**The Impact of the COVID-19 Pandemic on Asian-Identifying College Students with Disordered Eating**

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**Abstract**

The present study investigated the effect of COVID-19 on disordered eating in Asian-American college students, and whether discrimination and social support contributed to these effects. Eligible participants (*N* = 42) completed an online questionnaire that collected demographic data and measured levels of discrimination experienced, social support, and disordered eating behaviors. Contrary to predictions, there was not a statistically significant correlation between COVID-19 and discrimination, COVID-19 and social support, and COVID-19 and disordered eating for this specific demographic. Additional research is needed to explore potential long-term effects of COVID-19 on disordered eating that may be seen in a longitudinal study with a larger sample.

*Keywords*: eating disorders, COVID-19, discrimination, social support

**The Impact of the COVID-19 Pandemic on Asian-Identifying College Students with Disordered Eating**

The COVID-19 pandemic has led to uncertainty in the lives of many. Uncertainty, in turn, has become a stressor, especially for college students, due to illness, job insecurity, lack of social interaction, etc. Though it is evident that COVID-19 has affected individuals with disordered eating behaviors, very little is known about its impact on Asian-identifying college students with eating disorders. Asian-identifying individuals make up one of the smallest demographics in diagnosed eating disorders but one of the largest demographics to self-report disordered eating. Thus, the purpose of this study is to uncover the effects that this pandemic has had on disordered eating behaviors in this particular demographic to add to the present literature.

**COVID-19**

COVID-19 has impacted various aspects of life, including social life, jobs and a daily routine. Socially, individuals of all ages have been affected (United Nations, n.d.). Elderly individuals have been facing age-based discrimination due to this population’s high susceptibility to the disease. Adolescents and college students have been affected by a degree of isolation due to virtual classes and jobs (United Nations, n.d.). Isolation and uncertainty have impacted their levels of stress, well-being and ability to form meaningful connections with their peers. The inability to form and maintain meaningful connections has led to an increase in anxiety and feelings of depression and hopelessness, especially while quarantining.

The pandemic has greatly impacted the economy and job prospects (Cunningham, 2020). A restricted access to restaurants, stores, movie theaters, etc. has led to many businesses being forced to shut down. In addition, many Americans have been experiencing unemployment since the beginning of the pandemic (Cunningham, 2020). With modified store hours and a decreased number of customers, there is a reduced need of employees. In these ways, COVID-19 has altered many aspects of life for the majority of individuals.

The pandemic disrupted daily routines, leading to less exercise and outdoor activities along with abnormal sleep patterns. In addition, the use of video and Zoom calls have contributed to an increase in body consciousness in individuals with an eating disorder. (Rodgers et al., 2020). Lastly, increased levels of stress and a focus on preventing COVID-19 rather than eating a nutritious and balanced diet are also likely contributors to the increase in disordered eating during the pandemic (Rodgers et al., 2020).

The largest impact of these lifestyle changes has been on fitness and health. From the closing of gyms to the increased risk of COVID-19 in grocery stores, the pandemic has posed difficulties on maintaining a healthy lifestyle (Kaur et al., 2020). Individuals who relied on gyms to workout could no longer do so. Patrons of local grocery stores were posed with the dilemma of choosing between fresh foods and safety from COVID-19. In addition to these factors, the stress and anxiety that COVID-19 has caused has led to a decreased motivation in individuals to maintain healthy eating and lifestyle behaviors (Kaur et al., 2020).

COVID-19 related stressors affected racial demographic groups at disparate rates. Asian Americans and Pacific Islanders (AAPIs), for example, suffered from disproportionately high COVID death rates and hospitalizations (Yee, 2021). These rates are often overlooked and are underreported compared to white patients. These disproportionally high rates of infection are likely due to the fact that many Asian-identifying individuals hold service industry jobs working in restaurants, salons, housekeeping, factories, construction, etc. (Yee, 2021). Often, these individuals are denied a paid sick leave and rely on public transportation for their daily commute. This makes them more vulnerable to infection and increases chronic stress due to the constant risk of contracting COVID-19. Additionally, Asian Americans faced increased racial stressors. Since the pandemic started, AAPI have faced around 4,000 hate incidents. These incidents have increased by 149% since the last year (Abrams, 2021). In addition, it has been found that this COVID-related discrimination has led to an increase in anxiety, symptoms of depression and difficulty sleeping (Abrams, 2021).

