

Optimism, Resilience, and Other Health-Protective Factors Among Students During the COVID-19 Pandemic

Kate G. Burt, PhD, RDN, Lehman College, City University of New York,
katherine.burt@lehman.cuny.edu

Jacob M. Eubank, EdD, Lehman College, City University of New York

Abstract. Black, Indigenous, and People of Color (BIPOC) suffer disproportionately from coronavirus-related illness, death, and financial loss. The aim of this retrospective, qualitative study was to better understand the experiences of BIPOC students at a Bronx-based public university during the COVID-19 pandemic. Data was collected from a reflective final exam in a health sciences course in May 2020. Responses ($n = 28$) were coded and analyzed using the Social Determinants of Health (SDH) framework. Several themes were identified in structural and intermediary determinant areas, including occupation, education, social cohesion, and psychosocial factors. Participants demonstrated optimism, resilience, and perseverance—protective factors against exposure to adverse SDH. Findings indicate that COVID-19 negatively impacted BIPOC students in multiple SDH areas which may have a compounding effect, hindering equity and justice. Providers of social and academic support are critical levers in addressing SDH barriers and helping students strengthen protective factors to reduce adverse impacts of health-damaging determinants.

Keywords: social determinants of health; social support; minority students; COVID-19; anchor institutions

The COVID-19 pandemic hit New York City (NYC) especially hard at the onset (March 2020) in the United States and within less than three weeks of its first case, New Yorkers were ordered to shelter-in-place (Opam, 2020; van Dorn et al., 2020). It became clear that Black, Indigenous, and People of Color (BIPOC) suffered disproportionately from coronavirus-related illness, death, and financial loss (Garcia, 2020; van Dorn et al., 2020). In the Bronx, a borough home to many impoverished BIPOC residing in poor housing and suffering from poor health, the devastation of the pandemic (in terms of hospitalizations and death) was especially evident (Freitas-Tamura et al., 2020). During the early months of the pandemic, Bronx residents were also experiencing the loss of income as unemployment rates soared 2,000% as compared to the previous year; many residents were forced to work as essential employees, putting them at greater risk of contracting coronavirus (Freitas-Tamura et al., 2020).

At this time, some New Yorkers were also enrolled in higher education. The rapid switch from in-person to online or remote learning caused concern about equity and inclusion, particularly for BIPOC students (Maloney & Kim, 2020). In general, students experienced heightened anxiety and stress and have lost job and internship offers (Aucejo et al., 2020; Husky et al., 2020). As a result of COVID, low-income students may be as much as 55% more likely than higher-income peers

to delay graduation (Aucejo et al., 2020). Despite research accumulating about the medical and health impacts of the COVID-19 pandemic, little is known about the socio-emotional impact on BIPOC students during the intense, early months. Some quantitative research indicates that college students experienced higher anxiety, stress, and depression during the early pandemic and that students from low socioeconomic backgrounds or who knew someone with COVID experienced worse psychological impact (Browning et al., 2021; Molock & Parchem, 2021; Son et al., 2020). This evidence also indicates that financial and emotional support for students from higher education institutions may be beneficial, particularly for students of color (Molock & Parchem, 2021). However, due to the quantitative study designs, these data provide little insight into the lived experiences of low-income students of color, in particular. Understanding the impact of public health crises on marginalized groups who suffer disproportionately from health disparities is critical to improving preparedness, strengthening communities, and promoting health. The aim of this retrospective qualitative study was to better understand the experiences of BIPOC students at a Bronx-based public university during the COVID-19 pandemic.

Methods

This study explored the experiences of health sciences students at a Bronx-based public college located in NYC while it was the epicenter of the COVID-19 pandemic. Participants in this study completed a retrospective qualitative final examination in May 2020 at the end of the spring semester at Lehman College, City University of New York.

Setting

Lehman College is the only Bronx-based, Hispanic-serving, four-year public university. It is an anchor institution whose mission and strategic vision are aligned with serving the low-income community in which it is situated (Cruz, 2019). The Bronx has the poorest health outcomes of any New York State county and is home to the poorest congressional district in the nation with a poverty rate of 29.1% (more than double the national average of 13.1%) (United States Census Bureau, n.d.; Freytas-Tamura et al., 2020). Bronx residents were disproportionately impacted by the COVID-19 pandemic with more cases, hospitalizations, and deaths than any other borough (Freytas-Tamura et al., 2020). The Bronx has been cited as one of the worst places for economic mobility, ranking better than only about 5% of counties nationwide (Cruz, 2019).

On the other hand, Lehman College is consistently ranked in the top five US public institutions for the highest rates of economic mobility and was most recently ranked first ("Colleges With the Highest Student-Mobility Rates, 2014," 2018; Espinosa et al., 2018). About 80% of Lehman College students are BIPOC, 50% are from households earning \$30,000 or less, and 41% speak a language other than English at home (Cruz, 2019). About 60% of Lehman College students are from the Bronx (*Lehman College Interactive Fact Book*, n.d.). To serve these students and the surrounding community, Lehman College is home to important support services

such as a small business incubator, a wellness center, and a food pantry. Lehman College also hosts various cultural and arts events.

