

Faculty and Students' Coping Strategies in Response to the Covid-19 Pandemic: A Mixed Methods Design

Elmer E. González^{a,*}, Adelina Holguin^b, Josefina Carmona^c

^{a,c}*Health Sciences Division, New Mexico State University-Dona Ana Community College, 3400 South Espina Street, Las Cruces, NM, 88003, United States of America*

^b*Arts, Humanities & Social Sciences Division, New Mexico State University-Dona Ana Community College, 2800 Sonoma Ranch, Las Cruces, NM, 88011, United States of America*

^a*Email: egonzalez@dacc.nmsu.edu*

^b*Email: aholguin@dacc.nmsu.edu*

^c*Email: JCarmona@dacc.nmsu.edu*

Abstract

Research Questions: 1. How do students cope with stressful Covid-19 situations? 2. How do faculty cope with stressful Covid-19 situations? 3. What are the differences or similarities between students and faculty coping strategies?

Purpose: The purpose of the study is to investigate how faculty and students coped with stressful situations at three time points during the Covid-19 pandemic and what other stressors were having an effect in faculty and students' coping mechanisms.

Methods: An online survey was disseminated to all participants. The survey was modified and adapted from the COPE Inventory, Brief COPE inventory, and the Brief Resilient Coping Scale. Participants included students (783) and faculty (216), and the statistical analyses used were a mixed methods design.

Results: Multiple analysis of variance and repeated measures analysis were used. Coping strategies for faculty and students were statistically significant in response to the overall impact of the Covid-19 pandemic, ($p < .001$), emergency online teaching and learning, ($p < .001$), and the continued online teaching and learning ($p < .001$). Overall, in all three time points, faculty used adaptive coping strategies to a greater extent than students. Both groups reported that they were experiencing several perceived stressors.

Conclusions: The results highlight the faculty and students' coping strategies in response to the pandemic. The study also highlights other stressors reported by the respondents, such as being afraid to lose their jobs, lack of childcare options, lack of good instruction, and stressors compounding mental health problems.

* Corresponding author.

In planning for future crises like the pandemic, community colleges and universities can plan to mitigate the risks associated with stressful situations, institute trainings, and establish support systems for faculty and students that will help address mental health in the face of the pandemic.

Keywords: Pandemic; COVID-19; Teaching and Learning; Coping; Education; Teachers; Students.

1. Introduction

The Covid-19 pandemic's rampage, happening in the modern era of technology, brought its own challenges to human's ability to cope and adapt. In early 2020, the Covid-19 pandemic was declared a global health threat that presented challenges in which society had limited or no preparation to deal with those challenges, leaving individuals to face new and uncharted ways of living [1]. The risk of infection created chaos in the day-to-day functions (i.e., store trips, no daycare, unable to go to work or school) that compounded into disruptions at the macro level such as economies, industries, health systems, and educational institutions which, almost simultaneously, slowed-down, shut-down, or fully transitioned to remote platforms.

Educational institutions faced the challenge of becoming a public health burden if they became outbreak epicenters due to convening individuals into close quarters. Young adults are often affected more easily in public health outbreaks because of the limited understanding of sound safety practices [2,3]. Therefore, the transition to online learning required an impromptu response to avoid disrupting the in-progress semester. Shared challenges for faculty and students were the rapid changes that were taking place when the pandemic was declared in 2020 and the months that ensued, such as the isolation, interruption of face-to-face classes, lockdown, and, for some, the loss of a loved one [3,4]. Due to the educator's role as faculty and the learner's role as student, each group experienced the Covid-19 pandemic from two distinct positions.

2. Literature Review

A number of research endeavors emerged that published on how students were affected in the advent of the Covid-19 pandemic from academic institutions in the United States [5-10] to international academic institutions [3,11-17]. A consensus in the published literature was that increased levels of anxiety and depression were evident in students as a direct result of the impact of the Covid-19 pandemic. The impact of the pandemic rippled to students' nuclear family with the mid-semester impromptu return to their homes that intensified the stress in both the students and their families [7]. Other impacts of the Covid-19 pandemic were the heightened inequities towards females, single individuals, and those of low-socio economic status [10]. Students that were not able to transition to remote learning faced an interruption in their academic training or hands-on skill building such as career technical education training that, consequently, delayed students' degree-seeking goals [18].

From a faculty stance, the onus rested on faculty to have their lesson plans available online in a matter of days. For most faculty, the switch to remote learning was new without training in remote learning, telecommunication, and learning management systems [19]. Faculty, like other professionals, had to manage the balance between work and personal life while working at home [20,21]. Limited information is available about

the factors that concerned faculty and how they were coping. In some facets of academia, specifically in the medical field, faculty showed a desire to leave the profession due to the pandemic; a sentiment more so expressed by women, especially those with children [22].

The differences in age between the faculty and students can raise distinct concerns in socioeconomic status, job security, and full-time work. According to the College and University Professional Faculty Association for Human Resources report, the median age for faculty is 55 years old [23]. In contrast, the average age of students is 18-24 years old, making up 63% across educational institutions and 55% in two-year colleges [24]. Nationally, students' job earnings are minimum wages and primarily part-time employment compared to faculty where national earnings are on average \$60,000 [23,25]. Socioeconomic status and level of education along with age may influence how stressors are dealt with, especially during a global crisis; therefore, it is not clear if faculty and students perceived similar challenges as stressors and if they were coping differently to those challenges.

