

**EXAMINING THE LINK BETWEEN ATTACHMENT
STYLES, INDIVIDUAL RESILIENCY, AND COVID-19
EFFECTS ON SALEM STATE STUDENTS**

Honors Thesis

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Abstract

This study investigates the link between attachment style, resiliency through challenges, and COVID-19 pandemic outcomes in a sample of 53 Salem State University students. Past research has identified the importance of attachment style as how humans securely or insecurely tether to each other. The study hypothesized that students' attachment style would be related to their COVID-19 experiences and coping strategies during the pandemic. Salem State students currently enrolled in psychology courses and the honors program were recruited via email. Those willing to participate were asked to rate themselves first on attachment style (their perceived relationships with others and self-worth) using a Likert scale (Iwanaga et al, 2020). The second section contained statements pulled from the Coronavirus Anxiety Scale (Sherman, 2020) concerning worries about the COVID-19 virus infection, spread, and aftermath. An open-response question was included concerning students' strategies that helped them manage their mental health and how these strategies may have changed throughout the pandemic. The results from correlation analyses revealed that items on the COVID-19 response scale were not significantly correlated with their overall attachment score. Nonetheless, the descriptive findings are beneficial to faculty and staff to comprehend students' individual struggles and strategies.

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Introduction

The current body of knowledge in the field of psychology includes decades of in-depth research on human attachment styles, (i.e., how people create relationships, whether meaningful or superficial, that last for various amounts of time). Theorized by John Bowlby and Mary Ainsworth, attachment theory is rooted in the relationship between a child and mother, as well as how that relationship is malleable with separation and loss (Bowlby & Ainsworth, 1992). Extensive research has come from these first theorists allowing for increased recognition and analysis of attachment styles across the globe. The main importance of Bowlby's and Ainsworth's theory of attachment is how one forms their first relationship with a parent or caregiver. From this crucial interaction, attachment styles are developed and generally categorized into either secure or insecure attachments. The initial attachment between the child and mother, or other caregivers, sets the tone for relationships to come (Bowlby & Ainsworth). Considering the impact of this relationship as well as the current climate of the world today, it would be interesting to revisit the study of attachment as it applies to contemporary society. Within this study specifically, the focus was attachments in the context of the current COVID-19 pandemic.

In addition to attachment style, this study also incorporates measures of resiliency, which is how people bounce back from traumatic experiences. The mental, emotional, and physical flexibility of the demands and stress of life creates resiliency within people (APA, 2023). Such experiences and feelings can influence the actions and decisions we make, especially when dealing with a high-stress, deadly pandemic.

It is predicted that both factors, attachment style, and resiliency, correlate with anxiety created by the COVID-19 pandemic and influence the outcomes of one's mental and physical state. One recent study (Vowels, Carnelley & Stanton, 2022), sampled 200 people residing in the United Kingdom at the beginning of the lockdown. The researchers tracked their mood, depression, and anxiety for five weeks. The participants were asked to complete daily journals as well as rate themselves on various Likert scales that included topics such as experiences in close relationships and patient health. The researchers predicted that those more insecure in their attachment would have a larger range in mood fluctuation during the pandemic, but that was not the case. However, they did find that those higher in attachment anxiety had more significant periods of depression and anxiety during the pandemic compared to those lower in attachment anxiety with secure attachments and more resiliency.

Vowels, Carnelley & Stanton (2022) studied older adults mostly living and working in their day-to-day life. But how might the pandemic be experienced differently by young adults in college who are forming new relationships? A past study by Ognibene & Collins (1998) that looked at the interpersonal functioning of attachment style and ways of coping in the lives of 81 young adults found that those who are more secure generally seek support from loved ones. Whereas those who are more distant seek out less social support. College students initiate conversations and form friendships which may help with the daily stressors of college. However, during the pandemic, classes were switched to hybrid or remote learning, diminishing the frequency of interactions among college friends. Fewer interactions coupled with insecure attachments may result in an individual not utilizing the small amount of social support they would have during the

pandemic, possibly resulting in poor mental health situations for students. The current study of Salem State University students tests the hypothesis that attachment style and resiliency are related to mental health outcomes and the types of coping skills used during the pandemic. It also examines how one's attachment or perceptions of COVID-19 stayed the same or changed during this time. Finally, to learn from the student's strengths in the times of the pandemic, it was asked that the students share coping strategies that most helped them.