Participants

Participants in this study were senior health sciences students, majoring in dietetics, foods, and nutrition, and enrolled in a seminar-style course in professional practice. Many students were healthcare workers while enrolled in the Bachelor of Science program for professional advancement to become Registered Dietitian Nutritionists.

Data Collection

The data for this research was collected through a mandatory online final exam. It consisted of 9 open-ended questions, primarily designed to reflectively gauge learning about course objectives during the spring 2020 semester (January–May). Most questions related to how the course content contributed to students' skill development and learning. The two final questions gathered information unrelated to the course material: 1) Is there anything you want me to know about your experience this semester? 2) How are you, really? I haven't asked you this in about a month. I want an update. You *do not* have to share personal information if you don't want to. Demographic information was obtained from enrollment data and was not linked to exam responses to protect participant confidentiality.

The final exam was not initially intended to be used for research; the sole purpose was to assess cumulative knowledge as an alternative to a typical final exam. However, upon reviewing responses, the wealth of information about students' experiences was apparent. Expedited IRB approval was obtained (#2020-0424) to gather and analyze student responses.

Analysis

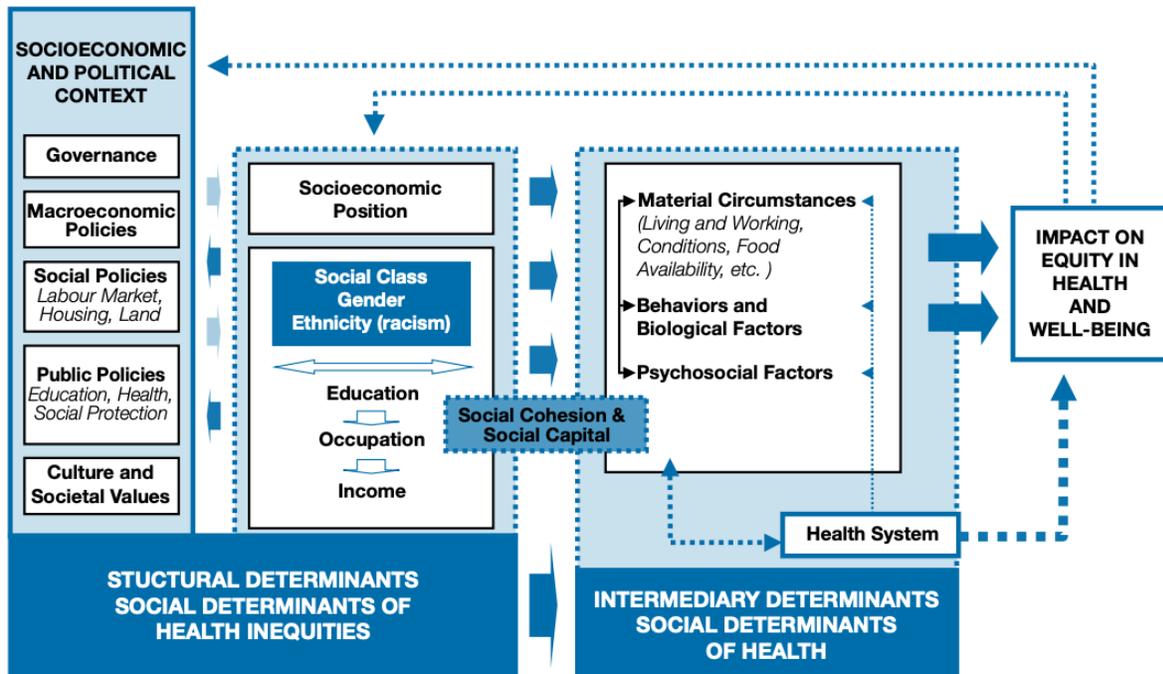
Responses from the two questions were anonymized and exported into Dedoose, an online coding software (Dedoose, 2016). In vivo coding was conducted by the two authors independently. Interrater reliability was analyzed using Cohen's Kappa and found to be .66, indicating substantial agreement (McHugh, 2012). Discrepancies in coding were discussed and a final codebook was generated. Next, both authors (together) conducted a thematic analysis by mapping codes to components of the World Health Organization's Social Determinants of Health (SDH) framework (World Health Organization, 2010).

