

PM is the Key: Perceived Stress and Mental Health as the Key Indicator of Wellbeing of Selected College Online Students in the Philippines During COVID-19 Pandemic

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Abstract

The COVID-19 pandemic had a significant impact on students' mental health. Monitoring and managing the students' wellbeing during a crisis such as this pandemic is a priority. In this study, the researchers' main objective is to determine the relationship between perceived stress and the mental health of selected college online students in the context of the COVID-19 pandemic. A total of 307 college online students served as the respondents to this research, where two instruments were used: (a) Perceived Stress Scale (PSS-10), which measured Perceived Stress; and (b) Mental Health Inventory-18 (MHI), which assessed the respondents' Mental Health. The researchers utilized statistical methods such as frequency, percentage, mean, standard deviation, one-way analysis of variance, and Pearson r correlation to analyze the data. It was also found out that perceived stress and mental health have a significant negative relationship, implying that the higher the students' perceived stress, the lower their mental health and vice-versa. Moreover, the respondents have low anxiety levels and moderate degrees for depression, behavioral control, and positive affect, respectively. Furthermore, the study revealed that a higher percentage of stress has a lesser influence on one's positive affect than anxiety, depression, and behavioral control. Therefore, it suggests that high behavioral control is an important factor in students' healthy mental state in this time of the pandemic. Finally, the gathered information may also serve as a basis for developing students' wellness programs.

Keywords: Mental Health, Perceived Stress, Online Learning, COVID-19 Pandemic, Philippines

Introduction

In December 2019, a cluster of atypical cases of pneumonia was reported in Wuhan, China, which was later designated as Coronavirus disease 2019 or COVID-19 by the World Health Organization (WHO) on 11 Feb 2020 (Anand et al., 2020). In the Philippines, President Rodrigo Duterte placed the entire Luzon archipelago on enhanced community quarantine on March 16, 2020 (Official Gazette, 2020) as one of the measures to address the possible transmission of the Coronavirus disease.

Due to the imposing lockdown, physical access to the classroom has been restricted. About 1.5 billion university students have been affected because of institutional closure due to the COVID-19 outbreak (IAU, 2020). As the DepEd reported, 21.7 million learners have enrolled in public and private schools nationwide for the academic year 2020-2021 (Montemayor, 2020) plus 3 million enrollees for higher education (ched.gov.ph). A survey conducted by DepEd in April 2020 showed that 3.8 million learners prefer "modular" wherein modules – either printed or digital – will be used as an alternative learning option and a total of 2.1 million learners said that they wanted online (Hernando-Malipot, 2020) but there are no existing studies at the moment that

describe the utilization of and current capacity for online learning in Philippine schools.

With the COVID – 19 pandemic, there are so many uncertainties and other mental health-related concerns noted, specifically among students. The closings of educational institutes affect children and young's primarily (Araújo et al., 2020). A growing number of universities across the world, beginning from March 2020, either postponed or canceled all such campus events as workshops, conferences, sports (both intra- and inter-university), and other activities. Universities moved rapidly to transfer various courses and programs from face-to-face to online teaching (Sahu 2020).

A survey by Cao et al. (2020), which includes 7143 participants of college students, found around 25% of students are suffering from severe anxiety due to online learning stress. Also, findings suggest that students, as well as the general population, may be experiencing psychological effects from the outbreak of Covid-19, such as anxiety, fear, and worry, among others. Some students might be at higher risk of social isolation and the development of mental health problems during the Covid-19 crisis. This is particularly true when they live by themselves, have less direct contact with close family members and friends, receive less social support, and are less well-

integrated into a social network of students. Female students appeared to be at higher risk of facing negative mental health consequences (Elmer et al. 2020).

Online classes are to be found demandable as an alternative to institutional closure during this unprecedented time. Nevertheless, as a result of an inadequate learning approach, both students and instructors face numerous challenges and difficulties including psychological problems. (Alam, 2020; Bao, 2020).

Though online teaching is one of the promising alternatives to the physical classroom, students show a negative perception of online learning behavior (Rohman et al., 2020), which might be a significant consequence that is responsible for psychological distress. The previous study showed that students are anxious because of a lack of enjoyment in the classroom (Dewaele et al., 2019) and that the majority of colleges and universities also faced current challenges with virtual learning (Talidong & Toquero, 2020).

As to help battle the stress and mental health concerns that the students might be experiencing, it is important to have good coping strategies. Coping refers to efforts to manage demands, regardless of the success of these efforts (Folkman 1984). In other words, as an effort to manage encounters, individuals construct a repertoire of coping strategies that may or may not be effective (Lazarus 1999).

