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THE FACULTY AREN'T ALRIGHT: FACULTY STRESS INCREASED OVER THE FIRST YEAR OF COVID-19

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Higher education faculty stress was exacerbated by the pandemic. While COVID-19 was an obvious stressor for anyone in a teaching position, there were a number of other factors that remain relatively unexamined. For instance, many full and part-time faculty members, also known as adjunct faculty, were subject to possible lay-offs and full-time faculty suddenly became heavily relied on to be mentors to their less technologically savvy peers. The American Council on Education found that mental health of faculty and staff was one of the top three most pressing issues for university and college presidents between April 2020 and July 2020 (Turk et al., 2020). However, the messaging being sent by higher education administrative officials reflected the exact opposite, with negative consequences on the mental health of its faculty members. It would be expected that perceived stress, “feelings or thoughts that an individual has about how much stress they are under at a given point in time or over a given time period” (Phillips, 2013, p. 1453), would increase for both full-time and part-time faculty members during the first year of the COVID-19 pandemic. Faculty members were hoping for reassurances from their higher education institutional leadership, but instead received uncertain or negative communications that further contributed to their perceived stress.

Financial Insecurity of Higher Education

Upon the emergence of COVID-19 in the United States, higher education institutions across the country started to consider the pandemic's impact on their budgets. News of budget cuts that would affect “non-essential” faculty (mainly adjunct faculty) and staff began to surface, and concerns of job security were heightened. For example, the provost's office at the University of Massachusetts at Boston (UMass-Boston) sent a memo to some of their adjunct faculty members in May 2020 telling them that they would not be reappointed for the fall semester, with the understanding that plans could change over the summer, leaving many adjunct faculty members in a state of limbo (Pettit, 2020). UMass-Boston was not the only university to do this. Missouri Western State University laid off 31% of their adjunct faculty and Ohio University also announced the elimination of instructor positions (Pettit, 2020).

The initial budgetary concerns and announcements that began in April 2020 continued over the next six months. By October 2020, the higher education workforce had decreased by 7% since the COVID-19 pandemic began in the U.S. Between February 2020 and August 2020 there were 337,000 fewer higher education employees, which is the fastest decrease that higher education has ever experienced (Bauman, 2021). During this same time, higher education faculty and staff were facing increasingly blunt austerity measures to shed enormous amounts of money from the budget. For example, the University of Akron cut millions from their personnel budget and many other institutions have furloughed, laid off, and not renewed contracts that many adjunct faculty depended on (Bauman, 2021). By October 2020, it was estimated that at a national level, higher education institutions in the United States had reported over \$120 billion in budget deficits due to the pandemic (Hubler, 2020). By April 2021, higher education institutions had shed 570,000 employees, a 69% increase from October 2020. Simply put, higher education faculty were continuing to be

laid off due to the pandemic and adjunct faculty experienced the largest impact. At this point, the pandemic had been raging in the U.S. for a year and the higher education workforce was reduced to levels not seen since February 2008 (Bauman, 2021).

Pre-Pandemic Faculty Engagement

Even before the pandemic, faculty were already experiencing negative outcomes associated with well-being at a national level. The Faculty Survey of Student Engagement (FSSE) is an annual assessment of faculty life and engagement in higher education, which includes stress and well-being. In 2019, the survey found that research responsibilities and lack of adequate sleep or inability to sleep well were the most difficult aspects of faculty life, and stress was the biggest impediment to success followed by anxiety. Feelings interfering with the ability to succeed also had a moderate-to-strong relationship with one another, with the strongest relationship between feelings of depression and feelings of anxiety (Brandon & BrckaLorenz, 2021). Sorgen et al. (2020) found similar results when they studied the perceived stress on work-related quality of life among 133 full-time, tenured faculty prior to the pandemic. They found that stress was the main determinant of work-related quality of life, which was significantly higher for female faculty than male faculty members (Sorgen et al., 2020).

The pandemic has exacerbated issues related to faculty well-being for full-time and part-time faculty according to many national surveys. The Chronicle of Higher Education conducted a survey in October 2020 and collected data from 1,122 professors at colleges and universities in the United States focused on the impact of COVID-19 on faculty well-being. They found that faculty had been experiencing higher levels of stress, hopelessness, anger, and grief due to the pandemic, heavy workloads, and a deteriorating work-life balance (Tugend, 2020). Faculty with children and other caregiving responsibilities were struggling with daycare, school, and senior centers, which disproportionately impacted women and Black, Indigenous, and people of color (BIPOC) (Tugend, 2020). In spite of the negative well-being outcomes that faculty were experiencing at a national level, very few felt supported by their institutions and had little confidence in actions to combat those issues (Tugend, 2020).

Although faculty were already feeling a sense of stress and anxiety from the pandemic, results from the FSSE (2020) indicated their everlasting commitment to their students. A majority of faculty reported that providing academic support, support for well-being, support for social activities, and helping students manage their non-academic responsibilities remained a high concern that should be provided by their higher education institution. In fact, more full-time faculty felt they were doing a better job than their institution at providing these supports and helping students adapt to the COVID-19 pandemic; adjunct faculty felt they were doing just as good of a job (Faculty Survey of Student Engagement, 2020). The ability to succeed, work well on difficult tasks, manage difficult work relationships, and focus on non-work-related items interfered with overall wellness in all academic ranks. However, the survey did not distinguish between full-time and part-time faculty. The survey also does not address part-time faculty who have additional employment (Faculty Survey of Student Engagement, 2020).

In addition to their university responsibilities, the COVID-19 pandemic introduced a new reality to many faculty: suddenly teaching, researching, serving, and mentoring wholly online and from home (and continuing to work from home throughout the year). The sudden shift to working from home increased stress and anxiety among all faculty members, regardless of if they had already had experience in working from home before the pandemic (Foster et al., 2022). Research suggests that pandemic “work-life” balance has caused significant stress on faculty, and many have considered leaving the academy all together. Matulevicius et al. (2021) distributed a survey to 1,186 faculty members during September 2020 and found that 23% considered leaving their current positions and 29% considered reducing their hours to part-time employment. Although the researchers only distinguished faculty ranks as instructor, assistant professor, associate professor, professor, faculty associate, or other/prefer not to say, findings indicated that women and women with children were the groups most likely to consider leaving their positions or reducing their hours to part-time work (Matulevicius et al., 2021). Boyer-Davis (2020) investigated the stress of working with technology (“technostress”) among 307 full-time faculty members and found that their stress levels were significantly higher during the pandemic than before, however, part-time faculty were not included in the sample. It is important to note that prior to March 2020, online learning platforms were not the main form of teaching at many higher education institutions in the U.S. In fact, online educational platforms saw a 161% increase in users by November 2020 (Hess, 2021). Brooks et al. (2021) conducted a qualitative study for which they interviewed 12 faculty members in their Master of Health Services Administration (MHSA) program and found that COVID-19 impacted several areas of their teaching. However, the researchers also found that although there was an increased responsibility associated with teaching online and additional communications with students, they had adapted well to the online modality through lessons learned. For example, the study participants learned that setting expectations in the online environment was

important to student engagement. Among the sample, eight (66.7%) faculty members were practitioners in the field of health administration and perceived stress was not measured (Brooks et al., 2021). The previously mentioned studies measured the impact of the COVID-19 pandemic on faculty members within higher education. Unfortunately, only one of the studies included part-time faculty in their sample, which measured their overall concerns with converting to the online modality. None of the studies investigated the perceived stress among full-time and part-time faculty throughout the pandemic.

