

Executive Summary
Assessing College Students' Socioeconomic Status and Mental Health During the
COVID-19 Pandemic

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Introduction

A growing body of literature supports the conclusion that the COVID-19 pandemic has dramatically impacted people's mental health. Although these impacts are felt across all populations, college students are among one of the most strongly affected by COVID-19 because of uncertainty regarding academic success, future careers, isolation, and social life. Additional consideration is warranted to those who are socioeconomically disadvantaged due to the exacerbation of income inequality during the pandemic. Therefore, students may need additional resources and services, such as those offered by our community partner, the Dartmouth Student Wellness Center (SWC), to help cope with the mental health effects of the pandemic. As the research on mental health amidst the pandemic rapidly grows, our study aims to add to this body of knowledge by investigating how COVID-19 has affected the mental health of undergraduate Dartmouth College students of different socioeconomic backgrounds. In doing so, we hope that our study will help the College, among others, develop programming and resources to better support their overall student population during these unprecedented times.

Literature Review

A key concern during the COVID-19 pandemic relates to the mental health of vulnerable populations, including college students. Relative to other studies focusing on the general population, research on college students' mental health during the pandemic is in its infancy. Recent assessments found increased levels of stress, anxiety and depression in the wake of the pandemic (Wang et al., 2020; Liu et al., 2020; Cao et al. 2020). Given that income inequalities have been exacerbated by the pandemic (Reeves and Rothwell 2020), an examination of mental health in relation to socioeconomic status is needed. A longitudinal study by the American Psychological Association, along with decades of research, posits that low SES is a risk factor for poor mental conditions (Hudson 2005). Prior to the pandemic, low socioeconomic status was found to be associated with decreased social network size and social support (Hefner and Eisenberg 2010), the latter being a factor in our research as an indicator of mental health.

Isolative COVID-19 restrictions such as social distancing and quarantine periods are essential for reducing transmission, however, the restrictions may represent a further risk for mental health. Numerous recent studies found isolation periods brought on by the pandemic to be associated with psychological distress (Pancani et al. 2020; Bierman and Schieman 2020). The negative psychological impacts of isolation have been well-established for decades. The Temporal Need-Threat Model suggests that prolonged experiences of isolation have been linked with an increased risk of "psychological resignation," characterized by feelings of depression, alienation, unworthiness, and helplessness (Williams 2009.)

Due to the isolative nature of COVID-19 guidelines and pre-existing literature, we posit that isolation affects individuals' social support. Generally, social support is defined as the instrumental, informational, or emotional assistance that friends, family and others can provide, and is considered a psychosocial coping resource that buffers the negative effects of stress (Thoits 1995), and therefore acts as an influence on emotional health and wellbeing (Kawachi and Berkman 2001). Extensive literature documents a strong association between social support and mental health (Thoits, 1995). Social support is an important correlate of depression, anxiety, suicidality, and eating disorders (Hefner and Eisenberg 2010). Further, social support has been found to have a stronger relationship with psychological distress than conditions of poverty (Caron et al. 2007). The current literature that focuses on college students during the pandemic does little to acknowledge or measure social support. Thus, we aim to address this gap of knowledge.

Corey Keyes work on the mental health continuum heavily influences the framework of our study. Keyes research operationalizes mental health as a "syndrome of symptoms of positive feelings and positive functioning in life," with the presence of mental health described as "flourishing," and the absence of mental health as "languishing" (Keyes 2002). Keyes also argues that measures of social wellbeing should be viewed as indicators of an individual's mental health status (Ibid). While our mediating variables, social isolation and social support, differ from the exact social wellbeing measures that Keyes employs, we build on the same sentiment that psychological wellbeing and social wellbeing reflect a multifaceted cluster of symptoms of positive functioning, which reflect mental health status.

Given the vulnerability of this population during the pandemic, there is a critical need to assess the mental health of college students by socioeconomic background in order to address concerns in a timely manner.

Research Question

Our research question investigates if a student's socioeconomic status (SES) impacts their mental health during the COVID-19 pandemic, if at all. Given the documented relationships between mental health and SES, isolation, and social support, this research question is significant as the COVID-19 pandemic is exacerbating the effects of social isolation, income inequality, and diminished social support. Our research will provide insight into how the pandemic affects the lives of our peers, with hopes of identifying disparities so that College services such as the SWC may develop data-driven solutions. We hypothesize that an increase in social support and student SES will result in higher levels of mental health, while an increase in social isolation will result in lower levels of mental health.

