression), and the National Strategy for Suicide Prevention<sup>4</sup> recommends screening for elevated suicide risk in emergency departments (EDs) and other settings, including primary care and juvenile justice facilities.

The ED setting has thus far been underutilized as a location to identify adolescents at elevated risk for suicide. Approximately 30% of adolescents visit emergency services settings each year,<sup>5</sup> and an estimated 1.5 million adolescents in the United States rely on the ED as their usual source of health care.<sup>6</sup> In addition, adolescents with higher levels of risky behaviors, a history of physical or sexual abuse, and higher depression scores are all more likely to use the ED as their usual source of care.<sup>6</sup> One study found that 39% of adolescents who died by suicide had attended an ED in the year before their death.<sup>7</sup> Finally, the ED setting may also provide access to male adolescents, who are at the highest risk for death by suicide<sup>1</sup> but are often difficult to identify as they are less likely to seek primary care<sup>8</sup> or mental health services.<sup>9</sup>

Several review articles, opinion articles, and consensus statements have been published in support of screening for suicide risk among youth who present to the ED with nonpsychiatric complaints<sup>10–12</sup>; however, there have been few empirical studies to date on this topic. In the first published study of screening for suicide risk among adolescents who presented to the ED with both psychiatric and nonpsychiatric chief complaints,<sup>13</sup> adolescents were screened for depression, alcohol abuse, and suicidal thoughts and behaviors. A positive screen for elevated suicide risk was defined as being at or above the clinical cutoff score for suicidal ideation, a suicide attempt in the past 3 months, or being at or above the clinical cutoff point for both depression and alcohol abuse. Sixteen percent of participating adolescents had presented to the ED with a nonpsychiatric chief complaint, suggesting that these youth would not otherwise have been identified. No data were collected on the adolescents' and parents' opinions of such a screening, however.

The second such study<sup>14</sup> examined the necessity, feasibility, and acceptability of screening for suicide risk in the ED among youth aged 10 to 21 years, presenting with both psychiatric and nonpsychiatric chief complaints. Six percent of the nonpsychiatric patients and 25% of the psychiatric patients were found to have clinically significant suicidal ideation and previous suicidal behavior. Authors argued that the screening was practical because there was no significant difference in time spent in the ED between those who screened positive and those who screened negative, and when compared with the high cost of adolescent suicide, the disruption caused by the suicide risk screening was worthwhile. They also argued that the screening was acceptable in that 60% of patients agreed to take the screening, and 96% of nonpsychiatric patients responded yes to the question, "Do you think it's a good idea for nurses to ask kids about suicide in the ER?" However, only those who agreed to take the screen were asked whether they thought suicide risk screening in the ED is a good idea, which may have biased the results in a more positive direction.

The most recent study<sup>15</sup> examined the use of a Web-based screening tool for various psychosocial issues (eg, depression, posttraumatic stress, family and community violence) and suicide risk among adolescents who presented to the ED for nonpsychiatric complaints. Approximately 10% of those who took the screening were identified as screening positive and were then assessed by the on-call psychiatrist or social worker to determine if further mental health treatment was required. One unique feature of this study is that the entire screening and assessment process was done by ED staff during their usual workflow (as opposed to research staff). However, ED staff offered the screening to only 33% of eligible youth, indicating a need to further develop ways to increase the adoption rate of such a screening in the ED by hospital staff.

In addition to the previously mentioned studies that have focused specifically on screening for suicide risk, a recent study<sup>16</sup> conducted semistructured interviews with adolescents and their caregivers on their beliefs about screening for depression in the ED. Participants were supportive of the idea of screening for depression in the ED, but were concerned about stigma, privacy, and provider sensitivity. In a similar study,<sup>17</sup> semistructured interviews were conducted with health care providers on their beliefs about adolescent depression screening in the ED. The participants in this study agreed that screening for depression was important, but they had significant concerns about how the system could respond to a youth who screened positive for depression.

