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Research paper

Student Mental Health in Higher Education: A Descriptive Correlational Study and Multi-Tiered Intervention Framework

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Abstract

This study aims to propose a research-based intervention framework program for the students of a state university in the Philippines in compliance with the mandates of RA 11036. This descriptive-correlational research involved 3,051 students who were recruited through a purposive sampling technique from 11 campuses of the state university. The mental health status of the participants was assessed using the Depression, Anxiety, and Stress Scale (DASS-42), a self-reporting tool. The results showed that the respondents exhibited varying levels of depression, anxiety, and stress. Most of the students reported a moderate level of depression and stress, while the majority of them had extremely severe anxiety levels. Furthermore, the study identified a significant association between the level of depression, anxiety, and stress and the respondents' profile variables. Findings of the study were used as baseline data to propose a multi-tiered intervention framework program aimed at addressing the varying levels of mental health concerns of the students. The proposed MIND Project intervention framework focused on providing resources and support for individuals struggling with mental health issues. It is a structured plan for addressing mental health concerns and serves as a model for other universities looking to prioritize mental health and create supportive environments for their members.

Keywords: *Anxiety; Depression; Mental Health; Stress; Students.*

1. Introduction

The World Health Organization (2016) declared that 3.3 million Filipinos are experiencing depression each year, while the suicide rate is 3.8 per 100,000 of the general population (Global Burden of Disease, 2015). In 2007 survey by the Department of Health (DOH) found that there were 15 suicide attempts in every 900 individuals aged 15 to 24 years old, with greater risks for males than females. Moreover, the DOH in 2006 also found that 32% of government employees experienced a mental health problem in their lifetime.

On June 20, 2018, the Mental Health Act or RA 11036 was signed into law, while the DOH promulgated its implementing rules and regulations in 2019. This Act mandates all of the institutions and health, corrects the stigma and discrimination, identifies and supports at-risk risks, and provides treatment and psychosocial support. This February 2020, the Commission on Civil Service (CSC) released the Memorandum Circular number 4, series of 2020, which directs the Public Sector to establish guidelines and standards on appropriate and evidence-based mental health programs.

Notably, COVID-19 also affected the mental health crisis as observed in a scoping review by Ocampo et al. (2024). The researchers discovered that students and healthcare workers are the most studied groups suffering from moderate to severe depression, anxiety, and stress amid the pandemic. These are supported by the UP Population Institute's 2022 YAFS5 survey that 1 in 5 Filipino youth aged 15-24 experienced suicidal ideation, whereas depressive symptoms had almost doubled since 2013 (Kabamalan, 2023).

Alibudbud (2024) and Meneses et al. (2024) revealed that despite the implementation of RA 11036 (the Mental Health Act), systemic barriers such as the limited number of professionals available, lack of adequate funding, and fragmented institutional programs continue to limit access to services and impact the effectiveness of policies. Likewise, the lack of up-to-date and fine-grained data on mental health delays evidence-based intervention and prevents compliance with national mandates under RA 11036 and CSC Memorandum Circular No. 4, s. 2020 (Dela Peña et al., 2024).

Given these challenges in mental health, there is no readily available and updated information with regards to the mental health status of the students of the university, which can be a substantial reference for evidence and research-based programs as required by RA 11036. Furthermore, the alarming rate of young people experiencing mental health problems and suicidal ideation captured the age of students in

secondary and tertiary education. The study generated a mental health intervention framework for the state university in the Philippines. It also responded to the CALABARZON Regional Research Agenda 2018 – 2022 under the health category.

2. Literature Review

2.1. The state of mental health in the Philippines

The Republic Act No. 11036, also known as the Mental Health Act of the Philippines, mandates all companies and institutions in the country to protect and promote the mental health of the Filipino people by developing and integrating mental health services into the health system. However, the scarcity of local and up-to-date mental health data is one of the factors that hinders the formulation of research-based mental health interventions directed by the law.

It has been known that 3.3 million Filipinos suffer from depressive disorders, and with suicide rates in 2.5 males and 1.7 females per 100,000 according to Redaniel, Dalida, and Gunnel (2011), wherein the average age of first depressive episode occurs in the mid-20s, although the disorder strikes all age groups indiscriminately, from children to the elderly (DOH, 2020).

In recent years, the outbreak of COVID-19 has worsened some already existing mental health issues. Through a scoping review, Ocampo et al. (2024) revealed a focus of research in health professionals and students in connection to moderate to severe mental health outcomes such as anxiety, depression, fear, and stress, which primarily increase due to strict quarantine, economic difficulties, and healthcare disruption in these populations.

While the pandemic has brought mental health into sharper focus, challenges in policy implementation persist. Despite the fact that the Philippines has made strides through the passage of RA 11036, implementation challenges remain, particularly in low- and middle-income settings. These barriers mirror findings in other LMICs, where limited resources and fragmented systems slow down mental health policy execution (Rathod et. al, 2017). Dela Peña et al. (2024) pointed to some major accomplishments in the execution of the Mental Health Act, such as the establishment of telemental health services, the organization of psychological first aid programs, and the enactment of local ordinances promoting services for counseling within the community. On the other hand, Lim et al. (2022) formulated a national mixed-method study protocol to assess the effects of COVID-19 and remote learning and social media engagement on the mental health of college students in the Philippines. Being just a protocol with no results presented, this paper nevertheless describes in detail a design involving more than 2,000 survey participants and qualitative interviews, as well as the use of DASS-21 and Brief-COPE tools. This protocol demonstrates the urgent need to collect systematic and empirical data on student mental health, which is an aim shared by the Mental Health Initiatives, Nurturance, and Development (MIND) Project in producing context-specific knowledge for institutional mental health strategies.