COVID-19 and the City University of New York

In academic year 2019-2020, the City University of New York (CUNY) relied on 12,288 part-time faculty members to teach a majority of its courses, almost double the amount of full-time faculty that were employed (Elsen-Rooney, 2020; The City University of New York, 2019). In 2018, part-time faculty in CUNY, who were generally over the age of 40, earned less than \$3,000 per course. For those adjuncts who were the sole earners in their household, 65% made less than \$50,000 per year (Almanac, 2019). In March 2020, shelter-in-place orders were implemented due to the COVID-19 pandemic interrupting the normal operation of businesses and organizations, including CUNY institutions, as New York City became the epicenter of the pandemic (Airhihenbuwa et al., 2020; van Dorn et al., 2020). These sudden closures forced CUNY faculty to quickly convert all currently taught courses to an online format, forcing a scramble into unfamiliar territory. This was consistent with concerns at a national level where many full-time faculty members were holding office hours, not for their students, but for their adjunct faculty who were not familiar with teaching online. Full-time and part-time faculty members were insecure in suddenly converting to online teaching, but many would risk being in public than risk not being ready to teach their classes, especially adjunct faculty who make much less than their full-time counterparts (McMurtrie, 2020; Zahneis, 2020).

Like other higher education institutions, CUNY also announced plans to lay off hundreds of adjunct faculty members (Elsen-Rooney, 2020; Pettit, 2020). According to Elsen-Rooney (2020), one CUNY provost sent a memo on May 8, 2020 stating “the school plans to notify the 450 adjuncts who are hired on a semester-by-semester basis they won’t be reappointed next year” (Elsen-Rooney, 2020, para. 3). In November 2020, the New York City Council’s Committee on Civil Service and Labor and Committee on Higher Education met to discuss the over 3,000 laid off faculty members that had occurred earlier in the year. The response from CUNY was that there was a 5.1% drop in enrollment, which heavily impacted the budget. Although CUNY received \$250 million in federal funding from the CARES Act, there were no plans to utilize some of that for part-time instructors. In fact, the then Governor Cuomo withheld \$2 billion from CUNY’s budget the month before (Leddy, 2020). Full-time and part-time faculty would continue to witness these types of discussions throughout the next six months.

By January 2021, the PSC (the Professional Staff Congress, the union representing CUNY faculty and staff) continued to fight back for those who were being threatened to be furloughed by arguing that CUNY faculty and staff should have the same protections as fast food workers (e.g., requiring employers to cite seniority and probationary periods for furloughs due to economic reasons) rather than being “at will” (Wangerin & Kagan, 2021). For many adjunct faculty members who subsist on precarious salaried appointments, the news of possible lay-offs understandably added to an already stressful situation during unprecedented times.

The COVID-19 pandemic only added to the existing inequality among its faculty, and the relationship between CUNY and faculty and staff was already tumultuous and untrustworthy. Prior to the pandemic, a tentative agreement between the PSC union and CUNY agreed on a ratification of their original 2017-2023 contract in October 2019 that would raise full-time and part-time faculty salaries by more than 10% over the next five years at 2% annual increments (Knudson, 2019). The ratification came after the original contract raises were delayed until 2019, in which faculty received retroactive pay from the first two years. In December 2020, CUNY’s budget concerns prompted them to quietly ignore their contractual obligations resulting in a delay of the scheduled 2% salary increases, which was supposed to have gone into effect the month before (O’Connell-Domenech, 2020). The delays in fulfilling the contractual agreement by CUNY and inconsistent messaging to their faculty created uncertainty. To better understand the impact of the COVID-19 pandemic and communications from the university on the faculty experiences at a four-year, urban, Hispanic-serving institution (HSI), the researchers distributed a survey to explore the perceived stress and other concerns among both full-time and part-time faculty.

Purpose of the Study

The purpose of this study was to examine the perceived stress and concerns among full-time and part-time faculty members, and the variables that may have contributed to them, during the first year of the COVID-19 pandemic at a

public higher education institution in the CUNY system. This research study aimed to answer the following research questions:

1. How did perceived stress change among full-time faculty members during the first year of the COVID-19 pandemic?
2. Did perceived stress increase among part-time faculty members during the first year of the COVID-19 pandemic?
3. How did concerns related to the COVID-19 pandemic change among full-time and part-time faculty members during the first year?
4. Did concerns related to full-time and part-time faculty responsibilities increase during the first year of the COVID-19 pandemic?

Methods

Research Site and Participants

This research study took place at a four-year degree granting HSI in the CUNY system between April 2020-April 2021. There were approximately 381 (37%) full-time and 639 (63%) part-time faculty at the college in AY 2020-2021. Upon approval by the CUNY institutional review board (IRB), the survey instrument was sent out by the researchers to all faculty, full-time and part-time, using the previously established faculty list serve on the first day of April 2020, October 2020, and April 2021. A follow-up email was sent out to the same faculty list serve on the 15th of each month that data was collected. The survey was open for the entire month at each timepoint.

Perceived Stress Scale (PSS-12)

Multiple and validated versions of the Perceived Stress Scale (PSS) have been used to measure one's perceived stress within the past month. The original version, the PSS-14, is a 14-item scale with seven positively worded and seven negatively worded items (Cohen et al., 1983). After removing four items, Cohen & Williamson (1988) introduced a 10-item scale (PSS-10) and a 4-item scale (PSS-4) to measure perceived stress more quickly. As there have been various iterations of the PSS, the PSS-10 has shown to be the most reliable (Chiu et al., 2016; Ezzati et al., 2014; Taylor, 2015). The Impact of Events Scale (IES) has been used to measure stress, retrospectively, from a specific life event such as cancer (Salsman et al., 2015), war (Morina et al., 2013), motor vehicle accidents (Beck et al., 2008), and even the H1N1 pandemic (Matsuishi et al., 2012). In order to measure perceived stress in full-time and part-time faculty members during a sudden health crisis, such as COVID-19, the researchers added modified questions from the IES to create a revised PSS-12, which has also been validated (see Eubank, J.M. et al., 2021).