Coping is the method of responding to a situation that an organism experiences and perceiving it as a stressful event [26] ensuing the organism to adapt to its environment whether the stressor is brief or chronic [27]. The multitude of variables factoring into the effectiveness of any coping strategy reflect how coping can be dimensional; therefore, consideration should be taken in making direct associations of the effectiveness of one coping strategy to multiple stressors [28]. The efficacy of coping strategies is relative to circumstances that are happening before, during, or after the challenge. Coping can be categorical, for instance, problem- or emotional-solving, appraisal or reappraisal, as well as adaptive or maladaptive [6,26,29-32]. A coping strategy can be adaptive or maladaptive depending on the duration (acute or chronic) of the stressor. Caution should be taken in assigning a coping strategy as adaptive or maladaptive because the outcome also factors the situation and the individual's perspective of the stressful event [33].

The aim of this study is to determine how faculty and students perceived stressors and the coping strategies used at three phases during the first year of the Covid-19 pandemic. The three phases were the response to the Covid-19 pandemic early February 2020, emergency switch to online instruction in late March 2020, and the continued remote learning in November 2020. In identifying potential underlying challenges faced by faculty and students and the coping strategies used by them, educational institutions can develop plans with resources for faculty and students to help alleviate the stressful events in future crises.

3. Research Design and Methodology

The study was conducted through a survey using a mixed methods design.

3.1 Operational Definitions

Emergency Online Teaching and Learning took place at the beginning of the Covid-19 pandemic, March 2020, when colleges and universities shut down because of public health orders.

Continued Online Teaching and Learning took place during summer and fall 2020.

3.2 Setting and Participants

The participants included faculty and students from a multi-campus community college in New Mexico.

Students: Four hundred and forty-eight faculty and six thousand two hundred and eight students were emailed the survey using SurveyMonkey. Reminders to participate were emailed once a week from October 12 to November 13, 2020. Out of the 6,208 emails to students, 1,877 bounced back, thus, the sample size of surveys delivered to students consisted of 4,331. The students' response rate was calculated by the number that successfully received the survey (4,331), divided by the number that submitted the survey (614), a response rate of 14.17%. The completion rate for the students' survey was calculated by dividing the number of students who opened the survey (783) and those who completed it (614) for a completion rate of 78.41%.

Faculty: Out of the 448 emails sent to faculty, one bounced back, thus the sample size for faculty was 447. The response rate for faculty was calculated by dividing the number that received the email (447) by the number that submitted the survey (202) with a response rate of 45.19%. The completion rate for the faculty survey was calculated by dividing the number of faculty who opened the survey (216) and those who completed it (202) for a completion rate of 93.51%. Exclusion criteria included faculty and students who were not teaching or enrolled, respectively, in the fall semester 2020. Also, students under the age of 18 were excluded from the study. This study was approved by the New Mexico State University IRB (NMSU oversees research protocols for the Doña Ana Community College; IRB approval #19998).

3.3 The Survey

The faculty and students' surveys had the same number of questions, but some of the questions differed to capture the faculty and the students' experience. Eleven questions were about demographics, including, gender, race/ethnicity, age, and income per year. Three vignettes were adopted and modified from validated instruments, the COPE Inventory [34]; Brief COPE inventory [35] and the Brief Resilient Coping Scale [36]. Two other questions were included to learn what other stressors faculty and students were facing at the time when the survey was deployed:

1. What other situations are causing undue stress in your life? (Picked all those that applied from the list)
2. What other situations not described in the questions above are causing stress in your life that you would like to share? (Open-ended question)

3.4 Time Points and Survey Vignettes

The survey included questions that asked participants to reflect on three time points: first time point - response to the pandemic in early February; time point two-response to the emergency switch to online learning and teaching in late March; and time point three - response to the continual of online teaching and learning in November 2020 when the survey was deployed. For each time point, a set of case scenarios or vignettes were asked about the coping strategies that were used by faculty and students.

The three vignette questions were stated as follows:

Vignette Question #1. Covid-19 created a lot of changes worldwide and in communities close to home. Thinking about the effects Covid-19 has had in your life, please answer the following questions, on what are you doing to cope with challenges during Covid-19 in general. Vignette Question #2. Institutions of higher education (colleges and universities) around the country have also faced challenges/opportunities in dealing with the unprecedented arrival of Covid-19. To continue operations and the evolving process of teaching/learning, instructors and students faced a mandated emergency online teaching/learning process in March 2020. Thinking about your own emergency online learning challenges and/or opportunities during the spring semester, please answer the following questions on what you did to cope with emergency online learning at the beginning of the Covid-19 pandemic. Vignette Question #3. As we progressed into the pandemic, colleges and universities had to move completely online or deliver instruction via hybrid models for summer and fall semesters. Considering your situation and the strategies you are currently using to deal with non-voluntary online instruction, answer what you currently do to cope with the stressors of the mandated online learning environment.

