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Impact of COVID-19 and emotional states of Filipino university students

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ABSTRACT

The coronavirus disease (COVID-19) pandemic has extremely caused massive disruptions in the education sector, and this led to the adoption of full-distance learning modalities across different educational institutions worldwide. However, studies are still needed within the context of the Philippines in terms of the impact of the pandemic on university students in light of a gradual limited face-to-face transition. This study determined the Filipino college students' perceived impact of the COVID-19 pandemic and the prevalence of depression, anxiety, and stress symptomatology (DASS) among them. This cross-sectional study surveyed Filipino university students from a public higher education institution in the Philippines via convenience sampling. A total of 3,718 students participated in the study. Analysis showed that despite the respondents' level of DASS being roughly similar and normal, half of them is experiencing mild to extremely severe symptomatology. Further results indicated that there is a statistically significant difference in their DASS when grouped according to their gender and class level. The findings will be beneficial to multiple stakeholders in designing data-driven policies that would maximize the possibility of a safe resumption of limited, gradual, and eventually, full face-to-face modalities.

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1. INTRODUCTION

The global educational landscape experienced a major paradigm shift as educational institutions were mandated to find alternative means to deliver instruction because of the threat of the coronavirus disease (COVID-19) pandemic. The UNESCO [1] reported that at least 90% of the student population around the world was affected by the closure of schools as a preventive protocol to restrain the spread of the virus. With this situation, the government must reconsider the matters that need to be addressed to ensure the continuous learning process of the students [2], [3]. In light of this, Azorín [2] further mentioned that most of the educational institutions located in different countries recognized the digitalization of the educational system to address the concern.

The impact of COVID-19 on the education system was carefully explored by several researchers who found various factors that affected teaching and learning amidst the pandemic [4]–[6]. The online modality that was implemented brought a negative impact on the learning of the students which caused a decrease in the quality of education they received [4]. Also, due to some limitations imposed by online learning such as accessibility and affordability, the students were involved in offline activities and self-exploratory learning to deal with the situation. In addition to these, the students who belong to the vulnerable

group encounter difficulties compared to the intrinsically motivated students as the supervision and guidance that they need are minimal only. On the other hand, competent students with economically impediment backgrounds were incapable of accessing online learning. The decline in the level of academic performance of the students was also caused by the pandemic specifically because there is insufficiency when it comes to teachers' consultation in encountering difficulties in understanding the lesson [5].

In compliance with the concerns brought by the pandemic, limited face-to-face learning was designed which requires thorough preparation [4]. Moreover, the planning of the implementation of face-to-face interactions in schools must be supervised attentively as it risks the safety of the learners, teachers, and other staff [7], [8]. This suggests that educational institutions must adhere to the international and national guidelines that were set to secure the protection of all stakeholders and mitigate the effects of COVID-19.

In the Philippines, the Department of Health (DOH) and the Commission on Higher Education (CHED) shared a joint memorandum about the guidelines that are needed to implement the gradual reopening of schools through limited face-to-face, specifically in the higher education sector. Based on the memorandum, hygiene kits must be carried by the students and teachers in attending face-to-face classes. The medical and allied medical programs were the first to allow face-to-face classes such as medicine, nursing, medical technology, medical laboratory science, physical therapy, midwifery, and public health, taking into consideration of the COVID-19 cases in the location of the campuses. Aside from that, the higher education institutions (HEIs) must coordinate with the local government unit (LGU) in the planning and implementation of the resumption of limited physical classes. In addition, the school administration must also redesign the facilities' layout in a way that physical distancing can be maintained [9].

Implementing limited face-to-face classes inflicted several challenges on learners and teachers [10], [11]. Since limited face-to-face classes still require the students to be present in online and offline modes of learning, they experience difficulties along the way [10]. One of these is the feeling of disconnectedness from the institutions which was found to be a significant aspect of a student's subjective well-being. On the other hand, on the part of the teachers, the bulk of work may overwhelm them since the limited face-to-face learning demands more time due to online and offline teaching [10]. Moreover, concern about speaking English was also found to be present among the students [11].

