

Coping with Mental Health When Teaching Online during the COVID-19 Pandemic

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ABSTRACT

The COVID-19 pandemic keeps taking hold of our daily lives in 2021. This study aims to analyze the effect of the pandemic on teachers from CamEd Business School. A literature review examined how levels of psychological distress are elevated during the pandemic. Teachers were highlighted as an at-risk group through various factors, and the paper discusses the effect of coping styles and resilience on psychological distress. The study measured psychological distress and deployed coping strategies of 17 respondents using the Perceived Stress Scale and Brief COPE, respectively. Statistical analysis showed similar levels of psychological distress in this sample as the pre-pandemic norm group of the PSS ($M=14.23$). Positive and Emotional Coping were used most often in this population and pre-pandemic norm groups ($M=2.40$, $M=2.05$). A significant positive correlation was found between Problem Solving and Psychological Distress, $r(13) = .76$, $p = 0.01$. There was no higher use of Avoidant coping styles than the pre-pandemic norm group ($M=1.45$). The study suggests that this population found resilience over time, helping to manage psychological distress during the COVID-19 pandemic.

Keywords: COVID-19; Psychological distress; Coping; Teachers; Online teaching

INTRODUCTION

The COVID-19 pandemic was quickly recognized as threatening mental health and well-being (Pfefferbaum, 2020). Early meta-studies from 2020 show that the pandemic has an apparent adverse effect on mental health (Rajkumar, 2020) and is correlated with increased psychological distress (Xiong et al., 2020), especially in people who stopped working during the outbreak (Zhang et al., 2020). Some groups are affected more than others. Young adults, females, and people with physical or mental diseases show more significant increases in psychological distress during COVID-19 (Asmundson et al., 2020; Klaiber et al., 2020; Losada-Baltar et al., 2020; Mazza et al., 2020). The long-term effects of the pandemic on mental health remain to be studied, although research from Riehm et al. (2021) found that for some groups, stress levels return to pre-pandemic levels four months into the pandemic. Key important factors in psychological distress among the population are (social) isolation and lockdown periods (Kim & Jung, 2020; Losada-Baltar et al., 2020; Asmundson et al., 2020). Lockdowns can increase feelings of loneliness, increasing psychological

distress (González-Sanguino, 2020). In 2020, over 1/3 of the global population has been in lockdown for considerable periods (AFP, 2020). The field of education is especially hit hard. According to UNESCO (2021), the pandemic caused the most significant educational disruption in human history. Education providers in many countries were (partially) closed during the majority of 2020 and remained so during the first half of 2021 (Figure 1). Students are more likely to be affected by quarantine measures (Brooks et al., 2020) and experiencing more considerable changes in their daily lives than the general population (Chen et al., 2020). Research from Fruehwirth et al. (2021) suggests that distant learning and isolation are essential variables in the increase in psychological distress in students. This could explain why students are at a higher risk for symptoms of Depression, Anxiety, and PTSD during the COVID-19 pandemic (Brooks et al., 2020; Lei et al., 2020; Lin et al., 2020).

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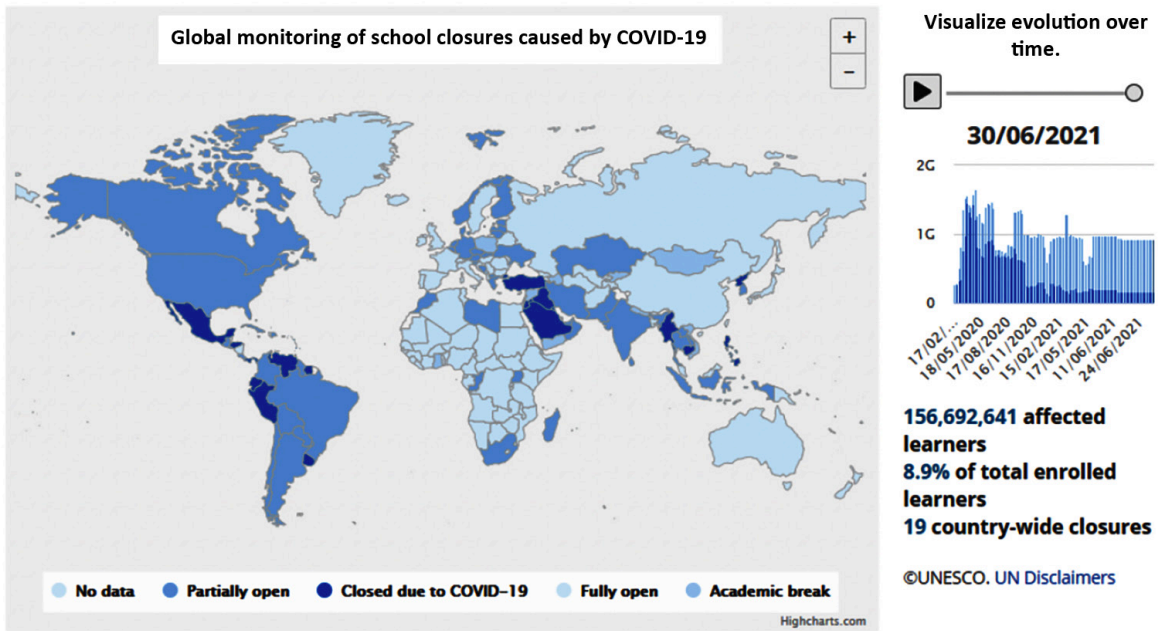


