

Pharmacy Students' Coping Responses and Experiences in Online Learning During the COVID-19 Pandemic

Vina Rose Dahilig-Talan, RPh, MS¹; Sofia M. Cortez, RPh; Elsa Espeleta, RPH;
Frederick M. Francisco, RPh; Leilani E. Hidea, RPh

Corresponding author: Vina Rose A. Dahilig-Talan, vinarosedahilig@yahoo.com
Department of Pharmacy, Manila Adventist College

Abstract

Stress among university students is a common phenomenon (Bòke et al., 2019, Reddy, et al., 2018). In addition to dealing with academic stress, students also have to deal with the transition to online distance learning in the light of the COVID-19 pandemic in the Philippines. This study explored the coping responses of the BS Pharmacy students in Manila Adventist College during the COVID-19 pandemic. This descriptive cross-sectional study was conducted on all 34 students in the first and second year level of the Pharmacy program. To measure coping responses and types of coping, a questionnaire was drawn from two standardized tests – the Brief COPE Inventory and the Brief Resilient Coping Scale (BRCS). Twenty-seven out of 34 students responded, giving a 79.41% response rate. Most of the respondents were first year students, are currently living with their parents, are using prepaid plans and mobile phones for online learning. The respondents report positive coping responses through Religion and Acceptance scales on the Brief COPE Inventory. They have taken an approach type and adaptive coping response to the situation. Majority of the students are medium resilient copers. This study recommends that wholistic interventions and student support be provided to the students to ensure their coping strategies and preserve mental well-being in online distance learning during the pandemic.

Keywords: *coping strategies, flexible learning, student resilience, mental well-being,*

Introduction

Stress is a common phenomenon in daily human interactions. It is pervasive anywhere people worked with each other or had close relationships with, for example, coworkers, family members, lovers, friends, students and teachers. People experience stress and perceive issues as threatening or dangerous whenever they believe that they have in adequate resources to cope with such obstacles (Shahsavarani, et. al, 2015)

Literature showed that stress is predominant among university students (Bòke et al., 2019,

Reddy, et al., 2018). Stress among university students was thought to be attributed to the expectations parents had for their children, which become larger burdens that these children could not carry anymore). Academic stress (Reddy, 2018) was defined as the interaction between environmental stressors, student's appraisal and reactions for the same. Common causes of academic stress include including high workload, attending lessons, respecting deadlines, balancing university and private life, and economic issues. These stressors have been found to

be associated with high risk of distress and reduced academic achievement (Portoghese et al., 2019).

As consequence to stress, individuals use many ways to cope. Coping was referred to as the way people manage stressful life conditions. The coping theory of Lazarus, 1999 defined coping as constantly changing cognitive and behavioral efforts undertaken by an individual in order to deal with demands which are especially challenging and are probably exceeding individual capacities and/or resources. Coping was said to have an inverse relationship with stress. When coping is ineffective, the stress level is high. On the other hand, when coping is effective, stress level is low. Therefore, analyzing coping can greatly help educational psychologists, researchers and educators understand students' constant struggle to adapt to troubling stressors and those produced by changing life conditions and help provide interventions that can help their academic capacities.

In the Philippines, the usual stressors in the academia have been further exacerbated for the tertiary-level students due to the COVID 19 pandemic. The extraordinary turn of events on both national and international scale have greatly affected the social and academic lives of these students.

Due to the nationwide imposition on social distancing, colleges and universities in the Philippines have suspended their face-to-face classes and operations and have resorted to flexible means of teaching and learning strategies, primarily through online distance learning (CHED CMO 5, s.2020). Majority of the tertiary level institutions utilized online learning management systems to deliver instruction to their learners while both teachers and students teach and study at home.

It is the interest of this study to explore the coping responses of the BS Pharmacy

students in Manila Adventist College during the Philippines situation in the light of the COVID-19 pandemic.

Methods

This quantitative descriptive study was conducted on all 34 students in the first and second year level of the BS Pharmacy program in Manila Adventist College during the Schoolyear 2020-2021. Consent from the respondents was sought and given as indicated by their participation in the online survey. The survey was administered by sending online questionnaires through the students' email and Facebook messenger accounts.

The study follows Lazarus and Folkman's framework of coping (Lazarus and Folkman, 1984). In order to measure the coping responses, type of coping and online student engagement, a questionnaire was drawn up with two standardized test – the Brief COPE Inventory and the Brief Resilient Coping Scale (BRCS). The students' responses were validated with additional open-ended questions. This questionnaire was then tested on ten respondents who were excluded for the study.