Determining the perception of the students is one of the essential components of assessing the methods utilized by school administrators because it will assist in the ascertainment of learners' needs for academic achievements [12]. In line with this, several studies explored the perception of the students about face-to-face and online learning and discovered that the former was the preferred modality of the students [13]–[15]. The demand for more effective learning is one of the bases of these results [15]. Although face-to-face learning was favored by the students, it was a noteworthy finding that some females were not prepared for the resumption of offline classes [15]. This finding may be attributed to the higher level of anxiety that females have compared to males [16]. On the other hand, the findings that the face-to-face modality was favored by the students contradicts the report [17] where online learning was seen as an effective modality to learn based on the point of view of medical students. Online learning was indicated as an effective approach to learning because there was an increase in the knowledge of the students according to the participants [18].

In exploring the depression, anxiety, and stress symptomatology of Lebanese university students during the COVID-19 quarantine, Fawaz and Samaha [18] mentioned that the onset of the quarantine period caused the students to experience moderate depression, anxiety, and stress which affected their satisfaction. The same prevalence among college students in Spain was found in the study by Ramón-Arbués *et al.* [19] even before the pandemic began. On the other hand, Johansson *et al.* [20] reported minimal changes in the mental health of Swedish university students in the first months of the pandemic.

In the advent of national policies implemented across different countries around the world relative to the gradual resumption of residential face-to-face classes, the institutionalization of data-driven policies must be anchored on relevant results to ensure the safety of learners. Moreover, while researches reveal inter and multi-national perspectives on COVID response in education, there is a dire need to initially explore how the pandemic has affected the learners in terms of its impact using determined psychological constructs in light of prospective or gradual resumption of face-to-face learning in the Philippines. This study aimed to assess the perceived impact, depression, anxiety, and stress symptomatology of Filipino college students within the context of a potential residential face-to-face at the time of the study. Results of the study may aid in the creation of institutional policies for a restructured modality while putting into consideration the mental and psychological state of the students.

The researchers conducted a cross-sectional survey of the students' perceived impact of COVID-19 pandemic and the prevalence of depression, anxiety, and stress symptomatology among them. Moreover, the study sought to: i) Describe the profile of the respondents as to their age, gender, civil status, residence, estimated monthly household income (cumulative income of all family members), if they are working students, their college/campus, student type, and year level; ii) Assess the perceived impact of COVID-19 on

the students' academic undertaking; iii) Describe the prevalence of depression, anxiety, and stress symptomatology of the students; and iv) Verify significant differences between the profile of the respondents, the impact of COVID-19, and their depression, anxiety, and stress symptomatology (DASS).

2. RELATED STUDIES

2.1. Impact of COVID-19 pandemic on the Philippine educational system

At the onset of the COVID-19 pandemic, several countries, including the Philippines, imposed measures to significantly reduce the new infections, alleviate the burden on healthcare hospitals and providers, and minimize the death toll. Among the most impacted industries in the education sector. The pandemic has brought about significant disruptions like school suspensions and closures seen across the country. Implementation of strict quarantine restrictions and lockdowns have forced schools to close and revisit and adopt new models to continue education in the country. According to UNICEF, the Philippines was at the bottom in terms of going back to in-person learning-affecting 27 million students [21].

Due to the influence of the COVID-19 pandemic in the educational sectors, suggestions and recommendations about the improvement of the curriculum were given by several education practitioners and scholars [6], [22]–[24]. In particular, Balahadia [6] and Toquero [22] examined the possible practices that may be implemented to address the challenges encountered during the pandemic, specifically in higher education. These include the incorporation of environmental and health education courses, reinforcement of the provisions and policies dealing with environment and hygiene, integration of virtual mental health and medical services, establishment of the digital skills of the workforce, and support to the research outputs [22]. Similar to this, Tria [24] also recommended practices, namely: the utilization of face masks and social distancing, augmenting online learning platforms, supporting research and development in health, and integrating and creating the health program. Also, the "goal, content, approach, and evaluation" of the curriculum must be considered to better re-assess education in this new era [23]. The findings indicate that the revision of the curriculum is one of the primary concerns of the education experts in the advent of the pandemic to further adapt to the contemporary era of teaching and learning.