Figure 1: School closures and affected learners by COVID-19

Source: unesco.org

Teachers are at a similar higher risk for lockdown measures as students. Teaching was already the profession with one of the highest levels of burnout before the pandemic (Carlotto & Câmara, 2015), and taking the increased complexity of managing online learning into account (NG, 2007), teachers' levels of distress during the pandemic are likely to be high. The first studies on the effect of COVID-19 on teachers' psychological distress confirm this assumption. A study by Besser et al. (2020) shows increased psychological distress in university teachers during their transition to online teaching. Teachers also report problems in work-life balance and mental health during online teaching (Asha et al., 2021). This aligns with findings from a quantitative study by Ferdous and Shifat (2020) that found high amounts of depressive and anxiety symptoms in ELT and EFL teachers teaching online. A meta-study by Santos et al. (2021) found similar increases in psychological distress. Moreover, teachers reported changes in daily routine, technological complexity, lack of specific training, and increased workloads as essential reasons for reduced mental well-being when teaching online. Research from Ozamiz-Etxebarria et al. (2021) found a higher link between the variables of young age, Job insecurity, parenthood, and psychological distress when teaching online.

Psychological distress can be expected to increase further when returning to face-to-face learning. Research by Ozamiz-Etxebarria et al. (2021) found increased symptoms of stress and depression in 1622 teachers during their first weeks of returning to face-to-face teaching. Therefore, teachers are an at-risk group for decreasing mental health during the pandemic, emphasizing the need for extra support. Supporting teacher's mental health would also bring benefits in these areas. Professional performance from university teachers is directly influenced by psychological distress (Ortega-Jiménez et al., 2021), and there is a direct link between teachers' mental health and the mental health, and therefore, academic performance, of students (Harding et al., 2019).

Coping mechanisms play an essential role in managing levels of distress; together with other factors, such as stressors and general protective character traits, hope plays a vital role in coping with pandemic-related psychological distress (Figure 2).

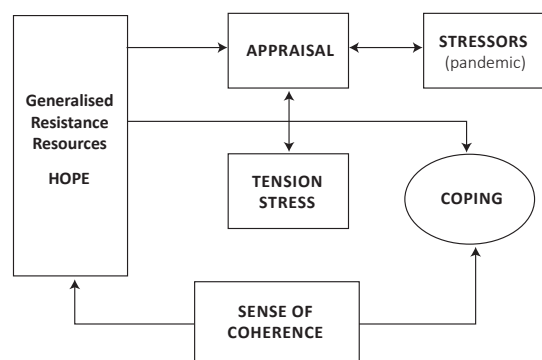


Figure 2: Studied Variables in the Model of Salutogenesis (Antonovsky, 1979)

There are different models describing coping mechanisms. A more commonly used model is the COPE. COPE defines different categories of coping mechanisms, some considered more effective as others. In the remainder of the literature review, these definitions will be used to further analyze coping mechanisms and distress during the pandemic (Table 1).