2.2. The students' mental health

The World Health Organization's (2011) Global School-Based Health Survey has shown that in the Philippines, about 20.0% of adolescents experienced a mental health problem each year, and among the most common were depression, anxiety, and other mood disorders. In this case, 16% of students between 13 to 15 years old have ever seriously considered attempting suicide, while 13% have attempted suicide one or more times during the past years. These findings supported the prior survey of the Department of Health in 2007, which claimed that 15 out of 900 individuals tried to commit suicide, aged 15 to 24 years old. While Quintos (2017) in studying the predictors of suicide ideation among Filipino youth stated that suicide is responsible for approximately one out of every three deaths among 10 to 24-year-olds. Deriving from the available local studies that explored the mental health of the students and their recommended interventions, Solidum (2018) in a cross-sectional descriptive study that assessed the mental health state of selected adolescents in Manila, Philippines. It was revealed that a significant percentage of respondents (n=200) aged 16 to 20 years old reported that they are suffering from moderate depression. The study further suggested that stakeholders should be engaged in the advocacy of raising awareness on the magnitude of the mental health issues among adolescents. Moreover, Pineda and Bueno (2019) found that academic stress often leads to general stress and anxiety; burnout is experienced during initial years; social support in higher levels of education declines; and social anxieties are common during high school transition. It is a cross-sectional descriptive study aimed to provide information on assessed mental health issues and academic performance of senior high school students. It was recommended that school administrators tend to mental health care programs, enhance the curriculum that will encourage learning, and conduct mental health education awareness.

The study of Dizon (2019) revealed that there is a high level of mental health literacy among the students of Batangas State University (n=380), although they have an average ability not to be affected by stereotypes and erroneous beliefs. Further, this sequential explanatory study recommended that the university should have strategic action areas that may develop students' mental health literacy to become upright and productive citizens. Adding to the previous evidence already made about mental health issues faced by students here in the Philippines, Alibudbud (2021) wrote extensively regarding the psychological effects of online learning among Filipino students, especially during the pandemic. This study found that moving from real classrooms to virtual classrooms heightened the experience of anxiety and screen fatigue, and disconnection in students, particularly those from poorer homes who do not have the needed devices and internet access at home.

Reinforcing the troubling mental health patterns among Filipino youth, the national survey conducted by the University of the Philippines Population Institute (2022) under the Young Adult Fertility and Sexuality Study (YAFS5) has shown that emotional difficulties have worsened considerably. The survey conducted among nearly 11,000 individuals aged 15 to 24 indicated that parameters like sadness, loneliness, and perceived social rejection have markedly escalated since 2013.

Conducting a cross-sectional study at the University of the Philippines Manila, Mantaring et al. (2023) described the impact of the COVID-19 pandemic on students' and faculty-staff perceptions of distress from distressing situations. A total of 290 students and 136 faculty members from seven colleges and satellite campuses revealed high prevalence rates of sleep disturbances and avoidance of academic work, with a percentage of students (72.4%) and faculty members (79.4%) reporting sleep-related stress responses. However, further differences were found in the perceived causes of stress and coping behaviors. For instance, while the majority of faculty members pointed to factors such as family and relationship issues, financial insecurity, and lack of physical socializing as stress triggers, many students did not share this view.

As mental health challenges continue, Estrellado (2021) probes the challenges and transitions of the Philippine education system with regard to the COVID-19 pandemic and, especially, in the learning modes post-pandemic. The major findings include that most of these mental health issues are related to problems brought about by technology, poor internet connection, academic pressure, and social isolation

during school closures. This touches on mental health challenges-including symptoms related to depression-points to the necessity of integrated psychosocial support systems in school transitioning, especially in post-pandemic recovery planning.
Using a qualitative design, Hernandez et al. (2023) collected firsthand accounts of students' experiences in the post-pandemic educational environment. The research shows that through interviews and surveys with students and teachers, the long-term effects of school closure aggravated this psychological distress. Common themes were social isolation, fatigue from online technology, and uncertainty regarding academic expectations. Moreover, the need for psychosocial interventions, improved infrastructure for digital learning, and comprehensive training for teachers to support students in their adjustment to and recovery from these experiences was highlighted. Thus, these findings support the calls made in earlier research for educational systems to put mental health on the agenda as they are transformed in this post-pandemic period.

2.3. The mental health initiatives, nurturance, and development (MIND) project

Studies conducted in the Philippines so far stress the absence of intervention programs that are localized and based in the universities. To address this issue, the MIND Project is presented in the current research as a framework based on research that intends to implement mental health programs in the institutions that are in line with RA 11036 and CSC Memorandum Circular No. 4, s. 2020. The current study is geared towards the generation of concrete data that will serve as a basis for the mental health interventions, nurturance, and development in the 11 campuses of the state university in the Philippines.
This idea has been expounded by Solidum (2018) and Pineda and Bueno (2019), who both recommended the need for mental health programs and promotion, also by Dizon (2019), who proposed the need to include mental health literacy programs in the University's strategic actions. The goal of the study is to establish research-based mental health programs for the students in state university campuses in the Philippines. Furthermore, the study will offer solutions to the challenges posed in the study of Tuliao (2014) about the difficulties in accessing mental health services.
The study seeks to determine the socio-demographic profile of the respondents, to assess the mental health status of the respondents using the Depression, Anxiety, and Stress Scale (DASS), to determine the relationship between the socio-demographic profile and mental health status of the respondents, and lastly, to formulate, design, and develop a mental health intervention framework for the state university.

3. Methodology

The study proposes an integrated mental health program for the university based on the association of demographic profile, depression, anxiety, and stress. It involves a total of 3,051 students employed through purposive sampling. An ethics review was done, and data were gathered via online surveys and printed questionnaires, supplemented by interviews for verification. The Depression Anxiety and Stress Scale-42 (DASS-42) was administered online through Google Forms and in person. Descriptive and correlational statistics like frequency, percentage, weighted mean, and chi-square tests were used to analyze the demographic profile and association between the variables.

3.1. Conceptual framework

The study adopted the Input-Process-Output conceptual framework model since the findings of the study will be used to propose an integrated mental health program in the 11 campuses of the state university. As seen in Figure 1, the necessary data are the demographic profile of the respondents and their scores on DASS, which served as the input of the study. After the collection of data, these underwent statistical analysis, which is the process that identified the mental health status of the respondents in terms of depression, anxiety, and stress, and their association with the demographic profile of the respondents. For verification of the responses, the researchers will also conduct triangulation through interviews of willing respondents. This descriptive-correlational study aims to formulate and developmental health intervention framework as an output of the study in terms of a mental health program.