As cited from the study by Fazel (2015) that mental health services embedded within school systems can create a continuum of integrative care that improves both mental health and educational attainment for children. It is important for schools to focus on intensive interventions because it gives an opportunity for the schools to figure out ways to serve their neediest students (Vaughn, 2013).

To date, there has been no comprehensive research performed in the Philippines to assess the perceived stress and mental health of online learners during this COVID-19 pandemic. Therefore, this study aims to study the prevalence and relationship of perceived stress and mental health in online learning of the selected college students in the Philippines during the COVID-19 pandemic. Also, the findings of the study set the basis of mental health programs for the students.

Research Questions

The main objective of the study was to determine the relationship between perceived stress and mental health among selected college online students during the COVID-19 Pandemic. Moreover, the findings of the study will be used as bases for a Mental Health Program for Students. Specifically, it seeks to answer the following questions:

1. What is the demographic profile of the respondents in terms of the following?
 - 1.1 Gender
 - 1.2 Year Level
2. What is the level of perceived stress of the respondents?
3. What is the total mental health score of the respondents?
4. What is the mental health profile of the respondents on the following mental health sub-scales?
 - 4.1 Anxiety Subscale
 - 4.2 Depression Subscale
 - 4.3 Behavioral Control Subscale
 - 4.4 Positive Affect Subscale
5. Is there a significant difference between the Perceived Stress and Mental Health levels of the respondents when grouped according to their demographic profile?
6. Is there a significant relationship between the level of perceived stress and the total mental health score of the respondents?

Literature Review

To further understand each context of the study, it is better to have a deeper understanding of the following topics; stress, mental health, and coping mechanisms.

Stress

Generally, stress can be defined as an expected threat to one's well-being (Ulrich-Lai & Herman, 2009). Stressors may be real or imaginary yet play an important role in health and illness (De Vibe et al., 2012). Stressors may operate as causal factors in various diseases, especially clinical depression, cardiovascular disease, HIV/AIDS, and cancer (Cohen et al., 2007). Plus, the fact that stress and physical well-being complaints are strongly related (Wood et al., 2010). Stressful events can cause the pathogenesis of physical disease by generating negative effects which in turn may affect biological processes and behavioral patterns that increase the risk of diseases (Cohen et al., 1995). On the other hand, an ability to decrease stress is considerably important for better health (Hoge et al., 2017).

Several studies have been conducted to report the stress (e.g. AlAteeq, Alijhani & AlEesa, 2020; and Baloran, 2020) and challenges encountered by students in virtual learning spaces in their respective countries (e.g. Adnan & Anwar, 2020 in Pakistan; Arinto, 2016 in the Philippines; Henaku, 2020 in Ghana; Matswetu, et al., 2020 in Zimbabwe; Subedi et al., 2020 in Nepal; and Dhawan, 2020 in India). A most recent comprehensive study including 31 countries (Bozkurt et al., 2020) was also conducted to look at how the COVID-19 pandemic interrupted the education arena across the globe. This multi-country study significantly reported reflections, lessons learned, and suggestions on how to navigate education in this time of uncertainty.

According to Stallman (2010), college students experience significantly higher levels of psychological distress. The estimated prevalence for mental health problems of university students was 19.2% with 67.4% reporting subsyndromal symptoms. These rates were significantly higher than the general population. Psychological distress was associated with disability and lower academic achievement. Predictors of distress included: full-time status, financial stress, being aged between 18 and 34 years, being female, and in a subsequent undergraduate year of their degree. The extremely high prevalence of mental health problems in university students provides evidence for this being an at-risk population. Implications: The results highlight the need for universal early interventions to prevent the development of severe mental illness in university students. Further, the perceived stress was reported by the students as commonly rooted in the reality that their place for work and rest now occurs in the same place, and there were no boundaries as to define and identify when is the time for rest and when is the time for work (Muñoz, 2021).

Mental Health

Depression, anxiety, and stress levels of moderate severity or above were found in 27.1, 47.1, and 27% of our respondents, respectively. Anxiety and stress scores were higher among female students. First- and second-year students had higher depression, anxiety, and stress scores than the others. Students who were satisfied with their education had lower depression, anxiety, and stress scores than those who were not satisfied. The high prevalence of depression, anxiety, and stress symptoms among university students is alarming. This shows the need for primary and secondary prevention measures, with the development of adequate and appropriate support services for this

group (Bayram, 2008). In connection to this, a study among professional health students suggests that perceived stress increases the risk of anxiety and lower quality of life (Racic et al., 2019). Thus it can lead to deterioration of mental health.

Mental illness affects everyone—all genders, young and old. But not everyone experiences mental disorders the same way. Mental health problems are among the most important contributors to the global burden of disease and disability.