Previous study [25] highlighted the impact of the pandemic on both students and teachers. Teachers and students alike have made several adjustments during the implementation of various quarantine measures. Furthermore, students are the most affected due to various reasons such as the lack of materials and devices to accomplish their learning tasks and limited access to the internet. Moreover, the pandemic also impacted the learning experiences and mental health of the students [26].

It was found that the students' challenges were greatly associated with their learning environment while their technological literacy and competency were the least challenging [26]. Meanwhile, online education which was brought about by the pandemic was seen to be the root cause of academic honesty and lack of feeling compared to face-to-face classes [27]. In line with this, continuous support and training to the faculty must be provided by the administration to adapt to the new landscape of education. Tee *et al.* [28], through a comprehensive survey, explored the psychological impacts of the pandemic among Filipinos where they found out that at the onset of the global health crisis, the majority of the Filipinos experienced moderate to severe anxiety, while a small percentage have likewise yielded a moderate to severe level of depression. Relative to this, mental health problems were also seen among young Filipinos during the pandemic [29]. In addition, older adults were also seen to deal with fear which led to anxiety and depression that is associated with the higher risk of acquiring the disease and the community quarantine imposed by the administration [30]. This summarizes that the pandemic has truly posed major concerns in the psychological well-being of Filipinos.

According to Lim *et al.* [31], the pandemic persistently affects Filipino students' overall mental health well-being. The already-challenged mental well-being of Filipino children was reportedly neglected despite the implementation of various interventions [32]. Malolos *et al.* [32] further stressed that approaches that addressed the issue of the mental health effects of the pandemic among children must be integrated. Without doing so, the COVID-19 pandemic will be replaced by a mental health epidemic shortly [32].

2.2. Students' depression, anxiety, and stress

Several studies have indicated that the COVID-19 pandemic has caused profound psychological and social impacts on students [33]. During this time, two studies in China highlighted those younger adults, regardless of their gender, usually aged 21-40 years old, were more vulnerable to psychological problems [34], [35] The same observation was found among older secondary students in Palestine [36]. A study in Bangladesh and other Asian countries also estimated that DASS was more prevalent and relatively high during the early COVID-19 outbreak [37]–[39]. They are at higher risk of developing anxiety, depression, and lower-level of mental well-being [34], [38].

In a similar study in Argentina, young people are often the most psychologically affected by the implementation of national quarantine protocols implemented due to the current COVID-19 pandemic [40]. The pandemic has negative persistent effects on students' moods, as well as on their wellness behaviors [41]. Studies participated by middle eastern countries which were conducted through popular online social networking sites (Facebook and WhatsApp) showed that being female together with other COVID-related factors can be a predictor for determining the level of DASS [42]. A literature review further mentioned that being a female alone in Southeast Asia can be a dominant factor in the mental decline during the COVID-19 pandemic [43]. In addition, emotional disturbances were seen to exacerbate the rates of students' suicidal tendencies during and probably after the pandemic [33], [37]. Sher further highlighted that it is imperative to address and decrease the emotional disturbances (e.g., stress, fears, anxiety, and loneliness) of not only the students but also the general population.

3. RESEARCH METHOD

3.1. Research design, population, and sample size

This study employed the use of a quantitative approach, particularly a cross-sectional survey. Creswell [44] highlighted that survey research designs are appropriate to establish trends and describe the perceptions of a bigger group of people. In particular, the researchers made use of a cross-sectional self-reported survey design conducted for a month-long time in January 2022. In particular, cross-sectional designs are grounded on the time the data were collected or at "one point in time" [44]. The researchers specifically utilized the cross-sectional design relative to "attitudes, opinions, and practices." These are relevant to students' responses to benchmark statements that describe the extent of the impact of the COVID-19 pandemic, and the personal assessment of their perceived depression, anxiety, and stress symptomatology.

The respondents included university students from a state university in Pampanga, Central Luzon, Philippines. The institution is one of the early implementers of distance learning modalities at the onset of the pandemic in 2020 in the Philippines. There were 37,398 students enrolled in the university as of January 2022 across its eight colleges and seven campuses strategically located in various towns of Pampanga (data provided by the Office of the University Registrar). Convenience sampling was used and yielded a total of 3,718 student-respondents who voluntarily accomplished the electronic survey.