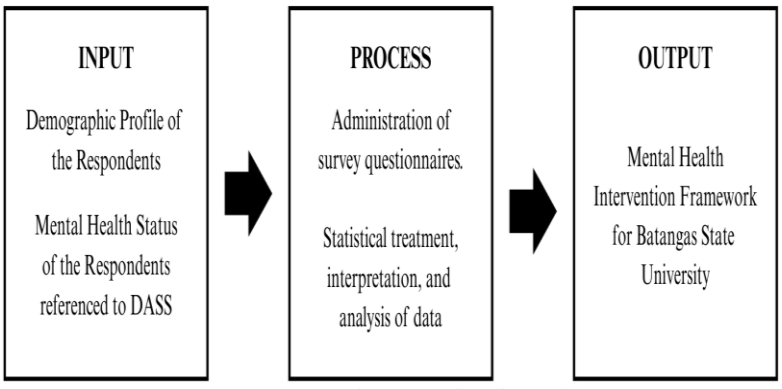

Fig. 1: Conceptual Framework of the Study.

3.2. Sampling design

The respondents of the study are the students of the eleven (11) campuses of the state university. The student must be a bona fide student on the tertiary level and must be 18 years old and above from First Year to Third Year level. This study included foreign students if they were in the targeted year level. Fourth-year students were not considered since they are graduating students and may not benefit from the expected output of the study. Moreover, graduate school is also excluded from this study. The study employed a purposive sampling technique, which recruited 3,051 qualified respondents. The data gathering was conducted in two ways: online data gathering through Google Forms and the distribution of printed questionnaires. Further, an interview was facilitated to validate and triangulate the responses of the respondents.

3.3. Data gathering procedure

Before the conduct of data gathering, the research proposal of this study was sent to the Philippine Normal University's Research Ethics Committee for ethical review. The ethics clearance was received on March 18, 2022, and a notice to proceed to the validation of the instrument and data gathering.

The questionnaire of the study underwent expert and construct validation. The informed consent was adjusted according to the suggestions of the validators. This includes discussion of objectives of the study, voluntary participation, privacy protection, duration of survey, risk and benefits, overview of the contents of the survey, data management, publication of results, and contact information of the researchers. The instrument also contained an informed consent declaration. Moreover, the main instrument of the study, which is the Depression, Anxiety, and Stress Scale with 42 items, was also subjected to pilot testing, even though it is one of the most widely used self-reported questionnaires on such constructs. The reliability yielded 0.975 for the DASS 42-item questionnaire.

The data collection was coordinated by the Vice President for Research, Development, and Extension Services (VPRDES) and by the respective Chancellors of the five (5) constituent campuses. It was done in two approaches. The first is online data gathering through a Google Form. Here, the Google Meet link was provided to the VCRDES and later endorsed to the respective colleges. This online data gathering was primarily proposed due to health restrictions brought by the pandemic; however, it was noticed that there is a poor response rate in this approach, hence, face-to-face data gathering was facilitated. With this concern at hand, the study was given an extension to fulfill the gaps that had arisen. The researchers scheduled campus visits especially for those campuses with low turnover of responses. The researcher personally explained and administered the hard copies of the questionnaires to the students of the respective campuses. The recruitment procedure was done using purposive sampling, wherein the online data gathering instrument sorted those not qualified participants to the last part of the survey towards exit, while during the actual data gathering, the researcher emphasized the criteria for selection. In the face-to-face data gathering, the Google Form version of the survey was also available to accommodate willing and qualified respondents of the study.

The researchers divided the tasks for data coding and recording. With the use of Microsoft Excel Sheets, the data matrix was plotted. The initial data collection through Google Form yielded 3,260 responses, while the face-to-face data gathering had 1,573 responses 1,143 from Google Form, and 430 from a hard copy of the survey form). Upon data cleaning, a total of 3,051 qualified respondents were included in the study. Since the proponents were composed of licensed Psychometricians and Psychologists, they scored the DASS-42. The researchers consolidated the responses into a single file for the numerical data, while the textual responses on the last part of the questionnaire were encoded in a separate file.

The research team commissioned a qualified statistician from outside the university to facilitate data treatment. This was done to avoid conflicts of interest and provide an expert perspective on the data that was collected. There was a series of meetings and consultations for data interpretation and analysis by the researchers. The formulation, design, and development of the proposed mental health intervention framework were also conducted. Finally, the terminal report was prepared and submitted to the research office of Pablo Borbon Campus and Central Administration.

4. Results

The following are the findings of the researchers on this study:

4.1. Demographic profile of the respondents

Table 1: Sex of the Respondents

Sex	f	%
Male	767	25.14
Female	2,235	73.25
No Answer	49	1.61
Total	3,051	100

Table 2: Age Range of the Respondents

Age Range	f	%
18 years old and below	429	14.06
19 to 40 years old	2,622	85.94
41 to 60 years old	0	0
61 years old and above	0	0
Total	3,051	100

Table 3: Civil Status of the Respondents

Civil Status	f	%
Single	3,045	99.8
Married	5	0.16
Widowed	0	0
Separated	1	0.03
Total	3,051	100

Table 4: Monthly Family Income of the Respondents

Monthly Family Income	f	%
Php. 10,957.00 and below	1,989	65.19
Php. 10,958.00 to Php. 21,914.00	711	23.3
Php. 21,915.00 to Php. 43,828.00	263	8.62
Php. 43,829.00 to Php. 76,669.00	58	1.9
Php. 76,670.00 to Php. 131,484.00	22	0.72
Php. 131,485.00 to Php. 219,140.00	3	0

Php. 219,141.00 and above	5	0.16
Total	3,051	100

Table 5: Religion of the Respondents

Religion	f	%
Roman Catholic	2,585	84.73
Christian (Protestants, Iglesia ni Cristo, Born Again, etc.)	391	12.82
Islam	5	0.16
No religion	22	0.72
Others	48	1.57
Total	3,051	100