Methods

Participants

Participants in the sample were not randomly selected but were recruited on a volunteer basis to complete the survey. The initial goal was to obtain a sample of 100 students from Salem State University to represent the student population at large, however, only fifty-three participants were sampled due to time constraints. After approval from the campus Institutional Review Board, prospective Salem State participants were recruited in two ways: a recruitment email was sent to all Commonwealth Honors Program students, and it was posted on the psychology subject pool website (managed with the SONA Systems platform). The SONA platform provides access to surveys, allowing students to become a participant in a Salem State University study to obtain extra credit in their psychology classes. Students may have taken the survey due to the credit or because of genuine interest and personal ties to the creator. The findings only include the responses of those committed participants who took the time to complete most of the survey.

The sample demographics revealed that about 44% of the participants were seniors in college compared to the 8% that were freshmen. Juniors were the second highest at roughly 25% with sophomores at 23%. As for the gender breakdown, 77% of participants were women with only 7.5% that were men. Those that self-identified as nonbinary/gender fluid consisted of about 6% of the survey (3 people), and those disclosing themselves as transgender made up about 7.5%.

Materials

In terms of the research design of the survey and to appropriately represent the variables of attachment style within the Salem State University community, it was best to ask students about their year in school and gender identity to start. Anonymous identification of SOGI (sexual orientation and gender identity) questions allows for appropriate representation of all populations, especially given the high LGBTQ+ population at Salem State University.

Following, the first section includes statements pulled from a 12-item Attachment-Style Questionnaire–Short Form that assesses whether the participant is more likely to have a secure, avoidant, or anxious attachment (Iwanaga et al, 2020). In this study, participants were asked to rank statements such as “It’s important that others like me” on a scale from 1 (totally disagree) to 6 (totally agree). A higher total rating for most of the answers would indicate a stronger attachment. Reliability was proven by internal consistency with Cronbach’s alpha coefficient displaying a value scope of 0.72 to 0.83 (Iwanaga et al, 2020). Content validity and convergent validity are strongly correlated as correlation coefficients computed related to other measures such as hope, subjective well-being and sense of emotions, and coherence (Iwanaga et al, 2020). The intended use and

goal of the study provided insight into counseling, rehabilitation, as well as attachment, thus creating items beneficial to ask Salem State participants.

The second section of the survey includes questions from the 5-item scale titled “Coronavirus Anxiety Scale” (Sherman, 2020). Such questions addressed topics like illness representation, perceived susceptibility to COVID-19, perceived efficacy of the mass testing programs, and trust toward governmental control measures. Answers in this section are predicted to be higher, as many people in the country, and in the world, were affected negatively by COVID-19. Items were designed to understand participants' thinking, emotional distress, physical function, and activity to help the anxiety surrounding the COVID-19 pandemic (Sherman, 2020).

The last question in the survey was open-ended. It asked, “What strategies did you find worked for you during the pandemic? How did your strategies change throughout the course of the pandemic (2020 to present day)?”

Procedure

Data was created and collected through Survey Monkey, a worldwide survey development platform that provides an online shareable survey. The link to the survey was provided in emails and was embedded in a QR code. This modernized alternative to handwritten surveys is much easier for a technological world, especially for college students who prioritize convenience. Participants were informed in the recruitment materials that the purpose of the student researcher's thesis project was to understand students' personal attachment styles and individual resiliency throughout the COVID-19 pandemic. It also stated that the 18-item questionnaire would take about 5 minutes to complete. Before starting the survey, the participants were first met with a disclosure

form that informed them of the benefits of the study as well as the minimal risks of participation. The form confirmed their anonymity and let the participants know that they could quit at any time during the survey. There was also information about Salem State's Counseling and Health Services that could help students with troubling thoughts or feelings about any content included.