The primary aim of the current study was to examine adolescent and parent attitudes (including any differences between adolescent and parent attitudes) toward the following aspects of screening for suicide risk and other mental health concerns in the ED:

- 1. How important is it to screen for suicide risk and mental health problems among teens in the ED? Should suicide risk and mental health screening be a part of routine care in the ED?
- 2. How does screening for suicide risk compare with screening for other mental health concerns?
- **3.** What response from the ED staff would be helpful if the youth screens positive?
- 4. What concerns do adolescents and parents have about screening in the ED?
- 5. Would they agree to the adolescent take a screening in the ED, if offered during the current visit?

The secondary aim was to examine any sex differences among adolescents and parents with regard to screening for suicide risk and other mental health concerns in the ED.

### METHODS

#### **Study Population and Design**

Adolescents, aged 13 to 17 years, who presented with a parent or legal guardian (hereafter referred to as "parent") to the pediatric general medical ED were approached for

participation. Inclusion criteria included being aged 13 to 17 years and having a parent or legal guardian present. Exclusion criteria included having a level I trauma, being unable to understand English well enough to complete the questionnaire, medical severity or cognitive delay that prevented them from being able to complete the questionnaire, or not having a parent/legal guardian present. Data collection was conducted by 2 bachelor's-level research assistants during 4 afternoon/evening shifts a week, from June to October. Because the study hospital has a separate psychiatric ED, adolescent participants were generally seeking treatment for nonpsychiatric emergencies or for a suicide attempt requiring medical attention.

The institutional review board approved this study. Research assistants provided potential participants with an informational letter about the study attached to the study questionnaire. This letter explained the purpose of the study (ie, to obtain parent and adolescent opinions about suicide risk and mental health screening in the ED) and noted the voluntary nature of participation. It also noted that participation would not affect their medical care and that no identifying information would be collected. Because of the anonymous nature of the study, the low risk level of the study design, and the importance of a high consent rate to the study goals and benefit, the institutional review board approved a waiver of written consent. Verbal consent/assent was obtained and documented by the research assistant.

It was possible for the parent to complete the questionnaire, even if the adolescent did not want to. It was also possible for the adolescent to complete the questionnaire, even if his/her parent did not want to, but the parent had to give his/her consent for the adolescent to do so. If both parents were present, they could both fill out individual questionnaires. Adolescents and parents completed the questionnaire in the waiting room or in the treatment area. Given that it was self-report, it was not possible for others to overhear the research assistant asking specific questions. Completion of the questionnaire required approximately 3 to 5 minutes. Participating adolescents were offered a dollar store item as a thank-you gift.

#### Measures

The "Mental Health Check-up in the Emergency Department–Adolescent/Parent Questionnaire" was developed specifically for this study (see Appendix A for adolescent version). The items on the questionnaire were developed from examination of the relevant literature and were reviewed and edited by the study coauthors and other members of the Child and Adolescent Depression and Suicide Prevention Team of the institution. Sex, race, and ethnicity data were collected on all participants. Adolescents were also asked about their grade level, and parents/guardians adults were asked about their relationship to the child and their highest level of education.

#### **Statistical Analyses**

Nonparametric statistical analyses were used to analyze the data because the majority of the data were not normally distributed and were either categorical or ordinal in nature. Specifically, the Mann-Whitney *U* test was used to compare differences between groups; the Wilcoxon signed rank test was used to compare the same participants on different measures, and  $\chi^2$  tests were used to compare 2 categorical variables.

# RESULTS

#### **Participants**

Of 451 adolescents in this convenience sample who presented to the ED, 125 were excluded because of medical severity, cognitive impairment, sedation, or being unable to speak English. Of the 336 adolescents who met eligibility criteria, 299 consented (89%), and 305 of their parents consented (91%). Data for 5 adolescents and 5 parents were later removed from the data set as they had reported presenting to the ED for a suicide attempt. Participating adolescents had a mean age of 15.2 (SD, 1.4) years; 48% were female, and their racial and ethnic breakdown was 72% white, 16% African American, 2% Asian, 1% American Indian/Alaska native, 9% multiracial/other, and 5% Hispanic. Participating parents were 73% female, and their racial and ethnic breakdown was 79% white, 15% African American, 2% Asian, 1% American Indian/Alaska native, 4% multiracial/other, and 4% Hispanic. Seventy-two percent of "parents" were biological mothers, 21% were biological fathers, and the remaining 7% were composed of step or adoptive parents or grandparents. They had to be legal guardians of the adolescent to participate. Eighteen percent of parents had a high school education or less, 26% had completed some college, 29% were college graduates, and 26% had graduate or professional training.