3.2. Instrument

The instrument was divided into three parts: i) Sociodemographic information about the respondents, ii) The impact of COVID-19, and iii) A 21-items self-reporting assessment for depression, anxiety, and stress symptomatology. The study adopted the survey questionnaire used by Kamil *et al.* [45] in determining the impact of COVID-19 among college students. Meanwhile, the researchers also adopted the DASS-21 scale [46]. The scale has been validated and recommended by Coker *et al.* [47] to be used as a tool to quickly screen tertiary students about their mental health. They further confirmed the reliability indices of the DASS-21 via internal consistency: .81 (DASS-depression), .89 (DASS-anxiety), and .78 (DASS-stress).

3.3. Data collection procedures and analysis

A Google Form was utilized and this was sent to the program chairpersons of each college and campus that asked their teachers to send the link to their respective advisory students and asked them to voluntarily participate in the study. The link also included the information about the study, their rights as respondents, including their right to refuse without any penalty, right to withdraw their consent, right to discontinue at any given point of time, and ensuring the confidentiality of their data and participation. All analysis was made using SPSS version 25. Kruskal-Wallis and Mann-Whitney tests were used to test the difference between their socio-demographic profile and self-reported DASS. Inferential analysis was tested at a 5% level of significance. Furthermore, descriptive statistics were also analyzed and reported.

3.4. Ethical considerations

Respondents were informed of the fundamental details of the research such as its description, objectives, and purposes. Respondents were asked for their consent to voluntarily participate. Preliminaries in the electronic survey include the respondents' right to withdraw or discontinue their participation at any time without citing any consequence. Their privacy was also maintained. All provisions were governed by the guidelines recommended by the Belmont report [48], the Philippine National Ethical Guidelines for Health and health-related research [49], and the Philippine Data Privacy Act [50].

4. RESULTS AND DISCUSSION

A total of 3,718 students participated in the study. It represents 9.98% of the total population of the university. 65.8% of the respondents are female, 32.7% are male, and the rest opt not to mention their gender assigned at birth (1.5%). As seen in Table 1, the respondents' ages ranged from 16 to 41 years old with a mean age of 20.34 years (*SD*=2.06). Most of the respondents are single (98%) and a majority of them categorized their family as either poor (48%) or in low income but not poor (35%) based on the estimated monthly household income. Only 16.2% of the respondents are working while studying. The highest participation (44.6%) was from the college of business studies or BS (e.g., BS accountancy, BS accounting information system, BS business administration, BS public administration). respondents are mostly regular students - meaning, they are enrolled in all the subjects in the current semester based on their curriculum per the university policy on the classification of students (94.6%). Students' participation based on their class level is ordered from freshmen (36.7%), sophomores (30.3%), seniors (17.2%), and juniors (15.9%).

Table 1. Respondents' socio-demographic data (Total population=3,718)

Variable		*N*	%
Gender	Male	1,215	32.7
	Female	2,447	65.8
	Prefer not to say	56	1.5
	Age (Mean±*SD*)	20.34±2.06	
	Median	20	
	Range	16-41	
Civil status	Single	3,643	98
	Married	59	1.6
	Widowed	8	0.2
	Annulled	2	0.1
	Divorced	6	0.2
Monthly household income group	Poor (below PHP 10,957)	1,784	48
	Low income but not poor (PHP 10,957 to 21,914)	1,301	35
	Lower middle (PHP 21,915 to 43,828)	440	11.8
	Middle (PHP 43,829 to 76,669)	171	4.6
	Upper middle (PHP 76,670 to 131,484)	14	0.4
	Upper middle but not rich (PHP 131,485 to 219,140)	6	0.2
	Rich (PHP 219,141 and above)	2	0.1
Working student	Yes	604	16.2
	No	3,114	83.8
College/Department	College of Engineering and Architecture	36	1
	College of Business Studies	1,658	44.6
	College of Arts and Sciences	3	0.1
	College of Hospitality and Tourism Management	675	18.2
	College of Social Sciences and Philosophy	16	0.4
	College of Education	657	17.7
	College of Computing Studies	572	15.4
	College of Industrial Technology	101	2.7
Student status	Regular	3,519	94.6
	Irregular	199	5.4
Class level	First year	1,363	36.7
	Second year	590	15.9
	Third year	1,126	30.3
	Fourth year	639	17.2