The resulting questionnaire was tested for its content validity with three experts – a registered psychologist, a college professor in the Pharmacy program of a different university and a college professor practicing online learning. The instrument was also tested for its reliability by determining its Cronbach alpha where a value of ≥ 0.7 is considered acceptable. Results of the reliability testing yielded Cronbach alpha of 0.9269, indicating high internal consistency. Data was cleaned, coded and encoded using Stata v.11. Descriptive statistics was used to characterize the student population. Correlation analyses and z-test were performed to compare differences in Brief COPE Scores between different student groups.

Results and Discussions

Of the 34 students invited to participate in the study, only 27 responded to the survey, giving a 79.41% response rate. Majority were females (88.88%) with mean age of 20.37 ± 2.15 . Most of the respondents are in their first year of the program (59.26%). Most of the students lived in Pasay City (37.04%) while the rest went back to their provinces as far as Isabela (3.70%) and Kidapawan (3.70%).

Most are living with their parents (66.67%) while some live with their guardians (11.11%). More than half (55.56%) use mobile data while some use postpaid internet connection (40.74%) and prepaid internet (3.70%). Almost all of the respondents use their mobile phones (96.30%) and laptops (55.56%) while only three of the twenty-seven participants (11.11%) use personal computers

Table 1

Summary of Respondent's Demographics

PARTICIPANT CHARACTERISTICS		FREQUENCY	PERCENTAGE
Gender	Male	3	11.11%
	Female	24	88.89%
	Total	27	
Year-Level	First Year	16	59.26%
	Second Year	11	40.74%
	TOTAL	27	
Internet Connection	Mobile data	15	55.56%
	Postpaid plan	11	40.74%
	Prepaid plan	21	3.70%
	TOTAL	27	
Type of Device used	Mobile phone	26	96.30%
	Laptop	15	55.56%
	PC	3	11.11%
Online resources used	Google	5	18.51%
	Facebook	4	14.81%
	Facebook messenger	4	14.81%
	Youtube	4	14.81%
	Zoom	4	14.81%
	Gmail	4	14.81%
	Google classroom	3	11.11%
	Instagram	1	3.70%
Ebook	1	3.70%	

Coping Responses

Coping responses of the respondents were measured using the Brief COPE Inventory and the Brief Resilient Coping Scale. The Brief COPE Inventory is an abbreviated version of the Carver's 1989 COPE Inventory, a 60-item instrument multi-dimensional inventory developed to assess different coping strategies people use in response to stress. The questions in the Brief COPE inventory identifies ways the respondents were coping with the stress in their life and the extent that they have been doing it since the start of the enhanced community quarantine in the Philippines due to the COVID-19 pandemic. There are 14 scales in the inventory, each comprising of two questions: 1) acceptance; 2) emotional support; 3) humor; 4) positive reframing; 5) religion; 6) active coping; 7) instrumental support; 8) planning; 9) behavioral disengagement; 10) denial; 11) self-distraction; 12) self-blaming; 13) substance use and 14) venting. Strategies of acceptance, emotional social support, humor, positive reframing, and religion are categorized as emotion focused. Active coping, instrumental support, and planning are considered as problem-focused strategies while behavioral disengagement, denial, self-distraction, self-blaming, and substance use and venting are considered as dysfunctional coping strategies.

Coping strategies are also further subcategorized as either adaptive or maladaptive. Adaptive forms of coping include direct coping, if the problem can be solved, reappraisal, regulated emotional expression, and non-repressive self-control. On the other hand, rigid dysfunctional approach coping (rumination, venting/emotional discharge, and confrontation) and rigid maladaptive avoidance, based on abandonment, social isolation, inhibition, and emotional suppression (Brown, L. et. al, 2019) are considered maladaptive.

The objective of this study is to determine the coping responses of the students during the COVID-19 pandemic and determine their type of coping. The summary of their coping responses is tabulated in Table 2.

From the 14 scales in the Brief COPE Inventory, the students scored highest in the Religion scale (Group mean: 7.19 ± 1.04) while Substance abuse was the least type of coping response used (Group mean: 2.11 ± 0.58).