**COVID-19 and Disordered Eating**

COVID-19 has led to a reduction of eating disorder treatment because of a change in environment and due to treatments being provided virtually as opposed to in-person (Termorshuizen et al., 2020). According to the South Carolina Department of Mental Health, around 8 million Americans currently suffer from disordered eating (2006). In addition, disordered eating is the leading cause of death from all mental illnesses (South Carolina Department of Mental Health, 2006). The most common types of eating disorders are anorexia nervosa, bulimia nervosa and binge-eating disorder, with around 1.2% of the total U.S. population battling anorexia nervosa.

Anorexia nervosa results in a lower than normal body weight, weakness, brittle hair and dry skin, thinning of the bones and digestion issues due to an excessively limited food and nutrition intake (Ackermann et al., 2021). The main causes of anorexia nervosa are cultural beauty ideals, trauma and stress, genetics and hormones, and being surrounded by individuals who engage in disordered eating behaviors (Ackermann et al., 2021). Around 1.6% of the total U.S. population has, or has had, bulimia nervosa (Ackermann et al., 2021). The most common symptoms of bulimia nervosa are a higher than normal body weight, repeated episodes of binge eating, forced vomiting and excessive exercise and fasting (“Bulimia Nervosa,” n.d.). Bulimia nervosa can be hereditary. Societal and cultural values about body image can also influence progression of bulimia symptoms. Around 5.7% of the total U.S. population has, or has had, binge-eating disorder (Ackermann et al., 2021). Although there are no main causes of binge-eating disorder (BED), an obsession over having the “ideal” body type can impact the onset of BED symptoms. Some symptoms include consistent overeating in short periods of time, disgust in response to the binge episode and a feeling of powerlessness as related to overeating (“Binge Eating Disorder,”2018). These three conditions are the most common eating disorders presented in individuals in the United States. Individuals can also display characteristics of multiple disorders at the same time or at different times.

Individuals with eating disorders were more vulnerable to physical and psychological consequences of the COVID-19 pandemic, which likely led to an exacerbation of their eating behaviors. (Fernández‐Aranda et al., 2020). Individuals with anorexia nervosa often struggle with feelings of loneliness and isolation, two emotional states that became increasingly prevalent during the pandemic (Fernández‐Aranda et al., 2020). This may have worsened their internal conflict and feelings of hopelessness, leading to more food restriction and a low food intake along with guilt and depression (Fernández‐Aranda et al., 2020). In addition, the emotional dysregulation that individuals may have faced during the pandemic likely worsened symptoms of binge eating disorder and bulimia nervosa due to a perceived loss of control because of the uncertainty of the pandemic (Fernández‐Aranda et al., 2020). These feelings of helplessness caused by uncertainty likely led to an increased loss of control in food intake in individuals with existing symptoms of binge eating disorder and bulimia nervosa (Fernández‐Aranda et al., 2020).

The COVID-19 pandemic has led to a significant weight gain in many Americans. In fact, the average weight gain since the pandemic began is approximately 29 pounds (Weir, 2021). Researchers have been able to conclude that the stress of the pandemic has been the main contributor to the weight gain (Weir, 2021). In addition, social media users agreed that feelings of frustration, hopelessness, loneliness and anxiety during the pandemic negatively influenced their mental health which had detrimental effects towards their disordered eating (Nutley et al., 2021).

**Disordered Eating in Asian American Individuals**

Of the Asian population in the U.S., 21.5% of individuals reported having an eating disorder (Cheng et al., 2019). A very small percentage of these individuals go on to access and receive treatment. As a matter of fact, only 10% of individuals of all races receive treatment for their eating disorders (South Carolina Department of Mental Health, 2006). Asians are often underrepresented in research related to mental health. In addition, eating disorders can be frequently stigmatized and invalidated in Asian culture (Wu et al., 2020). For these reasons, it is extremely important to raise awareness about the prevalence of eating disorders among this specific demographic.