The responses from faculty and students to the vignette questions would address the following:

- 2. How do students cope with stressful Covid-19 situations?*
- 3. How do faculty cope with stressful Covid-19 situations?*
- 4. What are the differences or similarities between students and faculty coping strategies?*

The questions that were asked on the survey for each time point were rated according to Likert scale using the following criteria: 1, "I don't do this at all", 2, "I do this a little bit", 3, "I do this moderately" and 4, "I do this a lot. Twenty-nine questions comprised the set of questions for each vignette, which were grouped in pairs to form 15 variables following a similar technique used on the original Brief COPE scale [34]. Except for one variable, there were two questions for each of the 15 variables that included self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, acceptance, religion, self-blame, resiliency, and humor (only one question).

3.5 Statistical Analyses

Statistical analyses were performed using SPSS Statistics for Windows, version 21 (SPSS). A multivariate analysis of variance (MANOVA) was conducted to assess coping strategy for faculty and students. A repeated measures ANOVA was conducted to assess within subjects' relationships and where applicable, post hoc test were assessed. A repeated measures ANOVA was conducted to determine between subjects' effects across all three timepoints based on demographics. The significance level was set at 0.05.

4. Results

4.1 Demographics

Faculty and students' sociodemographic variables included gender, race/ethnicity, age, and income (Table 1). Most faculty respondents identified themselves as female (55.0%), Non- Hispanic White (51.7%), and were 50

years old or over (52.5%). Faculty reported earnings of \$50,000-\$74,999 (40.2%) followed by \$75,000 or more (25.1%). Most students identified as female (69.2%), Hispanic (71.4%), and were between the ages of 18-21 (52.5%). Students reported income of less than \$20,000 (67.5%) followed by \$20,000-\$34,999 (16.5%) (see Table 1).

Table 1: Faculty and Students’ Sociodemographic Data

Demographic	Faculty n=204		Students n=608	
	Frequency	Percentage	Frequency	Percentage
Gender				
Female	111	55.0	420	69.2
Male	84	41.6	177	29.2
Other	7	3.5	10	1.7
Race/Ethnicity				
Non-Hispanic White	104	51.7	104	17.2
African American	4	2.0	10	1.7
American Indian	3	1.5	14	2.3
Asian	5	2.5	11	1.8
Other/Prefer Not to Say	18	9.0	34	5.6
Hispanic	67	33.3	432	71.4
Age				
18-21 years			319	52.5
22-24 years			59	9.7
25-43 years	17	8.4		
35-49 years	79	39.1	138	22.7
50 and over	106	52.5	92	15.1
Income per Year				
Less than \$20,000	18	9.0	397	67.5
\$20,000-\$34,999	25	12.6	97	16.5
\$35,000-\$49,999	26	13.1	42	7.1
\$50,000-\$74,999	80	40.2	28	4.8
\$75,000 or more	50	25.1	24	4.1

Race and Ethnicity: Faculty and students’ race and ethnicity were statistically significant for the variables

active coping, $F(5,375) = 3.318$, $p=0.006$ and positive reframing, $F(5,375) = 2.974$, $p=0.012$.

Age: Faculty and students' age was statistically significant for the variables active coping, $F(4,377) = 2.629$, $p=0.034$; denial, $F(4,377) = 3.346$, $p=0.010$; behavioral disengagement, $F(4,377) = 7.751$, $p<0.001$; self-blame, $F(4,377) = 7.017$, $p<0.001$; acceptance, $F(4,377) = 2.838$, $p=0.024$; religion, $F(4,377) = 4.026$, $p=0.003$ and humor $F(4,377) = 2.411$, $p=0.049$.

Income: A repeated-measures ANOVA for coping strategies and income across the three time points revealed significant differences for active coping ($F(1.79,664.56) = 3.308$, $p = .042$), denial ($F(1.405,521.075) = 528.206$, $p < 0.001$), self-blame ($F(1.92,713.23) = 8.41$, $p < 0.001$), and acceptance ($F(1.99,740.24) = 5.65$, $p = 0.004$). Post-hoc test revealed significant differences for active coping with earnings of less than \$20,000 ($\bar{x}= 2.66$) and \$50,000 - \$74,000 ($\bar{x}= 3.07$) ($p = 0.003$). Post hoc test for self-blame revealed significant differences for earnings of less than \$20,000 ($\bar{x}= 2.16$) with \$20,000-\$34,999 ($\bar{x}=1.73$) ($p = 0.020$), \$35,000-\$49,999 ($\bar{x}= 1.66$) ($p = 0.027$), \$50,000-\$74,999 ($\bar{x}= 1.66$) ($p = 0.002$), \$50,000-\$74,999 ($\bar{x}= 1.66$) ($p= 0.002$), and \$75,000 or more ($\bar{x}= 1.71$) ($p= 0.026$). The Post hoc test revealed significant differences in acceptance for earnings of less than \$20,000 ($\bar{x}= 2.95$) and \$50,000 - \$74,000 range ($\bar{x}= 3.07$) ($p = 0.003$), \$50,000-\$74,999 ($\bar{x}=3.30$) ($p= 0.012$), and \$75,000 or more ($\bar{x}= 3.32$) ($p= 0.027$).

