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**The Mediating Role of Mental Health on Academic Performance Among College Women
Who Have Experienced Sexual Assault**

An Honors Thesis submitted in partial fulfillment of the requirements for Honors in Psychology.

By
Ariah R. Lewis

Under the mentorship of Dr. Nicolette P. Rickert

ABSTRACT

The current study analyzed the mediating role of mental health on academic performance among college women who have experienced sexual assault. The purpose of this research was to acknowledge the impacts that sexual assault experiences may have on the college experience. A total of 241 undergraduate students participated in the study. Participants were college aged, ranging from 18-36 (90.5% female, 59.2% White, 28.1% Black/African American). Participants completed an online survey that evaluated their sexual assault experience, depression, and academic performance. Using Baron and Kenny's (1986) mediation model, it was found that as participants reported higher instances of sexual assault experience, they tended to report lower academic performance, and this relationship was mediated by increased depression symptoms. These findings contribute new information to the current literature and further stress the importance of preventing instances of sexual assault on college campuses and supporting victims due to psychological and academic consequences.

Key words: sexual assault, college women, depression, academic performance

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November 2022
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The Mediating Role of Mental Health on Academic Performance Among
Women Who Have Experienced Sexual Assault

One in five. One in five female students will experience sexual assault during their time at college (Muehlenhard et al., 2017). Sexual assault is defined as any “unwanted sexual outcomes (attempted/completed vaginal sex, oral sex, anal penetration, excluding touching) achieved through physical force, threats and incapacitation” (Carey et al., 2018). The topic of sexual assault is important not only because of its prevalence but because of the outcomes that often occur after this kind of experience. The consequences of these experiences can be traumatic, even life changing (Gialopsos, 2017). Sexual assault experiences can lead to numerous negative ramifications including thoughts or actions related to suicide, symptoms of Post Traumatic Stress Disorder anxiety, depression, physical pain/trauma, substance abuse, changes in eating habits, drastic weight gain or loss, self-mutilation, higher risk of pregnancy, and risky sexual behavior (Carey et al., 2018; LeBlanc et al., 1996). These consequences, along with any others that may occur, can greatly and negatively impact a woman’s college experience. Along with the aforementioned effects of sexual assault experiences, college women are at an increased risk for decreased academic performance as well as withdrawal from school (Gialopsos, 2017).

Furthermore, while sexual assault experience can negatively affect concurrent college experiences and academic performance, these negative impacts can continue to affect life after college. Leblanc et al. (1996) suggests that those with a history of sexual assault often are at greater risk for higher numbers of marriages and babies, drug use, suicidal thoughts, suicidal attempts, self-mutilation, and adult sexual trauma. Survivors of

sexual assault may continue to live with the repercussions of their experiences for the rest of their life. The impact of these traumatic experiences can greatly affect one's academic career and academic performance. Aside from that, these impacts are also often long lasting. It is crucial that as a society we understand how immensely this issue is affecting women, particularly college women. Prior research has investigated the relationship between sexual assault and academic performance or sexual assault and depression, however there is a dearth of literature investigating all three of these variables at once. Therefore, the current study sought to examine how sexual assault experiences predict college women's academic performance through the mediating role of mental health symptoms (i.e., depression).

Sexual Assault and Mental Health Consequences

In addition to the immense physical impact sexual assault may have on one's life, the mental health consequences of sexual assault experiences are daunting. Anxiety, depression, PTSD, and thoughts or actions of suicide are common among college women who experience sexual assault (Carey et al., 2018; LeBlanc et al., 1996). Suicide or suicidal ideation is an especially frightening consequence of college sexual assault experiences, especially since suicide is the second leading cause of death among young people aged eighteen to twenty-four (Keefe et al., 2018). The prevalence of suicide among young people is related to the prevalence of depression among young people, college students in particular. Depression is statistically significantly correlated with suicidal ideation, self-injury, and suicide attempts (Keefe et al., 2018). For survivors of college sexual assault, depression is quite common. For example, a 2019 study that involved students eighteen years of age and older at a mid-Atlantic university in the