The SDH framework depicts the social, economic, and political context that influence an individual's socioeconomic position (Figure 1) (World Health Organization, 2010, p. 6). There are both structural and intermediary determinants described within the framework. Structural determinants refer to the "interplay between the socioeconomic-political context, structural mechanisms generating social stratification and the resulting socioeconomic position of individuals" (World Health Organization, 2010, p. 28). As such, structural determinants also include

one’s socioeconomic position in relation to both fixed and modifiable characteristics. Fixed characteristics include social class (e.g., ownership and control of resources), gender, and race/ethnicity, while modifiable characteristics include education, occupation, and income. Intermediary determinants are context specific to individuals and impact individual health outcomes. Social cohesion and social capital are considered “cross cutting” determinants, influencing both structural and intermediary determinants (World Health Organization, 2010, p. 43). For this study, social cohesion and capital refer to the communitarian approach, defined as a “psychosocial mechanism” and “extension of social relationships” (World Health Organization, 2010, p. 41). This study focused on individual-level factors, including structural determinants related to socioeconomic position (education, occupation, and income), intermediary determinants (material circumstance, behaviors, and psychosocial factors) and social cohesion and capital. A policy analysis of other structural determinants is outside the scope of this study.

Figure 1

The World Health Organization’s Social Determinants of Health Framework, used as the conceptual framework for this study (Social Determinants of Health, 2010)



Results

Sample Characteristics

Participants in this study were 75% female, 93% identified as BIPOC, and the mean age was 32.6 years old. Of note, as this study is primarily concerned with BIPOC,

only 2 of the 9 participants who identified as white, solely identified as white, the others identified as two or more races/ethnicities. Several participants were employed as essential health care workers while NYC was the epicenter of the pandemic, and others lost employment. Many students have children and/or care for other family members, which compounded their responsibilities when schools, senior centers, and other social gathering spaces were closed during shelter-in-place orders.

Table 1

Participant demographics (n = 28)

| Demographics | n (%) |
|-----------------------------|--------------|
| Gender | |
| Male | 6 (21.4) |
| Female | 21 (75.0) |
| Not reported | 1 (3.6) |
| Age ^a | |
| 18-24 | 4 (14.3) |
| 25-34 | 16 (57.1) |
| 35-50 | 6 (21.4) |
| Over 50 | 2 (7.1) |
| Race/ethnicity ^b | |
| Asian | 1 (3.6) |
| Black | 12 (42.9) |
| Hispanic | 15 (53.6) |
| White | 9 (32.1) |

^aMean age is 32.6 years old

^bThe total proportion is greater than 100% because participants were able to identify as more than one race/ethnicity.

Several themes emerged from the data, using the social determinants of health framework as a guide to provide context in structural and intermediary determinants of health. Primary themes observed in this study include stress, anxiety, optimism, resilience, and perseverance. Stress, anxiety, and fear were related to loss of employment or income, being an essential healthcare worker, balancing coursework with employment, and managing unstructured time. Within intermediary determinants, the importance of social cohesion and social capital was especially prominent. Each is described in more detail in the following sections. Direct quotes are reported with a participant number indicated at the beginning of each quote (e.g., P1 for participant 1).

Structural Determinants of Health

Participants described stressors related to loss of employment/income and to the stress of being an essential healthcare worker during a viral pandemic. Physical and emotional safety was of concern for many participants who were required to be physically present at work or feared contracting coronavirus in public spaces (i.e., the subway). Others were scared for their safety at work in healthcare settings or for family members with whom they lived. One participant described his stressful experience living in a multi-generational household, with an elderly family member coincidentally visiting when the pandemic hit.

P25: When all this pandemic started, I have to admit I was scared...I was afraid of my grandmother's safety due to my brother and I work[ing] in a hospital. She is visiting from El Salvador, but El Salvador shut the airport a week before her return flight, so she is staying with us until it is safe to go back...It doesn't help the stress levels when co-workers [become] infected with the virus; one of them got intubated for over twenty days... unfortunately, we also lost two staff members to the virus. My stress level...is high but is slowly coming down.

Several participants discussed the challenges working in hospitals and living with the fear of becoming sick or dying from COVID-19. Many spoke of co-workers or family members who developed COVID-19, such as one whose father was "in the hospital...making a slow recovery" (P14) or another who "lost a family member to COVID" (P5). Working in the healthcare field or as essential workers further exacerbated the impact of the pandemic on these students.

Participants frequently described balancing employment with coursework during the final semester of their studies. Students enrolled in the major must earn a high GPA in order to best position themselves to match with a dietetic internship, which is highly competitive and the next step to become a Registered Dietitian Nutritionist. One participant recalled her experience trying to balance employment with coursework:

P5: This semester was going to be very exciting for me, I was waiting to take [a high level, intensive course] for so long. I learned a lot from it but I don't think I was able to focus as hard [after the semester moved online] as I did during in person lecture[s]. My grades are not as high as usual and I'm worried about my GPA. A lot slipped past me as I was working in the hospital and dealing with that fear.

Similarly, many participants discussed experiencing difficulty focusing on or completing coursework. Some did not have internet access or a computer at home. Some were expected to transition coursework and two or more part-time jobs online, while caring for children or older dependents. One participant recalled the cumulative effect of managing competing priorities:

P18: I am actually starting to feel the effects of being quarantined. From the crazy supermarket lines to not really being able to go outside and to living a remote life it has been a bit challenging to keep up with. One of the hardest parts is creating work-life boundaries. Before it was easier because when I was at work I worked, but now work and life are all mixed together. Despite everything, I am still able to keep up with all of schoolwork, work from home for my two jobs, and continue my sports training at home but it has been overwhelming.