Faculty Concerns

As the pandemic occurred suddenly, faculty, including the researchers, experienced several concerns regarding its impact on their personal and professional lives. A list of questions were developed based on these concerns related to employment and income (pandemic concerns) and to teaching online (faculty concerns). Participants were asked about their level of concern regarding the pandemic and its impact on their teaching (i.e., confidence in their ability to still teach and perform other responsibilities at the same level as before the pandemic). A total of five pandemic concern items were developed by the researchers and included statements such as, "If I will be able to get enough food for myself/my family," "If I will be able to earn enough income to support myself and my family," and "If I will be able to get enough physical activity." Participants responded to each pandemic concern variable by choosing "Never," "Rarely," "Sometimes," "Frequently," or "Always." Participants also responded to six faculty concern items about course modality and delivery such as, "I will be able to teach my course," "I will be able to teach my course with the same rigor and quality as before the pandemic," and "I will be able to give each student the time and attention they deserve." Participants responded to each faculty concern variable by choosing "Not at all Confident," "A Little Confident," "Somewhat Confident," "Pretty Confident," or "Very Confident." Participants also provided demographic information such as gender, race, ethnicity, geographic location, and faculty status (full-time vs. part-time).

Statistical Analysis

Descriptive statistics (cell counts and percentages) were used to summarize demographic variables at each timepoint (April 2020, October 2020, and April 2021) for the combined sample of full-time and part-time faculty. PSS-12

variables (PSS total, PSS helplessness subtotal, PSS self-efficacy subtotal), pandemic concern variables, and faculty concern variables were compared across timepoints using 1-way analysis of variance (ANOVA) model applied to the combined sample. Full-time-specific and part-time-specific trends over time in these variables were explored using a 2-way ANOVA model with a time by full-time status interaction term. P-values < 0.05 indicated statistical significance.

Results

There was a total of 191 (19.1%) responses in April 2020, 148 (14.8%) responses in October 2020, and 147 (14.7%) responses in April 2021. Table 1.0 contains further information regarding participant demographics below.

Table 1.0
Full-time and Part-time Faculty Demographics

	April 2020 n=191 (%)	Oct 2020 n=148 (%)	April 2021 n=147 (%)
Gender			
Male	51 (26.7)	36 (24.4)	33 (22.4)
Female	111 (58.1)	72 (48.6)	80 (54.5)
Non-binary	3 (1.6)	0 (0)	1 (0.7)
No Response	26 (13.6)	40 (27)	33 (22.4)
Age			
25-45	59 (31)	19 (12.8)	28 (19)
46-55	35 (18.3)	36 (24.3)	26 (17.7)
56-65	31 (16.2)	21 (14.2)	30 (20.4)
66-80	24 (12.6)	16 (10.8)	23 (15.6)
No Response	42 (22)	56 (37.8)	40 (27.2)
Race			
African/African American	23 (12)	14 (9.5)	15 (10.2)
Afro-Caribbean or Afro-Latinx	8 (4.2)	5 (3.4)	3 (2)
Central or South American Latinx	4 (2.1)	2 (1.4)	5 (3.4)
North American or Caribbean Latinx	13 (6.8)	2 (1.4)	8 (5.4)
Native American/Alaskan Native	0 (0)	1 (0.7)	0 (0)
Middle Eastern	3 (1.6)	2 (1.4)	0 (0)
Indian/Other nation in Indian subcontinent	3 (1.6)	2 (1.4)	3 (2)
Pacific Islander	0 (0)	0 (0)	2 (1.4)
East Asian	3 (1.6)	0 (0)	1 (0.7)
White	90 (47.1)	65 (43.9)	68 (46.3)
Two or more	7 (3.7)	5 (3.4)	9 (6.1)
No response	37 (19.4)	50 (33.8)	33 (22.4)
Person of Color			
Yes	52 (27.2)	29 (19.6)	40 (27.2)
No	104 (54.5)	72 (48.6)	73 (49.7)
No Response	35 (18.3)	47 (31.8)	34 (23.1)
Employment status			
Part time	76 (39.8)	56 (37.8)	49 (33.3)
Full time	100 (52.4)	59 (39.9)	66 (44.9)
No Response	15 (7.9)	33 (22.3)	32 (21.8)

Perceived Stress Scale

PSS variables tended to increase, on average, over time, indicating higher stress at later timepoints. The PSS total mean scores for all participants were 21.74 (8.63 SD) in April 2020, 24.08 (6.13 SD) in October 2020 ($p<0.006$), and 25.23 (5.88 SD) in April 2021 ($p<0.001$). Overall average stress for all faculty increased by 11% between April 2020 and October 2020, and increased again by 5% between October 2020 and April 2021, resulting in an increase of 16% over the first year of the pandemic. The PSS Helplessness and PSS Self-efficacy average scores also increased for all participants. The PSS Helplessness mean scores for all participants were 16.69 (7.24 SD) in April 2020, 16.94 (6.59 SD) in October 2020, and 20.35 (6.65 SD) in April 2021 ($p<0.001$). PSS Helplessness mean scores rose by 22% from April 2020 to April 2021. The PSS Self-efficacy mean scores for all participants were 6.96 (2.37 SD) in April 2020, 7.91 (2.49 SD) in October 2020 ($p<0.001$), and 10.10 (2.28 SD) in April 2021 ($p<0.001$), an increase of 45% from April 2020 to April 2021. Table 2.0 contains the PSS scores for the total sample below.

Table 2.0
Full-time and Part-time Faculty PSS Scores

PSS Variable	Faculty Status	April 2020 Mean (SD)	October 2020 Mean (SD)	April 2021 Mean (SD)
PSS-12	Total	21.74 (8.63)	24.08 (6.13)**	25.23 (5.88)***
	Full-time	21.58 (8.64)	24.83 (5.31)	25.47 (5.94)
	Part-time	22.05 (8.33)	23.25 (7.00)	24.92 (6.15)
PSS Helplessness	Total	16.69 (7.24)	16.94 (6.59)	20.35 (6.65)***
	Full-time	16.67 (7.21)	17.26 (6.36)	20.92 (6.59)
	Part-time	16.75 (6.93)	16.72 (6.90)	19.75 (7.01)
PSS Self Efficacy	Total	6.96 (2.37)	7.91 (2.49)***	10.10 (2.28)***
	Full-time	7.13 (2.21)	7.49 (2.30)	10.43 (2.39)
	Part-time	6.68 (2.37)	8.48 (2.61)	9.81 (1.94)