Mental health issues are the leading impediment to academic success. Mental illness can affect students' motivation, concentration, and social interactions—crucial factors for students to succeed in higher education. The Annual Report of the Center for Collegiate Mental Health (2019) reported that anxiety continues to be the most common problem (62.7% of 82,685 respondents) among students who completed the Counseling Center Assessment of Psychological Symptoms, with clinicians also reporting that anxiety continues to be the most common diagnosis of the students that seek services at university counseling centers. College students face more pressure in the setting of online learning since there is an increase in isolation and independence in terms of learning. In connection to this, according to a survey by the Centers for Disease Control and Prevention, 2 out of 5 adults aging 18-24 years old suffer from at least one “adverse mental or behavioral health condition” due to CoVid-19 Pandemic (Czeisler et al., 2020).

Coping Mechanism

Coping strategies are basic categories used to classify how people react to or handle stress. The best-known early classification (Lazarus and Folkman 1984) defined two major process-oriented functions of coping strategies: problem-focused coping and emotion-focused coping. In the problem-focused function, the individual obtains information about what to do and mobilizes actions for the purpose of changing the reality of the troubled person-environment relationship. The emotion-focused function is aimed at regulating the emotions associated with stressful situations. For example, the person can avoid thinking about a threat or reappraising it, without changing the realities of the situation (Lazarus 1999).

More recently, Rabenu et al. (2015) classified coping into three strategies. Change corresponds to problem-focused coping which is aimed at managing the stressors. Acceptance involves an emotion-focused

component (part of emotion-focused coping in Lazarus and Folkman 1984) which involves viewing the stressor as a fact that cannot be changed. Specifically, the person decides to adapt and adjust (perceptions, thoughts, and feelings) to the stressful situation. It also incorporates a meaning-focus (Folkman and Moskowitz 2007; Park and Folkman 1997) in which people use their beliefs, values, and goals to find or remind themselves of the benefits of experiencing stress which facilitates coping. In Withdrawal (also part of Lazarus and Folkman's emotion-focused coping) the individual feels 'trapped' in a stressful environment without being able (subjectively) to change it. People withdraw psychologically by distancing themselves mentally from the stressful work environment (Schuler 1986). One can also distance oneself physically from a stressful environment (Rosse & Hulin 1985).

Improving mental health has been one of the advocacies of mental health practitioners even before this COVID-19 pandemic. However, since this crisis has begun, increased social isolation and loneliness worsened the conditions of individuals (Kumar et al. 2020). Thus, statements on the prioritization of the preservation of mental health have been evident in several studies (Karam et al. 2020). Research on ways to improve mental health during the pandemic was produced for over a year, considering the limitations and resources of individuals affected in this situation.

The American Psychological Association (2020) presented ways for graduate and undergraduate students to lessen stress during pandemics, these are practice self-care, which basic self-care will keep the immune system intense and emotional reserves full. These include different ways and actions being observed in daily tasks such as having enough sleep, exercising regularly and eat well and try mindfulness apps. In addition, finding ways to focus such as establishing a routine, get up, go to bed and do the work at the same time every day and frequent breaks can help re-engage in work.

Another one is to seek out social support. To combat isolation, students come together with dorm-mates or graduate school cohorts via technology. Even something as simple as turning on the webcam during virtual classes can help others feel more connected. Another thing is to help others cope, for example, classmates and family members are also anxious. It is enough to let them know they are not alone. Find ways to manage disappointment, for example, grieve those losses, then reframe how to think about these life events. Thinking about how to honor what a person

has achieved would also help while limiting media consumption and smartphone use aids to avoid being overwhelmed. Lastly, focusing on things that a person can control like the control for one's own thoughts, feelings, and behaviors. Instead of worrying about an ambiguous future, focusing on solving immediate problems lessens anxious feelings.

According to the World Health Organization (2020), it is natural to have difficult thoughts and feelings under stress. Such as grounding, unhooking, acting on values, being kind, and finding safe space.

Browning et al. (2021) study concluded that rates of student psychological distress were as high as 90%. Students must "Maslow before they can Bloom;" in other words, their basic physiological, psychological, and safety needs must be met prior to them focusing on - much less excelling - in academic life. They further recommend that university administrators take aggressive, proactive steps to support the mental health and educational success of their students at all times, but particularly during times of uncertainty and crisis— notably, the COVID-19 pandemic

Estacio et al.'s (2020) study reveal that for some people, being placed under home quarantine has given them time to get in shape physically, mentally, and psychologically. Others have resorted to online activities, learning new hobbies, and spending time with their loved ones to cope with the situation. However, it was also stressed that remote learning and working arrangements, as well as online entertainment, are not privileges everyone enjoys.

