

Original Research

Coping Mechanism and Stressor Assessment of Level 4 Nursing Students: Basis for Adaptive E-Learning

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ABSTRACT

Navigating the realm of e-learning presents distinct stressors for level 4 nursing students, characterized by the convergence of academic rigor and technology-related challenges. This study explores the unique stressors these students face within the digital landscape and delves into the essential coping mechanisms required to thrive in an online educational setting. Hence, this study aimed to conduct stressor assessments and the coping mechanisms of level 4 nursing students, serving as a basis for adaptive e-learning. The research instrument used in this research is a tool adapted and modified by the researchers under the guidance of a consultant. According to the results, Level 4 Nursing students have a high-stress level compared to their peers in the area of comfort. Due to the transition to e-learning, relationships with peers are creating distance. While the most effective coping mechanism of the students is the statement “I always check my devices in advance”, it involves how they equip themselves when doing e-learning. Technological availability and Internet accessibility are fundamental in e-learning as they expand educational opportunities, foster innovation in teaching methodologies, and empower learners with tools and resources for a more efficient and engaging learning experience. This study delivers impactful insights for the nursing profession and the public, instilling confidence in the adaptability of level 4 nursing students in hybrid settings to meet industry innovations head-on. It underscores the importance of assurance in safeguarding the knowledge and skills crucial for nursing professionalism. Amidst life's changes, graduating students grapple with identity uncertainties during epidemics. The narrative emphasizes that resourceful individuals, adept at critical thinking, seamlessly navigate challenges, showcasing resilience and adaptability in the face of adversity.

Keywords: Adaptive E-learning, Stressor, Coping Mechanism, Nursing Students, and Level Four

INTRODUCTION

Many schools have been forced to switch from in-person instruction to e-learning, drastically altering students' daily schedules and making them more susceptible to stressors like concerns about their health, the stability of their families, and their sense

of independence in their new educational environment. Such an approach leads to the isolation of students and even professors. Thus, this had students experience various stressors in the years to come.

Moreover, Shdaifat (2018) mentioned that nursing students aged 18-20 are faced with some patient care responsibilities for which they lack the prerequisite professional knowledge and skills, which would be the root of their stress. Academic pressures include several assignments, examinations, and workloads. Lack of professional nursing skills and unfamiliarity with patients' diagnoses, medical histories, or treatments are additional sources of stress for nursing students in the clinical setting. Furthermore, Zakari et al.(2019) stated that nursing schools need to focus on providing psychological support to nursing students as well as training them in all available coping mechanisms to improve students' abilities to manage their emotions and provide practical coping tools that will improve the lives of nursing students, their families, and ultimately their patients.

Adapting to the new normal, a hybrid learning environment in nursing schools will remain at its full potential until the pandemic has subsided. Hence, this study will aim to conduct stressor assessments and the coping mechanisms of level 4 nursing students, serving as a basis for adaptive e-learning.

METHODOLOGY

Research Design

The research design of the study is Quantitative Descriptive Correlational Research as it seeks to determine the stressors and coping mechanisms of level 4 nursing students based on adaptive e-learning. This approach to conducting quantitative research seeks to describe the relationship that exists between two or more variables (McBurney & White, 2009). The study utilized an Online Survey Questionnaire. Therefore, the data for

this study were collected by the researchers based on the perspectives of the nursing students, specifically the level 4 student nurses of a private institution in Manila.

Study Site and Subjects

The study was conducted online at a private institution in Manila School of Nursing due to the present threat of the COVID-19 pandemic. Several online platforms were utilized to contact, gather, and interview the selected respondents of the research study. Facebook Messenger was used as the messaging platform to contact and inform the potential respondents regarding the survey questionnaire to collect the data necessary for the research study. To gather the informed consent of the respondents, the researchers used Google Forms.

The study's respondents were level 4 nursing students at a private institution in Manila. The number of respondents was 40 level 4 nursing students. The researchers utilized purposive sampling in which the researcher purposely selected the respondents of the study. Inclusion criteria for the respondents of the study were the following: 1) being a level 4 nursing student in the basic nursing program for A.Y. 2022-2023 in Emilio Aguinaldo College Manila; 2) being level 4 nursing students including old, transferees, and new students; 3) willingness to respond to the study. On the contrary, exclusion criteria in the selection of respondents were 1) nursing students not included in Batch 2023; and 2) unwillingness to respond to the study.

Data Measures

A Pearson correlation analysis was done to determine if there is a correlation between coping mechanisms and stress experienced by level 4 nursing students during e-learning in the said five

variables. Then a weighted average to determine the overall weighted mean of stress and coping mechanisms.