Table 6: Number of Family Members of the Respondents

Household Size	f	%
Below 3	271	8.88
3-6	2,028	66.47
7-9	598	19.6
10-12	137	4.49
13 and above	17	0.56
Total	3,051	100

Table 7: Campus of the Respondents

Campus	f	%
Pablo Borbon	566	18.55
Rosario	301	9.87
Lemery	236	7.74
San Juan	93	3.05
Alangilan	216	7.08
Lobo	22	0.72
Balayan	148	4.85
Mabini	43	1.41
Lipa City	368	12.06
JPLPC Malvar	792	25. 96
ARASOF Nasugbu	266	8.72
Total	3,051	100

Table 8: Year Level of the Respondents

Year Level	f	%
First Year	987	32.35
Second Year	1,137	37.27
Third Year	927	30.38
Total	3,051	100

The study involved a total of 3,051 students who were taken from the eleven different campuses of Batangas State University. Most of the people who answered the question were female and mostly 18-21 years old, which is the usual age of undergraduate students. The JPLPC Malvar Campus contributed the most respondents, and then the Main and Lipa campuses followed. Almost 50% of the students indicated that their families earned less than ₱20,000 a month, which means that a lot of students come from poor families. In general, the sample is the same as the university population in terms of academic breadth and socio-economic diversity.

4.2. Mental health status of the respondents

Table 9: Depression, Anxiety, and Stress Level of the Students

Levels	Depression		Anxiety		Stress	
	f	%	f	%	f	%
Extremely Severe	638	22.9	1352	44.3	241	7.9
Severe	637	20.9	628	20.6	640	21.0
Moderate	744	24.4	524	17.2	862	28.3
Mild	357	11.7	153	5.0	513	16.8
Normal	675	21.1	394	12.9	795	26.1
Total	3,051	100	3,051	100	3,051	100

The DASS-42 test has shown that a large portion of those surveyed reported experiencing moderate to very high psychological distress. More precisely, the situation was that depression approximately affected one-third of the student body, whereas anxiety and stress were the cases for almost half and one-fourth, respectively. The totality of the evidence gathered indicates the presence of a significant amount of mental health issues among the students, which can at least partly be attributed to the pandemic-related academic and psychosocial hardships.

4.3. Association between the mental health status of the respondents when grouped according to their demographic profile

Table 10: Association between Depression and Demographic Profile of the Students

Demographic Profile	Chi Square	df	p-value	Interpretation
Campus	85.94	40	<0.001	Significant
Sex	20.47	8	0.009	Significant
Age	10.82	4	0.029	Significant
Civil Status	8.05	8	0.429	Not Significant
Household Size	15.54	16	0.485	Not Significant
Monthly Income	34.41	24	0.078	Not Significant
Year Level	5.44	8	0.71	Not Significant
Religion	21.53	16	0.159	Not Significant

*Significant at 0.05.

Table 10 presents the association between the demographic profile and the level of depression of the student participants. Among all the demographic profiles, the campus, sex, and age were found to be significantly associated with the depression level of the respondents with p-values <0.001, 0.09, and 0.029, respectively. This causes the rejection of the null hypothesis. Therefore, there is a significant association between the campus and depression, sex and depression, as well as age and depression. The rest of the demographics are not significantly associated with depression. Thus, it can be concluded that from the samples selected in the study, their depression level depends on the campus where the students came from, their sex, and their age.

Cross-tabulation results revealed that among the campuses of the university, the JPLPC Malvar, comprising 6.2% of student participants, experienced a normal level of depression. However, 2.7%, 6.45%, 5.17% and 5.34% experienced mild, moderate, severe, and extremely severe levels of depression, respectively. In addition, the Pablo Borbon Campus, comprising 3.6% experienced a normal level of depression, while 1.08%, 4.29%, 4.45% and 4.32 experienced mild, moderate, severe, and extremely severe levels of depression, respectively. In the case of Alangilan campus, 1.50% of the student participants experienced normal levels of depression, while 1.54%, 1.31% and 1.86% of the student participants experienced moderate, severe, and extremely severe levels of depression, respectively. In the case of Balayan Campus, 0.52% of the student participants experience normal levels of depression; however, 1.60% and 1.24% experience severe to extremely severe levels of depression. In the case of Lipa campus, 2.1% of the student participants experience normal levels of depression, while 3.08%, 2.16% and 2.98% experience moderate, severe, and extremely severe levels of depression, respectively.

In terms of sex, results revealed that 16.55% of female student participants experienced normal levels of depression. Meanwhile, 17.6%, 14.55% and 15.6% experience moderate, severe, and extremely severe levels of depression. On the other hand, 5.27% of male participants experienced normal levels of depression, while 6.42%, 5.99% and 4.65% experienced moderate, severe, and extremely severe levels of depression. Both sexes experienced mild to extremely severe levels of depression, but more evident among female student participants.

Relative to the level of depression in terms of age, the results revealed that 19.40% of the student participants aged ranges from 19 to 40 years old experienced a normal level of depression, while 9.50%, 21.30%, 18.05% and 17.66% of the student participants experienced mild, moderate, severe, and extremely severe levels of depression. On the other hand, the 2.72% whose age ranges from 18 and below experienced normal levels of depression, while the 2.19%, 3.08%, 2.81% and 3.24% experienced mild, moderate, severe, and extremely severe levels of depression, respectively. These revealed that in terms of age, those student participants who fall between 19 to 40 years old are more likely to experience mild to extremely severe levels of depression than those who are 18 years old and below.

The association between the demographic profile and the anxiety level of the student respondents is shown in Table 16. The computed p-values for campus and sex are 0.001 and 0.013, respectively, both less than the 0.05 level of significance, indicating that the null hypothesis is rejected. As a result, there is a significant association between the campus and anxiety level, as well as between sex and anxiety level. Thus, based on the samples chosen for the study, it is possible to conclude that the students' anxiety levels are related to the campus from which they came as well as their sex. The computed p-values for age, civil status, household size, monthly income, year level, and religion, on the other hand, range from 0.062 to 0.582, which is greater than the 0.05 level of significance, and thus the null hypothesis is accepted. As a result, there is no significant association between the aforementioned demographic variables and anxiety level.