In light of the current surge of COVID-19 due to the omicron variant in the Philippines, 47.2% of the respondents believed that their university will be closed for two more semesters. More than a quarter of the respondents (26.6%) believed that it will take as long as more than three semesters or roughly 2 more years before their university will open for regular classes. Also, when students were asked if they are interested in participating in limited face-to-face classes, only half or 58.7% of the respondents would like to continue their studies. Interestingly, the respondents believed that the appropriate measure to cope with the current pandemic was either to continue using the current policy-implementation of flexible learning (i.e., combination of online synchronous, asynchronous, and modular classes) (42.1%) or the conduct of a hybrid offering (e.g., a combination of limited face-to-face and asynchronous classes) (40.5%). Approximately half of the respondents reported that their concentration on their study was not so bad (49.4%) despite the threat of the new COVID-19 variant. Further, the respondents were also unsure whether their goals for their future have changed (48.2%).

When the respondents as seen in Table 2 were asked about their communication with their classmates and teachers in light of the current situation of COVID-19 in the Philippines, nearly half of them are still uncertain about it (49.3%), while one-third agreed (28.9%) that they can easily communicate with them. In addition to these, the majority of the respondents plan to continue their studies (88.3%). The respondents think they will consider their plans if their program will go back to traditional face-to-face classes (71.6%). Regarding the motivation level of the respondents to continue their degree in light of the current status of the pandemic in the country, roughly one-third are either somewhat motivated (34.4%) or very motivated (30.4%).

Table 2. Respondents' responses in light of the threat of COVID-19 omicron-variant and the possible conduct of limited face-to-face classes

No.	Question	Available responses	*N*	%
1	With the current-status of the COVID-19 pandemic in the country, how long do you think the closure of the university will continue?	1st semester	610	16.4
		2nd semesters	1,755	47.2
		3rd semesters	364	9.8
		More than 3 semesters	989	26.6
2	Would you be interested in studying if your program will already be offered via limited face-to-face?	Yes	2,184	58.7
		No	1,534	41.3
3	Please select the appropriate measure that would be most helpful as you continuously cope with the COVID crisis	Flexible learning (a combination of online synchronous, asynchronous, and modular)	1,567	42.1
		Pure online	645	17.3
		Hybrid between limited face-to-face and asynchronous	1,506	40.5
4	Describe your concentration towards your study	Extremely bad	145	3.9
		Very bad	259	7.0
		Somewhat bad	1213	32.6
		Not so bad	1836	49.4
		Not at all bad	265	7.1
5	My goals for the future have changed	Strongly disagree	272	7.3
		Disagree	608	16.4
		Neither agree nor disagree	1,793	48.2
		Agree	846	22.8
		Strongly agree	199	5.4
6	I can easily communicate with my teachers and classmates	Strongly disagree	163	4.4
		Disagree	453	12.2
		Neither agree nor disagree	1,833	49.3
		Agree	1,075	28.9
		Strongly agree	194	5.2
7	What are your study plans now in light of the current COVID-19 situation?	Continue studies	3,284	88.3
		Postpone studies	66	1.8
		Cancel studies	17	0.5
		Do not know	351	9.4
8	What changes would you take into consideration?*	Shift to another program or major	375	10.1
		Change school	118	3.2
		Not studying at all	116	3.1
		Wait for my program to go back to traditional face-to-face	2,661	71.6
		Others	448	12
9	Rate your motivation level to continue your degree	Not motivated	143	3.8
		Slightly motivated	681	18.3
		Somewhat motivated	1,279	34.4
		Very motivated	1,131	30.4
		Extremely motivated	484	13.0

*Follow-up question for number 7

The respondents were also asked how much each of the statements in the DASS-21 survey was applied to them in the past month roughly right after the announcement of the Philippine government through CHED that the tertiary schools or HEIs may start their limited face-to-face classes anytime and in light with the threat of the new COVID-19 omicron variant. Results from the descriptive analysis showed that the respondents' levels of depression, anxiety, and stress similarly ranged from 0 to 42. The mean scores were also roughly similar for depression was 10.77 (*SD*=9.80), anxiety was 10.31 (*SD*=9.42), and stress was 10.60 (*SD*=9.49) in Table 3. Results showed that the DASS of the respondents in this study was lower when compared to the previous studies in the Philippines [28], [51].