In the study of Wang et al. (2020), a total of 2031 responses were collected through an online cross-sectional survey. More than half of the respondents described coping mechanisms and mentioned support from family and friends as a critical factor, similar to previous findings. Several respondents also said the use of technology, such as mobile apps and other digital platforms, as a means of positive coping practices, such as meditation, echoing recent findings on the positive effect of a mindfulness app on college student's mental health. This indicates some potential for mobile-based technologies to support mental health. In addition, such platforms may have the added benefit of helping overcome the barrier of social stigma related to seeking help from counseling services.

Further research is proposed by Sundarasan and others (2020) to include successful coping strategies used by the students during testing times, such as the COVID-19 pandemic. Research should also be

channeled toward teaching, learning, and assessment methods in the “new normal” space, which can have the dual benefit of maximizing learning outcomes and minimizing anxiety and adverse psychological impacts among students. Furthermore, research focusing on the use of digital technology and psychological artificial intelligence solutions to manage anxiety levels of university students should be intensified.

In general, it can be said that despite the adverse consequence of the COVID-19 pandemic, there are means to combat stress and boost students' mental wellbeing. Also, studies have established that the pandemic has increased the need for intervention and wellness programs to promote the students' mental health.

Methodology

Participants and Procedures

The sample consisted of 307 respondents; 99 were males, 194 were females, and 14 were under LGBT+. All college online students, 129 under third-year level, 68 second year, 66 first year, and 44 were fourth-year students.

For both convenience and safety reasons in light of the COVID-19 outbreak, the data gathering was done through online means. The recruitment of the respondents was based on the convenience of the students who answered the online form. The study was intended only for college online learners from the first to fourth-year level. Participation was voluntary, anonymity was guaranteed, and consent was obtained at the start of the survey. The instrument was converted into Google Forms and the published link was distributed through electronic mail and social media (Facebook).

The form was opened for a certain amount of time to maximize the possible participation of students from various organizations and institutions. Also, the researcher connected to different student organizations in disseminating the link among students in different respective schools.

Instruments

Perceived Stress Scale (PSS-10)

The stress was assessed using the Perceived Stress Scale (PSS-10). This tool, while originally developed in 1983, remains a popular choice for helping us

understand how different situations affect our feelings and our perceived stress. The PSS is a 10-item test that showed adequate reliability and, as predicted, was correlated with life-event scores, depressive and physical symptomatology, utilization of health services, and social anxiety. (Cohen et al, 1983). The PSS-10 includes 10 items which are rated on a 5-point Likert scale (0 = Never to 4 = Very Often). Its Cronbach alpha coefficient is 0.78 in an adult American population (Cohen & Williamson, 1988). In Iran, the Cronbach alpha coefficient of the long version of PSS-10 (i.e., PSS-14) was 0.76 (Safaei & Shokri, 2014)

Mental Health Inventory-18 (MHI)

The Mental Health Inventory-18 (MHI) was used to measure participants' Mental Health. MHI is a widely accepted measure of overall emotional functioning developed by Veit and Ware (1983) The instrument was developed by Veit and Ware in 1983 for the assessment of mental health in the general population. The first version of this instrument was a 38-item scale and measured psychological distress and wellbeing (Veit et al, 1983). The MHI-18 is an abbreviated version of the 38-item Mental Health Inventory. It contains items assessing anxiety, depression, behavioral control, and positive affect. The MHI-18 is highly correlated with its longer version the MHI-36 and the more established Center for Epidemiological Studies –Depression Scale (CES-D) (McHorney et al, 1993).

According to the study “Reliability and validity of a Farsi version of 18- item Mental Health Inventory” by Meybodi, F et.al. 2011, The results of the factor analysis provided support for the two-factor model of wellbeing and distress. This is in line with the factorial structure found in the original English version of the MHI. The concurrent and convergent validity of the MHI-18 was demonstrated in the pattern of Correlations between the MHI-18 and GHQ-28. Findings confirmed the concurrent validity. The pattern of correlations is consistent with the results from previous studies using the original English version of the MHI-18. These findings support the MHI-18 internal consistency and half- split reliability. With its student's norms, the MHI-18 is recommended for the assessment of student's mental health particularly in comparison with nonpsychiatric, normative students. Thus, the scale can help in the assessment of mental health in students. These findings, however, are limited in test-retest reliability, the sample size, the type of sample, and the measures which call for next studies on the psychometric

properties of the MHI-18.

Result

Descriptive

Table 1. *Demographic Characteristic of Participants*

Characteristic	Total Number	Percentage
Gender		
Female	194	63%
Male	99	32%
LGBT+	14	5%
Year Level		
1 st Year	66	21%
2 nd Year	68	22%
3 rd Year	129	42%
4 th Year	44	15%

Table 1 results revealed that the majority of the respondents are females, with a percentage of 63 and came from 3rd year level, with a percentage of 42.