Results from the cross-tabulation revealed that 1.70% of the student participants from Pablo Borbon campus experienced a normal level of anxiety during the time of assessment, while 9.60% experienced a severe level of anxiety. Similar findings revealed that 1.83% of student participants from JPLPC Malvar experienced normal levels of anxiety, in contrast to 11.47% who experienced extremely severe levels of anxiety during the assessment. In addition, 1.83% of student participants from the Alangilan campus experienced normal levels of anxiety, while 3.17% experienced extremely severe levels of anxiety. 1.83% of student participants from Lipa City Campus experienced normal levels of anxiety, while 5.47% of the participants experienced extreme levels of anxiety during the assessment.

Table 11: Association between Anxiety and Demographic Profile of the Students

Demographic Profile	Chi Square	df	p-value	Interpretation
Campus	120.03	40	<0.001	Significant
Sex	19.42	8	0.013	Significant
Age	2.86	4	0.582	Not Significant
Civil Status	12.2	8	0.142	Not Significant
Household Size	23.48	16	0.102	Not Significant
Monthly Income	35.49	24	0.062	Not Significant
Year Level	10.37	8	0.24	Not Significant
Religion	14.25	16	0.58	Not Significant

*Significant at 0.05.

In terms of sex, 9.37% of female participants experience normal levels of anxiety, while 3.67%, 12.19%, 14.65% and 33.36% experienced mild, moderate, severe, to extremely severe levels of anxiety, respectively. In addition, 3.34% of male participants experienced normal levels of anxiety during the time of assessment, while 1.20%, 1.21%, 4.94% and 9.99% of the male student participants experienced mild, moderate, severe, and extremely severe levels of anxiety during the time of assessment. Results revealed that female student participants are mild to extremely anxious than male student participants. Concerning the result that the year level has no association with the level of

anxiety, one surprising finding in the study of Khoshaim et al. (2020) was the association between anxiety and year level: students in their lower year were more anxious than students in their higher or final year.

Table 12: Association between Stress and Demographic Profile of the Students

Demographic Profile	Chi Square	df	p-value	Interpretation
Campus	93.3	40	<0.001	Significant
Sex	17.91	8	0.022	Significant
Age	10.01	4	0.04	Significant
Civil Status	6.9	8	0.547	Not Significant
Household Size	22.98	16	0.114	Not Significant
Monthly Income	29.42	24	0.205	Not Significant
Year Level	15.63	8	0.048	Significant
Religion	16.59	16	0.413	Not Significant

*Significant at 0.05.

The association between the demographic profiles of the student respondents and their level of stress can be gleaned from Table 3.1.3. The computed p-values for campus, sex, age, and year level range from 0.001 to 0.048 and are less than 0.05. As a result, there is a significant association between the variables and the student respondents' stress levels. Hence, campus, sex, age, and year level are linked with the stress level among student respondents.

In the association of sex and stress level, the result was opposed by the findings of the study by Graves et al. (2021), which found that the females reported higher levels of stress than their male counterparts. Furthermore, this finding was refuted by previous research by Bahhawi et al. (2018), Inam (2007), and Sehlo et al. (2018) that female college students are more stressed than male students in general. Academic stress was found to decrease with increasing student age in a study conducted by Onolemhenhen and Abel (2020). Stress was greater among younger students. On the other hand, the computed p-values for civil status, household size, monthly income, and religion range from 0.114 to 0.547 and are greater than 0.05; thus, the null hypothesis was accepted. Therefore, there is no significant association between the aforementioned variables and the stress level among the student respondents. This indicates that the civil status, household size, monthly family income, and religion are not related to stress levels.

In terms of campus, 26.05% of the student participants across all eleven campuses experienced normal levels of anxiety, while the remaining 16.81%, 28.25%, 20.97% and 7.89% of the student participants assessed mild, moderate, severe, and extremely severe levels of anxiety. Relative to stress in terms of sex, 7.27% of male respondents experience normal levels of stress during the time of assessment, while 4.42%, 7.17%, 4.621% and 1.63% of the respondents experience mild, moderate, severe, and extremely severe levels of stress. On the other hand, 18.48% of the female respondents experienced normal levels of stress while 12.15%, 12.15%, 15.92% and 5.96% experienced mild, moderate. Severe and extremely severe levels of anxiety, respectively. Both sexes are more likely to have normal levels of stress during the assessment.

In terms of age, 3.27% of the student participants who fall in the age bracket of 18 years and below experienced a normal level of stress during the time of assessment, while 2.03%, 4.81%, 2.94% and 0.98% experienced mild, moderate, severe, and extremely severe levels of stress during the assessment. On the other hand, 22.77% of the student participants who fall in the age range of 19 to 40 years old experienced a normal level of stress, while the remaining 14.78%, 23.43%, 18.02% and 6.91% experienced mild, moderate, severe, and extremely severe levels of stress during the assessment. In terms of age being compared, both experienced normal levels of anxiety during the assessment.

In terms of year level, 7.50% of the student participants in the first year experienced normal levels of stress during the assessment, while 5.21%, 9.70%, 7.53% and 2.39% experienced mild, moderate, severe, and extremely severe levels of stress. On the other hand, 10.32% of the second year level student participants experienced normal levels of stress, while 6.391%, 9.73%, 7.40% and 3.40% experienced mild, moderate, severe, and extremely severe levels of stress, respectively. Lastly, those who are in the third year level, comprising 8.22% experienced normal levels of stress, while 5.21%, 8.881%, 6.03% and 2.09% experienced mild, moderate, severe, and extremely severe levels of stress, respectively. The situation is more stressful for the first-year level students than for those who are in the second and third year levels.