Table 3. Respondents' depression, anxiety, and stress scale

	Range	Mean	Median	SD
Depression	0-42	10.77	10	9.80
Anxiety	0-42	10.31	8	9.42
Stress	0-42	10.60	10	9.49

Further analysis of the prevalence of depression, anxiety, and stress symptomatology among the respondents is shown in Table 4. In terms of depressive symptoms, 811 (21.8%) of them have moderate symptoms, 487 (13.1%) have mild symptoms, 342 (9.2%) have extremely severe symptoms, and 243 (6.5%) have severe symptoms. The distribution of anxiety symptomatology among the respondents were: 906 (24.4%)-moderate, 661 (17.8%)-extremely severe, 272 (7.3%)-mild, and 235 (6.3%)-severe symptoms. Further, as shown in Table 4, only 297 (8%) of the respondents have symptoms of mild stress. While 294 (7.9%) have moderate, 273 (7.3%) have severe, and only 92 (2.5%) have extremely severe symptoms of stress. This is contrary to prior studies from Brazil, Palestine, Jordan, and Bangladesh where DASS level was more prevalent during the COVID-19 pandemic [36], [38], [39], [52]. Before the pandemic, results from the studies conducted in Asia varied. For example, in previous studies in Vietnam [53], [54], Pakistan [55], Malaysia [56], and China [57], students tend to have moderate to extremely severe DASS symptoms. When compared to other studies conducted in Malaysia [37], Indonesia [37], [57], Thailand [37], [58], and Sri Lanka [59] students have a much lower level of DASS.

Table 4. Respondents' depression, anxiety, and stress levels

Severity	Depression		Anxiety		Stress	
	N	%	*N*	%	*N*	%
Normal	1,835	49.4	1,664	44.2	2,762	74.3
Mild	487	13.1	272	7.3	297	8
Moderate	811	21.8	906	24.4	294	7.9
Severe	243	6.5	235	6.3	273	7.3
Extremely severe	342	9.2	661	17.8	92	2.5

Using the Mann-Whitney U test, it can be concluded that the DASS symptomatology as presented in Table 5 in both the working student groups and students' status groups (i.e., regular and irregular) was not statistically significant. This is partly consistent with the findings of Mounsey *et al.* [60] where students, regardless of their status, do not display significant differences in terms of depression, but in contrast with the anxiety results. Interestingly, a sharp contrast to a recent study conducted in Portugal showed that students, mostly non-working students, have significantly higher levels of depression and stress but no significant difference in terms of stress [61].

When Kruskal-Wallis's test was taken into account, Table 5 showed that there is a statistically significant difference in the DASS symptomatology of the respondents between the different gender, x^2 (2)=12.427, p=0.002, with a mean rank of a depressive symptom of 1,777.63 for male, 1,894.92 for female, and 2,088.18 for those who did not mention their gender. For anxiety, x^2 (2)=23.866, p=0.000, with mean rank of 1,737.32 for male, 1,917.34 for female, and 1,982.94 for those who did not mention their gender. For stress, x^2 (2)=14.679, p=0.001, with mean rank of 1,765.16 for male, 1,902.84 for female, and 2,012.28 for those who did not mention their gender. This is partly consistent with the prior studies conducted in China and Iran, where most female college students reportedly have significantly higher anxiety [62], [63], stress [39], and are more vulnerable to other mental health issues [63], [64]. The same finding showed in a previous study in the Philippines, where women, particularly young adults, have a higher prevalence of depressive symptoms compared to their peers [51]. This complements the previous study [42] where being female alone was found to be a predictor of having higher levels of DASS. Furthermore, the study also found that there is no statistically significant difference between the level of DASS symptomatology of the respondents between civil status. The same observation was found between household income groups in Table 5.