United States found that mental health effects were found to be the most common consequence of sexual assault when compared to all other consequences (substance abuse, increased risky sexual behavior, and eating problems; Kaufman et al., 2019). In another study, it was found that those women who experienced sexual assault during their first semester of college were 2.5 times as likely to experience depression symptoms compared to those who did not experience sexual assault (Carey et al., 2018). Sexual assault experiences can largely impact one's mental health, and these consequences can take a toll on one's life and negatively impact other aspects, such as academic performance. The current study focused on depression symptoms to investigate the mental health of college women who have experienced sexual assault during their time at university.

Sexual Assault as a Predictor of Academic Performance

Sexual assault experiences among college women may lead to adverse effects on their academic performance as well. Sexual assault victimization has been associated with lower grade point averages, and victims of sexual assault are more likely to drop out of classes or drop out of school entirely (Banyard et al., 2020). Research conducted by Jordan et al. (2014), which included freshmen women at the University of Kentucky, suggests that sexual assault experiences during the first semester of college is associated with lower grade point averages during the first and second semester. This study also found that those women who experience sexual assault during college are more likely to have lower overall grade point averages when compared to those with no experience of sexual assault. Of participants with sexual assault experiences, 10.6% reported a grade point average less than 2.5, while only 3% of participants with no experience had a grade

point average in that same range (Jordan et al., 2014). It is also important to note that the risk for lower grade point average increases as a person's number of sexual assault experiences increases. A study conducted by Baker et al. (2016) explored the effects of multiple sexual assault experiences among female students in an introductory psychology course at a large university. Students who reported experiencing more than one type of sexual assault or sexual violence overall reported lower grade point averages when compared to those with only one experience of sexual assault. Those women who reported two or more types of sexual violence were at the greatest risk of dropping out before graduation. Among these women, only 56% graduated from university, compared to the 85% of women that graduated with no sexual assault experience. It is clear that sexual assault experiences can have a large impact on college women's academic experiences.

Mental Health and Academic Performance

Furthermore, mental health can have implications related to academic performance. A 2004 study involving undergraduate students in the United Kingdom found that depression predicted a decrease in performance on exams from first year to second year among students (Andrews & Wilding, 2004). This suggests that depression is negatively associated with academic performance. A decrease in academic performance was also found among students with higher levels of suicidal ideation in a 2016 study involving undergraduate students at The University of Texas at Austin (Luca et al., 2016). Another study, conducted in South Africa which examined first year students suggests that the effective treatment of Major Depressive Disorder could result in a 6.5% decrease in academic failure among students (Bantjes et al., 2020). This research also

suggested that in order to improve academic success among college students, universities should focus on the implementation of mental health resources (Luca et al., 2016).

Current Study

Previous research has focused on sexual assault and how these experiences predict mental health and academic performance in college women. However, few known studies have examined the interconnections and pathways between these experiences and outcomes. Therefore, the current study examined mental health (i.e., depression) as a mediator of the association between sexual assault experiences and academic performance (i.e., GPA). Following Baron and Kenny's (1986) mediation approach, this study sought to answer the following research questions: 1) Does sexual assault predict college women's academic performance?, 2) Does sexual assault predict mental health effects?, 3) Does mental health predict academic performance?, 4) Does mental health mediate the relationship between sexual assault experiences and academic performance? It was hypothesized that sexual assault would negatively predict academic performance, through the mediating pathway of mental health symptoms, such that college women who have experienced sexual assault would be more likely to experience depression symptoms, which would negatively predict their academic performance in college.