Methods

To investigate our research question, we are proposing a quantitative approach using an online survey as our main method of data collection. Our team selected this deductive approach because we know that a hypothesis for this research subject will pull upon pre-existing research. A deductive approach will also allow us not only to test our research question, but also to help us understand where data or potential solutions to our research question are either similar or dissimilar to existing ideas. We hope that this will help us gain a better understanding of the scope of our issue, forcing us to assess if there is a true relationship between our different variables. As a research instrument, our survey aims to measure mental health, socioeconomic status, levels of isolation, and levels of social support in the lives of students. Our survey measures are adapted from well-established questionnaires or are shorter adaptations that have proven good test retest reliability and validity.

We propose several advantages to our method, including convenience, familiarity for Dartmouth students, privacy, anonymity, cost efficiency, expediency, and low chance for human error. However, we acknowledge high chances of response bias. We have little control or information regarding the environmental or mental factors that may skew or exaggerate survey responses. The private nature of our study might also result in skewed, exaggerated, or under exaggerated responses. We hope to combat this by incorporating close-ended questions, including response options for all possible answers, employing neutral language, and avoiding double-barreled questions.

Our research design involves four variables: an independent variable (student SES), a dependent variable (mental health status), and two mediators (social isolation and support). We operationalize these variables as: SES as annual income, educational attainment, first-generation status; mental health status as emotional wellbeing, positive functioning, and symptoms of depression and anxiety; social isolation as frequency of isolation and/or experience of loneliness; social support as frequency of social participation and perceived quality of social support. Our conceptual model involves all of the aforementioned components. We predict an associative relationship between our independent and dependent variables, with our mediators as potentially intervening variables.

We pay special attention to the sampling method of our study. We understand that certain students may be more inclined to participate in our study than others, however, we aim for our study's results to represent the entire student body. Our target population includes the undergraduate student body at Dartmouth College. The sampling technique we propose involves probability sampling with a possible use of snowball sampling in the case that the original sampling method does not generate a breadth of responses from a representative part of our target population (i.e., low-income students). Our online survey would be emailed to our sampling population, which is all students who are currently enrolled at Dartmouth as of the winter term of 2021. Furthermore, our frame would be a list of all emails of students in Dartmouth's current student directory regardless of age, gender, major, etc.

For recruitment, we hope that certain college affiliated or student groups might agree to help us promote our study (i.e. the Psychology department, the Mental Health Student Union, FYSEP, etc.). Depending on the funding for this project, we hope that the SWC might also consider offering an incentive, such as a downloadable wellness journal. We also suggest coupling our survey with mandatory

student activities, such as the COVID-19 testing which students must comply with at Thompson Arena bi-weekly in order to remain on campus. For example, a researcher might include a QR code for students to scan while they wait in line for their COVID-19 test. For this study, we know that our form of data collection will call for quick assessment—ideally during the spring 2021 (21S) term—and will be cross-sectional.

We believe that the generalizability of our study is relatively strong because our research question directly addresses the lives of Dartmouth College undergraduates in particular. With that, we are mindful of the challenges of recruiting enough participants to represent Dartmouth's entire student population. Reliability issues include inconsistency in the way students might interpret questions. To mitigate this possibility, we pay special attention to the phrasing of questions to minimize these differences. Our study grapples with certain aspects of validity: ultimately, we do not know how genuine students' responses may be while taking the survey. Lastly, there are numerous ways to measure mental health, especially with consideration of mental health issues prior to the pandemic. Analysis of this study's results must bear in mind that we are trying to recognize patterns in quantitative data. Therefore, we propose utilizing statistical analyses to test the relationship between the variables proposed and look for evidence of a significant association. We hope that this analysis will help researchers identify associations between socioeconomic status, mental health, and our mediators in order to directly address our research question.

Ethical Considerations

Due to the sensitivity and stigmas that surround the topic of mental health, we must consider how to best preserve participants' privacy and respect their individual experiences while also obtaining accurate data for our study. As detailed in the Belmont Report, a document by National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, the basic core principles of respect for persons, beneficence, and justice must be addressed in order to maintain ethical research involving human subjects.