Table 2. *Level of Perceived stress of the respondents*

	Mean	SD	Interpretation
Perceived Level of Stress	24.41	5.59	Moderate

Table 2 presents the level of perceived stress of the respondents. It shows that most of the respondents fall under the “moderate” level, with a mean of 24.41.

Table 3. *Total Mental Health Score of the Respondents*
Level of Perceived stress of the respondents

	Mean	SD	Interpretation
Mental Health Total	47.11	17.13	Moderate

Based on the findings, table 3 shows that the total mental health score of the respondents is moderate and

it has a mean of 47.11. This only implies that although college students experience mental health problems, they can still take care of themselves and be aware that they can seek help from other people.

Table 4. *Mental Health Profile of the Respondents on the Mental Health Subscales*

	Mean	SD	Interpretation
Mental Health (Anxiety)	38.54	19.99	Low
Mental Health (Depression)	45.57	22.20	Moderate
Mental Health (Behavioral Control)	50.46	21.07	Moderate
Mental Health (Positive Affect)	53.44	19.63	Moderate

Based on the results shown in table 4, the level of mental health of the respondents in terms of the anxiety subscale falls under the “low” level with a mean of 38.54. It was also found out that the respondents were under moderate levels in all other mental health subscales such as depression (M=45.57), behavioral control (M=50.46), and positive affect (M=53.44), respectively.

This was supported by another study by Khoshaim, H, et. al (2020) titled “Anxiety Level of University Students During COVID-19 in Saudi Arabia” which shows that college students around the world suffer from psychological morbidity, particularly depression and anxiety, due to concerns about the future and academic pressure such as managing stressful tasks and assignments and pursuit to improve their academic performance. A variety of studies have shown that college students in Saudi Arabia share the same symptoms of anxiety and stress and recorded a prevalence of depression and anxiety ranging from 14 to 50%.

As cited by Cao et al. (2020) found that 0.9% of college students experienced severe anxiety during COVID-19, while around 24% experienced mild to moderate levels, which presents a low level of anxiety compared to previous literature on college students in general.

Table 5. *The significant difference between the Perceived Stress and Mental Health levels of the respondents when grouped according to their*

demographic profile

Table 5.1. Means, Standard Deviations, and Analysis of Variance of the Respondents According to Gender

Variables	Male	Female	LGBTQ+	F-ratio	p	η^2
Perceived Stress	23.17 (5.55)	25.05 (5.46)	24.36 (5.59)	3.781	.024	.02
Mental Health total	51.49 (15.43)	45.41 (17.08)	39.68 (23.06)	5.678	.004	.04
Mental Health (Anxiety)	45.73 (17.37)	35.31 (20.39)	32.29 (19.11)	10.203	.000	.01
Mental Health (Depression)	51.01 (21.15)	43.51 (22.29)	35.71 (21.29)	5.340	.005	.01
Mental Health (Behavioral control)	52.77 (19.99)	49.95 (20.92)	41.07 (28.29)	2.060	.129	.01
Mental Health (Positive Affect)	57.37 (18.34)	51.75 (19.12)	48.89 (30.39)	3.117	.046	.02

Note: Standard Deviations are presented in parenthesis

Table 5 shows the difference in the scores of the respondents when they are grouped according to their demographic profile. Although the persistence of significant differences in the level of stress is shown by the results of each gender group ($F = 3.781$, $p = .024$), it is observed that the female respondents tallied the highest levels of stress ($M = 25.05$), followed by the members of LGBTQ+ ($M = 24.36$) and the Male (23.17) respondents albeit still high, tallied the lowest average level of stress as compared to the other two.

For the respondents' scores on their Mental health inventory, it shows significant difference as well, although it is observable from the total mental health score ($F = 5.678$, $p = .004$) of the respondents up to the individual domains [Anxiety ($F = 10.203$, $p = .000$); Depression ($F = 5.340$, $p = .005$), and Positive Affect ($F = 3.117$, $p = .046$) except on the domain of Behavioral Control ($F = 2.060$, $p = .129$). With that, the data shows that Male respondents on average have the highest scores, while the members of the LGBTQ+ are observed to have the lowest mental health scores as compared to the others. The effect size of the interaction between variables are consistently observed to be on the lowest criterion which implicates that there is less than 5% of the change in the DV (Perceived Stress and Mental Health) are associated with the IV (Gender), this could mean that other situations or circumstances in the life of the respondents contribute to their stress and mental health.

