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Forced Sexual Intercourse and its Link to Suicide Ideation/Suicide Attempts among Adolescent Girls: Findings from 2013 Youth Risk Behavioral Survey

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Forced Sexual Intercourse and its Link to Suicide Ideation/Suicide Attempts among Adolescent Girls: Findings from 2013 Youth Risk Behavioral Survey

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A paper submitted in partial fulfillment of the requirements for the degree of

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By

Adebukola Helen Adegbite

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Dr. Corrine Williams

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Abstract

**Objectives.** We sought to assess the association between forced sexual intercourse and suicidal ideation/attempts among adolescent girls ages 14-17.

**Methods.** We performed secondary data analysis of the 2013 Youth Risk Behavioral Survey, using chi-square tests to examine the association of forced sex and race/ethnicity, with suicide ideation.

**Results.** We found that there was an association between those who had considered suicide and those who had experienced forced sexual intercourse. Moreover, race/ethnicity was associated with those who had ever considered suicide in the past 12 months before taking the survey. Lastly, we found that there was an association of suicide ideation and forced sexual intercourse among all racial groups. However, race was not associated with those who had ever experienced forced sexual intercourse.

**Conclusions.** Results of this study highlight that there is a significant relationship between those who have experienced forced sexual intercourse and suicidality among adolescent girls. Future research is needed to better understand the importance of suicidality and its link to forced sexual intercourse among adolescents’ girls in a longitudinal design, particularly among different racial ethnicities and sexual minority groups.
I. Introduction

Suicide among adolescents has become a significant public health problem. Among youth between the ages of 10 to 24, suicide is the third leading cause of death in the United States, resulting in 5,178 deaths in 2014 (Sullivan et al, 2015). Different forms of suicide have decreased among males and females over time, such as death with firearms (MMWR, 2015). Although, suicide rates have declined with firearms, death by suffocation increased significantly among all age groups and racial ethnicities from 1994-2012 (MMWR, 2015). Therefore, rates of suicide among adolescents still remain high (MMWR, 2015).

Research has shown that family history of suicide, a history of suicide attempts, depression or other mental illnesses, or stressful life events are associated with suicidal behavior (NIMH, 2015). When examining suicidal risks among adolescents, several studies looked at key factors associated with these risks. Bridge, Goldstein, and Brent (2006), examined mental health and physical disorders, personality and psychological traits, family factors, biology, contagion, and access to lethal agents. McHolm et al.(2003), found that depression is one of the many mental health disorders that contribute to suicidal ideation.

Amongst adolescents, other risk factors for suicidal behaviors include: bullying, abusive intimate partner relationships, and a history of sexual abuse (CDC, 2015). In a study conducted by Le, et al. (2011) among females with a history of forced sexual intercourse, there was an association with suicidality. Another study by Afifi et al. (2009), among heterosexual women, they were seven times more likely to have experienced suicidal thoughts than those who had never experienced dating violence. Additionally a longitudinal design study called “Healthy Teens Longitudinal Study” collected data annually from 6th-12 grades from 2003-to 2009. The
study hypothesized that among those who reported suicidal ideation, it will be higher among girls than boys who reported physical dating violence. Over the four years, it was found that girls reported significantly higher physical dating violence from grades 9-11. There was a higher prevalence of suicide ideation among girls who had reported physical dating violence than boys (Nahapetyan et al, 2014). On the other hand, a study by Canaugh et al (2011), reported findings that women who were in extreme danger in intimate relationships, they had significantly greater odds of attempted suicide than women who were in less danger or who had been sexually abused.