Ethical Consideration

Before conducting the research, the researchers explained the purpose of the study to the respondents for them to understand and cooperate with the study. The researchers provided informed consent to the respondents after a panel of examiners approved the research instrument used in the study. Such consent forms exhibited confidentiality as well, making the role of the respondents to be freely answered to or withheld from with full authority. The respondents were fully aware of the information they were given in the forms. The researchers then received the respondents’ consent forms, which allowed them to collect and ask questions that were relevant to the data required. The links were provided to the respondents via personal chats and other contact mediums. The respondents were level 4 nursing students enrolled at a private institution in Manila. A set of close-ended questions within an online form was provided for the respondents to answer.

The researchers commit and uphold the basic ethical standards in this academic research engagement and outline how such standards are integrated with the research paper’s critical processes. With ethical standards, the researchers refer to the following:

Beneficence, level 4 nursing students benefited from this study assessing their stressors to effectively help them cope with each problem.

Non-maleficence, in this study the respondents were not exposed and avoided unnecessary harm whenever possible.

Privacy in this study was implemented by ensuring that the identity of all respondents is hidden.

Full Disclosure, this study revealed the complete details of the research to all respondents concerned.

Informed Consent, the study has sought the approval and voluntary respondents of the chosen samples.

Data Analysis

Rundowns (2018) defines validity as the extent to which a tool accurately measures what it is intended to measure, and functions as intended. Validity is frequently expressed in degrees because it is extremely uncommon, if not impossible, for an instrument to be completely valid. Validation is the process of gathering and interpreting data to ascertain the accuracy of an instrument. Cronbach's alpha, a statistical test, was utilized to examine the reliability and validity of the study's instruments to determine their validity.

Cronbach's Alpha measures the internal consistency of a set of data. It is a reliability coefficient. It aids in the reliability of a questionnaire or survey's consistency. Cronbach's Alpha values vary from 0 to 1. Cronbach's Alpha values greater than one indicate that the set of data is more dependable.

| Variable | CA | Items | Interpretation |
|----------|-------|-------|---------------------------------|
| TM | 0.775 | 5 | Acceptable Internal Consistency |
| LE | 0.743 | 5 | Acceptable Internal Consistency |
| TA | 0.881 | 5 | Good Internal Consistency |
| SS | 0.804 | 5 | Good Internal |

| | | | |
|----|-------|---|---------------------------|
| | | | Consistency |
| IA | 0.864 | 5 | Good Internal Consistency |
| CM | 0.884 | 5 | Good Internal Consistency |

Legend: CA - Cronchbach's Alpha, TA - Time Management, LE - Learning Environment, TA - Technological Availability, SS - Support System, IA - Internet Accessibility, CM - Coping Mechanism

The Cronbach's Alpha value of the Variables and the Coping Mechanism is within the range of Acceptable and Good Internal Consistencies. Therefore, the data that will be gathered in this survey is reliable.

RESULTS AND DISCUSSION

Demographic Profile of the Respondents

Table 1. Distribution of the respondents in terms of Age

| Age | Frequency | Percentage |
|-------|-----------|------------|
| 21 | 5 | 12.5 |
| 22 | 21 | 52.5 |
| 23 | 11 | 27.5 |
| 27 | 1 | 2.5 |
| 28 | 1 | 2.5 |
| 32 | 1 | 2.5 |
| Total | 40 | 100 |

Table 1 above summarizes the age profile of the respondents. With a total of 40 respondents, 12.5% of the responses are from 21 years old (with a total count of 5 respondents), 52.5% of the responses are from 22 years old (with a total count of 21 respondents), 27.5% of the responses are from 23 years old (with a total count of 11 respondents), and 2.5% of the responses are from 27, 28, and 32 years old (with a total count of 1 respondent).

Table 2. Distribution of the respondents in terms of Sex

| Gender | Frequency | Percentage |
|--------|-----------|------------|
| Male | 3 | 7.5 |
| Female | 37 | 92.5 |
| Total | 40 | 100 |

Table 2 summarizes the gender profile of the respondents. With a total of 40 respondents, 7.5% of the responses are from males (with a total count of 3 respondents), and 92.5% are from females (with a total count of 37 respondents). Statistics show that women are more likely to pursue careers in nursing, and this fact holds among level four nursing students at a private institution in Manila.

The level of stress experienced by level 4 nursing students on e-learning in terms of the variables.