Results

Given that nearly half of the 53 survey respondents were seniors, the study hypotheses were tested with full group data rather than by individual years in college. It is important to note that the responses recorded mainly focused on how college students felt, coped, and attached during the COVID-19 pandemic.

The first analysis focused on the open-ended questions from the survey. The qualitative responses from the students allowed for students to share their personal coping strategies used or lack thereof. Based on such responses, the following categories were generated:

- staying productive (making lists of things to do, forming new routines)
- engaging in personal activities for enjoyment (time in nature, binge-watching television, working out)
- hygiene and protection (regular mask-wearing, staying isolated from others)
- no change in pre- to post-pandemic coping strategies (living a regular life, no mask-wearing, some staying in isolation)

As can be seen in Figure 1, the two categories tied with the highest number of responses (37%) were personal activities for enjoyment as well as hygiene and

protection. 14% of the responses regarded productivity following productivity and only 8.6% of responses had no change in pre- to post-COVID coping strategies.

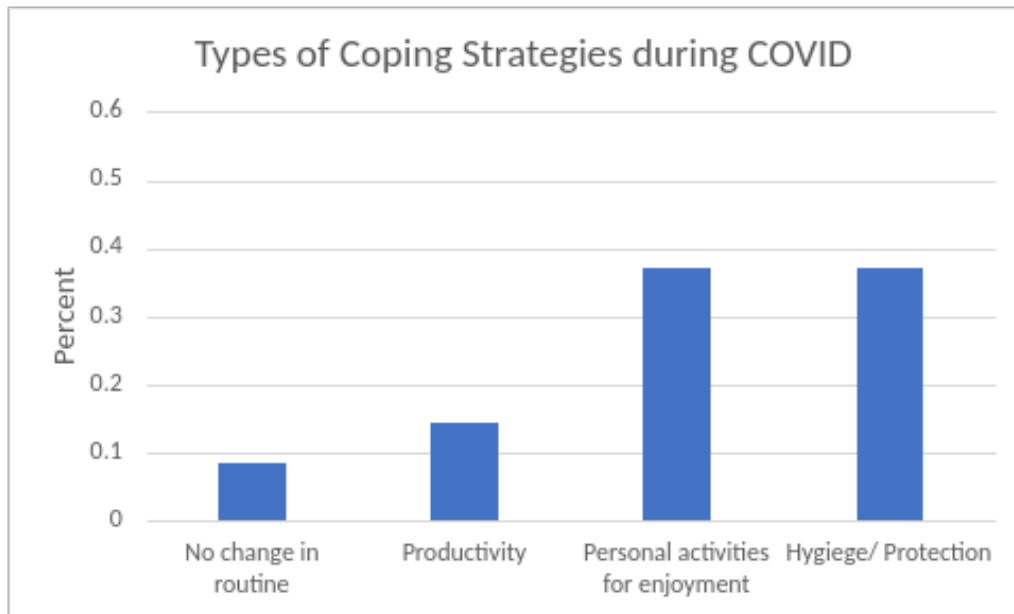


Fig 1. Coping strategies reported by Salem State students in percentages

The second set of analyses tests the hypotheses of the study. It was expected that students, generally speaking, with the strongest attachment style would have experienced the COVID-19 pandemic with the least amount of anxiety. Each question from the Coronavirus Anxiety Scale (Sherman, 2020) was correlated with the sum of each attachment question score. As an example, the correlation between the Attachment Style statement “Overall, I am a worthwhile person” (Iwanaga et al, 2020) and the Likert scale rating of “After thinking about the coronavirus, I felt extremely hopeless about the future” was only $r(53) = -0.03$.