Method

Participants

A total of 241 undergraduate students at a public university in southeast Georgia participated in the current study and completed the survey. Of this sample, 218 (90.5%) participants identified as female, 13 (5.4%) participants identified as male, 4 (1.7%) participants identified as non-binary/ third-gender, 2 (.8%) participants preferred not to

disclose their gender identity, and 2 (.8%) participants identified as other. Due to the disproportionate rates in which females are affected by sexual assault, males were excluded from the study. Those participants who identified as non-binary or other were included in data analysis; this left the final total sample analyzed at 228. The participants were college-aged students ($M = 20.05$, $SD = 2.87$). The majority of participants identified as white ($N = 135$, 59.2%); 64 participants identified as Black/African American (28.1%). The remaining participants identified as follows: Hispanic ($N = 13$, 5.7%), and Asian/Pacific Islander ($N = 3$, 1.3%). Those participants who selected other ($N = 11$, 4.8%), specified their race or races in the provided text box. Two participants chose to not disclose their race. Most participants were freshmen ($N = 86$, 37.7%). The sample also consisted of 78 (34.2%) sophomores, (21.1%) 48 juniors, and (4.8%) 11 seniors.

Measures

To measure sexual assault experiences, participants completed the Revised Sexual Experiences Survey (RSES; Testa et al., 2012). This 20-item measure includes items such as, “Has anyone ever threatened to physically harm you or someone close to you in order to fondle, kiss, or touch you sexually when you indicated you didn’t want to?” Historically, mutually exclusive severity scores were created and assigned to each participant based on the most severe type of experience reported (Testa et al., 2012). For the purpose of this study, items in which participants answered “no” were given a score of 0, while items in which participants answered “yes” were scored as 1. Then, a sum of scores was conducted in order to represent the capacity that participants experienced

sexual assault, with higher scores indicating a higher number of sexual assault experiences. This measure indicated an acceptable level of internal consistency ($\alpha = .89$).

In order to measure depression, the Center for Epidemiologic Studies Depression Scale- Modified was used (CES-D; Norris & Mitchell, 2014). This measure has seven items with example items such as “How many days during the past week have you felt that everything was an effort?” The items were rated on a scale from 0-7, then a sum of scores was conducted with values ranging from 0-49, with higher scores indicating higher levels of depression. This measure indicated an acceptable level of internal consistency ($\alpha = .93$).

Academic performance was measured through a questionnaire. Participants were asked to describe their grades while at university on a five-point scale ranging from “Mostly A’s” to “Mostly F’s.” This measure was reverse coded for the sake of data analysis, with higher scores indicating higher levels of academic performance.

Participants were also asked to answer a series of demographic questions including their age, race, ethnicity, gender, and sex.

Procedure

A form of technology, such as computer, laptop, or cell phone was needed to complete the survey. Participants were informed of the study through SONA systems. Participants were provided with a link to the Qualtrics Survey Software which gave them access to the survey. Before participating, participants were required to read the trigger statement and informed consent form at the beginning of the survey as well as some background information on the study. After electronically signing both documents, participants who consented to participate were able to complete the survey by answering

the questions. Debriefing information and campus counseling resources were provided at the end of the survey, along with information about a sexual assault hotline. Participants received .5 SONA research credits for participating in the study.

Results

Preliminary analyses were conducted to examine descriptive statistics across all variables (see Table 1) and to determine if the correlations between sexual assault experience, academic performance, and depression were statistically significant. Correlations between all three variables were statistically significant (see Table 2). Depression and sexual assault experiences were each negatively correlated with academic performance. In other words, the more depressed participants were, the lower their grades tended to be, and the more sexual assault experiences a participant reported, the lower their grades tended to be. Moreover, the relationship between sexual assault experiences and depression was positively correlated. In other words, the more sexual assault experiences participants reported, the more depressed they tended to be.