The difficulty managing unstructured time while having family around was impactful for many participants. They described the importance of trying to stay busy and the pressure or desire to stay productive.

P8: This semester was different, I had to learn how to adjust to online classes. It was much harder to keep the motivation compared to going to class in person. To be honest I thought it would be cool cause now I can just take classes online, but it is not the same. Students leaving their mics on during class, my family talking loudly and me losing my concentration and so many distractions it was not the same.

Intermediary Determinants of Health

Participants' material circumstances changed greatly at the onset of the pandemic. Many elaborated on safety concerns of public spaces, described above, as a place where they could contract coronavirus. Access to groceries and necessary household goods (e.g., toilet paper), were of concern. These separate conditions (public spaces and household goods) are inexorably linked for those without a car because it meant frequent small trips, sometimes to multiple stores. A participant described their situation as follows: "I do have some concerns about going on the trains...[two] supermarkets have most of the groceries that I need, however paper towels, toilet paper, and cleaning goods still seem to be in short supply [so I also need] to get toilet paper from BJ's and paper towels from Target" (P9).

In addition to these difficult circumstances, participants described many impacts of the pandemic on behaviors and psychosocial factors. The most commonly discussed behaviors were time management/productivity and behaviors related to leisure, recreation, and self-care. A participant described incorporating self-care into her new routine:

P18: Living with multiple family members, it is hard to be at home all the time having to accommodate with everyone's different schedules and routines. Nonetheless, I make sure to stay grounded and focus on the positive and simple little things to be grateful for every day. I have been enjoying different types of self-care practices that I have incorporated into my daily routine such as meditation, gratitude, yoga, listening to podcasts and enjoying tea before bed.

Others discussed cooking more frequently, spending time with family, talking to friends or family, praying or meditating, singing, and/or taking long walks as practices important to relax. Participants described the relief these activities provide, such as “one great benefit of being quarantined is home-cooked meals. Cooking is like my form of therapy and one of the simple joys of life. I truly enjoy playing with different recipes/dishes and being able to eat mindfully everyday” (P18). Another participant, who commuted from a rural town in New York State described their environment: “[my town] is a very quiet, small, farming town but we are glad that the pandemic finds us here, where we can go for walks without seeing many people” (P12).

Participants frequently mentioned stress, anxiety, and fear. Nearly all participants discussed the negative mental health impact of COVID-19, including helplessness, uselessness, anger, depression, devastation, disappointment, and feeling overwhelmed, scared, lost, and out of control.

P22: I could feel the spring coming and things felt better when all of a sudden, we were hit with COVID-19. The restaurant where I work as a server closed, and my world just turned upside down... It is scary to go outside, look around and realize that everything has changed. It feels like I am in a never-ending nightmare and cannot wake up from it. I stopped watching the news because I got sad, stressed, depressed, anxious...My future feels so uncertain, even typing this makes me tear up and it fills me with an emptiness.

Some participants even described anticipating a less stressful time while acknowledging their current mental state. For these participants, faith (as a religious practice or a sense of connectedness to a greater universal force) emerged as important.

P5: I am not doing fine at all, but I keep smiling every day and hoping for a better tomorrow. These months have been tough for me. I lost my job and I also lost a family member due to COVID 19...I also take advantage of this free time to get closer to God and my loved ones. I believe that these things will go away soon, and everything will back to normal. I pray to find a job soon hopefully and pursue my master’s degree.

Despite emotional, physical, and financial stress, most participants privileged positive aspects of their experiences. Participants were optimistic, resilient, and determined to persevere. Many remained hopeful, grateful, and even-keeled. Some even spoke explicitly about their emotional journey.

P6: Honestly, I am exhausted after this semester, but I am relieved and proud of myself for sticking it through to the end. This has been such a whirlwind for all of us, dealing with the effects of the pandemic, and to have successfully completed/ at the end of our classes, I am happy. This has strengthen[ed] my level of resilience as a person, and taught me that life will throw anything at you, so be ready to adjust and adapt to anything. I am

happy I had a chance to get to learn so much from [Dr. A], looking forward to learning much more in the future.

Future-oriented participants described personal goals as something they continued to look forward to and plan for. Some participants described looking forward for opportunities to travel, earning more academically, or gaining employment in nutrition, such as “I am SO READY to WORK!!! I have been applying for job positions...I honestly can’t wait to work and feel productive again” (P15).

Social Cohesion and Social Capital

Participants emphasized the importance of their social networks during the COVID-19 pandemic. Despite the ways that living with family members complicated their schedules, many participants discussed the important role that family and friends played in helping them cope with the impacts of the pandemic. They also discussed support they received from classmates, professors, the college, and university system as a whole.