When examining abusive intimate partner relationships and history of sexual abuse, teenagers are at a higher risk of physical dating violence than adults (Haegerich & Dahlberg, 2011; Silverman, Raj, Mucci, & Hathaway, 2001). Findings from the 2010 National Intimate Partner and Sexual Violence Survey, reported that 3 in 10 women have experienced physical violence (rape, stalking) from an intimate partner. Additionally (Tjaden, 2000), reported that 60% of female rape victims experienced their first rape before the age of 18. Moreover, females between the age of 16 and 24 are at the highest risk of dating violence (Rennison, 2001). Also, 1 in 5 female high school students report being physically and/or sexually abused by a dating partner (CDC, 2015). By the age of 25, most female victims of rape, physical violence had experienced some form of intimate partner violence (NISVS, 2010). Among female victims of dating violence, 94% of those between the ages of 16-19 reported being victimized by a current or former boyfriend or girlfriend (Tharp, 2012).

Adolescent females are more likely to experience dating violence, and those that have a history of dating violence are likely to exhibit health risk behaviors (Silverman, Raj, Mucci, & Hathaway, 2001). Violence becomes more severe among intimate partners once it has been
established during adolescence (Feld, 1989). During this time period, adolescents push away from their parents and spend most of their time with friends and/or sexual intimate partners. As a result, intimate partners and friends become advisors and influence decision making amongst this age group (CDC, 2015). Thus, relationships become very important and become associated with depressive symptoms when abuse occurs (i.e. emotional, sexual, physical, or mental abuse). Clearly, the consequences of dating violence can lead to suicidal thoughts. Therefore, an important key factor to be studied is the association of suicidal ideation and physical dating violence among female adolescents.

Most studies have examined intimate partner violence and suicidal behaviors among adults, but there is little investigation on female adolescents who are victims of forced sexual intercourse and its longitudinal association with increased risk of suicidal behaviors (Cavanaugh et al 2011; Nahapetyan et al 2014). With this study, we add to the growing literature on intimate partner violence and suicidal ideation among female adolescents by examining the association of forced sexual intercourse and suicidal ideation among different racial ethnic groups. This study can add to recent literature by providing further data on the importance of the need of suicide prevention and physical dating violence prevention programs in high schools.

Methods

Data Collection

This study used secondary data from a sample of US high school students who participated in the 2013 Youth Risk Behavior Surveillance System (YRBSS) also referred to as Youth Risk Behavior Survey (YRBS). The YRBS was established and created by the Center for Disease Control and Prevention to examine health risk behaviors among 9th through 12th grade students. The 2013 YRBS consists of 92 multiple choice questions. The YRBS examines a
multitude of different behaviors: tobacco use, drug use, alcohol, sexual risk behaviors, intentional and unintentional injuries, dietary behaviors, and physical activity (CDC, 2007). The survey uses a three stage cluster sample design to represent a nationally representative sample of students in grades 9 through 12. Among those excluded from the YRBS Survey were students that were absent the day the survey was administered, juvenile detention centers, Special Education Students, and those who spoke English as a second language. To participate in the YRBS Survey it was voluntary, self-administered, and anonymous. Parental consent for child participation was sent out a week before the test was administered. Parents were given the option of filling out an opt-out form if they did not want their child to participate. The 2013 survey includes data from 13,583 students. The school response rate was 77% and the student response rate was 88% with an overall response rate of 66% (MMWR, 2015).

Measures

Forced Sex (outcome/dependent variable)

The dependent variables used in this study were violence-related behaviors (related to forced sex), and suicidal ideation/attempts. Forced sex was assessed with the following questions: “Have you ever been physically forced to have sexual intercourse when you did not want to?” Response items to the question was “Yes” or “No.” The next forced sex question was “During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.) The next question was “During the past 12 months, how many times did someone you were dating or going out with force you to do sexual things that you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.) Response items for both questions were: “I did not date or go out with
anyone during the past 12 months,” “0 times”, “1 time,” “2 or 3 times,” “4 or 5 times,” and “6 or more times.”

Suicide ideation/attempt (outcome/dependent variable)

Suicide ideation/attempt was determined by asking “During the past 12 months, did you ever seriously consider attempting suicide?” “During the past 12 months, did you make a plan about how you would attempt suicide?” Response items for these questions were: “Yes” or “No”. The last question related to suicidal behaviors was “During the past 12 months, how many times did you actually attempt suicide?” Response items were “0 times”, “1 time,” “2 or 3 times,” “4 or 5 times,” and “6 or more times.”

