

## **Relationship Between Sexual Assault and Eating Disorder Symptoms in Domestic and International College Women**

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### **Abstract**

One in five women will experience some form of sexual assault in their lifetime<sup>1</sup> and 0.3-1% of women will experience anorexia nervosa in their lifetime.<sup>2</sup> Compared to other psychiatric disorders, anorexia has the highest mortality rate at 10%.<sup>3</sup> Additionally, college women seem to be at great risk for both eating disorders and experiencing sexual assault. While a few studies examine the relationship between eating disorder behavior and sexual assault, it is unclear if the risk between being sexually assaulted followed by development of an eating disorder is different between domestic and international college women. The objective of this study is to extend the literature by examining some groups who might be at a higher or lower risk for developing disordered eating symptoms following a sexual assault. Given the higher rates of eating disorders and sexual assault on college campuses, college women will be the focus of the current study. An anonymous online survey with census sampling was used to obtain the data for this study. It was only distributed to college students around the ages of 18-22. It is hypothesized that international students will be at a lower risk for disordered eating following a sexual assault due to observations of international students not being as involved in the college drinking culture as domestic students. The drinking culture tends to be where the most sexual assaults occur. Interventions can utilize the results of this study to target students who might be at a particularly higher risk. Implications will be discussed.

**Keywords: Eating Disorder, Sexual Assault, College Women, International Students**

### **1. Introduction**

Eating disorders (i.e., anorexia nervosa, bulimia nervosa, and binge eating disorder) have a prevalence of less than 5% in the United States; additionally, college students are at increased risk with a higher prevalence.<sup>4</sup> Moreover, college women have higher rates of eating disorders than college men.<sup>5</sup> Sexual assault, or any nonconsensual sexual act, also has a significant association with eating disorders. Specifically, individuals who have a sexual assault history are approximately three times more likely to also have an eating disorder.<sup>6</sup> In addition, over a million international students come to the United States each year for their college education.<sup>7</sup> However, it is unknown if the international female college students also have the same relationship between eating disorders and sexual assault when exposed to the college culture in the United States. Therefore, the purpose of the study is to examine the relationship between eating disorders and sexual assault across domestic and international student samples.

#### **1.1 Eating Disorders**

Compared to college men, college women have a higher risk for the development of eating disorders on college campuses. Eating disorders, for example, anorexia nervosa (AN) is defined as having a total body weight of less than 85% of what is considered to be the normal for a person's height and weight, a severe worry of becoming overweight or gaining weight, and the absence of a menstrual cycle for at least three consecutive months. Additionally, bulimia

nervosa (BN) is defined as eating large quantities of food that would not normally be consumed in such quantities and compensating for that by purging, extreme exercise, or fasting. These actions must take place at least two times a week and last for at least three months in order to be diagnosed. Approximately, 3-10% of women will experience some sort of eating disorder in their lifetime.<sup>8</sup> College women are at a higher risk of developing an eating disorder with an estimate of 25% of women in college having some form of disordered eating symptoms. People with a history of trauma have an increased risk of developing an eating disorder.<sup>9</sup>

## 1.2 Sexual Assault

Sexual assault can be defined as the force or threat of sexual contact.<sup>10</sup> College women are also predicted to have a 19% higher chance of being sexually assaulted in comparison to their non-college peers. Having a history of experiencing sexual assault is one of the major contributors to the development of an eating disorder, both anorexia and bulimia. Approximately 50% of a clinical sample reported experiencing some sort of unwanted sexual interaction and also had a diagnosis of AN or BN. Many patients also reported that the diagnosed eating disorder had developed from using food as a coping mechanism for being a victim of sexual assault.<sup>11</sup> In addition, being a recent victim of sexual assault is linked to the overestimation of body size.<sup>12</sup>

## 1.3 Purpose

Every year increasing numbers of international students are studying at United States colleges and universities. There is a relative dearth of research examining eating disorders and sexual assault among female international students. Based on the literature, it was hypothesized that college women with a history of sexual assault will also have symptoms of an eating disorder. Differences among international and domestic college women will also be explored.

## 2. Methods

### 2.1 Participants

The participants analyzed in this survey identified as female college students. A total of 2,144 female students completed the survey. A majority of the respondents identified as heterosexual 85.9% ( $n=1,841$ ). Regarding the respondents' ethnicity, 4.6% ( $n=98$ ) identified as Hispanic or Latino/a and 94.5% ( $n=2,206$ ) identified as not Hispanic or Latino/a. Regarding race, 4.5% ( $n=96$ ) identified as Black/African American, 84% ( $n=1,800$ ) identified as American White/Caucasian, and 12.5% ( $n=267$ ) identified as Asian or Asian American. Participants were asked to identify if they were an international student, in which 13.5% ( $n=289$ ) said yes and 85.5% ( $n=1,834$ ) said no. Participants identified if they were in a social fraternity or sorority with 46% ( $n=987$ ) saying yes. The average age of the participants was 19.89 ( $SD=1.54$ ). A total of 13.5% ( $n=289$ ) indicated that they were international students.

### 2.2 Procedure

Data was collected at a midsized Midwestern university. All full-time students received an email inviting them to complete the online Student Health Survey. The students had three weeks to complete this survey and were compensated with a \$3 gift card to coffee shops on campus.

### 2.3 Measures

Participants were given a series of questionnaires in order to measure their unwanted sexual experiences and eating habits during college.