4.2 Vignettes' Results

Faculty and students' differences in coping strategies at the three time point vignettes: 1) due to the Covid-19 pandemic, 2) emergency online teaching and learning in March 2020, 3) the continuation of online teaching and learning in fall 2020.

For each of the three time points, there were statistical differences in faculty and students' responses: time point one, the Covid-19 pandemic, Wilk's $\Lambda = .885$, $F(15,675) = 5.847$, $p < .001$, time point two, emergency online teaching and learning at the beginning of the Covid-19 pandemic, March 2020, Wilk's $\Lambda = .851$, $F(15,463) = 5.410$, $p < .001$, and time point three, the continuation of online teaching and learning, November 2020, at the time when the survey was deployed, Wilk's $\Lambda = .851$, $F(15,394) = 4.581$, $p < .001$. An ANOVA revealed significant differences for each of the 15 coping variables in faculty and students' responses within each time point (See Table 2). A repeated measures ANOVA revealed significant differences in the rating of each coping strategy between faculty and students as depicted in Table 3.

Table 2: Faculty and Students' Coping Mean Differences

VARIABLES	Means and Standard Deviation due to the effects of COVID		Mean Group Differences P value	Means and Standard Deviation due to emergency online teaching & learning		Mean Group Differences P value	Means and Standard Deviation due to non-voluntary online teaching & learning		Mean Group Differences P value
	Faculty N= 189	Student N= 502		Faculty N= 158	Student N= 321		Faculty N= 136	Student N= 274	
Self-Distraction	2.74 (SD .865)	2.93 (SD .748)	.004*	2.73 (SD .870)	2.87 (SD .821)	.080	2.70 (SD .891)	2.85 (SD .866)	.116
Active Coping	2.94 (SD .801)	2.83 (SD .777)	.095	2.92 (SD .906)	2.63 (SD .820)	<.001**	3.02 (SD .899)	2.65 (SD .895)	<.001**
Denial	1.22 (SD .529)	1.49 (SD .731)	<.001**	2.44 (SD .031)	2.80 (SD 1.352)	.003*	1.15 (SD .507)	1.37 (SD .695)	.001**
Substance Use	1.37 (SD .719)	1.31 (SD .684)	.362	1.33 (SD .665)	1.33 (SD .742)	.934	1.28 (SD .626)	1.31 (SD .698)	.683
Use of Emotional Support	2.47 (SD .892)	2.40 (SD .888)	.367	2.43 (SD .876)	2.29 (SD .919)	.110	2.43 (SD .933)	2.22 (SD .892)	.024*
Behavioral Disengagement	1.36 (SD .670)	1.68 (SD .821)	<.001**	1.30 (SD .668)	1.66 (SD .874)	<.001**	1.26 (SD .574)	1.60 (SD .805)	<.001**
Venting	2.24 (SD .743)	2.19 (SD .816)	.485	2.16 (SD .773)	2.13 (SD .867)	.651	2.17 (SD .805)	2.08 (SD .827)	.333
Use of Instrumental Support	2.30 (SD .841)	2.27 (SD .904)	.702	2.32 (SD .891)	2.22 (SD .882)	.276	2.34 (SD .941)	2.19 (SD .887)	.123
Positive Reframing	2.70 (SD .893)	2.67 (SD .852)	.670	2.73 (SD .960)	2.67 (SD .883)	.500	2.83 (SD .955)	2.64 (SD .924)	.051
Self-Blame	1.70 (SD .807)	2.21 (SD .971)	<.001**	1.61 (SD .823)	2.09 (SD 1.011)	<.001**	1.60 (SD .849)	1.97 (SD 1.003)	<.001**
Planning	2.76 (SD .876)	2.70 (SD .802)	.422	2.85 (SD .923)	2.60 (SD .838)	.003*	2.93 (SD .916)	2.58 (SD .871)	<.001**
Acceptance	3.29 (SD .709)	3.06 (SD .768)	<.001**	3.20 (SD .825)	2.96 (SD .871)	.004*	3.20 (SD .859)	2.92 (SD .940)	.003*

Religion	2.63 (SD .163)	2.42 (SD 1.052)	.021*	2.48 (SD .157)	2.36 (SD 1.105)	.299	2.60 (SD .147)	2.38 (SD 1.108)	.060
Humor	1.88 (SD .966)	1.97 (SD 1.029)	.340	1.85 (SD .923)	2.0 (SD 1.025)	.132	1.83 (SD .947)	1.99 (SD .009)	.120
Resiliency	3.03 (SD .802)	2.80 (SD .817)	.001**	3.04 (SD .825)	2.80 (SD .849)	.003*	3.08 (SD .868)	2.77 (SD .910)	.001**

***P value = or < .05, **P value = or < .001**

Table 3: Mean scores of faculty and students' coping mechanisms used during the pandemic