P23: I want to say this semester has been the most stressful semester during my years of study at Lehman [College]. This virus and the sudden change of everything (moving class online) etc. has made me realize that no matter how hard life gets, there will always be a way out, you just need to find it. The support provided by the [City University of New York] and you professors were heartwarming. This experience has taught me the love you all have for us and for me I want to say thank you and I’m very grateful.

Feeling connected to the academic community and empathy from professors was of particular importance for many participants. Some even described how the support they received expanded their own capacity and compassion: “my empathy for professors and students alike has greatly increased. Our vulnerabilities in many respects are exposed—and yet I see all of us rising to the occasion and finding ways through this” (P4). In more extreme examples, participants explicitly connected relief from depressive symptoms to the support they experienced from faculty.

P14: I am still hurting and restless. Right now, as I type this, it is May 27th, 2020 and the time is 3:40 AM. I can’t sleep and I haven’t eaten properly [for weeks]. I am grateful that both you and [other professors] has heard me out and gave me advice that has caught me from falling into a deeper state of sadness and depression. I have shared everything with you more so [than other professors] and I don’t regret talking about it. I felt more relieved once I typed out my feelings and more ready to return to my schoolwork.

Discussion

This study describes experiences of students (n = 28) at a Bronx, New York-based, Hispanic-serving Institution while NYC was the national epicenter of the COVID-19 pandemic. The SDH framework was used as a lens to better understand how

participants' experiences fit with social determinants of health. As anticipated, there were clear negative impacts of the COVID-19 pandemic in this sample of mostly BIPOC living in the unhealthiest county in New York State. However, researchers did not anticipate the degree to which participants demonstrated optimism, resilience, and perseverance, which contributed to an overall positive mental state.

Several participants were employed as essential healthcare workers in NYC hospitals, a burden assumed disproportionately by BIPOC (van Dorn et al., 2020). Thus, they may have perceived a more intense, continuous threat of COVID-19 than non-essential/non-healthcare workers. Stress and anxiety were almost palpable in how participants described experiences at work, confirming findings indicating high levels of stress and anxiety in college students (and college students of color, in particular) (Molock & Parchem, 2021; Son et al., 2020). In addition, close living quarters in multi-generational households, a phenomenon more common to BIPOC due to systemic racial inequity (Airhihenbuwa et al., 2020), increased the risk of contracting coronavirus and, for participants in this study, made accomplishing tasks at home especially difficult. However, setting goals and staying busy during stressful events like COVID-19 are promoted by leading health organizations as important self-care and stress-reduction techniques (*COVID-19*, 2020, p. 19). Remaining focused on academic achievement likely helped participants in this study create structure for managing time and gave them a sense of productivity while sheltering-in-place. It may have also served to reduce the negative psychosocial impact of being quarantined.

The social support participants derived from the academic community (i.e., peers, faculty) was not anticipated and is not well described in current research. For the purposes of this study, social support is defined as behavioral action between individuals to offer emotional, instrumental, informational, or appraisal help for one individual from the other (Glanz et al., 2015). This is in contrast with student services/support services, which are services provided by colleges and universities to students and are critical for student success (Ciobanu, 2013). In this study, emotional support from the academic community seemed more consequential than the typical academic (i.e., learning) support provided by faculty to students. Social support is important for physical and psychological health and can enhance resiliency to stress (Ozbay et al., 2007). Yet, the role of higher education anchor institutions as a provider of social support is not clear. More commonly, anchor institutions benefit communities by developing and hiring a local workforce, supporting local businesses, enriching local culture with arts and entertainment, contributing to community development, or increasing capacity for child and youth development (Cruz, 2019; Rubin & Rose, 2015). This study is the first to reveal the potential of educational anchor institutions to provide significant and important social support for students.

It is also possible that the academic environment became a critical lever of social support because the entire community moved online in mere days. Other communities of support, like religious or faith-based communities, may not have had tools or resources to transition online and support congregants as quickly as the academic community did. In academics, communication between students and

faculty is expected in face-to-face interaction and incorporating that social interaction when transitioning online has been cited as a best practice, particularly during COVID-19 (Rapanta et al., 2020). That many faculty members already utilize online educational platforms to collaborate or communicate with students may have been an unanticipated benefit to BIPOC. It is likely that continued regular contact with classmates and faculty members was important to participants' reception of social support. Shelter-in-place orders during COVID-19 has been associated with increased anxiety and loneliness (Tull et al., 2020), likely making increased social support on an already established platform even more important. Ultimately, the support provided in academic communities may make educational anchor institutions serving high need communities even more impactful and important during public health crises. The results of this study indicate a need to thoroughly examine the potential for educational institutions to improve social support among BIPOC communities.