Note: p-value indicates statistical significance in comparison to April 2020

* $p<0.05$

** $p<0.01$

*** $p<0.001$

PSS variables tended to show similar stress, on average, over time across full-time and part-time faculty. The PSS total mean scores for participants who identified as full-time faculty were 21.58 (8.64 SD) in April 2020, 24.83 (5.31 SD) in October 2020 ($p<0.01$), and 25.47 (5.94 SD) in April 2021 ($p<0.01$) while participants who identified as part-time faculty were 22.05 (8.33 SD) in April 2020, 23.25 (7.00 SD) in October 2020, and 24.92 (6.15 SD) in April 2021 ($p<0.05$). The average total perceived stress increased for both full-time (18%) and part-time (13%) faculty from April 2020 to April 2021. The PSS Helplessness mean scores for participants who identified as full-time faculty were 16.67 (7.21 SD) in April 2020, 17.26 (6.36 SD) in October 2020, and 20.92 (6.59 SD) in April 2021 ($p<0.001$) while participants who identified as part-time faculty were 16.75 (6.93 SD) in April 2020, 16.72 (6.90 SD) in October 2020, and 19.75 (7.01 SD) in April 2021 ($p<0.05$). The average helplessness scores increased for both full-time (25%) and part-time (18%) faculty from April 2020 to April 2021. The PSS Self-efficacy mean scores for participants who identified as full-time faculty were 7.13 (2.21 SD) in April 2020, 7.49 (2.30 SD) in October 2020, and 10.43 (2.39 SD) in April 2021 ($p<0.001$) while participants who identified as part-time faculty were 6.68 (2.37 SD) in April 2020, 8.48 (2.61 SD) in October 2020 ($p<0.001$), and 9.81 (1.94 SD) in April 2021 ($p<0.001$). The average self-efficacy scores increased for both full-time (46%) and part-time (47%) faculty from April 2020 to April 2021. See Table 2.0 for a full description of the PSS-12 scores. See Figure 1.0, 2.0, and 3.0 below for further illustration of increases in PSS scores among full-time and part-time faculty. Higher scores mean more stress.

Figure 1.0
Total Perceived Stress Scores of Full-time and Part-time Faculty

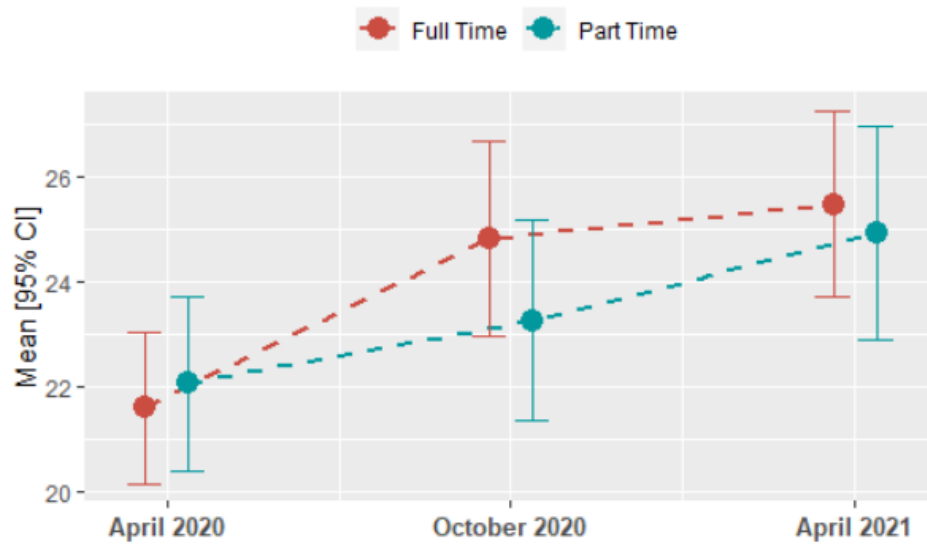


Figure 2.0
Total Helplessness Scores of Full-time and Part-time Faculty

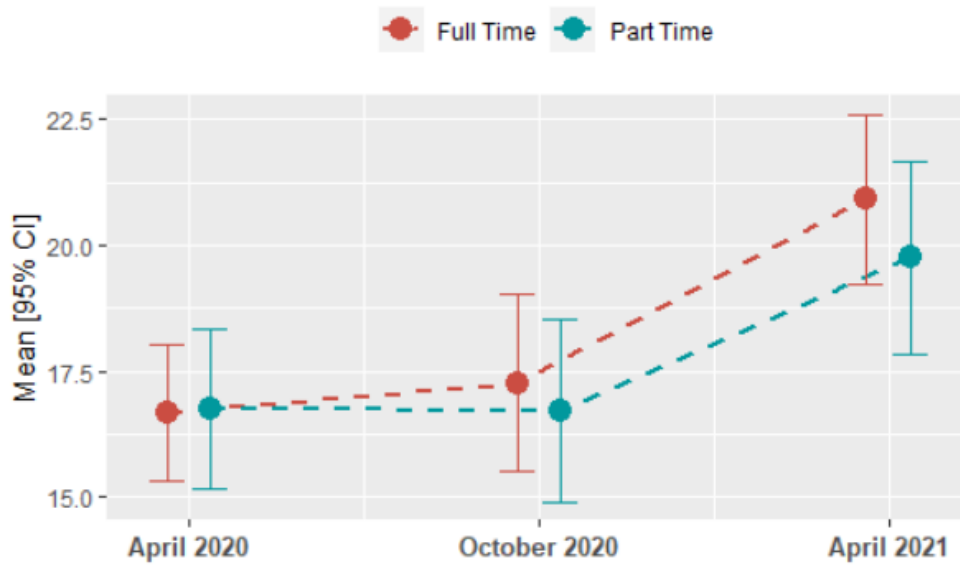
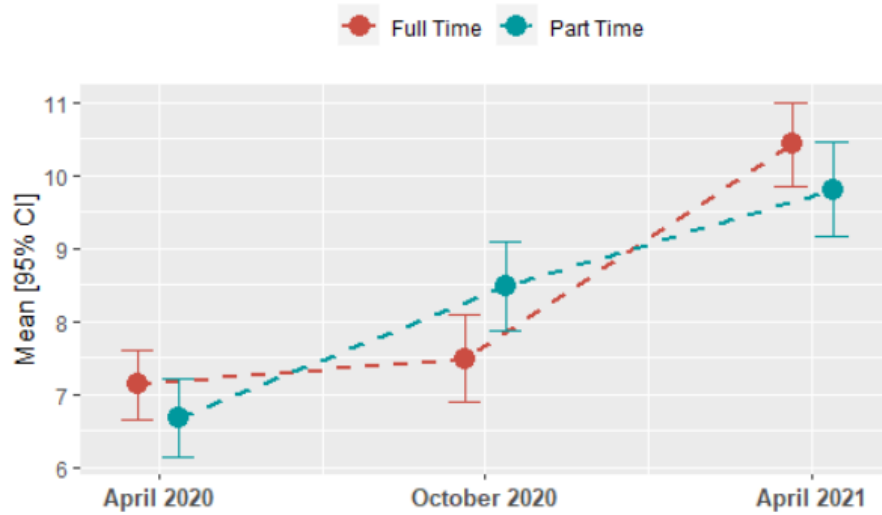


Figure 3.0
Total Self-efficacy Scores of Full-time and Part-time Faculty



Pandemic Concerns

Participants responded to several concerns regarding the pandemic and their role as a faculty member. Many concerns related to the pandemic decreased, on average, over time for both full-time and part-time faculty, indicating less concern at later. The pandemic concerns also showed greater concern among part-time faculty than full-time faculty in April 2020, October 2020, and April 2021 when it came to obtaining food for themselves and their families, earning enough income, and paying for basic necessities. Table 3.0 contains the pandemic concern scores for the total sample below.