	1. I don't do this at all		2. I do this a little bit		3. I do this moderately		4. I do this a lot	
	Faculty n=127 \bar{x} (σ)	Students n=256 \bar{x} (σ)	Faculty m=127 \bar{x} (σ)	Students n=256 \bar{x} (σ)	Faculty n=127 \bar{x} (σ)	Students n=256 \bar{x} (σ)	Faculty n=127 \bar{x} (σ)	Students n=256 \bar{x} (σ)
Resiliency*				2.78 (0.05)	3.06 (0.07)			
Acceptance*				2.98 (0.04)	3.27 (0.06)			
Self-Distract*			2.71 (0.06)	2.88 (0.04)				
Active Coping*			2.95 (0.06)	2.71 (0.04)				
Planning			2.85 (0.07)	2.62 (0.04)				
Positive Reframing			2.75 (0.07)	2.63 (0.05)				
Religion			2.55 (0.09)	2.35 (0.06)				
Use of Emotional Support*			2.49 (0.07)	2.29 (0.05)				
Use of Instrumental Support			2.33 (0.07)	2.20 (0.05)				
Venting			2.20 (0.07)	2.12 (0.04)				
Self-Blame**	1.62 (0.08)			2.06 (0.05)				
Humor	1.86 (0.08)	1.97 (0.06)						
Denial**	1.56 (0.06)	1.83 (0.04)						
Substance Use	1.31 (0.06)	1.32 (0.04)						
Behavioral Disengagement**	1.27 (0.06)	1.63 (0.04)						

P value = .05*, <.001**

Table 4 shows the conditions (selected from a list) that were reported by faculty and students as perceived

stressors. Furthermore, table 5 depicts faculty and students' responses to an open-ended question on what other stressors they were experiencing.

Table 4: Additional Stressors Affecting Students and Faculty

Stressful Situation	Students' Responses	Students' %	Faculty Responses	Faculty %
Loss of job	96	16%		
Increase in tuition	98	16%		
Decrease in financial aid	97	16%		
Worry of getting infected with covid-19 at school	105	17%		
Worry of getting infected with covid-19 at work	127	21%	39	19%
Worry of getting infected with covid-19 outside of work			81	40%
Worry that students may get infected with covid-19 while attending classes in person			46	23%
Personal problems that have a negative effect in my job or school	137	22%	22	11%
Personal Problems that are not related or have a negative effect in my job or school	123	20%	31	15%
Budget cuts in the organization			80	40%
Financial constraints in personal life	180	30%	56	28%

Table 5: Faculty and Students' Additional Stressors' Themes

Theme	Students	Faculty
Family members with covid-19	x	x
Death of relative or friend	x	x
Challenges home-schooling while juggling school work	x	x
Isolation	x	x
Coming into contact with covid-19	x	x
People no following covid-19 protocols	x	x
Relationship Issues	x	x
Lack of good instruction	x	x
Managing work and family while in Isolation	x	x
Financial burdens	x	x
Loss of job	x	x
Worry about students' coping		x
Uncertainty about jobs	x	x
Worry about preparedness for clinicals	x	x
Hypocrisy from higher administrators		x
Frustration	x	x
Pandemic fatigue	x	x
Need for a safe zone	x	x
Lack of leadership		x
Lack of support systems	x	x
Cognitive dissonance	x	x
Frustration about online instruction and workload	x	x
Mental health issues	x	
Failing classes/school	x	
Poor teaching	x	

5. Discussion

This study reports on the faculty and students' coping strategies at the onset of the Covid-19 pandemic. The three time points that faculty and students were asked to reflect on during the pandemic were, coping to the impact of the Covid-19 pandemic from the onset in February 2020, coping to the effects of the emergency switch to online teaching (faculty) and learning (students) in late March to early April 2020, and coping to the effects of continued online teaching and learning in the fall of 2020, specifically, in November when the survey was deployed. The Covid-19 pandemic aggravated the mental health crisis that was already a rising concern for faculty and students [6]. Faculty and students navigated through the challenges presented by the Covid-19 pandemic mitigating stressors such as schools transitioning to emergency online teaching and learning, isolation, and for some, the loss of a family member or friends. The results of this study also show the perceived stressors reported by both faculty and students that included, fear of losing their jobs, the inability to go to work/school, lack of childcare options, lack of adequate instruction, and stressors that added to mental health problems.

5.1 Students

Students rated higher in the use of maladaptive coping strategies, such as denial, behavioral disengagement, and