Interestingly, income was not frequently discussed by participants in this study and there may be several reasons why not. First, many participants were healthcare workers that continued to earn income during the pandemic. Secondly, many participants were enrolled full-time in order to be eligible for financial aid and may not be the primary income earners in their households. A third reason why income may not have been a focus is because Lehman College offered financial relief for students in the form of monetary stipends to pay bills, rent, or other basic necessities. This support service may have alleviated some of the financial hardship participants experienced.

Finally, participants adopted new behaviors in response to sheltering-in-place and had new emotional experiences that had both positive and negative impacts. Participants described implementing new time management and self-care practices, which likely positively contributed to coping and stress (*COVID-19, 2020*). The negative psychosocial impact of COVID-19 was more anticipated than positive psychosocial impacts because of early warnings from public health officials (Centers for Disease Control (CDC), 2020, p. 19). However, stressors remain of concern, particularly for BIPOC communities, who suffer disproportionately from stress as compared to their white peers (Bulatao & Anderson, 2004). BIPOC experience a greater number of life stressors in general, the response to which is mediated, in part, by socioeconomic status. That is, low-income BIPOC experience more distress than their higher income BIPOC peers (Bulatao & Anderson, 2004). Since access to health care, including mental health services, for BIPOC is more limited than in affluent or whiter communities (World Health Organization, 2010), the negative psychosocial impact of public health crises, like COVID-19, in BIPOC communities warrants more attention.

An unanticipated but important finding of this study are participants' positive attitudes. Resilience, optimism, and perseverance were prevalent throughout participants' responses, which may have a protective effect against the negative impacts of SDH (Palmer et al., 2019). Yet, health promotion initiatives are often focused on reducing risks or exposure rather than promoting resilience (Davis et al., 2005). Examining resiliency has recently been prioritized in BIPOC communities

for its importance to mitigate the adverse effects of SDH on individuals (Palmer et al., 2019). While this study did not pre-suppose any positive psychosocial impacts of the COVID-19 pandemic, it was apparent that most participants experienced these protective factors. Individual resilience related to recovery in combat veterans experiencing post-traumatic stress disorder (Meyer et al., 2019), and community resilience following weather-related disasters (Chan et al., 2015) is fairly common. However, the potential for resilience to be protective during public health crises is not well explored.

BIPOC, in general, demonstrate more optimism than their white peers at all socioeconomic levels (Graham, 2020). While the reasons for this aren't entirely understood, optimism is a strength found in the current study and the potential to capitalize on optimism to promote resilience warrants attention. Future community-based participatory research should measure community resilience using available tools, like the THRIVE toolkit, to assess communities' built environment, social capital, services and institutions, and structural factors (Davis et al., 2005). Doing so may serve to highlight communities' strengths and reveal areas of weakness that can be used to identify and prioritize goals to create lasting structural changes to reduce health disparities (Brown et al., 2019; Davis et al., 2005).

Limitations

Despite having a relatively high number of participants for a qualitative study, the results from the specific population studied are not necessarily generalizable. Participants in this study were undergraduate health sciences students in a dietetics major; other students' experiences may differ. While this study was primarily concerned with the experiences of BIPOC students, two students who identified as white were included (as indicated in the methods section). In addition, the data used for this study was from a final exam measuring course content. A data collection method more focused on gathering information about the impacts of COVID-19 on the student experience may reveal additional information. Future quantitative and qualitative research is needed to better understand the depth, breadth, and generalizability of the findings. Lastly, research that explores the potential impact of institutional or faculty policies to support students and promote engagement and learning would also benefit the student experience at higher education institutions, particularly those that serve low-income BIPOC.

Implications for Practice

This study identifies the potential impact of educational anchor institutions as critical levers of social support for students and found that optimism, resilience, and perseverance may be observed in low-income BIPOC during shelter-in-place orders. The mental health impact of COVID-19 on BIPOC and healthcare student workers (and other essential workers) should be considered by academic institutions when seeking to support students through public health crises using a two-pronged approach addressing institutional policies and pedagogy.

Educational anchor institutions should consider practical supports that students need to ease the burden of remote learning and reduce financial hardship via technology assistance and access, monetary support, mental health services, and academic flexibility. Access to adequate computers and high speed internet are critical to efficient and effective remote learning. Implementing laptop loan programs or providing internet hotspots to students can provide them with the technology they need to support their learning. Particularly for low-income students of color, financial strains that result from decreased opportunities to work as a result of shutdowns and stay-at-home orders can add undue stress. Examples of strategies to provide financial relief include offering small monetary stipends for immediate, basic needs (e.g., housing, food, bills) or forgiving holds on students' accounts (which may typically prevent students from persisting in their educational pathway). Ensuring that financial aid offices are adequately staffed during times of financial strain may improve processing times. Mental health services, like other college services, should be made available to students remotely and flexibly; that is, there should be flexible cancellation policies, pay options (e.g., a sliding scale or free sessions), and/or timing of appointments. Finally, offering academic flexibility through policies such as extended course withdrawal deadlines and/or an option to convert a course from a letter grade to pass/fail are institutional strategies to support student learning.