#### Importance of Screening in the ED

Table 1 presents adolescent and parent responses to the question, "How important do you think it for ED staff to ask all teens about the following: depression, anxiety, alcohol misuse, drug misuse, suicide risk, eating disorders, behavior problems, and dating violence?" The following percentages represent how many adolescents rated screening for each mental health problem as important or higher (ie, important, very important, extremely important): depression, 78%; anxiety, 70%; alcohol misuse, 83%; drug misuse, 89%; suicide risk, 86%; eating disorders, 75%; behavior problems, 65%; and dating violence, 68%. Parent ratings of important or higher were as follows: depression, 90%; anxiety, 87%; alcohol misuse, 91%; drug misuse, 91%; suicide risk, 92%; eating disorders, 90%; behavior problems, 84%; and dating violence, 88%. Parents reported significantly higher importance ratings than adolescents toward screening for each of the mental health problems with the exception of screening for suicide risk, which parents and adolescents rated as being equally important (Table 1).

With regard to sex differences among adolescents, females reported significantly higher importance ratings than did males for depression (U= 8724, P< 0.01), anxiety (U= 8849, P< 0.01), eating disorders (U= 8079, P< 0.001), behavior disorders (U= 9343, P< 0.05), and dating violence (U= 8448 P< 0.001), but not suicide risk (U= 9718 P= 0.095), alcohol misuse (U= 10,713, P= 0.740), or drug misuse (U= 9949, P= 0.189). Among parents, mothers had significantly higher importance ratings than did fathers for depression (U= 7459, P< 0.05), anxiety (U= 6578, P< 0.001), alcohol misuse (U= 7615, P< 0.05), drug misuse (U= 7553, P< 0.05) eating disorders (U= 6919, P< 0.01), behavior problems (U= 6874, P< 0.01), and dating violence (U= 6017, P< 0.001). The one exception was screening for suicide risk, which mothers and fathers rated as being equally important (U= 7848, P= 0.089).

#### Screening as Routine Care in the ED

When asked if ED staff should ask all teens about these problems as part of routine care, 4% of adolescents completely disagreed, 7% somewhat disagreed, 32% were neutral, 39% agreed, and 18% strongly agreed. Regarding parents, 6% completely disagreed, 16% were neutral, 41% agreed, and 29% strongly agreed. Parents had significantly higher levels of agreement with routine screening in the ED compared with adolescents (U= 33,678, P< 0.001). There were no sex differences among adolescents, but mothers had higher levels of agreement with screening as routine care than did fathers (U= 66,293, P< 0.001).

#### Screening for Suicide Risk Versus Other Mental Health Disorders

Table 2 compares the importance ratings for screening for suicide risk to each of the other mental health problems. Adolescents rated suicide risk as being significantly more important to screen for than all of the other mental health problems, whereas parents rated suicide risk as being more important to screen for than all other mental health problems except alcohol misuse and drug misuse.

Regarding sex differences, female adolescents believed screening for drug misuse was as important as screening for suicide risk (Z = -1.0, P = 0.312), whereas males did not rate any of the other mental health problems as being as important as screening for suicide risk. Both mothers and fathers believed that alcohol misuse (mothers: Z = -1.2, P = 0.249; fathers: Z = -0.15, P = 0.125) and drug misuse (mothers: Z = -0.647, P = 0.517; fathers: Z = -0.95, P = 0.34) were as important to screen for as suicide risk. Mothers also rated screening for dating violence as being as important as screening for suicide risk (Z = -1.8, P = 0.07).