self-blame for all three time points. Students adopting maladaptive behaviors when faced with perceived stressful situations is consistent with other literature [29]. The use of maladaptive coping strategies when facing a stressor is believed to be rooted in the child behavioral responses to protect oneself during periods of uncontrollable stress resulting in undesirable psychosocial outcomes such as the ones brought on by the Covid-19 pandemic [30]. The inability to cope with all the stressors as presented in the survey, lack of knowledge or use of alternative coping strategies by students, and the reoccurrence of the stressor(s) reinforced non-advantageous behaviors resulting in maladaptive coping mechanisms to adapt to a challenge [30]. Also, the ability to modulate emotions is associated with coping strategy used by students. Students perceive challenges as less stressful when emotional intelligence is high and that is associated with adaptive coping strategies, in contrast, challenges that are perceived more stressful when emotional intelligence is low is associated with maladaptive coping strategies [31]. Wellbeing of students can be the determinant in students' decisions towards academics. Students reported that Covid-19 put their academic training at high risk because they experienced a lack of good instruction and were more likely to not pursue or minimize their academic training if classes were mainly or completely offered online [6]. Furthermore, students reported increased levels of stress more so felt due to the rippling effect of the virus rather than the virus itself. In the present study, stressors that were weighing on students were economically inclined, such as losing a job, increased tuition, and reducing financial aid along with the fear of getting infected by Covid-19. Faced with economic strain and less education can lead students to resort to maladaptive behaviors, consequently, leading to detrimental effects on their health [37]. Other stressors experienced included mental health issues, poor teaching and failing classes/school. Most of the published literature is mostly focused on students' experiences in response to the Covid-19 pandemic. The present study included how faculty coped to stressors similar to those experienced by students during the Covid-19 pandemic.

5.2 Faculty

Faculty rated higher in the use of adaptive coping strategies such as acceptance, resiliency, and active coping for all three-time points. Though the literature is limited in how college faculty coped during the pandemic, what is published aligns with the findings of this study. Macintyre and his colleagues 2020, reported that approach-oriented coping strategies such as, active coping, emotional support, and acceptance, had small or no correlation with negative emotions (e.g., anger, sadness, loneliness); however, avoidant coping strategies (e.g., distraction, denial, self-blame) showed some level of correlation with negative emotions. In the present study, though faculty rated maladaptive coping strategies as used less often (I don't do this a lot; I do this a little), faculty did not overall rate adaptive coping strategies on the high end (I do this moderately; I do this a lot) of the scale. Although faculty may have exhibited well-adjusted behavior with the overall low rating for adaptive coping strategies signaled that there was some difficulty in adjusting to the impact of the Covid-19 pandemic effects [20]. Faculty reported experiencing stress towards concerns of job security, economic stability, and fear of infection, which, these stressors, could have contributed to faculty not feeling overly optimistic in their adaptive coping strategies. From the limited literature in educators' coping response to the Covid-19 pandemic, there are parallel findings pointing to the use of adaptive strategies among educators to deal with the pandemic. A study conducted in Germany with public school teachers reported that teachers used functional (proactive problem solving) and dysfunctional (efforts handling the problem) coping strategies during Covid-19 depending on the

type of stressor they were experiencing [21]. Teachers leaned towards functional coping strategies when their perspective of the stressor rested on parents' and institutional' low level organization. However, in situations where teachers leaned towards dysfunctional coping strategies correlated positively with high workloads for students and the lack of students' digital competency which suggested teachers were troubleshooting problems that were affecting students causing teachers to poorly mitigate stressors. Similarly, to the teachers' experience, in this study, faculty expressed feelings of stress due to concerns of students' ability to cope and the institutional response. A consensus emerges from the literature, and this study, that educators were managing their own challenges while showing high concerns for their students, particularly workloads [20, 21].

5.3 Resources

As community colleges and other institutions of higher education transition from the slowdown of the pandemic to recovery mode, sustainable resources that colleges could institutionalize include access to counseling services and support to student organizations for students to feel a sense of belonging. Furthermore, flex schedules can be incorporated to the modes of learning to provide faculty, students, and institutions flexibility to manage work/school schedules with more ease under any circumstances. Colleges can establish partnerships with community resources that can tap into underlying issues that may be negatively impacting faculty and students' performance in higher education.

5.4 Limitations

The survey included three vignettes for the responder to reflect on for each of the three timepoints; however, some participants felt the survey was repetitive and opted out or did not complete the survey. Also, the decrease in response rate may have been attributed to a prompting heightened level of stress to the survey given the pandemic circumstances when the survey was issued. A comparison between faculty and students was limited in one question that was on the students' survey and not in the faculty survey. This question asked to select from a list of items that could be perceived as stressors. However, there was an open-ended question that was asked of both groups to list those stressors that they were experiencing. Both groups indicated overall similar stressor experiences in the open-ended question. The data set reflects the sentiments of faculty and students from one, multi-campus community college which limits generalizing the results to other educational institutions. The study's findings contribute to the collective data across colleges to provide a wider picture of the perceptions and challenges experienced by faculty and students. Consequently, educational institutions can be informed to establish policies and guidelines to offset those challenges.

6. Conclusion

This study reports findings on how faculty and students coped with the Covid-19 pandemic, emergency online teaching and learning, and the continuation of online teaching and learning in the fall 2020 semester when the survey was deployed. Despite prior recommendations during and after the H1N1 pandemic [38], the challenges that were brought on by the Covid-19 pandemic were not well mitigated initially due to lack of process for these types of crises. This study enhances the literature by adding the results of a community college faculty and

students' coping strategies during the Covid-19 pandemic. Furthermore, the findings prompt a need for policies and procedures that will help faculty and students cope better with the ongoing Covid-19 pandemic and future crises. With the changes that have taken place over time, most significantly the Covid-19 vaccine, increased telecommunication platforms, and the extended period of teaching and learning remotely, follow-up studies can add to the findings to determine if changes ensued over time of how faculty and students coped.