Insecurities due to body image is a universal issue. Women from different cultures strive to match the ideal body type that their society values. Frederick and et al. (2016) identified body dissatisfaction among Asian American women due to sociocultural pressures. These sentiments are associated with the development of obsessive exercise and disordered eating behaviors. Asian-identifying individuals have reported to experience an unparalleled amount of pressure to be “perfect”. Studies show that the stereotype of the model minority myth puts unrealistic expectations on Asian Americans (NAMI*,* 2021). The myth identifies individuals of Asian descent as having an advantage for a higher socioeconomic status. Because pressures on Asian-identifying individuals are put forth by society and by their own families to be “intelligent, affluent and obedient”, feelings of incompetency and failure can easily result (NAMI,2021). These feelings are especially likely to occur in adolescents and college students when they are not able to maintain a certain level of “excellence”. In addition, many AAPIs have confessed that they were apprehensive to display symptoms of mental illness (NAMI,2021). They felt as if they would be shunned or dismissed by their family or community. The consistent stigmatization of mental illness in Asian cultures, due to the association of mental illness with failure and weakness, can lead to this feeling.

AAPIs are less likely to access, seek out and receive mental health services compared to other racial groups. This is mainly due to a cultural bias that exists against seeking treatment for mental illnesses (Abrams, 2021). These cultural biases against mental health services often lead to Asian Americans feeling hopeless, weak and alone. This can exacerbate any mental health issue they may be already facing. A study found that Asian American college students are overall less satisfied with their body and have negative attitudes toward obesity than their non-Asian, BIPOC counterparts (Uri et al., 2021). This shows that many Asian American college students struggle with body image issues, however as past research describes earlier, these individuals may not feel comfortable or able to reach out to resources to receive treatment due to fear of being rejected by their community. However, disordered eating in Asian American college students is a vast and growing concern (Uri et al., 2021). Considering past research, it was postulated that the COVID-19 pandemic has had a significant impact on disordered eating in Asian American college students, especially due to changes in social support and increased stress due to racism.

**Present Study**

Thus, the purpose of this study was to discover the relationship between discrimination, social support and disordered eating during the pandemic, among this specific demographic. The research questions that were studied are:

1. What is the relationship between experiencing discrimination and disordered eating in COVID-19?

2. What is the relationship between social support and disordered eating in COVID-19?

3. What is the impact of COVID-19 on eating disorders in Asian American college students?

There are three study hypotheses: (1) an increase of racism will be associated with the COVID-19 pandemic; (2) there is a negative association between perceived social support and COVID-19 and; (3) there is a positive association between disordered eating and the COVID-19 pandemic. The findings of this research will help increase the evidence-base on the impact of COVID-19 in Asian Americans and highlight the importance of this prevalent issue.

**Methods**

**Participants**

A sample (*N =* 42) comprising of Asian-identifying college students was recruited. From the participants that responded, the sample was mostly female (87.1%). Eleven individuals did not respond, so the total sample analyzed was 31 individuals. Participants ranged in age, from 18 to 25 (*M*=20.5, *SD*=1.71). Additionally, participants were asked about their ethnic identity (Chinese=19%, Indian=21.4%, Filipino=2.4%, Vietnamese=4.8%, Korean=4.8%, Japanese=4.8%, Other=2.4%,). 14.3% of the participants reported that they identified with multiple ethnicities. 11 individuals did not respond, so the total sample analyzed was 31 individuals.

This study was approved by the Institutional Review Board of UNC-Chapel Hill. Data for this project was collected using surveys sent through online platforms—social media and UNC-Chapel Hill Listserv. Participation was incentivized by a random drawing for a free iPad. Consent was given by the participants before taking part in the study, and they were free to withdraw their participation at any time without consequence.

**Measures**

After providing informed consent, participants completed a 64-item questionnaire with questions exploring COVID-19, eating disorders, discrimination and social support in addition to demographic items.

***Impact of COVID-19 on Eating Disorders***

There are 51 items on the “Impact of COVID-19 on eating disorders (ICED)” scale (Termorshuizen et al., 2020), which connects the effects of COVID-19 with prevalence and treatment of disordered eating behaviors. The ICED scale consisted of questions regarding sociodemographic information and illness status, COVID-19 exposure and situational circumstances, impact of COVID-19 on eating disorders, impact of COVID-19 on general physical and mental well-being, and impact of COVID-19 on eating disorder treatment (Termorshuizen et al., 2020). The scale has been found to be valid and generalizable(Termorshuizen et al., 2020).