To uphold the principle of respect for persons, we plan to address our subjects' autonomy and their right to its protection by obtaining self-voluntary and informed consent for all study interactions, conducting anonymous surveys that protect subject identities, and being transparent with the study's purpose and how the collected data will be used. Next, to abide by the principle of beneficence, we plan on minimizing possible harms and maximizing possible gains for survey respondents by maintaining subject anonymity to prevent private information from being publicly linked to them, using neutral language in our survey questions to minimize negative emotional reactions, and sharing final study results with the Dartmouth Student Wellness Center, who could use that information to improve the college's mental health resources that could, in turn, benefit all Dartmouth students. Finally, we plan to address justice, defined as the fair distribution of the study's burdens and benefits, by conducting random participant selection and ensuring our study outcomes are shared with the entire Dartmouth community through the Dartmouth SWC.

Feasibility and Significance

One of the greatest strengths of our research design is its feasibility within the resource constraints of our community partner, the Dartmouth SWC. Because of its format as an online survey, distribution is costless, efficient, and easy, and will not detract from the center's current funding, timing, and staffing situations. This means that after the survey is sent out, SWC staff can continue to focus on other responsibilities, all while gathering the data needed for this study.

Not only is this research practical, but its study of mental health is more important now than ever before; at a time when the SWC should be assisting the student population at Dartmouth, a majority of students may not have access to the physical center or know how to find resources under remote circumstances. Conducting this study could highlight potential avenues of support where students are in the most need and help guide the direction of Dartmouth's future mental health support programs, as well as add to the growing body of knowledge surrounding mental health and the pandemic, which is critical to improving the wellbeing of all humans during these physically and emotionally straining times.

Appendix

Appendix A: Consent Form Draft

Introduction:

You are being asked to participate in a research study. Taking part in research is voluntary.

What does this study involve?

We are seeking to learn more about the impact of socioeconomic status on students' wellbeing during the COVID-19 pandemic. We will ask some questions about your mental health, socioeconomic status, social support and isolation brought on by COVID-19 health guidelines. Participation in the study will take approximately 10 minutes.

Who is eligible to participate?

You must be a Dartmouth undergraduate student who is taking courses in the 2020-2021 academic year to take part in this study.

What are the options if you do not want to take part in this study?

Your participation in this study is completely voluntary. If you wish, you may withdraw your consent and discontinue your participation at any time with no consequences to you.

What are the risks involved with taking part in this study?

There are no known risks of participation in this study, though some topics about mental health may be triggering or uncomfortable for some participants.

Will you benefit from taking part in this study?

There is little chance that you will personally benefit from taking part in this research study. We hope to gather information that may help students in the future.

How will your privacy be protected?

The information collected for this study will be kept secure and confidential. Your identity will not be linked to your responses in any way. Only the research team for this study will have access to your data.

Whom should you contact about this study?

If you have any questions about this study, you can contact the research director for this study, Todd Gibbs (todd.a.gibbs@dartmouth.edu).

CONSENT

I have read the above information and agree to take part in this study.

Name (Print) _____

Signature _____

Appendix B: Survey/Questionnaire

NOTE* The following section aims to measure social support and isolation. We also propose an alternative method to measure social support and leave it for our community partner, the SWC, to review. The [Sarason Social Support Questionnaire](#), which measures more specifically the number of individuals in the respondent's social support network and the level of satisfaction with the overall support they have. We did not choose this questionnaire because it is longer and may cause the survey to take longer than 10 minutes to complete, so we leave it to the SWC's discretion. The first 6 questions are adapted from a modified Duke Social Support Index. The range is from 0-17 points, with social isolation indicated with a score of 0-6 points. Question 7-9 are adapted from the UCLA 3-item scale for loneliness. The range is 0-6 points; lonely defined as 3 or more points).