#### ED Response to Positive Screens

Table 3 presents ratings on the helpfulness of various responses that could be provided in the event of a positive screen. Forty-four percent of adolescents rated brochures as being helpful or above (ie, helpful, very helpful, or extremely helpful); 79% rated information on where to go for further help as being helpful or above; and 82% rated speaking to a professional while in the ED as helpful or above. Sixty-one percent of parents rated brochures as being helpful or above; 93% rated information on where to go for further help as being helpful or above; and 93% rated speaking to a professional while in the ED as helpful or above. Parents rated each of the possible ED response as significantly more helpful than adolescents. There were no sex differences in the helpfulness ratings of each of the possible ED responses, either among adolescents or parents.

When we compared the helpfulness ratings of each possible ED response, adolescents indicated that talking to a professional while in the ED was more helpful than receiving psychoeducation materials on the problem (Z = -10.5, P < 0.001) or receiving information about where to go for help (U = -2.7, P < 0.01). Parents rated talking to a professional while in the ED and receiving information on where to go for further help as equally helpful compared with each other (Z = -0.98, P = 0.325), but more helpful than receiving psychoeducation materials on the problem (Z = -10.3, P = < 0.001; Z = -11.7, P < 0.001).

#### **Concerns About Screening**

Table 4 presents both adolescent and parent responses to the question, "Do you have any of the following concerns about being asked/your teen being asked mental health questions in the ED?" Concern ratings by adolescents ranged from 29% being concerned with how long the screen would take to 47% being concerned about their privacy. Concern ratings among parents ranged from 21% believing it was unnecessary as they were already getting help to 34% believing their teen was in too much pain or distress.

Adolescents were significantly more concerned than parents about all items except "I am/my teen is in too much pain/distress right now to worry about this." Although adolescents reported higher levels of concern than parents, they still reported relatively low levels of concern overall. There were no sex differences either among adolescents or parents.

#### Agreeing to Take a Suicide Risk/Mental Health Screening

Forty-five percent of adolescents and 53% of parents stated that they would take/allow their teen to take a screening if it were offered as an option during their current ED visit, which is a statistically significant difference ( $\chi^2_1 = 5.1$ , P < 0.05). Female adolescents were more likely than male adolescents (52% vs 38%) to indicate they would take a suicide risk/mental health screening if offered ( $\chi^2_1 = 5.3$ , P < 0.05). There were no significant sex differences among parents.

### DISCUSSION

The results of this study indicate that both adolescents and their parents were generally supportive of screening for suicide risk and other mental health problems in the ED, with the majority of parents and adolescents rating screening for suicide risk and other mental health problems as important and believing that it should be part of routine care in the ED. Compared with the broader range of mental health problems, adolescents were especially supportive of screening for suicide risk and drug misuse, and parents were especially supportive of screening for suicide risk, drug misuse, and alcohol misuse. Considering that current suicidal ideation and a previous suicide attempt<sup>18,19</sup> and substance abuse<sup>20,21</sup> are known predictors of future suicide-related behaviors, such focused screening could identify the most at-risk adolescents. With limited time and resources in the ED, screening specifically for suicide risk and drug and alcohol misuse may also be the most feasible form of screening, in addition to the most acceptable for both adolescents and parents. However, it should be noted that although these issues were rated as being "statistically" more important than others, this may not necessarily translate into a truly meaningful difference in a practical, clinical sense.

Given that both parents and adolescents expressed the preference of having a mental health professional available in the ED to speak with adolescents who screen positive, this would be an important consideration for the development of an ED-based screening program. Although screening may be challenging in some EDs because of space and time limitations, many EDs do have a psychiatrist or other mental health professionals available or on call who could possibly follow up with youth who screen positive for elevated suicide risk. The

bigger challenge, as discussed by Cronholm and colleagues,<sup>17</sup> would likely be having a process by which identified youth could be referred for additional treatment in a timely and effective manner. One notable concern for both adolescents and parents was "I am concerned about how long it would take," with 100% of adolescents and parents being at least somewhat concerned about this aspect of mental health screening in the ED. The amount of time required for screening has also been noted as a primary concern of ED physicians.<sup>22</sup> The additional resources and time necessary for implementing such a program are undeniable, but with suicide as the third leading cause of death in adolescents,<sup>1</sup> screening may possibly reduce the morbidity and mortality associated with suicide attempts and deaths, in addition to offsetting health care costs elsewhere.