Table 1: Definitions of Coping Strategies from the COPE

Coping category	Definition
Problem-focused coping	
Active coping	“process of taking active steps to remove or circumvent the stressors or to ameliorate its effects. Active coping includes initiating direct action, increasing one’s efforts, and executing a coping attempt in stepwise fashion.”
Planning	“thinking about how to cope with a stressor. Planning involves developing action strategies, thinking about what steps to take and how best to handle the problem.”
Suppression of competing activities	“putting other projects aside, trying to avoid becoming distracted by other events, even letting other things slide, if necessary, to deal with the stressors.”
Restraint coping	“waiting until an appropriate opportunity to act presents itself, holding oneself back, and not acting prematurely.”
Seeking social support for instrumental reasons	“seeking advice, assistance, or information.”
Emotion-focused coping	
Seeking social support for emotional reasons	“getting moral support, sympathy, or understanding.”
Positive reinterpretation and growth	“construing a stressful transaction in positive terms.”
Acceptance	Learning to accept the reality of a stressful situation*
Denial	“reports of refusal to believe that the stressors exist or of trying to act as though the stressors is not real.”
Turning to religion	“tendency to turn to religion in times of stress.”

Avoidant coping	
Focus on and venting of emotions	“the tendency to focus on whatever distress or upset one is experiencing and to ventilate those feelings.”
Behavioral disengagement	“reducing one’s effort to deal with the stressors, even giving up the attempt to attain goals with which the stressors is interfering.”
Mental disengagement	“wide variety of activities that serve to distract the person from thinking about the behavioral dimension or goal with which the stressors is interfering,” e.g., daydreaming, watching TV, escaping through sleep.

Early research suggests specific dynamics regarding coping mechanisms and their effect on distress during the pandemic. Research by Ortega-Jiménez et al. (2021) found that positive coping styles, problem and emotional-focused, can lower feelings of loneliness as often experienced during lockdown times. Active coping styles focused on problem-solving reduced psychological distress during the SARS outbreak in 2003 (Main et al., 2011). Negative coping styles, such as avoidance, are related to increased levels of PTSS in Chinese adults during the COVID-19 pandemic (Fu et al., 2021). Research by Garbóczy et al. (2021) found a similar effect of problem-solving and positive coping styles lowering distress in students during the COVID-19 pandemic. Research by Amaral-Prado (2020) suggests that changing ways of coping with stress can improve resilience and lower psychological distress in university teachers. However, research from Copeland et al. (2021) found that healthy coping behaviors are used less during the pandemic, likely because of the event’s uncontrollable nature, making avoidant coping more prevalent.

Aim of the study: Schools in Cambodia remained fully closed during the first half of 2021. Since the COVID-19 outbreak in Q1 2020 until April 2021, schools in Cambodia have been closed for 35 weeks and partially open for 12 weeks. Many educational providers kept offering their programs online during this period, impacting the daily lives of around 3.3 million students and almost 99,000 teachers (Figure 3).

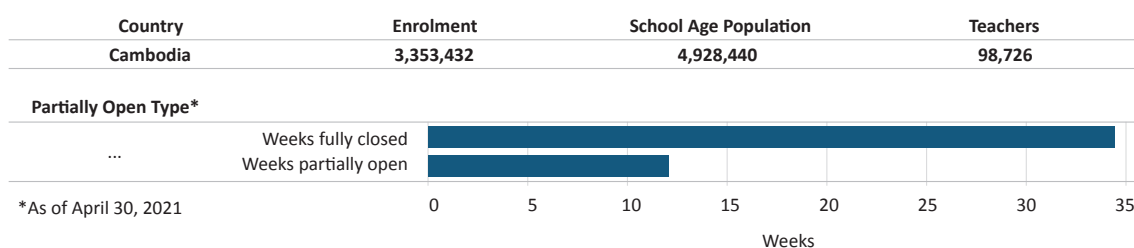


Figure 3: School Closures and Affected Students and Teachers in Cambodia

Source: unesco.org

Psychological distress in Southeast Asia was already at high levels before the COVID-19 outbreak, according to the global health estimates of WHO (2017). Psychological distress was also found above the global average in the Cambodian student population (Pan, 2017; Cornet, 2018). Combined with the teachers being an at-risk group, this strengthens the necessity of further research into the mental health of university teachers in Cambodia. Therefore, this study aimed to study the levels of psychological distress and used coping mechanisms of teachers from the CamEd Business School. The aim is to get more insight into experience levels of distress and which coping mechanisms are used. This data can be used to implement further ways of providing support to improve the mental well-being of these teachers and thereby, at the same time, improve the mental well-being and academic performance of students from CamEd Business School.

Research question 1: Are the levels of psychological distress in this population elevated compared to those in the general population?