Z-test was used to measure gender differences in the coping responses of the respondents in the Brief COPE scale scores. Males scored higher in the religion category (8 ± 0) than females (7.08 ± 1.06). An opposite finding was observed for scores on substance abuse where females scored higher (2.13 ± 0.61) than males (2 ± 0). However, there were no significant differences between the means of males and females ($p > 0.05$) for both Religion and Substance Abuse scales. T test was also used to evaluate differences between first and second-year level students. The results of the Brief COPE inventory indicated that most of the respondents found comfort in religious or spiritual beliefs by praying or meditating. They collectively do not need alcohol or other drugs to feel better or to help them get through the stress they are experiencing.

The respondents also ranked high in the Acceptance scale. Acceptance is accepting the reality that the COVID-19 pandemic has happened and that they are learning to live with it (Brief COPE, 1997). Males have higher acceptance scores than females. There were no significant differences between the means of males and females. On the other hand, the second-year students have higher acceptance than first-year level students. There were also no significant differences between the means of males and females ($p > 0.05$).

Table 2*Summary Of Coping Responses*

Brief COPE Scales	Total Population		Gender				Year Level					
			Male		Female		p-value	First Year		Second Year		p-value
	M	SD	M	SD	M	SD		SD	M	SD	M	
Self-distraction	6.11	1.34	6.67	1.53	6.04	1.33	0.46	6.25	1.24	5.91	1.51	0.53
Active Coping	6.31	1.22	6.67	1.53	6.23	1.21	0.60	6.33	0.98	6.27	1.55	0.90
Denial	3.15	1.68	5.00	1.53	2.92	1.44	0.04	2.94	1.44	3.45	2.02	0.44
Substance Abuse	2.11	0.58	2.00	0	2.13	0.61	0.73	2	0	2.27	0.59	0.23
Use of Emotional Support	5.04	1.73	4.50	3.54	5.08	1.64	0.65	5.25	1.69	4.7	1.83	0.44
Use of Instrumental Support	4.85	1.77	5.33	3.06	4.80	1.64	0.63	4.88	1.5	4.82	2.18	0.93
Behavioral Disengagement	3.85	1.63	3.00	1.00	3.96	1.68	0.35	3.75	1.48	4	1.90	0.70
Venting	4.96	1.56	2.67	1.15	5.26	1.36	0.00	5.06	1.34	4.8	1.93	0.68
Positive Reframing	6.23	1.63	5.33	2.08	6.35	1.58	0.32	6.13	1.63	6.7	1.71	0.68
Planning	5.89	1.45	5.67	2.08	5.92	1.41	0.78	5.69	1.30	6.18	1.66	0.39
Humor	2.77	1.24	2.67	1.15	2.78	1.28	0.88	2.88	1.36	2.6	1.07	0.59
Acceptance	6.37	1.55	7.00	1.00	6.29	1.60	0.47	6.19	1.72	6.64	1.29	0.47
Religion	7.19	1.04	8.00	0.00	7.08	1.06	0.15	7.13	1.02	7.27	1.10	0.72
Self-Blame	3.67	1.44	2.67	0.58	3.80	1.47	0.21	3.63	1.15	3.73	1.85	0.86

Notes: M= mean; SD = Standard deviation

There were, however, significant differences between genders for Denial and Venting scales. Similar with the findings in literature, gender differences in the expression of emotion have been observed and that the female gender role has been associated with the expression of emotion (Deng, *et al.* 2015). Denial was defined in the Brief COPE as saying to oneself "this is not real" or refusing to believe that it has happened. Males scored higher than females and there was a significant difference between these groups ($p < 0.05$). This result is consistent with studies that reveal that women report higher levels of chronic and daily stressors than men (Anbumalr *et al.*, 2017). However, given that there were only three male respondents,

it is recommended that this study be replicated for comparison of findings.

Venting was defined as saying things to let unpleasant feelings escape or by expressing negative feelings. Females reported higher scores than males and there was a significant difference between these groups ($p < 0.05$).

These results reflect the stereotypical views on gender socialization on stress coping based on various studies. It is a general view that men might be more likely to cope with stress by denying the problem or avoiding it because men are socialized to conceal their emotions (Chaplin, 2015).

Because men, based on some literature, are considered to be action oriented, direct, and assertive, they also might be more likely to engage in problem-focused coping (Chen and Sun, 2019). The social norm seems to be for women to express their feelings and for men to conceal their feelings. (Garcia et al, 2018).

To cope with the situation, students listed their coping activities. Most of the respondents found that sleeping (81.47%) is an effective way to cope with the current situation. Others read (66.67%), surf the internet (66.67%), watch movies (55.56%) or watch TV (51.85%). This is of special interest to the researchers so that future extra-curricular interventions may be developed based on activities they enjoy the most.