To assess for the impact of COVID-19, Q65 from the ICED scale was used. Participants reported how worried they were about various issues related to COVID-19. The responses for each sub-question (Please see Appendix) were scored from 1-7, with 1 being “Not Worried At All” and 7 being “Very Worried”. The scores from all 4 sub-questions were added to determine a total COVID-19 impact score. Higher scores indicated a greater impact of COVID-19 on overall wellbeing. To assess for the impact of COVID-19 on disordered eating, Q64 from the ICED Scale was used. Participants responded to questions based on the past year and were asked to report how concerned they were about certain aspects of their disordered eating. The responses for each sub-question (Please see Appendix) were scored from 1-4, with 1 being “Not At All Concerned” and 4 being “Very Concerned”. The scores from all 7 sub-questions were added to determine a total disordered eating score. Higher scores indicated a greater concern about disordered eating.

***Racial Discrimination***

There are nine items on the Everyday Discrimination Scale (Williams et al., 1997), used to identify discrimination that participants may have experienced during the COVID-19 pandemic. The scale assesses for the impact of COVID-19 on discrimination. Participants responded to questions based on the past year and were asked about the frequency at which they experienced racism or discrimination in various situations. The scale was determined to be reliable as evidence by a Cronbach’s alpha of 0.77 (Williams et al., 1997). Seven items from this scale were used in the survey. The responses for each sub-question (Please see Appendix) were scored from 1-5, with 1 being “Never” and 5 being “Always”. The scores from all 7 sub-questions were added to determine a total discrimination score. Higher scores indicated experiencing more discrimination.

***Perceived Parental Support***

There are five items on the Perceived Parental Support (PSS) Scale (Kristjansson et al., 2011), which identify how supported an individual feels by his or her parent(s). The scale was determined to be reliable as evidence by a Cronbach’s alpha of 0.77 to 0.87 (Kristjansson et al., 2011). All five items from this scale were used in the survey to assess for perceived parental support. Participants were asked “How easy or hard is it for you to receive the following from your parents?” The responses for each sub-question (Please see Appendix) were scored from 1-4, with 1 being “Very Difficult” and 4 being “Very Easy”. The scores from all 5 sub-questions were added to determine a total social support score. Higher scores indicated having more access to social support.

**Procedures**

Information regarding the study was sent out through social media and Listservs. Interested participants received an anonymous link to the screening survey. After providing consent, eligible participants were administered the survey through a direct link to the Qualtrics questionnaire. Although participant names were collected for the consent form, survey responses were not connected to participant-identifying information. Upon competition of the questionnaire, participants were given the option to enter their email address in order to enter the drawing for an iPad. Their survey responses had no impact on their chances of winning.

**Results**

Descriptive statistics, such as the mean, median, and standard deviation, and frequencies for participant characteristics, such as ethnicity, eating disorders, gender and age were collected. After acquiring descriptive statistics, the data was analyzed by developing three Pearson’s correlational models. Due to missing data, eating disorder frequency data from 29 participants were analyzed.

The most common eating disorders among the sample were binge-eating disorder (26.3%) anorexia nervosa (24%), and avoidant restrictive food intake disorder (23.8%). Less common were bulimia nervosa (9.6%), atypical anorexia nervosa (4.8%), night-eating syndrome (2.4%) and other specified feeding or eating disorder (2.4%). 7.2% of the participants reported having an eating disorder not listed in the questionnaire and 11.9% participants stated that they preferred not to answer (Please see Table 1). The percentages for eating disorder frequency exceed 100 when added because participants were able to indicate multiple lifetime eating disorders. In addition, 23.1% of the participants (*N* = 26) reported being worried about others being infected by COVID-19, 30.8% of the participants reported being somewhat worried about being infected themselves, and 23.1% of the participants also reported being somewhat worried that their physical and mental health could be influenced by COVID-19 (Please see Table 2)**.**