There were several notable sex differences found in this study. Mothers were more supportive than fathers of screening as routine care in the ED, but mothers and fathers did not differ when asked if they would allow their adolescent to take a screen if one were offered. This is a positive finding, hopefully suggesting that fathers who take their children to the ED would allow their adolescent to be screened, even if they do not support the idea of routine screening. Conversely, there were no sex differences among female and male adolescents with regard to screening being routine in the ED, but male adolescents were significantly less likely to say that they would take a screen if one were offered. In fact, only 38% of males (compared with 52% of females) stated that they would agree to take a screen, highlighting the previously discussed problem of how to locate and engage male adolescents.<sup>8</sup> This suggests a need for further research to understand male adolescents' discomfort with such a screening and to develop screening methods that males would find more acceptable and engaging. This is especially critical because of the fact that males are at much higher risk than females of dying by suicide,<sup>1</sup> yet are less willing to use mental health services.<sup>9</sup>

The percentage of adolescents and parents stating that they would take a screen if one was offered (45% and 51%, respectively) is lower than the percentage of adolescents and parents who agreed or strongly agreed that screening should be offered as routine care in the ED (70% and 57%, respectively). This may reflect an attitude of "Yes it is a good idea, but not for me." Further research into this discrepancy is warranted. This rate was also lower than the actual consent rates from previous studies of approximately 60%.<sup>13,14</sup> This may be due to the fact that they had already participated in additional tasks, that is, reviewing our letter of study description/invitation and completing our study questionnaire. It is difficult to know what their true response would have been if a screen was in fact offered. However, in designing any possible screening program for adolescents in the ED, it would be reasonable to estimate a consent rate between 45% and 60%. Additional information is needed concerning how we could optimize adolescent suicide risk screen administration and completion rates if conducted as part of usual care.

Strengths of the current study include its high participation rate and the comprehensive amount of information obtained from adolescents and their parents about their attitudes toward screening in the ED. Finally, the fact that participants were asked about their opinions on suicide risk and mental health screening, in the absence of actually having to do a screen, means that we were able to include the opinions of those who may not have agreed

to do an actual screen. In a previously mentioned study,<sup>14</sup> participants were asked about their opinion of screening after they had already completed the screen. The 40% of individuals who refused to complete the screening were not asked about their opinions. This may have led a more positively biased sample than the sample in this study.

There are several limitations to this study. The survey instrument was developed especially for this study, and as such, only limited data are available concerning its psychometric properties. The use of Likert scales assumes a relatively similar interval between points, whereas this may not actually be the case. In addition, the responses selected for the first 3 Likert-scale questions provided 4 positive responses and 1 negative response, which may have primed participants to answer in a more positive manner than if they had the option of 2 negative responses, a neutral response, and 2 positive responses. Social desirability could have also influenced the positive response of the participants. The restricted variability in race and ethnicity, the fact that this was a convenience sample from 1 hospital, and the exclusion of level I and medically severe youth limits the generalizability of our findings to other populations. Finally, the "statistically significant" differences reported throughout this study may not translate to "clinically significant" differences in opinions.

In conclusion, this study adds to our current knowledge base concerning adolescent and parent attitudes toward screening adolescents for suicide risk and other mental health problems in the ED. The results of this study indicate support for screening in the ED, especially for suicide risk and drug and alcohol misuse. There were some important preferences and concerns discovered-including being able to speak with a mental health professional while in the ED and concern about the amount of time that would be required. Adolescents were consistently less accepting of such a screening than parents, and male adolescents and fathers were generally less accepting than female adolescents and mothers. Research on the feasibility, necessity, and acceptability of screening for suicide risk and mental health problems in the ED is growing, but there is much more to be done. Echoing the recommendations of the Public Health in the Emergency Department: Academic Emergency Medicine Consensus Conference,<sup>12</sup> it is necessary to continue to research the nature, scope, and effectiveness of possible ED-based interventions for risky health behaviors (such as suicidal behaviors and drug and alcohol misuse) and to continue to address the barriers of time, space, funding, and staffing that EDs face to determine how to move forward with ED-based screening and interventions.