Additionally, Table 5 shows that there is also a statistically significant difference in depression, anxiety, and stress symptomatology between the respondents' year levels. For depression, x^2 (3)=19.225, p=0.000, with mean rank depression of 1,915.45 for first years, 1,932.41 for sophomores, 1,837.33 for juniors, and 1,711.91 for seniors. For anxiety, x^2 (3)=28.652, p=0.000, with mean rank anxiety of 1,946.64 for first years, 1,926.62 for sophomores, 1,811.49 for juniors, and 1,696.26 for seniors. Lastly, in terms of stress, x^2 (3)=21.701, p=0.000, with mean rank stress of 1,922.05 for first years, 1,932.24 for sophomores, 1,834.16 for juniors, and 1,703.57 for seniors. Table 5 further indicates that sophomores have ranked highest in depression (1,932.41) and stress (1,932.24) symptomatology except for anxiety where first years ranked highest (1,946.64). There are only slight differences among the DASS mean ranks of first years and

sophomores. The DASS is particularly ranked higher among new students (i.e., first-year students) of the university and somewhat declining as they mature. One possible reason for this is that young students tend to have low coping skills [43], [65]. A reversed result was found from previous studies for stress and anxiety [57], [63], [64]. When compared to the secondary school setting during the pandemic, older students were reported to have higher levels of stress and anxiety [36].

Table 5. Results of test of difference on students' depression, anxiety, and stress symptomatology in terms of respondents' socio-demographic data

		Depression	Anxiety	Stress
Working student (df = 1)	Mann-Whitney *U*	905,477	911,186.5	913,030.5
	p value	0.145	0.223	0.254
	Z score	-1.457	-1.218	-1.141
Student status (df = 1)	Mann-Whitney *U*	322,070.5	323,313	327,371.5
	p value	0.055	0.067	0.120
	Z Score	-1.457	-1.218	-1.141
Gender (df = 2)	Kruskal-Wallis H (x^2)	12.427	23.866	14.679
	p value	0.002*	0.000*	0.001*
Civil status (df = 4)	x^2	3.911	1.887	2.410
	p value	0.418	0.757	0.661
Monthly household income (df = 6)	x^2	3.243	1.731	6.118
	p value	0.778	0.943	0.410
Class level (df = 3)	x^2	19.225	28.652	21.701
	p value	0.000*	0.000*	0.000*

Note: *p < 0.05

5. CONCLUSION

The students were asked about their perception of the possible conduct of limited face-to-face classes and the results noted that half of them intend to attend in a limited face-to-face mode. They believed that maintaining the flexible learning modality is a great approach to address the impact brought by the pandemic. With the utilization of the DASS-21 survey, the majority of the students were found to have normal symptoms of depression, anxiety, and stress. However, the results also showed that a portion of the students was experiencing moderate depressive and anxiety symptoms, and mild stress symptoms, as well. In comparing the results of the DASS-21 survey in terms of gender, there is a significant difference between males and females since females appeared to have experienced higher levels of depression, anxiety, and stress symptoms. This study concluded that female students tend to be susceptible to a higher level of stress that can be attributed to lockdowns and social isolation due to the COVID-19 pandemic.

In addition, there is also a significant difference in terms of the class level whereas new students, including first-years and second-years, recorded higher levels of symptoms in terms of depression, anxiety, and stress which can be attributed to the inability to cope among young students. In addition, because female students pose higher scores in the DASS symptomatology, concrete psychological programs affirmative to their concerns must be closely considered. Moreover, since students in the lower collegiate years exhibited higher levels of perceived depression, anxiety, and stress, as compared to their counterparts in the higher years, guidance and counseling programs should be intensified among students in their first and second years. The results provide an idea of the associated impacts of the omicron COVID-19 variant as well as the psychological state of the students during consideration of implementing limited face-to-face classes despite the uncertainty on how the pandemic will continue. Furthermore, this study suggests that the leaders, elected officials, and policymakers of education in the country look at these considerations to better gauge if the students are truly ready to face the new challenges posed by the new normal.

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