**Correlations**

Due to missing data, the sample size for data analysis was 26 participants. The first correlational analysis determined if perceived discrimination and COVID-19 were related. The first hypothesis was that a positive correlation between perceived discrimination and COVID-19 would be observed. Results indicated that although there was a positive correlation, perceived discrimination was not significantly related to COVID-19, *r* = .33, *p* > .05 (Please see Table 3). The second correlational analysis determined if social support and COVID-19 were related. The second hypothesis was that a negative correlation between social support and COVID-19 would be observed. Results indicated that although there was a negative correlation, COVID-19 was not significantly related to social support, *r* = -.21, *p* > .05 (Please see Table 3). The final correlational analysis determined if COVID-19 and disordered eating were related. The last hypothesis was that a positive correlation between COVID-19 and disordered eating would be observed. Results indicated that disordered eating was not significantly related to COVID-19, *r* = -.08, *p* > .05 (Please see Table 3).

**Discussion**

This study used survey methodology to examine the impact of COVID-19 on disordered eating in Asian American college students. There were three hypotheses: (1) a positive correlation between perceived discrimination and COVID-19 would be observed; (2) a negative correlation between social support and COVID-19 would be observed; and (3) a positive correlation between COVID-19 and disordered eating behaviors would be observed. Results showed that there is no significant correlation (*N* = 26) between discrimination and COVID-19, social support and COVID-19, and COVID-19 and disordered eating. Further, in this sample, the most common eating disorders were binge-eating disorder, closely followed by anorexia nervosa and avoidant restrictive food intake disorder. This study expands the literature to describe the experience of disordered eating in Asian-identifying college students.

**Lifetime Prevalence of Eating Disorders**

 This study collected information regarding the frequencies of eating disorders in the sample. The most prevalent were binge-eating disorder, anorexia nervosa and avoidant restrictive food intake disorder. However, the most prevalent eating disorder in the country is binge-eating disorder, with anorexia nervosa and bulimia nervosa following closely (U.S. Department of Health and Human Services*,* 2021). This difference in frequencies could be due to the small sample size of the study and the narrow geographical area that the participants were recruited from. It is possible that this led to limited external validity. If participants were surveyed from across the country, it is likely that bulimia nervosa would have been a more frequent diagnosis among the sample. In addition, participants were all college students. If the study had been more inclusive to all age groups, more bulimia nervosa and less avoidant restrictive food intake disorder diagnoses may have been observed.

**Discrimination and COVID-19**

In the present study, the relationship between discrimination and the COVID-19 pandemic was examined. A positive correlation was expected to be observed between the two variables, in which discrimination increased during the pandemic. This hypothesis was rejected. Although there was a positive correlation as predicted, this correlation was not statistically significant. This was different than what was found in previous studies; In fact, discrimination during the COVID-19 pandemic has largely worsened (Wang et al., 2020). AAPIs have also been experiencing increased levels of xenophobia and racism because of coronavirus, and stress due to discrimination is a likely contributor to these existing disparities (Wang et al., 2020). This may explain why other studies discovered that discrimination likely increased due to the pandemic and that this discrimination led to further negative impacts caused by COVID-19. It is possible that the present study did not find a significant positive correlation due to the sample size and the limited geographical area that participants were from. If a sample were to be collected nationwide, then it is likely that the participants will have more varied experiences with discrimination in their hometowns.

**Social Support and COVID-19**

The relationship between social support and the COVID-19 pandemic was also studied. A negative correlation was expected to be observed between the two variables, in which social support decreased during the pandemic. The hypothesis was rejected. Although there was a negative correlation as predicted, this correlation was not statistically significant either. While not much research has been performed regarding social support during COVID-19, individuals with a poorer social support tended to be at a greater risk of developing eating disorders (Limbert, 2010). Although this study did not observe a direct link between family support and disordered eating, it is possible that cultural differences may play a role in this issue (Limbert, 2010). If various races and ethnicities were studied individually, a correlation between family support and eating disorders in Asian-identifying individuals may have been seen.

Another study observed that disordered eating behaviors in college students decreased as perceived social support increased (Birmachu et al., 2019). Birmachu and colleagues discovered that perceived social support from significant others was pertinent in decreasing disordered eating behaviors (Birmachu et al., 2019). This was not an aspect of social support researched in the present study, however separating participants based on who they quarantined with prior to surveying the changes in social support may have impacted results of this study. If some individuals quarantined alone or with a significant other, they may have experienced more social support during the COVID-19 pandemic. But, if many college students quarantined with their family during the pandemic and were separated from their significant other, this may have had an impact on eating disorders as well.