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# Appendix A: Adolescent Questionnaire

about the following?

Not important Somewhat important Important Very important Extremely important

<sup>(1)</sup> How important do you think it is for ED staff to ask all teens

| Depression        |  |  |  |
|-------------------|--|--|--|
| Anxiety/worries   |  |  |  |
| Alcohol misuse    |  |  |  |
| Drug misuse       |  |  |  |
| Suicide risk      |  |  |  |
| Eating problems   |  |  |  |
| Behavior problems |  |  |  |
| Dating violence   |  |  |  |
| Any others?       |  |  |  |

(2) If you had any of these problems, what would be helpful?

|   | Not helpful | Somewhat helpful | Helpful | Very helpful | Extremely helpful |
|---|-------------|------------------|---------|--------------|-------------------|
| Brochures on the problem                          |             |                  |         |              |                   |
| Information on<br>where to go for<br>further help |             |                  |         |              |                   |
| Speak with a mental<br>health professional        |             |                  |         |              |                   |

while in the ED

(3) Do you have any concerns about being asked mental health questions in the ED?

|  | Do not agree              | Somewhat agree           | Agree     | Strongly agree | Very strongly agree |
|--|---------------------------|--------------------------|-----------|----------------|---------------------|
| I am worried about<br>how long it will take                                  |                           |                          |           |                |                     |
| I am worried about<br>my privacy   |                           |                          |           |                |                     |
| I am in too much<br>pain/distress right<br>now                               |                           |                          |           |                |                     |
| It is unnecessary I<br>know I don't have<br>any of these<br>problems         |                           |                          |           |                |                     |
| It is unnecessary—I<br>am already getting<br>help with these<br>problems     |                           |                          |           |                |                     |
| I worry about what<br>other people might<br>think if I had these<br>problems |                           |                          |           |                |                     |
| (4) ED staff should as<br>routine care in the ED                             | k all teens about these p | roblems as part of       |           |                |                     |
| Completely disagree  | Somewhat disagree         | Neutral                  | Agree     | Stro           | ngly agree          |
|  |                           |                          |           |                |                     |
| (5) If a mental health of want to take one?                                  | check-up was offered du   | ring your visit today, v | vould you |                |                     |
|  | Yes                       | П                        | No        | П              |                     |

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# TABLE 1

Adolescent and Parent Responses to the Question "How Important Do You Think It Is for ED Staff to Ask All Teens About the Following?"

O'Mara et al.