Table 3.0
Pandemic Concerns by Time

Pandemic Concerns	Faculty Status	April 2020 Mean (SD)	October 2020 Mean (SD)	April 2021 Mean (SD)
If I will be able to get enough food for myself/my family	Total	2.45 (1.35)	1.62 (0.92)***	1.75 (1.18)***
	Full-time	2.27 (1.25)	1.6 (0.98)***	1.85 (1.18)*
	Part-time	2.71 (1.44)	1.62 (0.84)***	1.65 (1.22)***
If I will be able to earn enough income to support myself and my family	Total	2.48 (1.39)	2.20 (1.14)	1.89 (1.20)***
	Full-time	2.17 (1.29)	1.97 (1.15)	1.73 (1.12)*
	Part-time	2.85 (1.45)	2.45 (1.09)	2.14 (1.29)**
If I will be able get physical activity	Total	2.88 (1.26)	2.92 (1.11)	2.73 (1.16)
	Full-time	2.97 (1.27)	2.86 (1.16)	2.55 (1.15)*
	Part-time	2.76 (1.23)	3 (1.06)	2.92 (1.11)
If I will be able to pay	Total	2.36 (1.37)	1.98 (1.15)*	1.77 (1.22)***

Pandemic Concerns	Faculty Status	April 2020 Mean (SD)	October 2020 Mean (SD)	April 2021 Mean (SD)
for basic necessities (e.g., rent, internet or phone service)	Full-time	2.05 (1.30)	1.74 (1.09)	1.72 (1.21)
	Part-time	2.73 (1.37)	2.21 (1.16)*	1.88 (1.27)***
If I will be able to obtain household items (e.g., toilet paper)	Total	2.95 (1.21)	2.43 (1.06)***	2.45 (1.07)***
	Full-time	2.89 (1.21)	2.5 (1.03)*	2.46 (1.05)*
	Part-time	3.07 (1.20)	2.36 (1.05)***	2.43 (1.14)**

Note: p-value indicates statistical significance in comparison to April 2020

*p<0.05

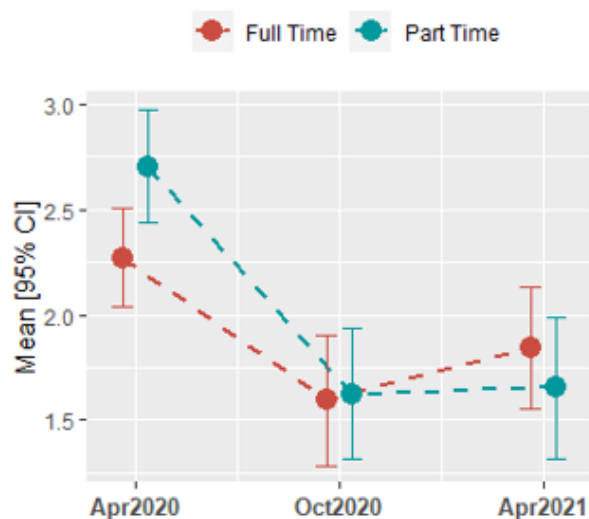
**p<0.01

***p<0.001

At the beginning of the pandemic, faculty members were concerned about being able to secure enough food for themselves and their families (i.e., having income sufficient to buy groceries, grocery stores being well stocked) (Pandemic Concern 1) in April 2020 with an average score of 2.45 (1.35 SD). Their average scores decreased to 1.62 (0.92 SD) in October 2020 ($p<0.001$) but then rose slightly again to 1.75 (1.18 SD) in April 2021 ($p<0.001$). Both full-time and part-time faculty followed this trend of a high concern in April 2020, decreased in October 2020, then increased slightly in April 2021. The average scores for full-time faculty were 2.27 (1.25 SD) in April 2020, 1.6 (0.98 SD) in October 2020 ($p<0.001$), and 1.85 (1.18 SD) in April 2021 ($p<0.05$) while average scores for part-time faculty were 2.71 (1.44 SD) in April 2020, 1.62 (0.84 SD) in October 2020 ($p<0.001$), and 1.65 (1.22 SD) in April 2021 ($p<0.001$). There was a slight increase in concern scores in April 2021 about being able to get enough food for themselves and their families, but they did not surpass their initial score in April 2020. Although both groups, full-time and part-time faculty, followed similar trends throughout the first year, part-time faculty scored higher in April 2020 than full-time faculty. See Figure 4.0 below for further illustration of decreases in Pandemic Concern 1 scores among full-time and part-time faculty. Higher scores mean more concern.

Figure 4.0

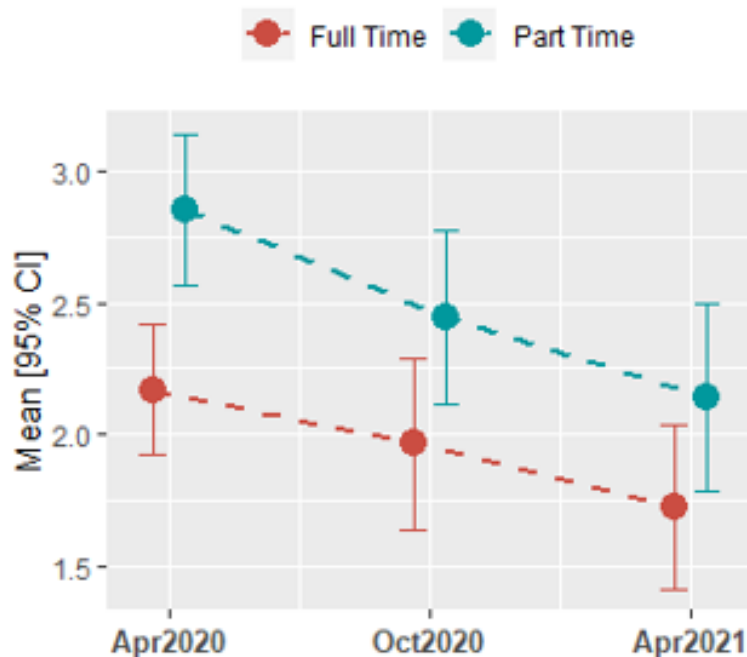
Total Pandemic Concern 1 Scores of Full-time and Part-time Faculty



Concerns related to being able to earn enough income (Pandemic Concern 2) also decreased for the total sample, and for both groups over the first year of the pandemic, possibly due to the limited austerity measures taken by CUNY. Contrary to the concern of being able to get enough food for themselves and their families, both full-time and part-time faculty's concern about earning enough income averaged 2.48 (1.39 SD) in April 2020 then decreased to 2.20