Acknowledgements

The investigators thank the staff from the office of institutional analysis for their support with the distribution of the survey and feedback on some of the analyses. Additionally, a grateful thank you to DACC students and faculty for their participation in this study.

7. Data Statement

Raw data was generated at Doña Ana Community College. Derived data (SPSS files) supporting the findings of this study are available from the corresponding author upon request.

References

- [1]. V. Balanza-Martinez, B. Atienza-Carbonell, F. Kapczinski, & R. De Boni. (2020, May). Lifestyle behaviours during the Covid-19 - time to connect. *Acta Psychiatrica Scandinavica*, 141(5), 399-400. doi:10.1111/acps.13177
- [2]. D. Van, M.L. McLaws, J. Crimmins, C. Macintyre & H. Seale. (2010). University life and pandemic influenza: Attitudes and intended behavior of staff and students towards pandemic (H1N1) 2009. *Public Health*, 10(130), 1-9.
- [3]. Y. Zhai, & X. Du. (2020, Jun). Addressing collegiate mental health amid COVID-19 pandemic. *Psychiatry Research*, 288, 1-2. doi:10.1016/j.psychres.2020.113003
- [4]. W.L. Filho, T. Wall, L. Rayman-Bacchus, M. Mifsud, D.J. Pritchard, V.O. Lovren, A.L. Balogun. (2021). Impacts of COVID-19 and social isolation on academic staff and students at universities: a cross-sectional study. *BMC Public Health*, 21(1213), 1-19.
- [5]. L.M. Aubry, T.M. Laverty & Z. Ma. (2020). Impacts of Covid-19 on ecology and evolutionary biology faculty in the United States. *Ecological Applications*, 31(2), 1 - 7.
- [6]. A. Clabaugh, J.F. Duque & L.J. Fields. (2021, March 17). Academic Stress and Emotional Well-Being in United States College Students Following Onset of the Covid-19 Pandemic. *Frontiers in Psychology*, 12, 1 - 8. doi:10.3389/fpsyg.2021.628787
- [7]. S.S. Hall & E. Zygmunt. (2021, July). Dislocated College Students and the Pandemic: Back Home Under Extraordinary Circumstances. *Family Relations*, 70(3), 689 - 704.
- [8]. M.E. Morris, K.S. Kuehn, J. Brown, P.S. Nuriou, H. Zhang, Y.S. Sefidgar, J.C. Mankoff. (2021). College from home during Covid-19: A mixed-methods study of heterogeneous experiences. *PLOS*, 16(6), 1 - 26.
- [9]. X. Wang, S. Hegde, C. Son, B. Keller, K. Smith & F. Sasangohar. (2020). Investigating Mental Health

- of US College and Students During the COVID-19 Pandemic: Cross-Sectional Survey Study. *Journal of Medical Internet Research*, 22(9), 1 - 11.
- [10]. W. Xiaomei & S. Farzan. (2020, September 3). Effects of COVID-19 on College Students' Mental Health in the United States: Interview Survey Study. *Journal of Medical Internet Research*, 22(9), 1 - 14.
- [11]. M.F. Cruz, J. Alvarez Rodriguez, I. Avalos Ruiz, M. Cuevas Lopez, C. de Barros Camargo, F. Diaz Rosas & E. Lizarte Simon. (2020). Evaluation of the Emotional and Cognitive Regulation of Young People in a Lockdown Situation Due to the Covid-19 Pandemic. *Frontiers in Psychology*, 11, 1 - 11.
- [12]. H. Li, H. Hafeez & M.A. Zaheer. (2021, January 27). COVID-19 and Pretentious Psychological Well-Being of Students: A Threat to Educational Sustainability. *Frontiers in Psychology*, 11, 1 - 8. doi:10.3389/fpsyg.2020.628003
- [13]. V.M. Lopéz-Ramos, B. León-Del-Barco, S. Mendo-Lázaro & M.I. Polo-Del-Rio. (2021). Coping Strategies by University Students in Response to Covid-19 Differences between Community and Clinical Groups. *Journal of Clinical Medicine*, 10(11), 1 - 13.
- [14]. Y.M. Masatoshi Tahara. (2021). Mental Health Crisis and Stress Coping among Healthcare College Students Momentarily Displaced from Their Campus Community Because of Covid-19 Restrictions in Japan. *International Journal of Environment Research and Public Health*, 18(14), 1 - 12.
- [15]. A.A. Qutaiba Agbaria. (2021, January). Coping with Stress During the Coronavirus Outbreak: the Contribution of Big Five Personality Traits and Social Support. *International Journal of Mental Health and Addiction*, 22(9), 1 - 11.
- [16]. A.M. Rogowska, C. Kusierz & A. Bokszczanin. (2020). Examining Anxiety, Life Satisfaction, General Health, Stress and Coping Styles During Covid-19 Pandemic in Polish Sample of University Students. *Psychology Research and Behavior Management*, 13, 797 - 811.
- [17]. Z. Ye. (2020). Resilience, Social Support, and Coping as Mediators between Covid-19-related Stressful Experiences and Acute Stress Disorder among College Students in China. *Applied Psychology; Health and Well-Being*, 12(4), 1074 - 1094.
- [18]. E.M. Aucejo, J. French, M.P. Ugalde Araya & B. Zafar. (2020). The impact of COVID-19 on student experiences and expectations: Evidence from a survey. *Journal of Public Economics*, 191(104271), 1-16. Retrieved from <https://doi.org/10.1016/j.jpube.2020.104271>
- [19]. L.L. Walsh, S. Arango-Caro, E.R. Wester & K. Callis-Duehl. (2021). Training Faculty as an Institutional Response to COVID-19 Remote Teaching Supported by Data. *CBE-Life Sciences Education*, 20(3), 1-11. doi:DOI:10.1187/cbe.20-12-0277
- [20]. P.D. Macintyre, T. Gregersen & S. Mercer. (2020, July). Language teachers' coping strategies during the Covid-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. *System*, 94, 1-14.
- [21]. F. Klapproth, L. Federkeil, F. Heinschke & T. Jungmann. (2020). Teachers' experiences of stress and their coping strategies during COVID-19 induced distance teaching. *Journal of Pedagogical Research*, 4(4).
- [22]. S.A. Matulevicius, K.A. Kho, J. Reisch & H. Yin. (2021, June 1). Academic Medicine Faculty Perceptions of Work-Life Balance Before and Since the COVID-19 Pandemic. *JAMA New Open*, 4(6).