| 1234512345 $\mathbf{J}^{*}$ $\mathbf{P}^{*}$ Depression6%16%37%27%19%1%9%32%25%33%34,552 $<0001$ Anxiety7%23%37%21%12%2%11%32%26%30,950 $<0.001$ Anxiety7%23%21%12%2%7%2%7%2% $<0.001$ Anxiety7%23%2%11%32%2%40%37,018 $<0.001$ Ancohol misuse6%5%2%2%7%2%4%30,950 $<0.001$ Alcohol misuse6%5%2%2%7%2%4%30,950 $<0.001$ Drug misuse6%8%2%19%2%2%7%2%4% $<0.001$ Buicide risk6%19%2%2%2%7%2%2% $<0.001$ Behavior problems14%24%21%3%7%2%2% $<0.001$ Buing violence13%18%28%21%3%2%2%2% $<0.001$ Dating violence13%18%28%21%3%2%2%2% $<0.001$ |                                   |          | Adole     | scent Ra | atings*  |           |           | Pare       | ent Rati | ngs*      |           | Mann-W       | /hitney U        |
|---|-----------------------------------|----------|-----------|----------|----------|-----------|-----------|------------|----------|-----------|-----------|--------------|------------------|
| Depression 6% 16% 37% 22% 19% 1% 9% 32% 23% 34,552 <(0.01   |                                   | 1        | 6         | e        | 4        | S         | 1         | 19         | ŝ        | 4         | ŝ         | υŕ           | $P_{\tau}^{\pm}$ |
| Anxiety 7% 23% 37% 21% 12% 2% 11% 32% 29% 30,50 <0.001  | Depression                        | %9       | 16%       | 37%      | 22%      | 19%       | 1%        | %6         | 32%      | 25%       | 33%       | 34,552       | <0.001           |
| Alcohol misuse 7% 10% 27% 28% 28% 7% 28% 40% 37,018 <0.001   Drug misuse 6% 5% 26% 30% 33% 2% 6% 40% 37,018 <0.001  | Anxiety                           | 7%       | 23%       | 37%      | 21%      | 12%       | 2%        | 11%        | 32%      | 26%       | 29%       | 30,950       | < 0.001          |
| Drug misuse 6% 5% 26% 30% 33% 2% 6% 23% 2% 2% 4.2% 3.5.42 <0.05   Suicide risk 6% 8% 23% 19% 44% 3% 7% 2% 42% 3.5.42 <0.05  | Alcohol misuse                    | 7%       | 10%       | 27%      | 28%      | 28%       | 2%        | %L         | 23%      | 28%       | 40%       | 37,018       | < 0.001          |
| Suicide risk 6% 8% 23% 19% 44% 3% 7% 22% 21% 48% 41,630 0.141   Eating disorders 6% 19% 28% 21% 3% 7% 24% 27% 29% 36,876 <0.001   | Drug misuse                       | %9       | 5%        | 26%      | 30%      | 33%       | 2%        | %9         | 23%      | 26%       | 42%       | 39,542       | <0.05            |
| Eating disorders 6% 19% 28% 26% 21% 3% 7% 34% 27% 29% 36,876 <0.001   Behavior problems 14% 24% 33% 21% 11% 4% 12% 33% 25% 36,876 <0.001  | Suicide risk                      | %9       | 8%        | 23%      | 19%      | 44%       | 3%        | 7%         | 22%      | 21%       | 48%       | 41,630       | 0.141            |
| Behavior problems 14% 24% 33% 21% 11% 4% 12% 33% 25% 26% 31,752 <0.001   Dating violence 13% 18% 28% 21% 20% 3% 9% 27% 26% 31,752 <0.001  | Eating disorders                  | %9       | 19%       | 28%      | 26%      | 21%       | 3%        | <i>1</i> % | 34%      | 27%       | 29%       | 36,876       | <0.001           |
| Dating violence 13% 18% 28% 21% 20% 3% 9% 27% 20% 41% 30,601 <0.001   | Behavior problems                 | 14%      | 24%       | 33%      | 21%      | 11%       | 4%        | 12%        | 33%      | 25%       | 26%       | 31,752       | <0.001           |
|   | Dating violence                   | 13%      | 18%       | 28%      | 21%      | 20%       | 3%        | %6         | 27%      | 20%       | 41%       | 30,601       | <0.001           |
|   | $\hat{\tau}_{Mann-Whitney Utest}$ | compar   | ing pare  | nts and  | adolesce | ant impo  | rtance r  | atings o   | f screen | ing for 6 | each of t | the mental l | health conc      |
| $\check{r}$ Mann-Whitney $U$ test comparing parents and adolescent importance ratings of screening for each of the mental health con  | t                                 | new secu | ra in the | directio | n of nar | onte renc | vrtina hi | ahar im    | outour   | e ratingo | c than ac | lacrante     |                  |

#### TABLE 2

Comparison of the Importance of Screening for Suicide Risk Versus Other Mental Health Problems

|                   | Wilc  | oxon Signo    | ed Ranl | x Test        |
|-------------------|-------|---------------|---------|---------------|
|                   | Adole | escents       | Pa      | rents         |
|                   | $Z^*$ | $P^{\dagger}$ | $Z^*$   | $P^{\dagger}$ |
| Depression        | -7.9  | < 0.001       | -4.8    | < 0.001       |
| Anxiety           | -9.7  | < 0.001       | -6.2    | < 0.001       |
| Alcohol misuse    | -4.7  | < 0.001       | -7.8    | 0.067         |
| Drug misuse       | -2.1  | < 0.05        | -1.1    | 0.279         |
| Eating problems   | -7.2  | < 0.001       | -6.5    | < 0.001       |
| Behavior problems | -10.1 | < 0.001       | -7.6    | < 0.001       |
| Dating violence   | -8.8  | < 0.001       | -3.7    | < 0.001       |

\* Wilcoxon signed rank test comparing adolescent and parent ratings of the importance of screening for suicide versus the other mental health problems.