Table 1 below represents this analysis, with the percentages of students who strongly disagree to strongly agree, and the number of students labeled within the parenthesis.

Table 1. Percentage Breakdown of Coronavirus Anxiety Scale Statements

Statement	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
If I were infected with COVID-19, it would affect my life only a little.	18.87% (10)	20.75% (11)	5.66% (3)	41.51% (22)	13.21% (7)
My anxious thoughts and feelings increased as the number of deaths increased in my area.	9.43% (5)	9.43% (5)	9.43% (5)	49.06% (26)	22.64% (12)
If you were infected with COVID-19, how much control do/did you feel you would have over your illness (1= no control to 5= full control)?	11.76% (6)	21.57% (11)	39.22% (20)	21.57% (11)	5.88% (3)
After thinking about the coronavirus, I felt extremely hopeless about the future.	11.32% (6)	32.08% (17)	22.64% (12)	24.53 (13)	9.43% (5)
I changed/will change my future travel, vacation, or shopping plans because of the coronavirus	16.98% (9)	22.64% (12)	9.43% (5)	28.30% (15)	22.64% (12)
I felt dizzy, lightheaded, or feel anxious when I read or listened to the news about the coronavirus.	22.64% (12)	20.75% (11)	20.75% (11)	26.42% (14)	9.43% (5)
Because of my fear and anxiety over the coronavirus, my ability to work is impaired.	26.64% (14)	37.74% (20)	9.43% (5)	20.75% (11)	5.66% (3)
I think my risk to contract the coronavirus is high.	13.21% (7)	28.30% (15)	37.74% (20)	16.98% (9)	3.77% (2)

However, the items on the COVID-19 response scale were not significantly correlated with their overall attachment score. Table 2 on the following page reports all the correlation results from the first analysis.

Table 2. Correlation Table between COVID-19 Pandemic Response and Attachment

Score

Survey Question (from COVID-19 Scale)	R value	P value
If I were infected with COVID-19, it would affect my life only a little.	-0.03	p>0.05
My anxious thoughts and feelings increased as the number of deaths increased in my area.	0.13	p>0.05
If you were infected with COVID-19, how much control do/did you feel you would have over your illness (1= no control to 5= full control)?	0.04	p>0.05
After thinking about the coronavirus, I felt extremely hopeless about the future.	-0.03	p>0.05
I changed/will change my future travel, vacation, or shopping plans because of the coronavirus.	0.06	p>0.05
I felt dizzy, lightheaded, or feel anxious when I read or listened to the news about the coronavirus.	0.20	p>0.05
Because of my fear and anxiety over the coronavirus, my ability to work is impaired.	-0.07	p>0.05
I think my risk to contract the coronavirus is high.	-0.15	p>0.05

Also, it was considered whether upperclassmen experienced the pandemic differently between freshmen and sophomores. The t-tests showed no difference between all groups, shown in the table below. It is concluded that upperclassmen and lowerclassmen did not react differently because of their year in college.

Table 3. Correlation Table between upperclassmen and lowerclassmen experiences during the pandemic

Survey Question	R value	P value
If I were infected with COVID-19, it would affect my life only a little.	0.75	p>0.05
My anxious thoughts and feelings increased as the number of deaths increased in my area.	0.28	p>0.05
If you were infected with COVID-19, how much control do/did you feel you would have over your illness (1= no control to 5= full control)?	0.62	p>0.05
After thinking about the coronavirus, I felt extremely hopeless about the future.	0.77	p>0.05
I changed/will change my future travel, vacation, or shopping plans because of the coronavirus.	0.24	p>0.05
I felt dizzy, lightheaded, or feel anxious when I read or listened to the news about the coronavirus.	0.60	p>0.05
Because of my fear and anxiety over the coronavirus, my ability to work is impaired.	0.39	p>0.05
I think my risk to contract the coronavirus is high.	0.60	p>0.05

Discussion

Although the study provided more knowledge about coping strategies used by Salem State University students during the COVID-19 pandemic, there was no correlation between COVID-19 responses and the attachment styles of the same students. While there is no correlation between the variables as predicted, this study allowed for a more extensive understanding of mental health and ways to cope with recent, negative events. How college students cope with their mental health such as listening to the needs of their bodies, taking up new hobbies, or staying connected with their friends through social media creates awareness and recognition of college students' ability to carry on through the pandemic. Some felt that creating a to-do list would help them stay productive, especially during a time that created a lot of turmoil and sadness that we continue to live through now.