Lastly, the independent variable used was the demographic variable question “What is your race?” “American Indian or Alaska Native” “Asian” “Black or African American” “Native Hawaiian or Other Pacific Islander, and/or “White.” For this analysis the racial categories were collapsed into “Non- Hispanic White”, “Non- Hispanic Black, “Hispanic”, and “Other”.

Results

<table>
<thead>
<tr>
<th>Demographic characteristics of female study participants, N= 6,621</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Less than 15 years</td>
</tr>
<tr>
<td>15 years or older</td>
</tr>
<tr>
<td>Grade</td>
</tr>
<tr>
<td>9th Grade</td>
</tr>
<tr>
<td>10th Grade</td>
</tr>
<tr>
<td>11th Grade</td>
</tr>
<tr>
<td>12th Grade</td>
</tr>
<tr>
<td>Ungraded or Other Grade</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
</tr>
<tr>
<td>White (Non-Hispanic)</td>
</tr>
<tr>
<td>Black or African American (Non-Hispanic)</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>
There were a total of 13,583 students (6,621 females; 6950 males excluded from the study) who completed the 2013 YRBS. For the purposes of this study, only females aged 14-17...
were included in the analyses. Characteristics of the analytic sample size are summarized in Table 1. The analytic sample was 40% Non-Hispanic White, 23% Non-Hispanic Black, 25.6% Hispanic/Latino, 11.3% other. Most of the sample consisted of youth ages 15 years or older (54%) compared to those less than 15 years of age (45.7%). There was an average of 24% of students in each grade (9-12).

Among 6,586 female students, 22.3% of the female students reported ever considering suicide in the past 12 months; 17.8% reported to ever make suicide plans in the past 12 months. Most of the students reported to have never attempted suicide in the past 12 months (88.6%) while, those who have reported a range of 6 or more times of attempted suicide were low (0.7%). Among the female students, 3.7% reported that they were ever injured from a suicide attempt in the past 12 months; 88.6% reported to have never attempted suicide in the past 12 months (Table 1). When examining ever experienced being forced to have sex, 10.9% reported “Yes”, while 89.1% reported “No.” While 23.8% did not date in the past 12 months, 66% reported to have never experienced being physically hurt by dates in the past 12 months. Lastly, 4.5% reported to have been forced to do sexual things by dates 1 time; 4.1% reported 2 or 3 times; 0.9% reported 4 or 5 times; and 1.6% reported 6 or more times.

| Table 2. Bivariate Associations Between Race on Ever Considered Suicide in the past 12 months: Youth Risk Behavioral, 2013 Survey |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                | Race/Ethnicity  |                 |                 |                 |                 |
|                                |                | Non-Hispanic White | Non-Hispanic Black | Hispanic | Other | Total (n=6,467) |
| Ever Considered Suicide in the Past 12 months? | Yes | 39.7% | 19.8% | 28.1% | 12.40% | 1,439 |
|                                | No | 40.2% | 23.9% | 24.9% | 11.0% | 5,028 |

*p=.0002
Table 3. Bivariate Associations Between Race on Forced Sexual Intercourse in the past 12 months: Youth Risk Behavioral, 2013 Survey

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Hispanic</th>
<th>Other</th>
<th>Total (n=6,463)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physically forced to have sexual intercourse</td>
<td>Yes</td>
<td>36.1%</td>
<td>24.5%</td>
<td>26.6%</td>
<td>12.7%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>40.6%</td>
<td>22.9%</td>
<td>25.4%</td>
<td>11.1%</td>
</tr>
</tbody>
</table>

With respect to race/ethnicity, among 1,439 students who have considered suicide in the past 12 months, 39.7% were Non-Hispanic Whites, 19.8% were Non-Hispanic Blacks; 28.1% were Hispanics 28.1%; and 12.4% reported another race/ethnicity (Table 2). There was a significant relationship between race and those who considered suicide in the past 12 months. Among 706 female students who have ever been forced to have sex, 36.1% were Non-Hispanic Whites; 24.5% Non-Hispanic Black; 26.6% Hispanic; and 12.7% Other (Table 3). There was not a significant relationship between race and those who have ever been forced to have sex in the past 12 months.