1. How many persons in your local area do you feel like you can depend on or feel close to?
 - a. None
 - b. 1-2 persons
 - c. More than 2 people

2. In the past week, about how often did you go to meetings of clubs, religious meetings, or other groups that you belong to, virtually or in-person?
 - a. None
 - b. 1-2 times
 - c. 3-6 times
 - d. Daily

3. How many times in the past week did you spend time in person with someone who does not live with you?
 - a. None
 - b. 1-2 times
 - c. 3-6 times
 - d. Daily

4. How many times in the past week did you talk with friends or relatives on the telephone?
 - a. None
 - b. 1-2 times
 - c. 3-6 times
 - d. Daily

5. How many times in the past week did you talk with friends or relatives using video devices (such as FaceTime or Zoom)?
 - a. None
 - b. 1-2 times
 - c. 3-6 times
 - d. Daily

6. How many times in the past week did you communicate with friends or relatives using the internet (such as social media)?
 - a. None
 - b. 1-2 times
 - c. 3-6 times

d. Daily

7. How often do you feel you lack companionship?

- a. Never
- b. Hardly ever
- c. Some of the time
- d. Often

8. How often do you feel left out?

- a. Never
- b. Hardly ever
- c. Some of the time
- d. Often

9. How often do you feel isolated?

- a. Never
- b. Hardly ever
- c. Some of the time
- d. Often

NOTE* The following section aims to measure emotional wellbeing and symptoms of anxiety and depression. Questions 10-16 are adapted from Corey Keyes' 2002 study. Questions 17-20 are from the four-item Patient Health Questionnaire for Anxiety and Depression. The score is determined by adding together the scores of each of the 4 items. Scores are rated as normal (0-2), mild (3-5), moderate (6-8), and severe (9-12). Total score ≥ 3 for first 2 questions suggests anxiety. Total score ≥ 3 for last 2 questions suggests depression. The scores for the response options are: not at all (zero), several days (1), more than half the days (2), nearly every day (3). Question 21 broadly measures pre-existing mental health conditions.

10. How much of the time during the past 30 days have you felt cheerful?

- a) All the time
- b) Most of the time
- c) Some of the time
- d) A little of the time
- e) None of the time

11. How much of the time during the past 30 days have you felt in good spirits?

- a) All the time
- b) Most of the time
- c) Some of the time
- d) A little of the time
- e) None of the time

12. How much of the time during the past 30 days have you felt extremely happy?

- a) All the time
- b) Most of the time

- c) Some of the time
- d) A little of the time
- e) None of the time

13. How much of the time during the past 30 days have you felt calm and peaceful?

- a) All the time
- b) Most of the time
- c) Some of the time
- d) A little of the time
- e) None of the time

14. How much of the time during the past 30 days have you felt satisfied?

- a) All of the time
- b) Most of the time
- c) Some of the time
- d) A little of the time
- e) None of the time

15. How much of the time during the past 30 days have you felt full of life?

- a) All of the time
- b) Most of the time
- c) Some of the time
- d) A little of the time
- e) None of the time

16. How would you rate your life overall these days on a scale from 0 to 10, where 0 means the worst possible life overall, and 10 meaning the best possible life overall?

1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10

Over the last two weeks, how often have you been bothered by the following problems?

17. Feeling nervous, anxious or on edge

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

18. Not being able to stop or control worrying

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

19. Feeling down, depressed, or hopeless

- a. Not at all
- b. Several days

- c. More than half the days
- d. Nearly every day

20. Little interest or pleasure in doing things

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

21. Did you experience any clinical mental health conditions prior to the pandemic (depression, anxiety, etc.)?

- a. Yes
- b. No

22. Do you identify as a first-generation student?

- a. Yes
- b. No

23. Please report your mother's highest degree completed.

- a) 12th grade or less
- b) Graduated high school or equivalent
- c) Some college, no degree
- d) Associate degree
- e) Bachelor's degree
- f) Post-graduate degree
- g) Other/unknown

24. Please report your father's highest degree completed.

- a) 12th grade or less
- b) Graduated high school or equivalent
- c) Some college, no degree
- d) Associate degree
- e) Bachelor's degree
- f) Post-graduate degree
- g) Other/unknown

25. Please report your family's combined annual household income.

- a) \$5,000 or less
- b) \$5,001 - \$20,000
- c) \$20,001 - \$50,000
- d) \$50,001 - \$75,000
- e) \$75,001 - \$100,000
- f) \$100,001 - \$200,000
- g) \$200,001 or more