5. Discussion

The present study sought to examine the prevalence of depression, anxiety, and stress among the respondents during the COVID-19 pandemic. The results show that psychological distress was widespread, with anxiety emerging as the most severe and prevalent concern. Nearly half of the respondents reached the "extremely severe" range for anxiety, while significant proportions also reported high levels of depression and stress. These figures are not just simple statistics; they represent the lived experiences of students going through disrupted education, uncertainties in the future, and everyday struggles with family as well as financial instability.

When placed in an international perspective, the results gain more weight. The World Health Organization reported a global increase in anxiety and depression by 25% during the early phase of the pandemic, yet the 44.3% extremely severe anxiety case rate established in this study is beyond that. Amini-Rarani et al. (2024), in a meta-analysis of meta-analyses, put a global pooled prevalence of 30.8% for another figure that the respondents obviously surpass; this points out that maybe it was the Filipino higher education students who were disproportionately affected. Hoteit et al. (2024), in their study from Lebanon, stated that almost half of the students showed depressive symptoms, while more than half reported anxiety, which illustrates how student cohorts worldwide carry a heavy burden, albeit with differing levels of severity across local contexts. Likewise, Xiong et al. (2020) stated that because of the COVID-19 pandemic, the general population in several countries, including China, Spain, Italy, Iran, the United States, Turkey, Nepal, and Denmark, seriously experienced high prevalence rates of mental health symptoms such as anxiety (6.33-50.9%), depression (14.6-48.3%), post-traumatic stress disorder (7-53.8%), psychological distress (34.43-38%), and stress (8.1-81.9%). These problems resonate very well within the context of this study, as the abrupt transition to online platforms and long-lasting restrictions could have exacerbated all mental stress.

Additionally, national research strengthens this assertion. In a study conducted by Cleofas, Rocha, and Parcon (2023), results revealed that academic stress mediated the relationship between pandemic anxiety and quality of life among Filipino students. Their findings provide an explanation for why they have found overlapping data in their study: anxiety and stress not only correlated but appeared to further the effects of the other. National surveys by Puyat et al. (2025) noted indications of doubled prevalence of depressive symptoms among Filipino youths within a span of eight years, from 2013 to 2021, with females and those from relatively lower socioeconomic groups most affected.

These patterns are mirrored in the findings, where students from similar subgroups were disproportionately represented in higher distress categories. In addition, an article dealing with senior high school students in Metro Manila (Serrano et al., 2023) reported that the increased risk is caused mainly by being female and having a family history of mental illness, while social support acts like a buffer. Collectively, the findings show that student respondents were nested within the broader national trend of increasing disparities in mental health.

Lifestyle factors have also played an important role. Bou-Hamad et al. (2023) emphasized that exercise, good sleep hygiene, and a balanced diet were predictors of a better quality of life, whereas overuse of the internet and smoking tended to increase risk. Hoteit et al. (2024) corroborated that demographic and lifestyle factors together account for worse outcomes, especially for those students reporting low self-rated health. In the university where schedules were often disrupted by lockdowns and family pressures, it is plausible that unhealthy lifestyle patterns worsened the psychological toll or consequences of the pandemic.

Stress, though often treated as a secondary outcome, warrants closer examination. The findings suggest that Cleofas et al. (2023) emphasized stress as a mediator for the negative effects of anxiety upon well-being. Simultaneously, Goppert and Pfost (2021) noted unexpectedly that stress levels in German university students decrease during the rapid transition to online learning, when institutions were required to implement e-learning systems very hastily. This is different from other respondents, where the students faced difficulties in adapting to new modes of instruction. In Ballebas et al. (2024), another empirical study conducted among UP medical students, it was found that high stress was strongly associated with inadequate sleep, especially during higher academic years. Cumulatively, these studies clarify why stress appeared not just as a symptom, but as a central mechanism linking academic pressures, anxiety, and day-to-day functioning.

The sociodemographics and subgroup distinctions also enrich the findings. Wong et al. (2024) indicated that LGBTQ+ emerging adults in Metro Manila faced increased risk for depression and anxiety, elevated when combined with low income or weak social support. According to Puyat et al. (2025), there were also certain differences along gender and socioeconomic lines. The present study corroborates these findings: female students and students from less privileged families scored higher in the severe range. These vulnerabilities impinge upon the mental health outcomes, indicating that their distribution is neither even nor impartial, affected instead by intersecting identities, levels of income, and family support.

The clustering of depression, anxiety, and stress also reflects extensive patterns reported across the globe. In a study done by Wang et al. (2022), it was indicated that the symptoms overlapped among Chinese students confronting the double strain of academic pressure and pandemic uncertainty. The findings of this study point in the same direction: the students bore multiple forms of distress simultaneously, which adds to the complexity of intervention, as they risk not addressing the interwoven nature of the students' struggles. The academic implications are massive, with Bruffaerts et al. (2021) declaring that more than a third of first-year students worldwide had met the criteria for a mental disorder that impaired their academic functioning. It has been shown in the literature that stress and burnout-reducing interventions (Madigan et al., 2024; Tang et al., 2021) were highly associated with academic resilience. It is therefore careless to overlook the implication that improving student mental health is essential not only for personal well-being but also for academic survival.

One recurring notion is the treatment gap. Rotenstein et al. (2016) proved that only 15.7 % of depressed or suicidal medical students sought help, despite the very high prevalence rates. Such was the finding documented by Auerbach et al. (2018) and Bruffaerts et al. (2021) in several countries. In the Philippine context, Tan et al. (2025) singled out self-stigma as a strong predictor of low well-being and hindered help-seeking. This resonates with the finding that barriers to mental health care are neither purely institutional nor purely cultural in the university. Some students exhibit a fear of judgment; others hesitate to disclose their struggles.