**Disordered Eating and COVID-19**

Lastly, the relationship between disordered eating and the COVID-19 pandemic was observed. A positive correlation was expected to be observed between the two variables, in which disordered eating increased during the pandemic. This hypothesis was rejected as well. There was a weak negative correlation observed between the two variables. A past study found that the increased stress due to COVID-19 negatively impacted mental health of individuals; this likely led to the development of new disordered eating behaviors or a relapse of prior eating disorders (Termorshuizen et al., 2020). In addition, while many individuals stated that telehealth did contribute to a continuation of eating disorder treatment during the pandemic, they also expressed concerns and limitations regarding telehealth (Termorshuizen et al., 2020). Although the present study yielded different results, this supports the hypotheses since eating disorder treatment declined, overall, during the COVID-19 pandemic which led to increased disordered eating behaviors. The worsening mental health due to the pandemic also contributed to an increase in eating disorders (Termorshuizen et al., 2020).

Another study also explored the relationship between the pandemic and eating disorders and found that there was an increased risk of eating disorder development due to the conditions created by the COVID-19 pandemic (Rodgers et al., 2020). The pandemic not only reduced the access to social support but also led to a decreased access to eating disorder treatments, as hypothesized in the present study. (Rodgers et al., 2020). It is possible that these results were not observed in the present study because of the limited sample size and cross-sectional nature of the study.

**Limitations**

There are several limitations that may have affected the results of this study. This was a cross-sectional study. Since data was only collected at a single time point, the change in each variable relationship over time or the duration of pandemic was not observed. Therefore, it is possible that participants may have faced more discrimination, have had less access to social support and experienced worse disordered eating as the pandemic continued, if this had been assessed at different timepoints. This has the potential to affect the correlations found comparing these variables with COVID-19.

Another limitation was the sample size. The stigma around disordered eating may have likely contributed to this low response rate to the survey, and thus a small sample. Unfortunately, the small sample size may decrease the external validity of the study. In addition, participants were recruited from the same geographical region (North Carolina). In future studies, expanding the recruitment to the whole country would allow us to explore the effects of COVID-19 on disordered eating in Asian American college students in the United States more broadly. This may improve the ability to recruit a larger sample and increase the likelihood that this study would be more generalizable to the nation as a whole.

**Future Directions**

There are several possibilities for future directions. If replicated, it may be beneficial to survey individuals over the period of the pandemic rather than at just one time point. A longitudinal study would account for changes during the pandemic and increase the overall external validity of the study. In addition, a larger sample from a more widespread population could also lead to stronger correlations and a more generalizable study.

To better gauge social support, future studies could expand on the type of household social support that an individual received, to include siblings, neighbors, etc. and not parents alone. In addition, it may be beneficial for future studies to ask about diversity in hometown before asking participants to respond to questions about experiences with discrimination. It is possible that some participants that reported low discrimination levels during COVID-19 may live in more diverse areas than participants that faced more discrimination during the pandemic. This may have led to potential inaccuracies in data.

**General Interpretations**

As the issue of disordered eating becomes more concerning, it is crucial to examine how the lack of social support and the increase of stressors, such as discrimination, can lead to the development of eating disorders. This study explored the impact of COVID-19 on discrimination, social support and disordered eating. Prior research exists on the relationship between social support and disordered eating, between stress and disordered eating and between discrimination and the COVID-19 pandemic. However, this study represents the first direct demonstration of the relationship between COVID-19, discrimination, social support and eating disorders while focusing on the specific demographic of Asian-American college students. Replicating this study and identifying any extraneous variables that may have influenced these correlations would be beneficial. This research highlights the urgency of the issue that arises with eating disorder stigma. Overall, awareness of the negative, and potentially fatal, impacts of disordered eating need to be raised among this demographic. As the stigma around eating disorders decreases, individuals will feel more supported to seek out treatments and minimize harmful effects of their eating disorder.