Table 3. Interpretation Table for the Level of Stress Experienced by Level 4 Nursing Students.

| Assigned Value | Range | PSI | NSI |
|----------------|-------------|-----------|-----------|
| 1 | 1.00 - 1.75 | Very Low | Very High |
| 2 | 1.76 - 2.50 | Low | Moderate |
| 3 | 2.51 - 3.25 | Moderate | Low |
| 4 | 3.26 - 4.00 | Very High | Very Low |

Legend: PSI - Positive Statement Interpretation, NSI - Negative Statement Interpretation

Time Management

Table 4. Level of Stress experienced in terms of Time Management Mean Score.

| Descriptive Statistics: Time Management | | | | |
|---|----|------|----------------|----------------|
| Variable | N | Mean | Std. Deviation | Interpretation |
| TM 1 | 40 | 2.37 | 0.774 | Low |
| TM 2 | 40 | 2.97 | 0.768 | Moderate |
| TM 3 | 40 | 2.85 | 0.770 | Moderate |
| TM 4 | 40 | 2.60 | 0.672 | Moderate |
| TM 5 | 40 | 2.45 | 0.749 | Low |

In Table 5, there are two statements: one that is negative and one that is positive. These are called good stress and bad stress, respectively. Good stress is short-term, and it inspires and pushes you, keeps your energy focused, and improves your performance. Bad worry, on the other hand, makes you tired and jittery and can hurt your health.

Statement 2 “My environment at home is not ideal for e-learning” and statement 3 “I have difficulty performing my required tasks” are negative statements. Both statements' interpretation is low showing that the level 4 nursing students have moderate stress regarding the statements. Statement number two from Learning Environment “My environment at home is not ideal for e-learning” corresponds to a negative statement which exhibits the highest weighted mean of 2.38 with a verbal interpretation of “Low”. This result shows that the participants experienced moderate stress. Kapasia et al. 2020 noted that homes were not a conducive environment for learning. More than 30% of students mentioned slow connections as a problem. This was supported by Adnan & Anwar (2020) and Al-Tammem et al. (2020) state that the learning process of students is facilitated by a healthy, comfortable, and non-toxic atmosphere. Due to the presence of potential distractions like family members and pets, the home setting is not conducive to learning. Distractions can occur at any time, but especially during important academic events like

interviews, tests, homework, and projects (Sangster et al., 2020).

Statement 1 “I have a convenient learning environment”, statement 4 “I have a quiet and independent learning environment” and statement 5 ‘I often go to places intended for studying. (e.g., Libraries, Study Halls, Studios)’. are positive statements. These statements range from low to moderate interpretation that indicates they are on the borderline between having high stress and very low stress regarding e-learning in terms of the learning environment. Statement number one from Learning Environment “I have a convenient learning environment.” corresponds to a positive statement which exhibits the highest weighted mean of 2.63 with a verbal interpretation of “Moderate”. These results show that the participants experienced moderate stress regarding their environment on e-learning. Most of the level 4 nursing students don't have a convenient learning environment that can support the negative statements since they both show moderate stress regarding the learning environment. It shows us that contemporary learners deserve learning spaces that meet their individual and collective needs. To rise to this challenge, school administrators will need to create settings that are both conducive to learning and exciting for students. Learners should feel comfortable and engaged in their surroundings, which is why it's important to pay attention to the design of the physical environment and learning area (Balog,2018).

Technological Availability

Table 6. Level of Stress experienced in terms of Technological Availability Mean Score.

| Descriptive Statistics: Technological Availability | | | | |
|--|----|------|----------------|----------------|
| Variable | N | Mean | Std. Deviation | Interpretation |
| TA 1 | 40 | 2.82 | 0.781 | Moderate |
| TA 2 | 40 | 3.10 | 0.810 | Moderate |
| TA 3 | 40 | 1.92 | 0.730 | Low |
| TA 4 | 40 | 2.05 | 0.815 | Low |
| TA 5 | 40 | 2.95 | 0.876 | Moderate |

In Table 6, there are two statements: one that is negative and one that is positive. These are called good stress and bad stress, respectively. Good stress is short-term, and it inspires and pushes you, keeps your energy focused, and improves your performance. Bad worry, on the other hand, makes you tired and jittery and can hurt your health.