With questions about COVID-19, there was the assumption that some would have differing ratings for how the pandemic affected their life as it can be a polarizing topic. Such a widespread public health issue prompted the entirety of the United States as well as specific states, with the guidance of the CDC, to enforce restrictions for the safety of all. Certain populations were thus affected negatively due to such encouraged procedures, including college students across the nation and the world. (CDC, 2023) Understanding this discrepancy, it is important to tread carefully with how many questions were listed and what short answer questions to choose to respect the participants. Many that participated in the study agreed with the idea that the pandemic is coupled with strong political affiliations and discussions. One participant, a hospital worker, wrote, "I felt

fulfilled knowing I was doing *something*, anything to help others during a challenging time.”

Study Limitations

Moreover, this study was not able to adequately test the study hypothesis due to a lack of representation for students with low attachment. Those with lower scores on the Attachment Style Questionnaire (Iwanaga et al, 2020) were not represented. The scale ranged from 1 (strongly disagree) to 5 (strongly disagree) with 7 items meaning the range of the attachment scores is 7 to 35. The majority of students fell above the score of 20, while only a few were below that. Thus, the central hypothesis of this study may not have been fully tested with the relatively healthy participant sample.

The scales used to test the hypothesis of COVID-19 and attachment style accurately measured the construct of this study, to some extent. The scales were directly pulled from previous studies, however, not all scale statements were used and there were fewer statements within the study itself. Fewer scales were used to promote time-saving and convenience, but ten to twelve statements for both the COVID-19 and attachment style scales could have been developed to obtain a more accurate representation of an individual's attachment style.

As for increased representation, it was noted that almost half of the study was completed by seniors, allowing for less variety in other years. Considering the population within this study was comprised of seniors, attachment scores represent experiences and coping mechanisms of a specific age group, rather than the population at large. As

seniors, the COVID-19 pandemic was a part of the university experience as compared to underclassmen that lived through the pandemic during high school as well as college. The massive transition between high school into higher education creates varying levels of individual resiliency and attachment styles, but a lack of representation for those undergoing this transition is apparent. The initial goal for the sample size was 100 students but due to time and availability, the study was capped at 53. A larger population of students would have created a more intense analysis of the upperclassmen versus lowerclassmen comparison, as there were not enough students in each targeted group overall.

While the study aimed at representing the current Salem State University student population, the study was not available to everyone who is a student at Salem State. The focus was college students, but a college student can come in various forms such as parents, adult learners, or international students. For this study, there was an overrepresentation of honors students as the survey was posted within the Honors Program Newsletter, eliminating those who are not a part of the program. Considering this implication, it would have been beneficial to send the survey out to said groups by email to classes and professors or posting on social media, allowing for more access for many. Along with an increase in a more diverse population, one semester for data collection limited the amount of possible data. If the participants were followed from before the pandemic until the current day, there would have been the possibility of a richer analysis over a longer time. Tracking participants through the pandemic as well could provide insightful data with more accurate descriptions of coping strategies.