 $^{\dagger}$ All significant differences were in the direction of suicide risk being more important to screen for than the other mental health problems.

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# TABLE 3

Adolescent and Parent Responses to the Question "If You/or Your Teen Had Any of These Problems, What Would Be Helpful?"

|   |           | Adoles   | scent Ra  | atings*  |           |         | Pare     | ent Rati  | *sgu      |         | Mann-W | hitney $U$     |
|---|-----------|----------|-----------|----------|-----------|---------|----------|-----------|-----------|---------|--------|----------------|
|   | 1         | 7        | e         | 4        | ŝ         | 1       | 7        | 3         | 4         | ŝ       | Uŕ     | $P^{\ddagger}$ |
| Brochures on the problem                        | 19%       | 37%      | 30%       | 11%      | 3%        | 10%     | 30%      | 32%       | 16%       | 13%     | 54,440 | <0.001         |
| Information on where to go for help             | 4%        | 16%      | 35%       | 32%      | 12%       | %0      | 7%       | 30%       | 34%       | 29%     | 57,205 | <0.001         |
| Speak to professional in the ED                 | 4%        | 14%      | 28%       | 34%      | 20%       | 2%      | 5%       | 28%       | 30%       | 35%     | 54,459 | <0.001         |
| *<br>1 = Not helpful, 2 = somewhat helpful,     | 3 = he    | lpful. 4 | = verv h  | elpful.  | 5 = extre | melv he | alpful.  |           |           |         |        |                |
| f<br>Mann-Whitney II tast commering news        | at and a  |          | ot rating | e of noe | cihla rac | o eauou | f ED etc | ff to a n | ocitiva c | neero   |        |                |
| TATALITY A LINUTE PARTY OF LOSI COMPANIES PARTY | זו מוזח מ | nonnon   |           | end in e | STUL IND  | normad  |          | шыар      | 2 A INTEO | SULCUL. |        |                |

 $t^{\star}$  All significant differences were in the direction of parents having higher importance ratings than adolescents.

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# **TABLE 4**

Adolescent and Parent Responses to the Question, "Do You Have Any Concerns About Being Asked/Your Teen Being Asked Mental Health Questions in the ED?"

|  |     | ΡQ  | olescen | ts* |    |      |      | arents* |    |     | <u>Mann-W</u> | hitney U      |
|--|-----|-----|---------|-----|----|------|------|---------|----|-----|---------------|---------------|
|  | 1   | 7   | 3       | 4   | S  | 1    | 7    | e       | 4  | Ś   | n             | $P^{\dagger}$ |
| Worried about time                     | 42% | 29% | 20%     | 6%  | 3% | 56%  | 23%  | 15%     | 3% | 3%  | 37,808        | <0.01         |
| Worried about privacy                  | 27% | 27% | 29%     | 11% | 6% | 37%  | 30%  | 19%     | 6% | 8%  | 38,473        | <0.05         |
| Too much pain/distress                 | 41% | 25% | 17%     | 11% | 6% | 38%  | 36%  | 15%     | 7% | 4%  | 41,946        | 0.242         |
| Unnecessary-do not have these problems | 40% | 27% | 19%     | 8%  | 6% | 59%  | 19%  | 13%     | 5% | 4%  | 33,438        | <0.001        |
| Unnecessary—already getting help       | 54% | 25% | 13%     | 6%  | 2% | 68.5 | 16.5 | 11%     | 1% | 2.5 | 33,503        | $<\!0.01$     |
| Worried what other people would think  | 48% | 19% | 20%     | 8%  | 5% | 81%  | 12%  | 4%      | 2% | 1%  | 27,088        | <0.001        |

 $\dot{\tau}_{\rm All}$  significant differences were in the direction of adolescents having higher concern ratings than parents.