Table 5.2. Means, Standard Deviations, and Analysis of Variance of the Respondents According to Year Level

Variables	1 st Year	2 nd Year	3 rd Year	4 th Year	F-ratio	p	η^2
Perceived Stress	23.90 (5.76)	24.47 (5.43)	24.92 (5.09)	23.59 (6.83)	.856	.464	.00
Mental Health (Anxiety)	35.94 (19.27)	39.71 (19.38)	37.71 (19.38)	43.09 (23.13)	1.289	.278	.00
Mental Health (Depression)	44.17 (20.52)	46.47 (22.24)	45.66 (22.71)	46.02 (23.61)	.131	.924	.00
Mental Health (Behavioral control)	48.71 (22.00)	50.44 (22.03)	49.96 (19.78)	54.55 (22.01)	.725	.538	.00
Mental Health (Positive Affect)	55.68 (20.60)	54.71 (19.02)	52.05 (19.36)	52.16 (20.07)	.656	.580	.00

Note: Standard Deviations are presented in parenthesis

This table shows that the Perceived stress and mental health of the respondents do not have a significant difference when grouped according to their year level ($p < .01/.05$). The result signifies that regardless of the year level that students are in, it does not necessarily increase the tendency of individuals to be distressed and affect their mental health in a negative way. Although this may be the case, it is very important to note that in the context and life of a student, the expectations and tasks in class are still a form of stress.

Table 6. Correlation Between Perceived Stress and Mental Health

		Correlations					
		1	2	3	4	5	6
1. Perceived Stress	r	1					
	p						
2. Mental Health Total	r	-.751**	1				
	p	0.000					
3. Mental Health (Anxiety)	r	-.630**	.839**	1			
	p	0.000	0.000				
4. Mental Health (Depression)	r	-.646**	.867**	.751**	1		
	p	0.000	0.000	0.000			
5. Mental Health (Behavioral Control)	r	-.660**	.848**	.571**	.651**	1	
	p	0.000	0.000	0.000	0.000		
6. Mental Health (Positive Affect)	r	-.575**	.781**	.487**	.511**	.631**	1
	p	0.000	0.000	0.000	0.000	0.000	

** . Correlation is significant at the 0.01 level (2-tailed).

The table shows the correlations among variables. Significant negative relationships are observed between the perceived stress of the respondents and their mental health in general ($r = -.751$, $p .000 < .01/.05$). As for the individual domains of Mental health and its relations to the perceived stress of the

respondents, although all of the domains indicate a significant relationship, there is an observed difference among the four factors. Namely, the level of relationship of the factor positive affect ($r = -.575$) is observably lower than the other (Anxiety = $-.630$, Depression = $-.646$, Behavioral Control = $-.660$) this could indicate that there is a higher percentage than stress influence less one's positive affect compared to anxiety, depression, and behavioral control.

Discussion

1. As per the results of the data, female respondents from the 3rd-year level are the top most in the study. Saleh et al. (2017) in their study states that psychological difficulties were significantly higher in women than men when it came to perceived stress, perceived helplessness, perceived self-efficacy, global psychological distress, somatic symptoms, anxiety, and insomnia. They also have a lower sense of self-efficacy than men.

However, they did not find significant differences between women and men concerning self-esteem, life satisfaction, and optimism. On the one hand, these results are following much previous research performed in different countries (Backović et al., 2012; Cruz et al., 2013; Shamsuddin et al., 2013) that show that levels of stress and psychological distress are higher in females than males college students (Spitz et al., 2007; Backović et al., 2012; Deasy et al., 2015).

On the other hand, results concerning associations between gender and the sense of self-efficacy are in opposition to other literature data (Follenfant and Meyer, 2003; Ayle and Nagels, 2014). This was also the case for our results concerning the links between gender and self-esteem (Dozot et al., 2009).

In addition, Kostic (2021) on their study findings showed that female students were significantly more stressed during the COVID-19 outbreak than the male and that being female significantly predicted higher perceived stress in our sample. Earlier research as well as the recent studies carried out on the student population during the COVID-19 have shown significant gender differences in the psychological response to the epidemic.

2. The results only show that even though students' lives are stressful with the pandemic, they still have time to cope up and bounce back. Based on the study of Deemah et al. (2020) titled "Perceived stress among

students in virtual classrooms during the COVID-19 outbreak in KSA" it states that through the month preceding the survey, the following trends were observed: 58.1% of the students (fairly or very) often felt nervous and stressed; 58% were often angered due to things that happened outside of their control; 50.5% often felt that difficulties were piling up so high that they could not overcome them; 43% often found that they could not cope with all the things that they had to do; 42.2% often felt that they were unable to control the important things in their life; 34.9% were often upset because of something that happened unexpectedly.

Conversely, 49.3% of the students often felt confident in their ability to handle personal problems, 30.8% often were able to control irritations in their lives, 26.5% often felt that things were going their way, and 25.6% often felt that they were on top of things. In general, 55% of the students had moderate stress, and 30.2% had high stress.