References

- Bierman, Alex, and Scott Schieman. 2020. "Social Estrangement and Psychological Distress before and during the COVID-19 Pandemic: Patterns of Change in Canadian Workers." *Journal of Health and Social Behavior* 61(4):398–417. doi:10.1177/0022146520970190.
- Cao, Wenjun, Ziwei Fang, Guoqiang Hou, Mei Han, Xinrong Xu, Jiabin Dong, and Jianzhong Zheng. 2020. "The psychological impact of the COVID-19 epidemic on college students in China." *Psychiatry Research* 287(11):29-34. doi:10.1016/j.psychres.2020.112934.
- Caron, Jean, Eric Latimer, and Michael Tousignant. 2007. "Predictors of psychological distress in low-income populations of Montreal." *Canadian Journal of Public Health* 98(1):35-44. doi:[10.1007/BF03403725](https://doi.org/10.1007/BF03403725)
- Coley, Rebekah Levine, Michael O'Brien, and Bryn Spielvogel. 2019. "Secular Trends in Adolescent Depressive Symptoms: Growing Disparities between Advantaged and Disadvantaged Schools." *Journal of Youth and Adolescence* 48(11):2087–98. doi:
<http://dx.doi.org.dartmouth.idm.oclc.org/10.1007/s10964-019-01084-1>.
- Hefner, Jennifer and Daniel Eisenberg. 2010. "Social Support and Mental Health Among College Students." *Journal of Orthopsychiatry* 79(4):491-499. doi: [10.1037/a0016918](https://doi.org/10.1037/a0016918).
- Hudson, Christopher. 2005. "Socioeconomic Status and Mental Illness: Tests of the Social Causation and Selection Hypotheses" *American Journal of Orthopsychiatry* 75(1): 3-18 doi:
10.1037/0002-9432.75.1.3
- Kawachi, I., & Berkman, L. F. 2001. "Social ties and mental health." *Journal of Urban Health* 78(3):458-467. Doi: [10.1093/jurban/78.3.458](https://doi.org/10.1093/jurban/78.3.458)
- Keyes, Corey L. M. "The Mental Health Continuum: From Languishing to Flourishing in Life." *Journal of Health and Social Behavior* 43(2):207-222. Doi: [10.2307/3090197](https://doi.org/10.2307/3090197)

Liu Shau, Lulu Yang, Chenxi Zhang, Yu-Tao Xiang, Zhongchun Liu, Shaohua Hu, and Bin Zhang. 2020.

“Online mental health services in China during the COVID-19 outbreak.” *The Lancet Psychiatry* 7(4):e17-e18. doi: [10.1016/S2215-0366\(20\)30077-8](https://doi.org/10.1016/S2215-0366(20)30077-8)

Magson, Natasha, Justin Freeman, Ronald M. Rapee, Cele E. Richardson, Ella L. Oar, and Fardouly

Jasmine. 2021. “Risk and Protective Factors for Prospective Changes in Adolescent Mental Health during the COVID-19 Pandemic.” *Journal of Youth and Adolescence* 50(1):44–57. doi: <http://dx.doi.org.dartmouth.idm.oclc.org/10.1007/s10964-020-01332-9>.

Reeves, Richard V. and Jonathan Rothwell. 2020. “Class and COVID: How the less affluent face double risks.” Retrieved February 1st, 2021

(<https://www.brookings.edu/blog/up-front/2020/03/27/class-and-COVID-how-the-less-affluent-face-double-risks/>).

Thoits, Peggy A. 1995. “Stress, Coping, and Social Support Processes: Where Are We? What Next?”

Journal of Health and Social Behavior (Extra Issue):53-79. doi:[10.2307/2626957](https://doi.org/10.2307/2626957).

Wang, Xiaomei, Sudeep Hedge, Changwon Son, Bruce Keller, Alec Smith, Farzan Sasangohar. 2020.

“Investigating Mental Health of US College Students During the COVID-19 Pandemic: Cross-Sectional Survey Study.” *Journal of Medical Internet Research* 22(9):e22817. doi: 10.2196/22817.

Williams, Kipling. 2009. “Ostracism: A temporal need-threat model.” *Advances in experimental social psychology* 41:275–314. Doi: [10.1016/S0065-2601\(08\)00406-1](https://doi.org/10.1016/S0065-2601(08)00406-1)