In addition to institutional supports, individual faculty have opportunities to support students by demonstrating empathy, prioritizing self-care, increasing flexibility, and becoming familiar with best practices in online pedagogy. As found in this study, faculty who demonstrate empathy for their students provide an opportunity for students to articulate how they're doing and to feel like someone is listening. It gives faculty the opportunity to identify students who are struggling and liaise with mental health services, technology assistance, student success services, or other college services and resources. Moreover, faculty should prioritize self-care and talk about stress management with students, as it may be advantageous to forge stronger relationships and to model positive behaviors. In essence, talking about stress and stress management techniques may help normalize and ultimately reduce it. Faculty should also consider ways that they can create flexibility in courses, such as with assignment deadlines (which may be of particular help to students who struggle with reliable internet or who are unexpectedly caring for children who are also learning remotely). Pedagogical practices that promote learning in a remote environment should be considered and adopted. While this may create additional work for faculty to implement (e.g., to record lectures in advance or learn new technology, like VoiceThread), adjusting course delivery methods and expectations for synchronous class time may be more supportive and promote student engagement.

These suggestions, based on the current study, are limited, and there are likely numerous ways that institutions and faculty can support students. There may be opportunity for educational anchor institutions and faculty to expand their capacity and capability to support students in unconventional ways, particularly during unconventional, unprecedented times.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

References

- Airhihenbuwa, C. O., Iwelunmor, J., Munodawafa, D., Ford, C. L., Oni, T., Agyemang, C., Mota, C., Ikuomola, O. B., Simbayi, L., Fallah, M. P., Qian, Z., Makinwa, B., Niang, C., & Okosun, I. (2020). Culture matters in communicating the global response to COVID-19. *Preventing Chronic Disease, 17*. <https://doi.org/10.5888/pcd17.200245>
- Aucejo, E. M., French, J., Ugalde Araya, M. P., & Zafar, B. (2020). The impact of COVID-19 on student experiences and expectations: Evidence from a survey. *Journal of Public Economics, 191*, 104271. <https://doi.org/10.1016/j.jpubeco.2020.104271>
- Brown, A. F., Ma, G. X., Miranda, J., Eng, E., Castille, D., Brockie, T., Jones, P., Airhihenbuwa, C. O., Farhat, T., Zhu, L., & Trinh-Shevrin, C. (2019). Structural interventions to reduce and eliminate health disparities. *American Journal of Public Health, 109*(Suppl 1), S72–S78. <https://doi.org/10.2105/AJPH.2018.304844>
- Browning, M. H. E. M., Larson, L. R., Sharaievska, I., Rigolon, A., McAnirlin, O., Mullenbach, L., Cloutier, S., Vu, T. M., Thomsen, J., Reigner, N., Metcalf, E. C., D'Antonio, A., Helbich, M., Bratman, G. N., & Alvarez, H. O. (2021). Psychological impacts from COVID-19 among university students: Risk factors across seven states in the United States. *PLOS ONE, 16*(1), e0245327. <https://doi.org/10.1371/journal.pone.0245327>
- Bulatao, R. A., & Anderson, N. B. (Eds.). (2004). Stress. In *Understanding racial and ethnic differences in health in late life: A research agenda*. National Academies Press (US). <http://www.ncbi.nlm.nih.gov/books/NBK24685/>
- Centers for Disease Control (CDC). (2020, February 11). *Coronavirus disease 2019 (COVID-19)*. <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/stress-coping/index.html>
- Chan, J., DuBois, B., & Tidball, K. G. (2015). Refuges of local resilience: Community gardens in post-Sandy New York City. *Urban Forestry & Urban Greening, 14*(3), 625–635. <https://doi.org/10.1016/j.ufug.2015.06.005>
- Ciobanu, A. (2013). The role of student services in the improving of student experience in higher education. *Procedia - Social and Behavioral Sciences, 92*, 169–173. <https://doi.org/10.1016/j.sbspro.2013.08.654>

Colleges with the Highest Student-Mobility Rates, 2014. (2018, August 19). *The Chronicle of Higher Education*. <https://www.chronicle.com/article/Colleges-With-the-Highest/244094>

COVID-19 and your mental health. (2020, April 2). Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/mental-health-covid-19/art-20482731>

Cruz, J. L. (2019). Lehman College: A mission anchored in our history. *Journal on Anchor Institutions and Communities*, 2, 4–12.

Davis, R., Cook, D., & Cohen, L. (2005). A community resilience approach to reducing ethnic and racial disparities in health. *American Journal of Public Health*, 95(12), 2168–2173. <https://doi.org/10.2105/AJPH.2004.050146>

Dedoose (7.0.23). (2016). [Computer software]. SocioCultural Research Consultants, LLC. <http://www.dedoose.com>

Espinosa, L. L., Kelchen, R., & Taylor, M. (2018). *Minority serving institutions as engines of upward mobility* (p. 24). American Council on Education, Center for Policy Research and Strategy.