Results also showed that the respondents have taken an approach-type of coping than avoidant. Both males and females have higher scores on approach coping than avoidant. First-year level students have higher scores on approach coping) than their second-year counterparts. There were no significant differences for gender and year-level on these types of coping.

Participants also record a higher mean on adaptive coping than maladaptive, indicating that the students have found positive means to cope with their current situation. This result is consistent with the individual scales in the Brief COPE inventory which showed that the top coping responses of the students were under the adaptive category. These were as follows: religion (7.19 ± 1.04), acceptance (6.37 ± 1.55) and active coping (6.31 ± 1.22).

To further validate the results of the Brief COPE Inventory, the Brief Resilient Coping Scale was also administered to the respondents. The Brief Resilient Coping Scale (BRCS) is a 4-item measure designed to capture tendencies to cope with stress

in a highly adaptive manner (Sinclair and Wallston, 2004). There were four themes from the BRCS instrument: tenacity, optimism, creativity, an aggressive approach to problem solving and commitment to extract positive growth. The themes describe an effective, active problem-solving coping pattern that reflects resilient coping. The final scores in the BRCS scale were summed up where a high score between 17 and 20 indicates a highly resilient copier and a low score between 4 and 13 suggests a low resilient copier. Sinclair and Wallston, 2004 recommends the BRCS as a useful scale in identifying individuals in need of interventions designed to enhance resilient coping skills.

Based on the BRCS scores, majority of the respondents are medium resilient copiers. Analysis of the individual scores showed that there were 10 low resilient copiers (with scores 12-13), 11 medium resilient copiers and 4 high resilient copiers.

Conclusions

Under normal, ordinary circumstances, university students are often faced with stress, particularly, academic stress. This stress is currently being compounded with the uncertainty caused by the COVID-19 pandemic and challenges of distance learning. As part of the responsibilities of college faculty members, it becomes necessary for them to determine how students cope with the current strain and aid in ensuring coping resilience and preserving mental wellness.

While this study showed that generally, the students have positive coping responses by turning to religion for comfort and reassurance and by accepting the current situation, the current level of resiliency is moderate. Thus, the immediate concern of the faculty should be to determine the extent of the students' resiliency during flexible teaching and

learning. The results of the study indicate a need to provide mental health support and extra-curricular interventions to ensure students' coping resiliency during these challenging times.

References

- Agolla, J. and Ongori, H. (2009). An assessment of academic stress among undergraduate students: The case of University of Botswana. *Educational Research and Review* 4(2), 063-070.
- Anbumalr,C. & P., Dorathy V.P., Jaswanti & Dhandapani, Priya & D., Reni. (2017). Gender differences in perceived stress levels and coping strategies among college students. *The International Journal of Indian Psychology*. 4(4), 22-23 https://www.researchgate.net/publication/323995368_Gender_Differences_in_Perceived_Stress_levels_and_Coping_Strategies_among_College_Students.
- Ashwin P., McVitty D. (2015) The Meanings of student engagement: Implications for policies and practices. In: Curaj A., Matei L., Pricopie R., Salmi J., Scott P. (eds) *The European Higher Education Area*. Springer, Cham. https://doi.org/10.1007/978-3-319-20877-0_23
- Böke, Bilun Naz; Mills, Devin J.; Mettler, Jessica; Heath, Nancy L., (2019). Stress and coping patterns of university students. *Journal of College Student Development*, 6(1). 85-103. <https://muse.jhu.edu/article/715312>.
- Brown, L., Bond, M & Topa, G. (reviewing editor). (2019) The pragmatic derivation and validation of measures of adaptive and maladaptive coping styles, *Cogent Psychology*, 6:1. DOI: 10.1080/23311908.2019.1568070
- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief cope. *International Journal Of Behavioral Medicine*, 4(1), 92-100.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality And Social Psychology*, 56(2), 267.
- Chaplin, T. (2015). Gender and emotion expression: A developmental contextual perspective. *Emot Rev*. 7(1),14–21. <http://emr.sagepub.com/content/7/1/14.full.pdf+html>.
- Chen S-M, Sun P-Z (2019) Gender differences in the interaction effect of cumulative risk and problem-focused coping on depression among adult employees. *PLoS ONE* 14(12). e0226036. <https://doi.org/10.1371/journal.pone.0226036>
- Connor-Smith JK, & Flachsbart C. (2002). Relations between personality and coping: a meta-analysis. *J Pers Soc Psychol* 93(6), 1080-107. doi: 10.1037/0022-3514.93.6.1080. PMID: 18072856. <https://pubmed.ncbi.nlm.nih.gov/18072856/>
- Deng Y, Chang L, Yang M, Huo M, & Zhou R. (2016). Gender differences in emotional response: Inconsistency between experience and expressivity. *PLoS ONE* 11(6). e0158666. <https://doi.org/10.1371/journal.pone.0158666>
- Eisenberg, S. A., Shen, B. J., Schwarz, E. R., & Mallon, S. (2012). Avoidant coping moderates the association between anxiety and patient-rated physical functioning in heart failure patients. *Journal of Behavioral Medicine*, 35(3), 253-261.