doi: 10.1001/jamanetworkopen.2021.13539.

- [23]. J. McChesney & J. Bichsel. (2020). The Aging of Tenure-Track Faculty in Higher Ed: Implications for Succession and Diversity. Retrieved June 2022, from <https://www.cupahr.org/surveys/research-briefs/2020-aging-of-tenure-track-faculty-in-higher-ed-implications-for-succession-diversity/>
- [24]. A. Beer. (2016). Diversity of Community College Students in 7 Charts. Retrieved from <https://perspectives.acct.org/stories/diversity-of-community-college-students-in-7-charts>
- [25]. National Center for Educational Statistics. (2016). National Postsecondary Student Aid Study, Undergraduate.
- [26]. R. Lazarus. (1985). Psychology of Stress and Coping. *Issues in Mental Health nursing*, 7(1 - 4), 399 - 418.
- [27]. K.H. Greenway. (2015). Measures of Coping for Psychological Well-Being. In G. M. Gregory J. Boyle (Ed.), *Personality and Social Psychological Constructs* (pp. 322 - 351). Academic Press. doi:10.1016/C2010-0-68427-6
- [28]. M.S. Zeidner. (1996). Adaptive and maladaptive coping. In N. E. M. Zeidner, *Handbook of coping: Theory, research, applications* (pp. 505 - 531). John Wiley & Sons.
- [29]. J.S. Mahmoud, R.T. Staten & L.A. Hall. (2012, February). The Relationship among Young Adult College Students' Depression, Anxiety, Stress, Demographics, Life Satisfaction, and Coping Styles. *Issues in Mental Health Nursing*, 33(3), 149 - 156. doi:10.3109/01612840.2011.632708
- [30]. M.E. Wadsworth. (2015). Development of Maladaptive Coping: A Functional Adaptation to Chronic, Uncontrollable Stress. *Child Development Perspectives*, 9(2), 96-100.
- [31]. A. Enns, G.D. Eldridge, C. Montgomery & V.M. Gonzalez. (2018). Perceived stress, coping strategies, and emotional intelligence: A cross-sectional study of university students in helping disciplines. *Nurse Education Today*, 68, 226-231. Retrieved from <https://doi.org/10.1016/j.nedt.2018.06.012>
- [32]. C.S. Carver, M.F. Scheier & J.K. Weintraub. (1989). Assessing Coping Strategies: A Theoretical Based Approach. *Journal of Personality and Social Psychology*, 56(2), 267-283.
- [33]. O. Braun-Lewensohn & C.H. Mayer. (2020). Salutogenesis and Coping: Ways to Overcome Stress and Conflict. *Environmental Research and Public Health*, 17(6667), 1- 6. doi:10.3390/ijerph17186667
- [34]. C.S. Carver. (2013). COPE Inventory. Measurement Instrument Database for the Social Science. Retrieved from <https://www.midss.org/sites/default/files/cope.pdf>
- [35]. C.S. Carver. (1997). You want to measure coping but your protocol' too long: Consider the brief cope. *International Journal of Behavioral Medicine*, 4(1), 92 - 100.
- [36]. V. G. Sinclair & K.A. Wallston. (2004). The development and psychometric evaluation of the Brief Resilient Coping Scale Assessment. 11(1), 94-101. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/14994958>
- [37]. A.M. Brouwer & L. Menard. (2020, March). Social Determinants of Health and Health Outcomes: The Mediating Role of Coping Strategies. *Wisconsin Medical Journal*, 119(1), 56-63.
- [38]. O. Ekmekci & J. Bergstrand. (2010). Agility in Higher Education: Planning for Business Continuity in the Face of an H1N1 Pandemic. *SAM Advanced Management Journal*, 20-30.