In spite of all of these, the evidence points to effective interventions. Mindfulness-based programs improve resilience and reduce stress even for nonclinical student populations (Galante et al. 2018). According to Sperling et al. (2023) and Vasudevan et al. (2025), multi-component approaches involving mindfulness, physical activity, and breathing exercises are effective. Abulfaraj et al. (2024) stated that resilience-building interventions decrease stress and anxiety, while Goodchild & Richardson (2023) and Wells et al. (2025) emphasized the benefits of embedding resilience training in curricula. Harrer et al. (2019) cited the efficacy of online interventions in reducing depression and anxiety, which has special relevance to the student respondents already steeped in digital platforms. Ongoing salutary effects of the programs are further supported by Madigan et al. (2024) and Tang et al. (2021), with interventions against burnout requiring sustained engagement for preferably eight weeks or more. Collectively, these support arguments for multi-layered, contextual, and extended frameworks of mental health interventions to achieve meaningful results.

To summarize this whole discussion, the results paint a rather grim picture: the levels of depression, anxiety, and stress among the student respondents were reported as being disproportionately high, with anxiety being the most prominent. Lifestyle factors, sociodemographic vulnerabilities, academic pressure, and the pain of pandemic disturbances shape these outcomes. Such convergence of national and global research tells us that these findings are not isolated instances but rather part of a bigger pattern of student distress during COVID-19. There is now considerably consistent evidence for the proposal that interventions, be it mindfulness, resilience training, multi-component programs, or digital supports, could effectively reduce these very risks. The challenge now is to find a way of sustaining this knowledge within an institutional framework to counter both the personal travails of students and the systemic impediments to seeking or receiving their help. Hence, by building on both the present results and supporting literature, the researchers propose the following framework to serve as a guide in addressing the mental health challenges of students in a sustainable and evidence-based manner. With this, the high prevalence of moderate to extremely severe depression, anxiety, and stress guided the development of the MIND Project Framework. Each of the tiers corresponds to the varying levels of mental health symptoms identified in this study, ensuring that interventions are evidence-based and need-responsive.

5.1. Proposed mental health intervention framework for the university

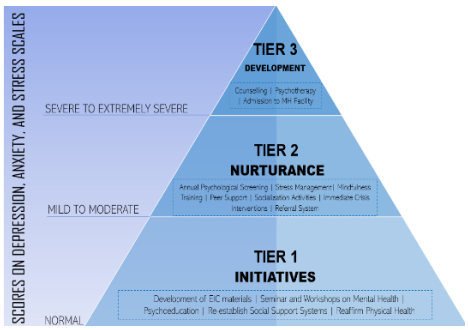

Fig. 2: The MIND Project Intervention Framework.

Figure 2 presents the proposed mental health intervention framework as an output of the study; this is entitled Mental Health Initiatives, Nurturance, and Development (MIND) Project Intervention Program. The proposed intervention framework is a comprehensive approach designed to address mental health challenges among university stakeholders, including students. The framework aims to provide preventive and interventional measures at different tiers based on the severity of mental health symptoms.

The interventions in the framework are categorized into three tiers: initiatives (tier 1), nurture (tier 2), and development (tier 3). Each tier corresponds to the level of mental health symptoms experienced by the stakeholders. Overall, tier 1 initiatives in the framework adopt a proactive approach to mental health by providing universal interventions that promote mental well-being, stress reduction, and resilience. Through the development of educational materials, seminars, workshops, psychoeducation, and emphasis on social and physical health, stakeholders are empowered with knowledge and resources to maintain their mental well-being even when they are not currently experiencing significant mental health challenges.

Tier 2 nurturing activities within the framework are designed to provide selective interventions that specifically target individuals with mild to moderate levels of mental health symptoms. These interventions are aimed at addressing the specific challenges faced by this group and providing them with the necessary support to manage their mental health effectively. One of the key components of tier 2 nurturing activities is the implementation of annual psychological screening. This involves conducting regular assessments or surveys to identify individuals who may be experiencing mild to moderate mental health symptoms. By screening individuals every year, the program can proactively identify those who may require additional support and interventions. Stress management and mindfulness training are also important elements of tier 2 interventions. These activities provide individuals with practical tools and techniques to effectively manage stress and promote mental well-being. Stress management workshops or training sessions may focus on teaching relaxation techniques, time management skills, and problem-solving strategies to help individuals better cope with stressors in their lives. Mindfulness training, on the other hand, emphasizes being present in the moment, cultivating self-awareness, and developing a non-judgmental attitude towards one's thoughts and emotions.

Counseling services play a crucial role in tier 2 nurturing activities. They provide individuals with access to professional therapists or counselors who can offer guidance, support, and evidence-based interventions tailored to their specific needs. These counseling sessions may be conducted on a one-on-one basis, allowing individuals to discuss their concerns, explore their emotions, and develop coping strategies. The counselors can help individuals develop personalized plans for managing their mental health and provide ongoing support as needed. Support groups are another valuable resource offered within tier 2 interventions. These groups bring together individuals who are facing similar challenges, providing them with a supportive and empathetic community. Support groups offer a safe space for individuals to share their experiences, exchange coping strategies, and provide mutual support. Facilitated by trained professionals, these groups can foster a sense of belonging and reduce feelings of isolation among participants. Socialization activities are also included in tier 2 nurturing activities. These activities aim to promote social connections and reduce feelings of loneliness or isolation that can contribute to mental health issues. Socialization activities may involve organized group outings, community events, or recreational activities that encourage participants to engage with others and build supportive relationships. Additionally, immediate crisis interventions are an essential part of tier 2 nurturing activities. These interventions are designed to provide immediate support to individuals who may be experiencing a mental health crisis or need urgent assistance. Crisis interventions may involve a rapid response team, helpline services, or on-campus resources that individuals can reach out to in times of acute distress or emergency. The referral system is also an added feature to the framework in tier 2.