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**Table 1**

*Lifetime Eating Disorders Frequencies*

|  |  |
| --- | --- |
|  | N = 42 |
| Binge-eating disorderAnorexia nervosaAvoidant restrictive food intake disorderBulimia nervosaAtypical anorexia nervosa | 11 (26.3%)10 (24.0%)10 (23.8%)4 (9.6%)2 (4.8%) |

*Note.* The five most common eating disorders within the sample are reported above. Participants were able to indicate multiple lifetime eating disorders.

**Table 2**

*Q65: Impact of COVID-19*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| (*N* = 26) | Not worried at all | 2 | 3 | Somewhat worried | 5 | 6 | Very worried |
| …about being infected yourself? | 2 (7.7%) | 4 (15.4%) | 3 (11.5%) | 8 (30.8%) | 5 (19.2%) | 2 (7.7%) | 2 (7.7%) |
| …about others being infected? | 1 (3.8%) | 1 (3.8%) | 4 (15.4%) | 11 (42.3%) | 2 (7.7%) | 6 (23.1%) | 1 (3.8%) |
| ...that your physical health could be inﬂuenced by COVID-19? | 0 (0.0%) | 2 (7.7%) | 7 (26.9%) | 6 (23.1%) | 6 (23.1%) | 3 (11.5%) | 2 (7.7%) |
| ...that your mental health could be inﬂuenced by COVID-19? | 0 (0.0%) | 1 (3.8%) | 6 (23.1%) | 6 (23.1%) | 6 (23.1%) | 5 (19.2%) | 2 (7.7%) |

**Table 3**

*Correlations for Study Variables*

|  |
| --- |
| **Correlations for Analysis** |
|  | Sum of COVID-19 questions | Sum of Discrimination | Sum of Social Support | Sum of Eating Disorders |
| Sum of COVID-19 questions | Pearson Correlation | 1 |  |  |  |
| Sig. (2-tailed) |  |  |  |  |
| N | 26 |  |  |  |
| Sum of Discrimination | Pearson Correlation | .326 | 1 |  |  |
| Sig. (2-tailed) | .104 |  |  |  |
| N | 26 | 26 |  |  |
| Sum of Social Support | Pearson Correlation | -.206 | -.438\* | 1 |  |
| Sig. (2-tailed) | .312 | .025 |  |  |
| N | 26 | 26 | 28 |  |
| Sum of Eating Disorders | Pearson Correlation | -.080 | .481\* | -.326 | 1 |
| Sig. (2-tailed) | .698 | .013 | .104 |  |
| N | 26 | 26 | 26 | 26 |
| \*. Correlation is significant at the 0.05 level (2-tailed). |

**Appendix**

**Questionnaire items**

*Q65 COVID-19 Impact Scale*: “How worried are you...”

|  |
| --- |
| ...about being infected yourself? |
| ...about others being infected? |
| ...that your physical health could be inﬂuenced by COVID-19? |
| ...that your mental health could be inﬂuenced by COVID-19? |

*Q64 Disordered Eating Scale*: “Please answer the following questions based on the past year. I have been concerned about...”

|  |
| --- |
| ... having access to enough food (e.g., unable to go to a grocery store regularly, unable to leave home, etc.)? |
| ... accessing foods that are consistent with my current meal plan/style of eating? |
| ... worsening of my eating disorder due to a lack of structure? |
| ... worsening of my eating disorder due to a lack of social support? |
| ... worsening of my eating disorder due to increased time living in a triggering environment? |
| … being able to afford the food I need for recovery due to loss of income related to COVID-19? |
| … being able to afford eating disorder treatment due to loss of income related to COVID-19? |

*Q34 Everyday Discrimination Scale*: “Please answer the following questions based on the past year. In your day-to-day life, how often do any of the following things happen to you?”

|  |
| --- |
| You are treated with less courtesy/respect than other people are. |
| You receive poorer service than other people at restaurants or stores. |
| People act as if they think you are not smart. |
| People act as if they are afraid of you. |
| People act as if they’re better than you are. |
| You are called names or insulted. |
| You are threatened or harassed. |

*Q71 Perceived Parental Support Scale*: “How easy or hard is it for you to receive the following from your parents?”

|  |
| --- |
| Caring and warmth. |
| Discussions about personal affairs. |
| Advice about academics. |
| Advice about other issues of yours. |
| Assistance with other things. |