- García, F.E., Barraza-Peña, C.G., Wlodarczyk, A. et al. (2018). Psychometric properties of the Brief-COPE for the evaluation of coping strategies in the Chilean population. *Psicol. Refl. Crít.* 31(22) <https://doi.org/10.1186/s41155-018-0102-3>
- Gol, A. R., & Cook, S. W. (2004). Exploring the underlying dimensions of coping: a concept mapping approach. *J. Soc. Clin. Psychol.* 23, 155–171. doi:10.1521/jscp.23.2.155.31021
- Herman-Stabl, Mindy & Stemmler, Mark & Petersen, Anne. (1995). Approach and avoidant coping: Implications for adolescent mental health. *Journal of Youth and Adolescence.* 24, 649-665. 10.1007/BF01536949.
- Holahan CJ, Moos RH, Holahan CK, Brennan PL, & Schutte KK. (2005). Stress generation, avoidance coping, and depressive symptoms: a 10-year model. *J Consult Clin Psychol.*, 73(4):658–666. doi:10.1037/0022-006X.73.4.658
- Meyer, B. (2001). Coping with severe mental illness: Relations of the brief cope with symptoms, functioning, and well-being. *Journal of Psychopathology and Behavioral Assessment* 23, 265–277. <https://doi.org/10.1023/A:1012731520781>
- Moore BC, Biegel DE, & McMahon TJ. (2011). Maladaptive coping as a mediator of family stress. *J Soc Work Pract Addict.*, 11(1):17–39. doi:10.1080/1533256X.2011.544600.
- Portoghese, I., Galleta, M., Porru, F., Burdorf, A., Sardo, S., D'Aloja, E., Finco, G., & Campagna, M. (2019). Stress among university students: factorial structure and measurement invariance of the Italian version of the effort-reward imbalance student questionnaire. *BMC Psychol* 7, 68. <https://doi.org/10.1186/s40359-019-0343-7>.
- Ptacek, J.T., Smith, R.E., Dodge, K.L. (1994). Gender differences in coping with stress: When stressor and appraisals do not differ. *Personality and Social Psychology Bulletin*, 20(4), 421-430. <https://journals.sagepub.com/doi/10.1177/0146167294204009>
- Regehr, C. & Glancy, D. (2013). Interventions to reduce stress in university students: A review and meta-analysis. *Journal of Affective Disorders*, 148(1), 1-11.
- Shahsavarani, A., Abadi, E., & Kalkhoran, M. (2015). Stress: Facts and theories through Literature Review. *International Journal of Medical Reviews*, 2(2), 230-241.
- Sinclair VG, Wallston KA. (2004). The development and psychometric evaluation of the Brief Resilient Coping Scale. *Assessment.*, 11(1), 94-101. <https://pubmed.ncbi.nlm.nih.gov/14994958>

Author Biography

Asst. Prof. Vina Rose Dahilig-Talan, RPh, MS is currently the program chair of the Department of Pharmacy of the Manila Adventist College. She graduated MS Pharmacy (major in Hospital Pharmacy) and BS Industrial Pharmacy from the University of the Philippines Manila. She is currently a candidate for the degree of PhD. in Educational Leadership and Management in De La Salle University Manila. She finished her post-graduate fellowship in Plant Medicine Research and Drug Formulation in Rangsit University, Thailand. An associate member of the National Research Council of the Philippines Pharmaceutical Sciences Division, she has presented and published her research works in the field of plant medicine and education research in various local and international fora.

Sofia M. Cortez, RPh, Elsa Espeleta, RPH, Frederick M. Francisco, RPh, and Leilani E. Hidea, RPh are faculty members of the Department of Pharmacy.