- H_0 : Psychological distress will not be significantly different from the norm group
- H_1 : Psychological distress will be significantly higher than the norm group

Research question 2: Are avoidant coping styles more used during the pandemic?

- H_0 : Brief COPE subcategories will not be significantly different from the norm group
- H_1 : Avoidant coping is significantly higher than the norm group

Research question 3: Are problem-focused coping mechanisms related to lower psychological distress levels?

- H_0 : Problem-focused coping mechanisms are not correlated with lower levels of psychological distress
- H_1 : Problem-focused coping mechanisms are correlated with lower levels of psychological distress

METHODOLOGY

Data collection

Data was collected by an online survey presented to the participants through Google Forms. The survey included a short questionnaire measuring social demographic variables, the Perceived Stress Scale (PSS), and the Brief COPE. A link to the survey was sent to all teachers from CamEd Business School.

Participants

Participants of this study are all teachers at CamEd Business School. The school is located in Phnom Penh, Cambodia. Since teachers at CamEd Business School have been teaching online since the pandemic outbreak, all of them do not currently reside in Cambodia. Seventeen participants completed the survey out of around 45 teachers (Table 2).

Table 2: Social-demographic characteristics of participants

	Frequency (n = 17)	Percentage
Gender		
Female	2	11.8%
Male	15	88.2%
Age		
Below 20	0	0%
21- 30	0	0%
31- 40	6	35.3%
41- 50	5	29.4%
Above 50	6	35.3%
Perceived Health		
Very poor	0	0%
Poor	0	0%
Regular	2	11.8%
Good	10	58.8%
Very good	5	29.4%

Measures

Social-demographic variables: These variables were collected at the start of the survey. Gender, age, and perceived health were collected to measure the social-demographics of participants.

Psychological distress: This study used the Perceived Stress Scale (PSS) to measure psychological distress. This instrument is most widely used to measure levels of psychological distress. There is sufficient evidence for validity. Norm groups are gathered from 2,387 respondents (Table 3). Scoring of items takes place on a 5-point Likert scale: 0: Never, 1: Almost Never, 2: Sometimes, 3: Fairly Often, 4: Very Often. Questions 4, 5, 7, and 8 are positive and scored reversely.

Table 3: Norm Table for PSS

Category	N	Mean	SD
Gender			
Male	926	12.1	5.9
Female	1406	13.7	6.6
Age			
18-29	645	14.2	6.2
30-44	750	13.0	6.2
45-54	285	12.6	6.1
55-64	282	11.9	6.9
65 & Older	296	12.0	6.3
Race			
White	1924	12.8	6.2
Hispanic	98	14.0	6.9
Black	176	14.7	7.2
Other minority	50	14.1	5.0

Coping mechanisms: The Brief COPE was used to measure Coping Mechanisms. The Brief-COPE is a 28-item self-report questionnaire designed to measure effective and ineffective ways to cope with a stressful life event. The Brief Coping was developed as a short version of the original 60-item COPE scale (Carver et al., 1989). Scores are collected on a 4-point Likert scale: 1: I have not been doing this at all, 2: I have been doing this a little bit, 3: I have been doing this a medium amount, 4: I have been doing this a lot.

Primary Coping styles are determined on three sub-scales, such as Problem-Focused, Emotion-Focused, and Avoidant Coping. In addition, this questionnaire measures the following factors of Coping: Self-distraction, Denial, Substance Use, Behavioral disengagement, Emotional Support, Venting, Humor, Acceptance, Self-Blame, Religion, Active Coping, Use of Instrumental Support, Positive Re-framing and Planning. For non-clinical respondents, norm scores validated by research from Poulus et al. (2020) are used most often (Table 4).

Table 4: Norm Scores Sub-scales Brief COPE

	Mean	SD
Problem-Focused	2.47	0.63
Emotional-Focused	2.23	0.49
Avoidant Coping	1.64	0.45

The three sub-scales are defined as:

1. Problem-Focused Coping (Items 2, 7, 10, 12, 14, 17, 23, 25)

It is characterized by the facets of active coping, use of informational support, planning,

and positive re-framing. A high score indicates coping strategies to change the stressful situation. High scores indicate psychological strength, grit, and a practical problem-solving approach and predict positive outcomes.