Figure 1 demonstrates the mediation relationship that this study aimed to investigate. The Baron and Kenny (1986) approach to mediation was conducted in order to analyze the relationship between sexual assault experiences and academic performance through the mediating pathway of depression symptoms. First, a simple linear regression was conducted to analyze the effects of sexual assault experience (predictor) on academic performance (outcome). The overall regression model was statistically significant ($R^2 = .02$, $F(1, 228) = 5.60$, $p < .05$). Sexual assault experiences statistically significantly negatively predicted academic performance ($\beta = -.12$, $p < .05$). Second, a simple linear regression was conducted to examine the effects of sexual assault experience (predictor)

on depression (mediator). The overall regression model was statistically significant ($R^2 = .20$, $F(1, 223) = 55.66$, $p < .001$). Sexual assault experience was a statistically significant positive predictor of depression ($\beta = .45$, $p < .001$). Third, the relationship between depression (mediator) and academic performance (outcome) was also analyzed using a simple linear regression. The overall model was statistically significant ($R^2 = .06$, $F(1, 223) = 14.96$, $p < .001$). Depression statistically significantly negatively predicted academic performance ($\beta = -.25$, $p < .001$).

Finally, a multiple regression mediation analysis was conducted to examine the relationship between sexual assault experiences and academic performance, as mediated by depression. The overall multiple linear regression model was statistically significant ($R^2 = .067$, $F(2, 222) = 7.94$, $p < .001$). Depression was statistically significantly related to academic performance when controlling for sexual assault experiences ($\beta = -.22$, $p < .01$). However, when controlling for depression, the relationship between sexual assault experiences and academic performance was no longer statistically significant ($\beta = -.07$, $p = .34$). These findings demonstrate full mediation from sexual assault experience to academic performance through the mediating role of depression (see Figure 2). This indirect effect was statistically significant (Sobel's test = -2.98 , $p < .05$). As sexual assault experiences in college women increase, depression also increases, which then predicts decreases in academic performance.

Discussion

Summary of Findings

The current study aimed to investigate mental health (e.g., depression) as a mediator of the association between sexual assault experiences and academic

performance in college women. It was hypothesized that sexual assault would negatively predict academic performance through the mediating pathway of depression symptoms, such that college women who have experienced sexual assault would be more likely to experience depression symptoms, which would negatively predict their academic performance. The results of the study did confirm this hypothesis. In line with previous research, academic performance was negatively associated with depression and sexual assault experience (Baker et al., 2016; Mengo & Black, 2016), and sexual assault experience was positively associated with depression (Carey et al., 2018). As participants reported higher instances of sexual assault experience, they tended to report more depression symptoms and lower academic performance. Furthermore, based on multiple regression mediation analyses, it was determined that depression fully mediated the relationship between sexual assault experience and academic performance. In other words, sexual assault experiences were related to increases in depression symptoms, which in turn predicted decreases in academic performance. These findings suggest an indirect effect of sexual assault experiences on college women's academic performance that can be explained by their pervasive mental health consequences, such as depression.

Limitations and Future Directions

Although the current study examined a mediation relationship not yet explored in the literature, there are several limitations to the study that future researchers should consider when formulating their work. First, the current study used a single time point design. Ideally, studies that use mediation analyses involve three different time points (timepoint 1 for predictor, timepoint 2 for mediator, and time point 3 for outcome). Future researchers should consider collecting data at more than one time point to

establish temporal precedence and strengthen our mediation claim findings. Given the correlational nature of the study design, it is important to note that we cannot draw causal conclusions from the findings that sexual assault experiences caused depression in college women, which caused declines in academic performance. Intervention methods and practices may help to determine the potential causal nature of this mediated pathway.

In addition, data was collected from participants using self-report scales; future researchers should consider using different methods of data collection to decrease participant response bias. For instance, researchers could confirm grades and grade point averages using institutional records. Furthermore, because the title and description of the study were visible to participants through the SONA research system, students who have experienced sexual assault may have been more likely to click on and participate in this study than those who have not. This may account for the potentially skewed averages of participants' experiences of sexual assault. In addition, participants were asked to report about sexual assault experiences that occurred only when in college. Because these experiences can happen at any point in time, future researchers should consider investigating sexual assault experiences across the lifetime and the potentially far reaching impacts on academic performance during college via feelings of depression.