#### 2.3.1 SCOFF

The SCOFF is used to assess the possibility of anorexia nervosa and bulimia nervosa. Five questions comprise the SCOFF scale as a screener for potential further clinical questioning. The five questions are: 1.) "Do you make yourself Sick because you feel uncomfortably full?", 2.) "Do you worry that you have lost Control over how much you eat?", 3.) "Have you ever recently lost more than One stone (14lbs) in a 3-month period?", 4.) "Do you believe yourself to

be Fat when others say you are too thin?”, 5.) “Would you say that Food dominates your life?”. Two or more answers of “yes” indicated the possibility of eating disorder symptoms and the need for further diagnosis. In the first study performed using this scale, there was 100% sensitivity and 87.5% specificity.<sup>13</sup> This questionnaire is used to identify the need for further diagnosis.

### 2.3.2 Sexual Experience Survey (SES)

The SES was developed to help determine unreported incidences of rape and sexual assault. The current study utilizes the SES to determine sexual experiences since the start of college for college women. The self-report questionnaire contains 20-questions asked in yes-no format. The questions pertain to tactics, such as force, used to engage in sexual activities. It also asks questions related to unwanted sexual experience because of the use of different tactics.<sup>14</sup>

## 3. Results

A total of 44.5% of women identified as being a victim of sexual assault ( $n = 1189$ ). For the survey, sexual assault included unwanted touching with increasing severity up to rape. Consistent with national surveys, 15.3% ( $n = 328$ ) reported experiencing rape or attempted rape since the start of college. International college women were less likely to have a sexual victimization history than domestic women,  $\chi^2(n = 1778, 5) = 18.65, p = .002$ .

Approximately 17.5% ( $n = 376$ ) of women scored a 2.00 or higher on the SCOFF which indicated eating disorder symptoms and the need for further evaluation by a licensed clinician for the possibility of a potential eating disorder diagnosis. International college women had no difference on eating disorder symptoms when compared to domestic women,  $\chi^2(n = 1803, 1) = 2.82, p = .09$ .

There was a significant relationship between sexual assault history (i.e., SES) and eating disorder symptoms (i.e., SCOFF),  $r(1708) = .13, p < .001$ . This correlation indicates that those with sexual assault histories are more likely to have eating disorder symptoms.

To further explore the relationship between sexual assault history (IV) and eating disorder symptoms (DV), we ran a multiple regression. In addition, international vs. domestic status was added as a predictor to determine being an international student predicted having eating disorder symptoms. The regression was significant,  $F(2, 1697) = 16.64, p < .001$ . Sexual assault history ( $\beta = .14, p < .001$ ) significantly predicted eating disorder symptoms, but international status did not ( $\beta = .04, p = .08$ ).

## 4. Discussion

The purpose of this study was to examine the relationship between a past sexual assault experience and the risk of developing an eating disorder due to the sexual assault. More specifically, examining this relationship among domestic and international college women. This study was important because there has been little to no research done on the topic of sexual assault and eating disorders relating to international students in relation to domestic college women.

Consistent with the previous literature, sexual assault history was related to eating disorder symptoms. It is possible that the eating disorder symptoms could be due to the trauma of the sexual assault. Further longitudinal research is needed to explore this relationship to determine if there is a causal link.

The results support the hypothesis that college women who are sexually assaulted are more likely to have eating disorder symptoms. Further, whether the woman identified as a domestic or international college student did not predict eating disorder symptoms. In addition, the chi-square indicated that international college women were not more or less likely to have eating disordered symptoms when compared to domestic women. Additional research is needed to confirm these results.

There were a few limitations to this study. Given the relative dearth of research on international students and sexual assault and eating disorders, hypotheses about the relationships among the variables were not possible. Domestic college women tend to be the focus of eating disorder and sexual assault research. Therefore, additional research is needed to further explore these concepts. The survey method was a limitation to this study. The results showed how international students were less likely to be sexually assaulted than domestic college women but there was no explanation as to why. This would be helpful to examine in future research. Another limitation was that the SCOFF scale only contained 5 questions. This is a small amount of questions to base eating disorder symptoms on. The small

amount of questions meant that only two questions needed to be answered “yes” in order to go on to further diagnosis. There was also no guarantee that the participant had an eating disorder. Exploring the diagnosis by health care professionals would be helpful to investigate how many participants were positively diagnosed with an eating disorder in future research. Furthermore, adding more questions to the scale could have possibly gone into more detail about the women’s eating disorder symptoms and the cause of them.

Future research should focus on obtaining more data with international students and possibly looking at a wider population including other colleges with a large international student population. This would allow future researchers to analyze results including more international students. There should also be further investigation as to why international students were less likely to be sexually assaulted when compared to domestic college women. As stated, a limitation was the survey method so using a different method, such as interviews, may help explain why international students are less likely to be sexually assaulted. Interviews after further evaluation for those women who scored a 2 or higher on the SCOFF scale can also be helpful to further investigate the relationship between sexual assault and eating disorders. It would also help explain what may trigger the disordered eating in women who were previously sexually assaulted. College women have a higher risk of developing an eating disorder if they have been sexually assaulted which is why there should be future research done on this topic. It would allow a better understanding of why this happens and a way to decrease the rate of eating disorders that are developing after sexual assault.

Sexual assault relates to eating disorder symptoms in both domestic and international college women. This is very important because there needs to be more help for students who are sexually assaulted to aid in the prevention of eating disorder symptoms following the assault. This can start with universities having more resources for reporting sexual assault and more education on how to go about reporting a sexual assault. There should also be counseling more readily available for women who were sexually assaulted in order to attempt to prevent the onset of an eating disorder or disordered eating symptoms after the sexual assault has occurred. Education about the counseling services on campuses could potentially help women who were sexually assaulted and developed an eating disorder. Educating others about the positive relationship between sexual assault and eating disorders could possibly help college women as well.

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