Freytas-Tamura, K. de, Hu, W., Cook, L. R., & Bhaskar, G. (2020, May 26). 'It's the death towers': How the Bronx became New York's virus hot spot. *The New York Times*. <https://www.nytimes.com/2020/05/26/nyregion/bronx-coronavirus-outbreak.html>

Garcia, S. E. (2020, June 17). Where Did BIPOC Come From? *The New York Times*. <https://www.nytimes.com/article/what-is-bipoc.html>

Glanz, K., Rimer, B. K., & Viswanath, K. (Eds.). (2015). *Health behavior: Theory, research, and practice* (5th ed.). Jossey-Bass.

Graham, C. (2020). *Happiness for all?: Unequal hopes and lives in pursuit of the American dream*. Princeton University Press.

Husky, M. M., Kovess-Masfety, V., & Swendsen, J. D. (2020). Stress and anxiety among university students in France during Covid-19 mandatory confinement. *Comprehensive Psychiatry*, 102, 152191. <https://doi.org/10.1016/j.comppsy.2020.152191>

Lehman College Interactive Fact Book. (n.d.). Tableau Software. https://public.tableau.com/views/LehmanCollegeInteractiveFactBook/StartMenu?:embed=y&:showVizHome=no&:host_url=https%3A%2F%2Fpublic.tableau.com%2F&:tabs=yes&:toolbar=no&:animate_transition=yes&:display_stat_image=no&:display_spinner=no&:display_overlay=yes&:display_count=yes&:loadOrderID=0

- Maloney, E. J., & Kim, J. (2020). The challenge of equity in higher education under COVID-19. *Inside Higher Ed*.
<https://www.insidehighered.com/blogs/learning-innovation/challenge-equity-higher-education-under-covid-19>
- McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia Medica*, 22(3), 276–282.
- Meyer, E. C., Kotte, A., Kimbrel, N. A., DeBeer, B. B., Elliott, T. R., Gulliver, S. B., & Morissette, S. B. (2019). Predictors of lower-than-expected posttraumatic symptom severity in war veterans: The influence of personality, self-reported trait resilience, and psychological flexibility. *Behaviour Research and Therapy*, 113, 1–8. <https://doi.org/10.1016/j.brat.2018.12.005>
- Molock, S. D., & Parchem, B. (2021). The impact of COVID-19 on college students from communities of color. *Journal of American College Health: J of ACH*, 1–7. <https://doi.org/10.1080/07448481.2020.1865380>
- Opam, K. (2020, March 24). It's not 'shelter in place': What the new coronavirus restrictions mean. *The New York Times*.
<https://www.nytimes.com/article/what-is-shelter-in-place-coronavirus.html>
- Ozbay, F., Johnson, D. C., Dimoulas, E., Morgan, C. A., Charney, D., & Southwick, S. (2007). Social support and resilience to stress. *Psychiatry (Edgmont)*, 4(5), 35–40.
- Palmer, R. C., Ismond, D., Rodriguez, E. J., & Kaufman, J. S. (2019). Social determinants of health: Future directions for health disparities research. *American Journal of Public Health*, 109(Suppl 1), S70–S71.
<https://doi.org/10.2105/AJPH.2019.304964>
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the covid-19 crisis: Refocusing teacher presence and learning activity. *Postdigital Science and Education*.
<https://doi.org/10.1007/s42438-020-00155-y>
- Rubin, V., & Rose, K. (2015). *Strategies for strengthening anchor institutions' community impact* (p. 11). PolicyLink.
- Social Determinants of Health*. (2010). World Health Organization. License CC BY-NC-SA 3.0 IGO.
- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of covid-19 on college students' mental health in the united states: Interview survey study. *Journal of Medical Internet Research*, 22(9), e21279.
<https://doi.org/10.2196/21279>

- Tull, M. T., Edmonds, K. A., Scamaldo, K. M., Richmond, J. R., Rose, J. P., & Gratz, K. L. (2020). Psychological outcomes associated with stay-at-home orders and the perceived impact of COVID-19 on daily life. *Psychiatry Research, 289*, 113098. <https://doi.org/10.1016/j.psychres.2020.113098>
- United States Census Bureau. (n.d.). *Bronx County, New York*. <https://data.census.gov/cedsci/profile?q=0500000US36005&q=Bronx%20County,%20New%20York>
- van Dorn, A., Cooney, R. E., & Sabin, M. L. (2020). COVID-19 exacerbating inequalities in the US. *Lancet (London, England), 395*(10232), 1243–1244. [https://doi.org/10.1016/S0140-6736\(20\)30893-X](https://doi.org/10.1016/S0140-6736(20)30893-X)
- World Health Organization. (2010). *A conceptual framework for action on the social determinants of health: Debates, policy & practice, case studies*. World Health Organization. Retrieved June 27, 2020, from http://apps.who.int/iris/bitstream/10665/44489/1/9789241500852_eng.pdf