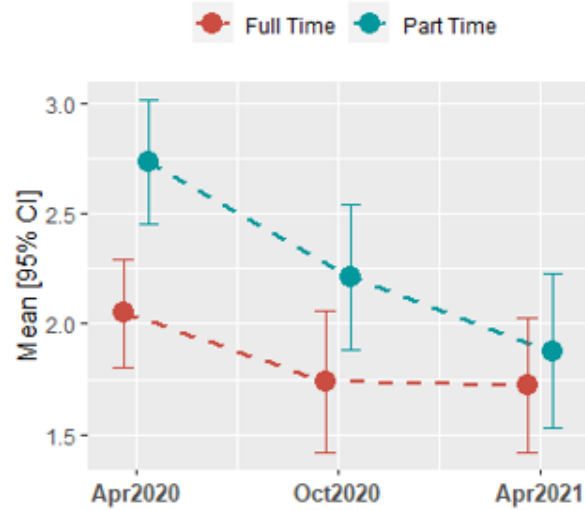
(1.14 SD) in October 2020, then decreased even more to 1.89 (1.20 SD) in April 2021 ($p < 0.001$). Although both groups, full-time and part-time faculty, followed similar trends, part-time faculty scored higher than full-time faculty during all three time points throughout the first year of the pandemic. The average scores for full-time faculty were 2.17 (1.29 SD) in April 2020, 1.97 (1.15 SD) in October 2020, and 1.73 (1.12 SD) in April 2021 ($p < 0.05$) while average scores for part-time faculty were 2.85 (1.45 SD) in April 2020, 2.45 (1.09 SD) in October 2020, and 2.14 (1.29 SD) in April 2021 ($p < 0.01$). See Figure 5.0 below for further illustration of decreases in Pandemic Concern 2 scores among full-time and part-time faculty. Higher scores mean more concern.

Figure 5.0
Total Pandemic Concern 2 Scores of Full-time and Part-time Faculty



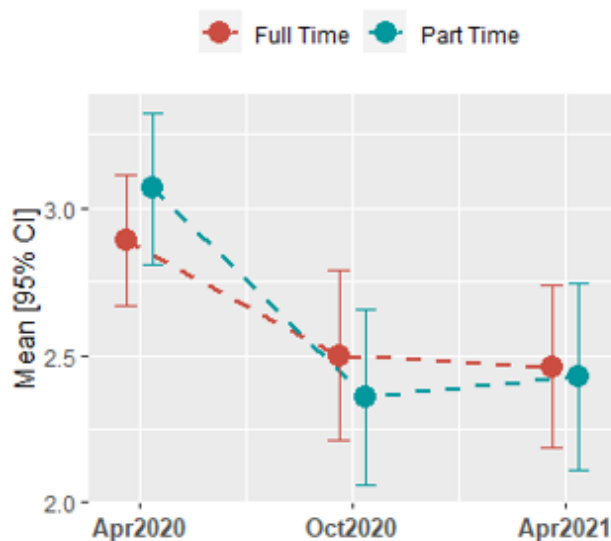
Both full-time and part-time faculty members had a high concern related to being able to pay for basic necessities such as rent, internet, or phone services (Pandemic Concern 4) in April 2020 with an average score of 2.36 (1.37 SD). Both full-time and part-time faculty scores decreased to 1.98 (1.15 SD) in October 2020 ($p < 0.05$), then decreased even more to 1.77 (1.22 SD) in April 2021 ($p < 0.001$). Although both groups, full-time and part-time faculty, followed similar trends, part-time faculty scored higher than full-time faculty during all three time points throughout the first year of the pandemic. The average scores for full-time faculty were 2.05 (1.30 SD) in April 2020, 1.74 (1.09 SD) in October 2020, and 1.72 (1.21 SD) in April 2021 while average scores for part-time faculty were 2.73 (1.37 SD) in April 2020, 2.21 (1.16 SD) in October 2020 ($p < 0.05$), and 1.88 (1.27 SD) in April 2021 ($p < 0.001$). See Figure 6.0 below for further illustration of decreases in Pandemic Concern 4 scores among full-time and part-time faculty. Higher scores mean more concern.

Figure 6.0
Total Pandemic Concern 4 Scores of Full-time and Part-time Faculty



Full-time and part-time faculty members also had a high concern related to being able to obtain household items (e.g., toilet paper) (Pandemic Concern 5) in April 2020 with a score of 2.95 (1.21 SD), then that concern decreased to 2.43 (1.06 SD) in October 2020 ($p < 0.001$) and remained at 2.45 (1.07 SD) in April 2021 ($p < 0.001$). This was similar to public concerns at the national level when grocery stores were only able to stock items, such as toilet paper, for little more than one week, and families tended to require more household items than normal due to stay-at-home orders (Moore, 2020). The average scores for full-time faculty were 2.89 (1.21 SD) in April 2020, 2.5 (1.03 SD) in October 2020 ($p < 0.05$), and 2.46 (1.05 SD) in April 2021 ($p < 0.05$) while part-time faculty were 3.07 (1.20 SD) in April 2020, 2.36 (1.05 SD) in October 2020 ($p < 0.001$), and 2.43 (1.14 SD) in April 2021 ($p < 0.01$). See Figure 7.0 below for further illustration of decreases in Pandemic Concern 4 scores among full-time and part-time faculty. Higher scores mean more concern.

Figure 7.0
Total Pandemic Concern 5 Scores of Full-time and Part-time Faculty



Faculty Concerns

When asked about their confidence in the faculty concern statements, faculty members seemed to become more confident as the first year of the pandemic progressed. Meaning that faculty concern variables, higher scores equal less concern, tended to show less concern at later timepoints. Most notably, faculty confidence scores improved on the statement regarding the concern of being able to teach their course with the same rigor and quality as before the pandemic (Faculty Concern 2). The average scores for Full-time and part-time faculty were 2.85 (1.36 SD) in April 2020, 3.53 (1.23 SD) in October 2020 ($p<0.001$), and 3.52 (1.35 SD) in April 2021 ($p<0.001$). Average scores for full-time faculty were 2.84 (1.39 SD) in April 2020, 3.52 (1.15 SD) in October 2020 ($p<0.01$), and 3.56 (1.39 SD) in April 2021 ($p<0.01$) while part-time faculty scores were 2.82 (1.37 SD) in April 2020, 3.59 (1.30 SD) in October 2020 ($p<0.01$), and 3.53 (1.29 SD) in April 2021 ($p<0.01$). Both groups, full-time and part-time faculty, reported similar scores in all three time points throughout the first year of the pandemic. Table 4.0 contains the faculty concern scores for the total sample below.