Table 4. Bivariate Associations Between Forced Sex on Ever Considered Suicide in the past 12 months: Youth Risk Behavioral, 2013 Survey

<table>
<thead>
<tr>
<th>Ever Considered Suicide in the Past 12 months?</th>
<th>Physically Forced to Have Sex</th>
<th>Did Not Experience Forced Sex</th>
<th>Total (n=6,557)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>346 (48.4%)</td>
<td>1,114 (19.1%)</td>
<td>1,460</td>
</tr>
<tr>
<td>No</td>
<td>369 (51.6%)</td>
<td>4,728 (80.9%)</td>
<td>5,097</td>
</tr>
</tbody>
</table>

*p<.0001
Among 1,460 students who had ever considered suicide in the past 12 months, 48.4% reported to have experienced forced sex. Comparatively, among those who had ever considered suicide in the past 12 months, 19.1% did not experience forced sex. There was a significant association among these variables p<.0001 (Table 4).

Table 5. Percentage of Adolescent Girls Reporting Ever Considering Suicide By Race and Forced Sex: Youth Risk Behavioral, 2013 Survey

<table>
<thead>
<tr>
<th></th>
<th>Forced Sex In the Past 12 Months</th>
<th>Did Not Have Forced Sex in the Past 12 Months</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic White</td>
<td>126 (49.6%)</td>
<td>443 (19.0%)</td>
<td>p&lt;.0001*</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>67 (38.7%)</td>
<td>217 (16.6%)</td>
<td>p&lt;.0001*</td>
</tr>
<tr>
<td>Hispanic</td>
<td>101 (54.0%)</td>
<td>299 (20.5%)</td>
<td>p&lt;.0001*</td>
</tr>
<tr>
<td>Other</td>
<td>44 (48.9%)</td>
<td>133 (20.9%)</td>
<td>p&lt;.0001*</td>
</tr>
</tbody>
</table>

Table 5 results show a multivariate analysis, displaying the percentages of adolescent girls who had considered suicide in the past 12 months by a crosstab of racial/ethnicity groups and forced sex. Among Non-Hispanic White females who reported to have experienced forced sex, 49.6% who had ever considered suicide. Comparatively, of Non-Hispanic White females who were never forced to have sex, 19.0% reported suicidal thoughts. Of Non-Hispanic Blacks, who reported to have experienced forced sex, 38.7% had ever considered suicide. Comparatively, of those who never experienced forced sex, 16.6% of Non-Hispanic Blacks reported suicidal thoughts. Among Hispanic females who reported to have experienced forced sex, 54.0% had ever considered suicide. In comparison, suicidal thoughts were reported by 20.5% among Hispanics females who had never experienced forced sex. Lastly, among the Other racial/ethnicity group, 48.9% had considered suicide among those reported to have experienced
forced sex, and 20.9% among those who never experienced forced sex (Table 5). There was a significant association among those who had considered suicide in the past 12 months between race and forced sex p<.0001 (Table 5).

Discussion

The purpose of this study was to examine suicidal ideation among female adolescents, and to report the impact of forced sex and its relationship to suicide ideation among different racial groups. Furthermore, to attain a better understanding of forced sexual intercourse being related to suicidal behavior. This study describes findings from forced sexual intercourse questions and suicidal questions using the 2013 Youth Risk Behavioral Survey. In response to suicide ideation and forced sex separately among female adolescents, there were a small percentage of students who experienced suicidal thoughts (17-22%) or experienced forced sex (10.9%). However, the results concluded that both suicidal and forced sex are prevalent among high school students and that there is a significant relationship between these two variables. There was a significant relationship between race, those who experienced forced sex, and reported to have considered suicide in the past 12 months.