3. Based on the findings, it shows that the total mental health score of the respondents is moderate and it has a mean of 47.11. As per the study conducted by Liu et al. (2020) titled "Online Mental Health Survey in a Medical College in China During the COVID-19 Outbreak" results shows that approximately one-third of students who participated in the survey were in a state of mild or moderate depression, one-fifth of these students were in a state of mild or moderate anxiety, and merely one or two were severe.

Mental health issues are the leading impediment to academic success. Mental illness can affect students' motivation, concentration, and social interactions—crucial factors for students to succeed in higher education. Mental health problems are among the most important contributors to the global burden of disease and disability.

In addition to that, although the present survey mainly screened for depression and anxiety, a previous study demonstrated that the progression of negative emotions such as anxiety, which are experienced in the early stages of disasters, can lead to post-traumatic stress disorder when left without intervention. However, if early mental health care measures are implemented, such consequences can be avoided. It was advantageous that the majority of students who were in a depressed or anxious state had mild or moderate symptoms. This allowed for a favorable outcome when appropriate measures were taken.

4. In terms of the anxiety subscale, the respondents have a low anxiety level. According to Dewaele et al.

(2019) in their previous study, it was revealed that students are anxious because of a lack of enjoyment in the class and that the majority of colleges and universities also faced current challenges with virtual learning (Talidong & Toquero, 2020). On the depression subscale, it suggests that the respondents have moderate levels of depression and they may experience feelings of guilt, disturbed sleep, reduced appetite, tiredness and difficulty concentrating from time to time, but they can manage and cope with it.

This can be supported by a local study conducted by Baticulon et al. (2020), in which among 3,670 medical students in the Philippines, only 1,505 students (41%) considered themselves physically and mentally capable of engaging in online learning. Barriers were classified under five categories: technological, individual, domestic, institutional, and community barriers. These challenges might contribute to the psychological distress and depression of the students. Most frequently encountered were difficulty adjusting learning styles, having to perform responsibilities at home, and poor communication between educators and learners.

Another subscale of mental health is positive affect which refers to the extent to which an individual subjectively experiences positive moods such as joy, interest, and alertness. The respondents were also under the moderate degree in this subscale. This can be further explained by Estacio et al.'s (2020) study which reveals that during this COVID-19 pandemic, for some people, being placed under home quarantine has given them time to get in shape physically, mentally, and psychologically. Lastly, respondents have a moderate degree of behavioral control. In this time of the pandemic, others have resorted to online activities, learning new hobbies, and spending time with their loved ones to cope with the situation. However, it was also stressed out that remote learning and working arrangements, as well as online entertainment, are not privileges everyone enjoys.

5. Results of the comparative analysis regarding the levels of perceived stress and mental health of the respondents, when grouped according to their demographic profile, showed that in terms of gender, women are the ones who feel the most stressed when compared to men and the members of LGBTQ+ (Prowse et al., 2021; Gao et al., 2019; Torres-Montiel et al., 2017). The results also coincide with the study of Torres-Montiel et al. (2017), by also identifying those men tend to have lower stress levels as well as higher scores for psychological well-being which also reflects the results of the study. This can be

associated with how the students cope with the situation, can be said that because of the change in the norm due to the limits of the pandemic from body image and academic performance which leads to higher anxiety for women (Gao, 2019) which can be associated to stress along with the fear of contracting the virus (Turna et al., 2021; Son et al., 2020).

Regarding the results on the significant differences in the respondents' year level and their level of stress and mental health, the findings did not show a significant result. This can be associated with the similarity of their situation in terms of their environmental situations and circumstances during this time of the pandemic, since there is evidence that where students from lower levels perceived stress and anxiety more when it comes to academic difficulty (Madebo et al., 2016; England et al., 2019). This could indicate that difficulty brought about by the more advanced subjects associated with year level does not necessarily be the cause of stressors of the students and more on the thought of balancing concerns with the virus and managing both their personal and professional lives (Son et al., 2020).

6. The result of the correlation between the perceived stress of the respondents to their mental health shows that perceived stress and mental health have a significant negative relationship. This implies that the higher the students' perceived stress, the lower their mental health and vice-versa. Mental health includes the emotional, psychological, and social well-being that affects how people think, feel, and act (Mental Health.gov, 2020). Perceived stress is defined as the thought or feeling that an individual has about the amount of stress that one has at a given time (Phillips, 2015). In line with this, the connection between stress and mental health is vital, and understanding it is essential to handle it (MQ Mental Health, 2018). A study among professional health students suggests that perceived stress increases the risk of anxiety and lower quality of life (Racic et al., 2019). Thus, it can lead to deterioration of mental health.