Monitoring participants throughout the pandemic allows for a longitudinal analysis of their coping strategies, but those results would also vary depending on geographic locations. Coping strategies differ amongst individuals but also within regions, with variables such as population size, socioeconomic status of the school, or the specific demographics per school to allow for a more diverse collection of information. With the size of universities varying across the country, a university polled in California would look different than one studied in Ohio. An evaluation of the pandemic within a particular population of a university creates a better comprehension of the specific student's needs. Within Salem State University's diverse campus, many students are commuters or first-generation students that felt the exacerbated effects of the pandemic. Students who were commuters were to stay home during peak pandemic times, affecting the individual's mental health but also Salem State University as a campus. This also stretches beyond Salem State University to schools across the country rapidly changing their way of communal life due to the unforeseen, damaging circumstances of the COVID-19 pandemic on students.

Considering such results demonstrated that the correlations between attachment style and the COVID-19 pandemic were not significant, it is rather crucial to investigate the qualitative responses provided by the study. Personal, written encounters with college students provide beneficial insight into how students with differing backgrounds, occupations, and mental states coped and adapted to the COVID-19 pandemic. Such information aids in a deeper understanding of the Salem State community and what mental and physical processes of college students are at play during the pandemic.

One of the more valuable takeaways from this study was the information obtained regarding the coping strategies of college students. Of the 40 written responses obtained, 13 students mentioned how they took care of their health by wearing masks, staying home or isolated, and demonstrating effective cleaning habits as encouraged by the Centers for Disease Control and Prevention (CDC, 2023). While these strategies were encouraged by the CDC throughout the pandemic, not all followed such guidelines. One student explained, “Keep working. No change. Masks do not work...Normal people worked through the 'pandemic’”. Moving to mental coping strategies, some disclosed their poor mental health due to the pandemic. One student noted, “nothing really helped. I would cry everyday because I was so depressed.”

Others mentioned their struggles with mental health but provided how they deal with the challenging times, suggesting that college students might find healthier and more productive ways to cope with the pandemic. Finding ways to distract oneself from the scary times of the pandemic was a common theme within the short answer responses. Many mentioned that they felt as though they had no control over what was happening in the outside world so by using strong coping skills, students could have a grasp on their drastically changing lives. Some made lists to complete household chores, went for scenic drives, or developed new hobbies such as cooking or baking. Some interpreted the short answer question as a place to write about mental coping strategies such as finding inner peace through meditation or “by focusing on loving those around me and appreciating that we have each other”. Services provided by Salem State University, listed before the survey, aid in this mission for students.

The study not only includes research pertaining to students' personal outcomes and resilience due to the COVID-19 pandemic but allows for a greater understanding of the mental health of young people, useful to disability and counseling services. The nature of mental health services has changed over time, and with the COVID-19 pandemic as a part of daily life now, services are to change once again. The change and analysis of such information are especially crucial for hospital workers and counselors who seek to directly help those affected physically and mentally by the pandemic. Diving further in, services provided within higher education and the university systems benefit from the understanding of current college perceived mental health status. Such awareness would allow for a smoother transition of what has changed or not changed for the specific population of students.

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Appendix

This appendix contains the list of statements provided to Salem State students taken from the Attachment Style Questionnaire–Short Form (Iwanaga et al, 2020) and the Coronavirus Anxiety Scale (Sherman, 2020).

Attachment Style Questionnaire

Overall, I am a worthwhile person.

It's important that others like me.

I find that others are reluctant to get as close as I would like.

I prefer to keep to myself.

I am comfortable with depending on others.

I feel like I have someone to rely on.

It's very important to me to have a close relationship with the people in my life.

Coronavirus Anxiety Scale

If I were infected with COVID-19, it would affect my life only a little.

My anxious thoughts and feelings increased as the number of deaths increased in my area.

If you were infected with COVID-19, how much control do/did you feel you would have over your illness (1= no control to 5= full control)?

After thinking about the coronavirus, I felt extremely hopeless about the future.

I changed/will change my future travel, vacation, or shopping plans because of the coronavirus.

I felt dizzy, lightheaded, or feel anxious when I read or listened to the news about the coronavirus.

Because of my fear and anxiety over the coronavirus, my ability to work is impaired.

I think my risk to contract the coronavirus is high.