2. Emotion-Focused Coping (Items 5, 9, 13, 15, 18, 20, 21, 22, 24, 26, 27, 28)

It is characterized by venting, emotional support, humor, acceptance, self-blame, and religion. A high score indicates coping strategies that aim to regulate emotions associated with the stressful situation. High or low scores are not uniformly associated with psychological or ill health but can inform a broader formulation of the respondent's coping styles.

3. Avoidant Coping (Items 1, 3, 4, 6, 8, 11, 16, 19)

It is characterized by self-distraction, denial, substance use, and behavioral disengagement. A high score indicates physical or cognitive efforts to disengage from the stressors. Low scores are typically indicative of adaptive coping.

DATA ANALYSIS

All the data in this study was collected through Google Forms and transferred into IBM SPSS Statistics version 25 for Windows for further analysis. All variables were dummy-coded in SPSS, whereby 'Gender' was converted to a Dichotomous variable.

First, descriptive statistics were formed to analyze the overall experience of psychological distress and COVID-19-related distress. To further analyze potential gender differences in psychological distress and potential gender differences in COVID-19-related trauma symptoms, the study used independent samples t-tests. Scatter plots were made to analyze assumptions of linearity, and simple linear regression analysis was used to analyze the correlation between psychological distress and COVID-19-related trauma symptoms and the correlation between psychological distress and levels of (self)-isolation.

RESULTS

Reliability Tests

The Cronbach's Alpha of both the PSS and Brief COPE were calculated to test internal validity. Both the PSS ($\alpha = .804$) and the Brief COPE ($\alpha = .931$) showed an excellent reliability in this study (Table 5).

Table 5: Reliability Score PSS and Brief COPE

	Cronbach's Alpha	Items
PSS	.804	10
Brief COPE	.931	28

Descriptive statistics

The average score on the PSS is 1.42 (sd=.530) on a scale from 0 to 4 points. The total average score on the Brief COPE is 2.00 (sd=.559). Scores on each subcategory are 2.40 (sd=.884) on Problem-Focused Coping, 2.05 (sd=.658) on Emotional-Focused Coping, and 1.45 (sd=.380) on Avoidant Coping (Table 6).

Table 6: Mean PSS and Brief COPE

	Mean	SD
PSS	1.42	.530
Brief COPE		
Total	2.00	.559
Problem-Focused	2.40	.884
Emotional Focused	2.05	.658
Avoidant	1.45	.380

Regarding self-perceived health, 10 participants perceived their health as Good, and five as Very Good. Six participants are in the age group 31 - 40, five in the range of 41-50, and six are above 50 years (figures 4 and 5).

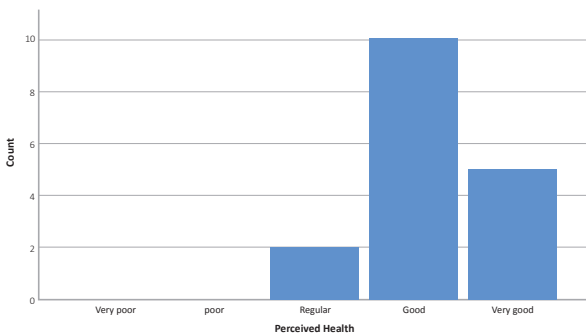


Figure 4: Perceived Health

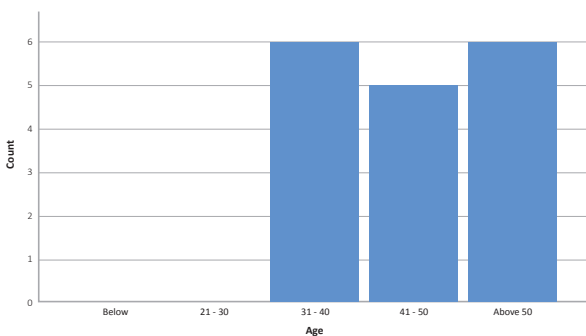


Figure 5: Age Groups

Responding to research question 1, a one-sample t-test was conducted to compare levels of distress in this population with the norm groups provided with the PSS. There is no significant difference between the levels of distress from this population (M=14.32, SD=5.309) compared with the norm group (M = 12.37), $t(16) = 1.448$, $p = .167$. Thus, H_0 (Psychological distress will not be significantly different from the norm group) can be accepted.