Table 4.0
Faculty Concerns by Time

Faculty Concerns	Faculty Status	April 2020 Mean (SD)	October 2020 Mean (SD)	April 2021 Mean (SD)
I will be able to teach my course	Total	4.05 (1.09)	4.41 (0.80)**	4.28 (1.13)
	Full-time	4.24 (0.93)	4.46 (0.82)	4.46 (1.02)
	Part-time	3.86 (1.23)	4.39 (0.78)**	4.16 (1.15)
I will be able to teach my course with the same rigor and quality as before the pandemic	Total	2.85 (1.36)	3.53 (1.23)***	3.52 (1.35)***
	Full-time	2.84 (1.39)	3.52 (1.15)**	3.56 (1.39)**
	Part-time	2.82 (1.37)	3.59 (1.30)**	3.53 (1.29)**
I will be able to give each student the time and attention they deserve	Total	3.19 (1.44)	3.59 (1.27)*	3.45 (1.37)
	Full-time	3.12 (1.37)	3.68 (1.18)*	3.52 (1.45)
	Part-time	3.21 (1.54)	3.55 (1.37)	3.44 (1.27)
I will be able to devote the time and attention to students as well as I would have if the COVID-19 pandemic never happened	Total	2.96 (1.50)	3.42 (1.43)**	3.41 (1.41)*
	Full-time	2.83 (1.53)	3.45 (1.39)*	3.42 (1.44)*
	Part-time	3.07 (1.48)	3.45 (1.48)	3.45 (1.36)
I will be able to manage my personal responsibilities with my teaching responsibilities	Total	3.56 (1.29)	3.73 (1.11)	3.78 (1.25)
	Full-time	3.48 (1.25)	3.66 (1.15)	3.78 (1.38)
	Part-time	3.63 (1.34)	3.8 (1.10)	3.85 (1.04)
I will be able to create online content and conduct courses in a	Total	3.75 (1.22)	3.93 (1.14)	3.88 (1.23)

Faculty Concerns	Faculty Status	April 2020 Mean (SD)	October 2020 Mean (SD)	April 2021 Mean (SD)
way that conveys my competence as an educator	Full-time	3.73 (1.19)	3.85 (1.11)	3.81 (1.29)
	Part-time	3.76 (1.26)	4.05 (1.15)	4.02 (1.11)

Note: p-value indicates statistical significance in comparison to April 2020

*p<0.05

**p<0.01

***p<0.001

Faculty confidence in the amount of time and attention they could devote to their students as if the pandemic never happened (Faculty Concern 4) also increased from April 2020 to April 2021. Both full-time and part-time faculty's confidence started out slightly low at 2.96 (1.50 SD) in April 2020 but then increased to 3.42 (1.43 SD) in October 2020 ($p<0.01$) and remained at 3.41 (1.41 SD) in April 2021 ($p<0.05$). Average scores for full-time faculty were 2.83 (1.53 SD) in April 2020, 3.45 (1.39 SD) in October 2020 ($p<0.05$), and 3.42 (1.44 SD) in April 2021 ($p<0.05$) while part-time faculty were 3.07 (1.48 SD) in April 2020, 3.45 (1.48 SD) in October 2020, and 3.45 (1.36 SD) in April 2021. Although part-time faculty reported a slightly higher confidence compared to full-time faculty in April 2020, their scores were similar in October 2020 and April 2021. See Figure 8.0 and 9.0 for further illustration of decreases in Faculty Concern 2 and Faculty Concern 4 scores among full-time and part-time faculty. Higher scores mean less concern.

Figure 8.0

Total Faculty Concern 2 Scores of Full-time and Part-time Faculty

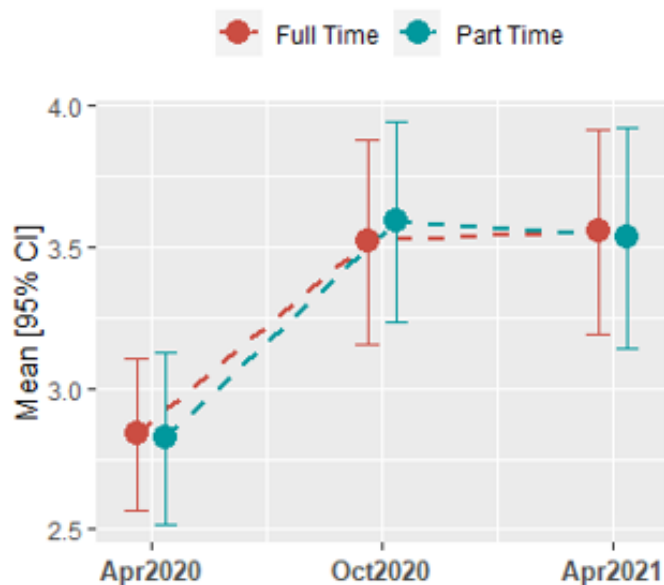
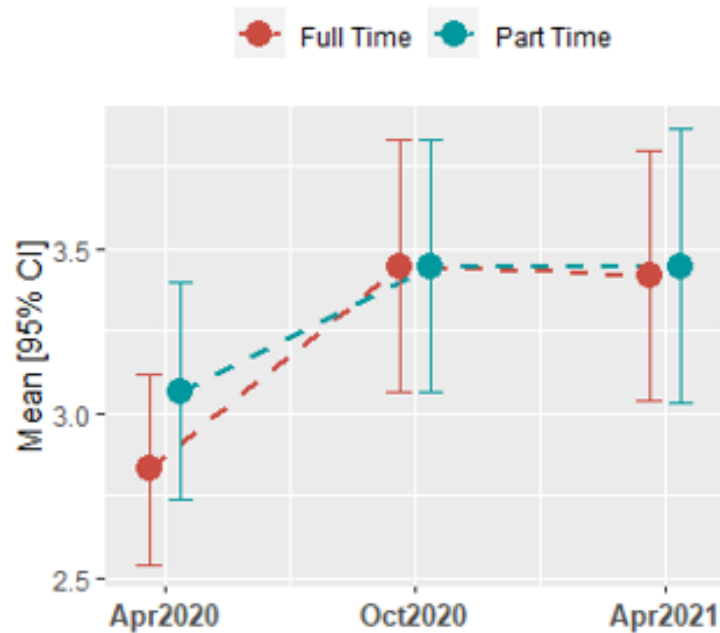


Figure 9.0
Total Faculty Concern 4 Scores of Full-time and Part-time Faculty



Discussion

The findings in this study answered the first research question, how did perceived stress change among full-time faculty members during the first year of the COVID-19 pandemic, along with the second research question, did perceived stress increase among part-time faculty members during the first year of the COVID-19 pandemic? Faculty stress worsened while the pandemic itself (e.g., rates of contracting and dying from COVID-19) improved, indicating that the pandemic may not have been the primary cause of stress for most faculty during the first year. As faculty stress increased over the three timepoints, faculty concerns about the pandemic decreased during the same time, answering research questions three and four. This was an unanticipated finding as the researchers expected that both perceived stress and faculty concern scores would decrease alongside one another over time. The faculty concern scores were high at the beginning of the pandemic but leveled off while the perceived stress continued to rise. There was an increased burden on full-time faculty to train adjunct faculty who were not comfortable with technology, increased service responsibilities (e.g., advisement, course scheduling, instructor assignments, program reviews, program assessments), and increased pressure to strategize a response to the decrease in student enrollment CUNY-wide.