Further, this study consisted of mainly freshmen and sophomores and participants who identified as white and female. Research indicates that particular groups of people are especially impacted by sexual assault at a disproportionate rate compared to their counterparts. For example, Tillman et al. (2010) suggests that African American women experience sexual assault more than white women. In addition, given that statistics indicate that those who identify as female experience instances of sexual assault

disproportionately compared to males, we decided to focus on participants who identify as female/non-binary/other. However, there is research that indicates that males underreport these type of experiences (Griswold et al., 2020). Future researchers should aim to have a more diverse sample of participants across age, race/ethnicity, and gender to better capture these varied experiences and outcomes. The indirect pathway from sexual assault experience to academic performance through feelings of depression may look different across various groups of individuals.

Implications

The findings of this study demonstrate that experiences of sexual assault while in college predict increases in symptoms of depression and decreases in academic performance. Moreover, as students experience sexual assault while at university, they are more likely to experience depression, and this depression predicts declines in their academic performance. These findings further stress the importance of preventing instances of sexual assault on college campuses and supporting victims, due to both the short-term and long-term consequences to students' mental health and academic performance (i.e., drug use, suicidal ideation, suicide attempts; Leblanc et al., 1996). Furthermore, Carey et al. (2018) suggests the need to implement programs that emphasize empowerment and self-defense, and previous research suggests that experts in the fields of victimization, specifically sexual assault victimization, should be present and active on campus (Jordan et al., 2014). By working closely with professors, academic advisors, and mental health counselors, experts can help university staff not only in understanding the impact of sexual assault experiences on college student's mental health and academic performance, but also in helping support students' well-being and

academic success moving forward. These findings indicate a need for university administration to implement sexual assault preventions programs, mental health counseling, and victimization services on campuses. Furthermore, since sexual assault experiences are significantly related to decreases in academic performance, experts in the field of sexual assault victimization should work directly with professors and academic faculty on campus in order to provide adequate support for victims.

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Table 1
Means, Standard Deviations, Minimums, and Maximums for Sexual Assault Experience, Depression, and GPA

Measure	Min	Max	<i>M</i>	<i>SD</i>
Sexual Assault	0.00	20.00	4.72	4.71
Depression	0.00	49.00	21.64	14.24
GPA	1.00	5.00	4.01	.822

Table 2
Correlations between Sexual Assault Experience, Depression, and GPA

	Sexual Assault	Depression	GPA
Sexual Assault	-		
Depression	.45**	-	
GPA	-.16	-.25**	-

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

Figure 1
Triangular Relationship between Sexual Assault Experience, Depression, and GPA

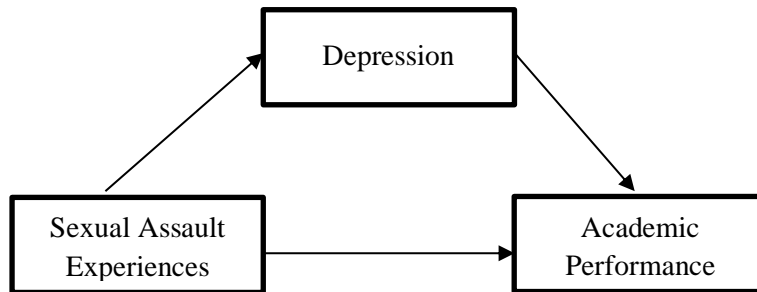
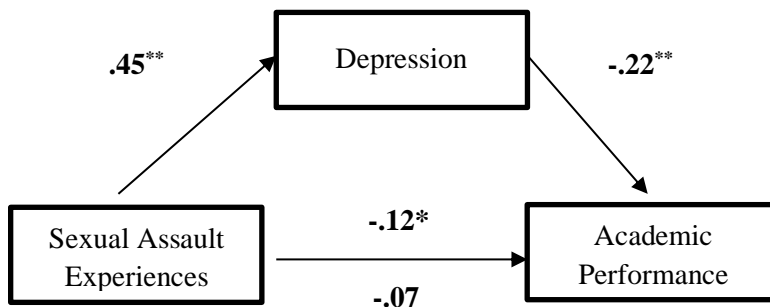


Figure 2
Triangular Relationship between Sexual Assault Experience, Depression, and GPA



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