Table 7: One-sample t-test; Comparison between Sample versus Norm PSS

	n	Mean	SD	t	Sig.
PSS	17	14.23	5.309	1.448	.167

Further, in response to research question 2, the study conducts a one-sample t-test for each of the three subcategories of the Brief COPE and compares this population with the provided norm groups. There is no significant difference in the use of problem-focused coping (M=2.40, SD=.884) compared with the norm group (M=2.47), $t(16) = -.306$, $p = .764$. Also, the use of emotional-focused coping in this population (M=2.05, SD=.658) is not significantly different from the norm group (M=2.23), $t(16) = -1.102$, $p = .287$. The use of avoidant coping is also not significantly different in this population (M=1.45, SD=.380) from the norm group (M=1.64), $t(16) = -1.998$, $p = .063$. Thus, H_0 (Brief COPE subcategories will not be significantly different from the norm group) can be accepted.

Table 8: One-sample t-test; Comparison between Sample versus Norm Brief COPE Sub-categories

	n	Mean	SD	t	Sig.
Problem-Focused	17	2.40	.884	-.306	.764
Emotional-Focused	17	2.05	.658	-1.102	.287
Avoidant	17	1.45	.380	-1.998	.063

In response to research question 3, a scatter plot was first created to see if a linear relationship could be assumed (Figure 6). The scatter plot shows a weak linear relationship and two significant outliers.

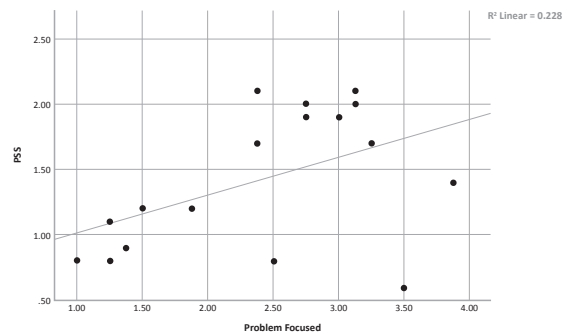


Figure 6: Scatter Plot Problem-Focused Coping versus Levels of Distress

After removing the two outliers from the dataset, Pearson's r was used to calculate the correlation. The variables Problem-Focused Coping and distress levels were strongly correlated, $r(13) = .76$, $p = 0.01$. Thus, H_0 (Problem-focused coping mechanisms are not correlated with lower levels of psychological distress) can be accepted.

Scatter plots were made to analyze further the relationship between distress and the remaining two subcategories. In both cases, a linear relationship could not be assumed, and both scatter plots show a significant amount of outliers, and further analysis is therefore not conducted (Figures 7 and 8).

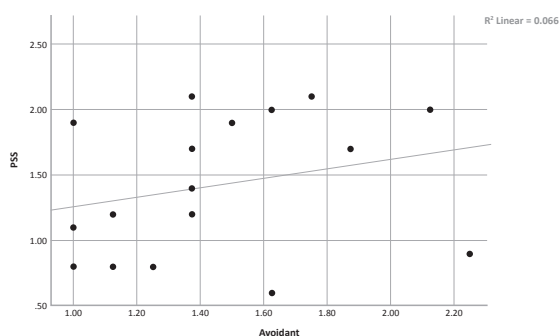


Figure 7: Scatter Plot Avoidant Coping versus Levels of distress

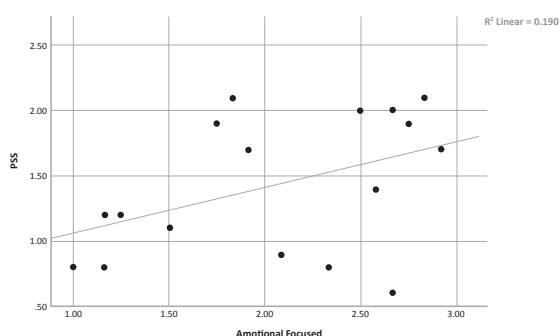


Figure 8: Scatter plot Emotional Coping versus Levels of Distress

DISCUSSION

Outcomes

The teacher population in this study reports similar levels of distress on the PSS as the general population (pre-pandemic). Although higher levels of distress are expected at first, these findings align with recent research on how people adapt to the pandemic. Research by Daly and Robinson (2021) analyzing levels of distress in the same sample over different times during the first months of the pandemic found that the initial sharp rise in experienced mental