Salari et al. (2020) found that although older individuals had a higher risk of infection, the age category with the highest levels of anxiety, stress, and depression were those 21-40 years old. The authors suggested that the main reason for this is that age group was more concerned with the long-term consequences of the pandemic and its impact on the economy (i.e., employment and income) (Salari et al., 2020). Similar to findings of Brooks et al. (2021) and Salari et al. (2020), the reporting of budget constraints and furloughs may have caused perceived stress to increase throughout the first year, however, perhaps as faculty became more comfortable with adjusting to the pandemic they became less concerned with earning enough money to support themselves and their families and they became more comfortable in their roles as online educators. They may have also been encouraged by the optimism and resilience that they had seen in their students as they helped them navigate the challenges of the pandemic, as noted by Burt & Eubank (2021).

The researchers also anticipated that the perceived stress would have been much higher in part-time faculty compared to full-time faculty throughout the first year of the pandemic. The results showed that was not the case. Although both full-time faculty and part-time faculty perceived stress increased, respectively, over the three timepoints, full-time faculty averaged higher in their perceived stress than part-time. This could be due to the increased responsibilities that full-time faculty experienced, including helping part-time faculty navigate the virtual environment, mentoring and

counseling students, and communicating between the administration and our part-time faculty and students. Part-time faculty's concerns were for their ability to teach their courses and support their students, but full-time faculty were required to coordinate their efforts in supporting part-time faculty as much as possible, in addition to other increased responsibilities (e.g., privacy issues concerning students turning on their cameras during class). This may have burdened full-time faculty more because they were required to meet with their part-time faculty regularly to mentor them in the online learning platform, address student needs and concerns, and meet scheduling demands. These findings are similar to those of Kotini-Shah et al. (2022) who found that untenured and tenured assistant professors experienced the highest stress during the COVID-19 pandemic, but untenured adjunct faculty also experienced significant levels of stress. The sources of stress varied among the two groups. Tenure-track and tenured faculty members experienced high work and home stress due to higher workloads, a slow down in research productivity due to the pandemic, and at home dependent responsibilities while part-time faculty experienced increased work responsibilities such as clinical and teaching loads (Kotini-Shah et al., 2022).

As the pandemic progressed from October 2020 and then to April 2021, stress that CUNY faculty experienced continued to increase. These findings are quite surprising because between October 2020 and April 2021, conditions seemed to be improving: no faculty had been laid off, by January 2021 CUNY communicated that in person instruction would resume by the fall, and a vaccine was introduced and available to New Yorkers by April 2021 (Parrott, 2021). Yet, stress continued to rise between timepoints 2 (October 2020) and 3 (April 2021) in this study.

Full-time and part-time faculty concerns for being able to get enough food, make enough income, and pay for basic necessities decreased. Faculty confidence in their ability to teach their courses and give students enough time and attention also continued to increase. Although many forms of support were provided to students throughout the pandemic (i.e., food pantry, laptop loaner programs, etc.), CUNY faculty were only provided with additional training opportunities to help them navigate the online learning environment. Despite very little was done to address health and wellness needs to full-time and part-time faculty alike. This could explain the 16% increase in PSS-12 scores from April 2020 to April 2021 and why faculty had felt increasingly helpless and decreasingly self-efficacious during the first year of the pandemic. While adjunct faculty were experiencing the loss of, or possible loss of, their positions, full-time faculty were also facing challenges contributing to their overall perceived stress.

Full-time faculty reported a higher increase in perceived stress than part-time faculty, higher increase in their perceived helplessness, and a similar increase in their perceived negative self-efficacy from April 2020 to April 2021, similar to findings in Kotini-Shah et al. (2022). Although full-time faculty reported higher or similar changes, all faculty felt the effects of the COVID-19 pandemic and budgetary discussions advanced by CUNY leadership. It is important to note that the COVID-19 vaccine was introduced and widely available at the beginning of 2021, however, faculty perceive stress continued to worsen into April 2021. During this time, CUNY continued with their messaging about budget cuts and shortfalls. When CUNY leadership began informing faculty, staff, and students of a re-opening and a return to the classroom plan for the upcoming Fall 2021 semester in January 2021, it left many with health and safety concerns and questions regarding course enrollment limits, social distancing, disinfection, ventilation, vaccination requirements, testing requirements, positive test reporting procedures, etc. (Parrott, 2021). On one hand, a full return to in-person teaching might seem like a relief, or at least decrease stress, by signaling the end of the crisis, but a deeper read suggests that this announcement could have increased stress. It would seem as if the continued trend of increased perceived stress was primarily due to CUNY's handling of the COVID-19 pandemic rather than the pandemic itself.

Faculty in this sample experienced a 16% increase in their PSS-12 scores over the first 12 months of the pandemic. Faculty also experienced a 22% increase in helplessness and self-efficacy worsened by an increased score of 45%. The increase in perceived stress and the high faculty concerns at the beginning of the pandemic reflects and adds to the survey findings for the American Council on Education, making mental health of faculty and staff an important focus for university leadership (Turk et al., 2020). The research findings indicate that this trend continued well into 2021. Hopelessness and exhaustion are clear signs of burnout for higher education faculty and staff, especially for faculty members who are struggling with issues in their own personal lives while trying to make teaching and serving their students their top priority (McMurtrie, 2020).

Limitations

This study was not adequately powered to understand if disparities exist in which faculty members suffered most during the pandemic. There is evidence that the pandemic itself impacted Black, Indigenous and People of Color (BIPOC) communities more than their white peers. Unfortunately, the sample size was not large enough to conduct this analysis sufficiently. If inequities are observable in how CUNY handled the COVID-19 pandemic, there may be other implications on equity in higher education. Lastly, this study did not inquire about other employment that part-

time faculty may have had so the potential economic implications on job loss could not be reported.

Conclusion

The impact that the COVID-19 pandemic on the lives of CUNY faculty members was wide-ranging. Faculty were required to address issues professionally and personally while worrying about their job security. The constant messaging by CUNY about budget cuts and inconsistent messaging about health and safety added to faculty stress, which was high even before the pandemic. Full-time and part-time faculty stress increased at each timepoint (April 2020, October 2020, and April 2021), all while faculty became less concerned about the COVID-19 pandemic. This research study provides insight into the impact of the COVID-19 pandemic and CUNY's inconsistent response on the mental health of its faculty. Higher education executive leadership would be wise to address these concerns and adjust their approach to addressing an acute health crisis such as the COVID-19 pandemic in the future.

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