A referral system in mental health is a coordinated network of healthcare providers and resources that facilitate the transfer of patients with mental health needs from one level of care to another. It is a critical component of the mental health care system and is designed to ensure that individuals with mental health needs receive appropriate and timely care from qualified professionals. This involves identification of individuals with mental health needs, referral to the appropriate healthcare provider, coordination, which involves communication between healthcare providers to assure timely care, and follow-up to ensure that individuals receive ongoing care and support, such as but not limited to monitoring, medication management, and additional referrals if needed. The goal of a referral system in mental health is to provide individuals with the right care at the right time and in the right place. It is an essential component of the mental health care system, as it ensures that individuals receive the care and support they need to recover and maintain good mental health. In general, tier 2 nurturing activities in the MIND program provide a variety of targeted interventions for individuals with mild to moderate mental health symptoms. These interventions include regular psychological screening, stress management techniques, mindfulness training, counseling services, support groups, socialization activities, and immediate crisis interventions. The aim is to offer individuals specific and personalized support to effectively tackle their unique mental health challenges.

Tier 3 development activities within the MIND program are specifically tailored for individuals who are experiencing severe or extremely severe levels of depression, anxiety, or stress. These interventions are more intensive and aim to provide specialized support to help individuals cope with and overcome their mental health challenges. One of the key components of tier 3 development activities is individual therapy. This involves one-on-one sessions between the individual and a trained mental health professional, such as a psychologist or psychiatrist. Individual therapy provides a safe and confidential space for individuals to explore their emotions, thoughts, and experiences in depth. The therapist works closely with the individual to develop personalized treatment plans and employ evidence-based interventions to address their specific mental health needs. The focus may be on addressing underlying issues, developing coping strategies, and promoting overall well-being. Psychiatric consultations play an important role in tier 3 interventions.

In cases where individuals require psychiatric evaluation or medication management, a consultation with a psychiatrist may be necessary. These consultations allow for a comprehensive evaluation of the individual's mental health condition and may result in the inclusion of medication as part of their treatment plan. Referral to external mental health professionals is another aspect of tier 3 development activities. In some cases, the severity of the individual's mental health symptoms may require specialized treatment beyond what can be provided within the university setting. In such situations, the MIND program may facilitate referrals to external mental health professionals or clinics that offer specialized services. This ensures that individuals receive the appropriate and comprehensive care they need from experts in the field.

Additionally, tier 3 development activities may involve a multidisciplinary approach, with collaboration between different professionals to provide comprehensive care. This could include working closely with medical doctors, psychologists, psychiatrists, social workers, and other mental health specialists to address various aspects of the individual's mental health and well-being. The goal of tier 3 interventions is to provide individuals with the necessary support and resources to manage their severe or extremely severe mental health symptoms. By offering individual therapy, psychiatric consultations, and referral to external mental health professionals, the program aims to provide comprehensive and specialized care that addresses the unique needs of each individual. It's important to note that tier 3 development activities should be integrated with appropriate crisis management protocols. In situations where individuals are in immediate danger or facing an acute mental health crisis, prompt and immediate actions should be taken to ensure their safety. This may involve implementing

emergency response procedures, involving crisis hotlines or helplines, and collaborating with local mental health services for urgent interventions.
In summary, tier 3 development activities in the framework provide specialized and intensive assistance to individuals facing severe or extremely severe mental health symptoms. The program offers individual therapy, psychiatric consultations, and facilitates referrals to external mental health professionals. The primary objective is to assist individuals in managing their challenges, fostering resilience, and progressing towards recovery. By categorizing interventions into different tiers, the MIND Project Intervention Framework ensures that the level of support provided matches the severity of mental health symptoms experienced by university stakeholders. This approach allows for a targeted and comprehensive approach to addressing mental health challenges, providing universal, selective, and suggested interventions as needed.

5.2. Limitations of the study

While the study provides valuable insights into the mental health status of university students and proposes an evidence-based intervention framework, limitations should be acknowledged.
First, the fact that the purposive sampling technique restricted the researchers from making broad generalizations. The sample was limited to certain campuses of a single state university, which makes the findings less applicable to other universities. More representative data across different university settings can be gathered in future research by using probability-based or stratified sampling methods.
Secondly, the cross-sectional method was used in this study, which means that it only captured the participants' responses at one time. Therefore, the study could not determine the direction of the relationship between the demographic variables and the psychological outcomes. Longitudinal studies are suggested to monitor the development of the symptoms of depression, anxiety, and stress, and to investigate the impact of institutional interventions over a prolonged period.
Third, data collection occurred during the COVID-19 pandemic, a time characterized by much academic disruption, economic downfall, and social isolation. Conditions that were so abnormal may have caused the participants to be generally more psychologically distressed than usual, and that should be considered when interpreting the findings.
Fourth, the research mostly used self-report data from the DASS-42 questionnaire. Although this instrument is high in reliability and has been widely validated, personal bias and self-perception still may have played their part in the responses, thus slightly influencing the accuracy.
In spite of the above-mentioned limitations, the research has made a big and contextually relevant contribution to the area of student mental health. The limitations pointed out do not in any way lessen the importance of the findings; on the contrary, they underline the necessity of ongoing data collection and program evaluation. The MIND Project Framework proposed is still relevant and flexible—it is designed to adapt alongside new evidence, institutional feedback, and changing student needs. This quality makes it possible for the framework to act as a sustainable and scalable model for the other higher education institutions, which are providing mental health support under RA 11036 and CSC Memorandum Circular No. 4, s. 2020, to adopt it.

6. Conclusion

The study concluded that:
The student respondents experienced varying levels of depression, anxiety, and stress. The majority of the students reported mild to extremely severe levels of depression, anxiety, and stress.
A few demographic profiles of the respondents are significantly associated with their depression, anxiety, and stress levels, such as campus, age, sex, year level, work arrangement, and highest educational attainment. The crosstabulation of the scores on depression, anxiety, and stress showed significant differences in these variables.
The proposed mental health intervention framework is a multi-tiered framework that corresponds to the varying levels of mental health needs of various stakeholders. This is composed of tier 1, the initiative that is designed to target universal intervention for those with normal levels of depression, anxiety, and stress. This is a proactive approach to mental health problems that involves various activities. Tier 2 is dubbed as nurturance, which intends to provide selective interventions that specifically target individuals with mild to moderate levels of mental health symptoms. Lastly, tier 3, which is development, provides specialized and intensive assistance to individuals facing severe or extremely severe mental health symptoms.

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