distress is diminished after a month or more into the pandemic, even while in the same period COVID-19 was spreading rapidly. These findings suggest that people, over time, find resilience in response to the pandemic. This is also in line with how resilience tends to lower levels of distress to more general stressors (Infurna & Luthar, 2018). The current study focused on levels of distress more than one year after the pandemic's start, which likely resulted in adjustments to this new 'normal.' The relatively lower levels of distress can also result from the coping styles used in this population. Participants in this sample mostly use effective coping styles, including Problem-Solving Coping and Emotional Coping. Amaral-Prado (2020) found lower distress levels in students using problem-solving coping strategies during the pandemic. The same effect of these coping strategies during the COVID-19 pandemic was found in nurses (Lorente et al., 2021). This study's sample also scored low on the Avoidant coping style, which generally correlates with increased negative affect and higher levels of PTSS (Ben-Zur, 2009; Fu et al., 2021).

Higher levels of distress were significantly correlated with higher use of problem-solving coping in this study. These findings can be interpreted in multiple ways. General research on problem-solving coping shows lower levels of distress when this coping strategy is applied (Amaral-Prado, 2020; Lorente et al., 2021; Ortega-Jiménez et al., 2021). It is, therefore, likely in this study that participants with higher levels of distress are making more use of effective coping styles to manage their distress, resulting in overall stress scores that were lower than expected. A second interpretation could be that problem-solving coping is ineffective in managing distress in this population. However, this would not align with the general findings on effective coping. Further research is needed on the exact relationship between problem-solving coping and distress in this population.

Avoidant coping styles were not increased in this population, although the uncontrollable nature of the pandemic as a source of stress could promote more avoidant coping styles, as found in some populations during the COVID-19 pandemic (Tahara et al., 2020; Wang et al., 2020). Thai et al. (2021) found that avoidant coping styles are more often deployed when individuals experience high levels of distress during the pandemic. The lower levels of distress found in this study can be a reason for lower levels of avoidant strategies. Higher levels of impact of COVID-19 tend to be mediating the relationship between avoidant coping and COVID-19-related distress (Pomerantz et

al., 2020). It is possible that the impact of COVID-19 is less more than one year after the initial outbreak and the use of avoidant coping styles therefore too, this would also be fitting with early research on avoidant coping during the pandemic were focused on the first couple of weeks of the pandemic (Tahara et al., 2020; Wang et al., 2020).

These findings suggest high levels of resilience in this population sample, resulting in normal levels of distress when higher levels of psychological distress could be expected.

LIMITATIONS

The current study faces a couple of limitations that should be considered when drawing assumptions and implications from the results. Selection bias may have occurred; this study used less than 50 percent of the total teacher population at CamEd Business School. Teachers with higher levels of distress did not manage to fill in this questionnaire. This effect could even be more substantial regarding avoidant coping strategies. Not doing this survey would be fitting for more avoidant coping strategies. This lowered the overall stress and avoidant coping scores in this study.

The analyzed studies in the introduction/literature review are less than one year old. Some studies have yet to be replicated by other researchers. Psychological distress is often differently defined in psychological research. Although the Perceived Stress Scale is commonly used, many studies use different questionnaires, resulting in potentially different psychological structures being analyzed. Although the studies used in this paper were selected on these limitations, assumptions based on these studies should still be taken with care.

IMPLICATIONS

The findings of this study give a hopeful first look at the mental well-being of the academic staff at CamEd Business School. Healthy coping mechanisms are used primarily on effective coping strategies, and overall levels of psychological distress tend to be at pre-pandemic norms. More research is needed to analyze further the exact relationship between positive coping styles and levels of distress in this population. A bigger sample size would eliminate the risk of selection bias, which could have lowered the levels of distress in this study. Although these findings suggest healthy levels of distress, continued support for academic staff is needed. Levels of psychological distress are short-term states and, therefore, quickly

change over time. When teaching goes back to face-to-face or other hybrid forms, an increase in psychological distress can be expected.

Earlier research on psychological distress in the student population of CamEd Business School showed increased levels. Findings from this study on positive coping styles possibly decreasing general levels of distress can be used to support this student population. Moreover, longitudinal research to analyze possible growth in resilience would be helpful to understand better the dynamics surrounding psychological distress during the pandemic at CamEd Business School.

CONCLUSION

In conclusion, the academic staff at CamEd Business School are resilient and employ effective coping strategies, resulting in relatively low levels of psychological distress. In times of uncertainty, lockdowns, and challenges resulting from online teaching, resilience is most effective in managing mental health. Continued support is essential to ensure the academic staff's mental well-being and, thereby, the students.

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