Although, most female adolescents reported to not have ever experienced forced sexual intercourse. Females that have experienced violent dating situations, only a few report or ask for help (CDC, 2015). Moreover, suicide ideation among female adolescents can be attributed to other factors, and forced sexual intercourse with a dating partner is pertinent to understanding how it can relate to suicidal behaviors among teenagers.

The results of this study were consistent with prior studies reporting the significant correlation between forced sex and suicidal ideation. According to (Olshen et al. 2007), dating violence was associated with suicide ideation/Attempts among female adolescents. Furthermore,
they go on to describe that other factors such as sexual orientation, eating disorders, bullying, correlate with suicide attempts. Moreover, Exner-Cortens et al (2013) described the longitudinal associations of teen dating violence and the study found that female adolescents who were victims of dating violence, went on to report an increase in health risk behaviors such as heavy drinking, depression, suicidal ideation, and adult victimization. However, there was a marginal association of suicide among those who had been victims of teen dating violence.

Strengths and Limitations

The strengths of this study was that it included a large sample size from the 2013 Youth Behavioral Survey. The study participants were 6,621 female adolescents. The representative sample from the YRBS allowed the findings to be generalizable. On the other hand, limitations of this study was that YRBS data is cross-sectional and can only provide the association on the relationship of forced sex and suicidal behavior. The YRBS does not provide a way of providing questions that can distinguish whether forced sexual intercourse causes suicidal ideation, or if one was already suicidal and then became a victim of forced sexual intercourse. The suicide questions in the YRBS were only associated in the past 12 months. There would be no responses from female adolescents who considered suicide two years or more in the past.

The survey was self-reported and there was a possibility of response bias. Unfortunately, participants may have not answered questions correctly, such as under-reporting or over reporting responses related to personal experiences such as having suicidal thoughts or being a victim of forced sex. Moreover, this survey was not administered to students who did not attend school. Students who were absent or not in class during the time the test was administered were not able to participate in the survey, therefore not all adolescents were represented in this study. Coincidently, those who completed suicide would not be able to be surveyed. Lastly, this
research did not focus on gender differences of forced sexual intercourse and suicidality. Despite these limitations, our research provides information on the importance of considering teen dating violence and suicide prevention mandatory sessions in high schools.

**Implications**

These findings show a significant relationship between those who have experienced forced sexual intercourse and suicidality among female adolescents 14-17. Further investigation is needed for more studies to report on the relationship of forced sexual intercourse and suicide ideation/attempts among this age group in a longitudinal design study. Also, future research should focus on gender and age differences to create gender-specific interventions for adolescents. Specifically, gender differences among male, female, and/or transgender adolescents in sexual minority groups.

A study done by Bearman et al, (2004) found that adolescents who had thoughts of being sexually attracted to the same sex were more likely to have suicide thoughts. Furthermore, adolescent girls and their partners’ age difference should be investigated as it relates to the amount of power that could occur in a relationship. For example, (Volpe et al, 2014) found that among adolescent girls who had older partners, it was reported that age was negatively associated with consistent condom use. However, physical intimate partner violence or relationship power did not have a significant effect on sexual risk behavior. On the other hand, low self-esteem is another risk factor associated with suicide ideation among adolescent girls. A study by Bearman et al, (2004) investigated the relationship between friendships and suicidality among adolescents. It was found that having high self-esteem lowered the likelihood of having suicidal thoughts among adolescent boys and girls. Lastly, these risk factors stated that are associated with forced sex and suicide among adolescents confirm the importance of updating
the YRBS survey and to add sexual orientation related questions, to allow researchers to examine the differences among sexual minority groups, and review the short-term and long term effects forced sex and suicide among adolescents.
References