The pandemic COVID-19 had produced stress among students regarding academic workload, separation from school, and fear of contagion, which affects their health. This is according to a study conducted among Chinese college students (Yang, 2021). College students face more pressure in online learning since there is an increase in isolation and independence in terms of learning. In connection to this, according to a survey by the Centers for Disease Control and Prevention, 2 out of 5 adults aging 18-24 years old suffer from at least one "adverse mental or behavioral

health condition” due to COVID-19 Pandemic (Czeisler et al., 2020). The perceived stress was reported by the students as commonly rooted in the reality that their place for work and rest now occurs in the same place, and there were no boundaries as to define and identify when is the time for rest and when is the time for work (Muñoz, 2021).

The previous studies and articles may explain a significant negative correlation between perceived stress and mental health among students. The more they experience an increase in perceived stress brought about by the rapid shift of face-to-face learning to distance learning, the more they experience isolation, anxiety, and virtual fatigue (High Focus Centers, 2020); this indicates deterioration of mental health.

7. Son et al. (2020) concluded that due to the long-lasting pandemic situation and onerous measures such as lockdown and stay-at-home orders, the COVID-19 pandemic brings negative impacts on higher education. Their findings highlighted the urgent need to develop interventions and preventive strategies to address the mental health of college students.

According to Hernandez-Torrano, et.al. (2020), such studies would inform administrators and practitioners on how to broaden and enrich available programs and initiatives to promote mental health and well-being in higher education contexts in order to offer alternative forms of support that university students find appropriate for their social and cultural values.

Lei, Liu and Jiang (2021) mentioned that universities should develop a care culture and environment that supports the life adjustment of college students, promotes cultural and sports activities, and facilitates the expansion of social networks. Meanwhile, mental health education and psychological counselling services should be strengthened. These include hotlines offering timely help to those in urgent needs. Early detection and effective management of mental health problems can effectively reduce serious mental health disorders.

Grotan, Sund and Bjerkeset (2019) suggest that future studies should assess students’ health prior to study start and follow them up with repeated measurements and qualitative interviews. This methodology could provide useful knowledge about mental health problems and how they arise and influence academic self-efficacy and study progress. Second, counseling and health services should be easily available and offered on campus, to facilitate and increase mental health literacy and help seeking – both represent key challenges across societal and health care settings.

More specifically, psychoeducational interventions, counseling, guidance and treatment, group initiatives, stigma reducing, and health-promoting measures could be carried out and evaluated in the university setting. Finally, research that combines educational and psychological theory in higher education might contribute further to a more complete understanding of the associations between mental health, academic self-efficacy and study progress.

Conclusion

Gender differences and year level shows a result that will give a great impact with regards to the perceived stress and mental health issues. Female respondents state that they are more prone to stress and have mental health issues, there are many reasons to consider such as hormonal change issues that affect their mood. With regards to the year level, they are also prone to stress and have issues in mental health, reasons such as they have more academic requirements.

In terms of the mental health subscales, the respondents have moderate levels of depression, positive affect, and behavioral control while a low level of anxiety was also noted. The role of positive affect and behavioral control helps in managing the negative thoughts and experiences of the students. Although they may be struggling personally, academically, and socially, they resort to other positive coping strategies and healthy behaviors which help them to become more resilient in these challenging times.

It has been concluded in the study that the total mental health score of the respondents is moderate. This implies that although college students experience mental health problems, they can still take care of them and be aware that they can seek help from other people.

Moreover, perceived stress and mental health have a significant negative relationship. Therefore, stressors, especially in this time of the pandemic, could substantially affect the students’ mental health in general. However, when correlated per individual domain, it can be observed that stress can be less likely to influence positive affect among students as compared with other mental health domains.

In the light of the present findings, students, as well as the management of the Universities and or Colleges, should be encouraged to be more mindful of their

Mental Health with the intent to improve their Well-being. Conceptualizing exciting activities or student engagements must be considered to balance the online schooling and personal life of Students.

Moreover, it should be considered that the COVID-19 pandemic is already stressful for the students. The mental health of the students is already affected by the pandemic and the transition of online schooling. Consequently, it would be helpful for the students to feel that they are not fully isolated in this situation. It is going to be beneficial for the students if the teaching professionals would be extra considerate to the condition of the students, and mental health practitioners would frequently check on them and intervene when needed.

Guidance counselors shall facilitate alternative ways in conducting regular school-based psychological screening as a continuous way of identifying and monitoring those who might experience emotional suffering and other mental health concerns considering that the respondents were found to have moderate degrees of perceived stress and mental health.

Further study is also recommended since this paper is mainly focusing on the level and relationship of stress and mental health. It is more beneficial if the future researcher can identify the cause of stressors. Also, since the respondents focus on online college students, it is beneficial to study students at lower levels.

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