Statement 3 “I have difficulties in using e-learning technologies” and statement 5 “I have experienced eyestrain when using gadgets” are negative statements. Both statements' interpretation is low and moderate showing that the level 4 nursing students have borderline stress regarding the statements. Statement number three from Technological Availability “I have difficulties in using e-learning technologies” corresponds to a negative statement that exhibits the lowest weighted mean of 2.38 with a verbal interpretation of “Low”. This result shows that the participants experienced moderate stress. Barot & Llenares, 2021; Bayagas, 2020 explained that in the Philippines, the challenges of college students ranged from learning at home to technological literacy and competency. In addition, Wallace et al. (2021), noted that technological challenges had students recalling their perception of the professors’ unfamiliarity with the online platforms they are utilizing and If students in an online setting lack the necessary digital skills and competency, the resulting rise in academic pressure and stress might lead to burnout (Sharma, R.C. 2020).

Statement 1 “I am satisfied with the technology and apps I use for e-learning”, statement 2 “I have the technology needed for e-learning” and statement 4 “I share my devices with others” are positive statements. These statements range from low to moderate interpretation that indicates they are on the borderline between having high stress and very low stress regarding e-learning in terms of technological availability. Statement number two “I have the technology needed for e-learning” exhibits the highest weighted mean of 3.10 with a verbal interpretation of "Moderate". This result shows that the participants experienced moderate stress regarding their technologies' availability on e-learning. Cleofas & Rocha, 2021; Yra et al., (2020) stated that in the local context, these devices are still unavailable to some students. This becomes a burden or a challenge for them, especially in their learning. Siddes M, Veerabhadrapa (2020) The high cost of education in India means that few students have access to personal devices like laptops, desktop computers, or mobile phones that could be used for online education. Families with more than one child have experienced challenges enrolling in online courses and programs due to the necessity of sharing a single household device.

Support System

Table 7. Level of Stress experienced in terms of Support System Mean Score.

| Descriptive Statistics: Support System | | | | |
|--|----|------|----------------|----------------|
| Variable | N | Mean | Std. Deviation | Interpretation |
| SS 1 | 40 | 1.80 | 0.823 | Low |
| SS 2 | 40 | 1.80 | 0.758 | Low |
| SS 3 | 40 | 1.78 | 0.862 | Low |
| SS 4 | 40 | 1.73 | 0.905 | Very Low |
| SS 5 | 40 | 1.83 | 0.747 | Low |

In Table 7, there are negative statements. The worst stress doesn't go away quickly. Most of the time, it lasts for a long time and wears you out. It can make you move slower and lower your quality of life in a big way. Achieving success might be impeded by stress. In the end, it's very bad for you because it never gives your body a chance to recover from the effects of the fight-or-flight.

Statement 3 "I feel insecure with my friends because they are getting good grades" exhibits a weighted mean of 1.78 with a verbal interpretation of "Low" and statement 4 "I feel nobody cares for me" exhibits the lowest weighted mean of 1.73 with a verbal interpretation of "Very Low". These statements range from low to very low interpretation indicating they are on the borderline between having high stress and moderate stress regarding e-learning in terms of support systems.

Statement number three "I feel insecure with my friends because they are getting good grades" is the second to the lowest weighted mean in the support systems. This shows that the participants are having a moderate stress level in terms of their peers. According to Mondal (2018), there is a close connection between a multifaceted psychological theory of motivation and individual elements like instincts and emotions as well as societal factors like cooperation and rivalry. A healthy dose of competition can motivate focus, energy, and growth. When students feel pressure to perform well in comparison to their peers, they are often motivated to put in more effort than they otherwise would. Instead of having a positive attitude towards the competition, some students feel insecure that they start to doubt their capability because of other people's success. During Covid-19, students had negative attitudes regarding online education, including feelings of

unworthiness, ineffectiveness, anger, anxiety, and irritation. Not only is there a greater chance of dying from an infection, but people are also under tremendous emotional stress because of the pandemic (Cao et al., 2020). Baloran's (2020) research found that Filipino students deal with the pressures of online learning by maintaining close relationships with supportive friends and family and constantly pushing and motivating themselves. There's no denying that maintaining positive emotional health through such a coping mechanism can aid students in pursuing academic success.

Statement number four "I feel nobody cares for me" is the lowest weighted mean in the support systems. This shows that the participants have a high stress level in terms of their peers in terms of comfort. Al Tahqeeq et al. (2021) stated that women are more likely to experience anxiety due to hormonal variations between genders, which can lead to emotional outbursts and exhaustion. Students experiencing emotional distress due to participating in a distance learning program typically turn to their classmates for comfort, as stated by Gore et al. (2019). This conforms to the argument of Wang (2000), in which he argued that students create close ties to counteract feelings of isolation. Due to the transition to e-learning, relationships with peers are creating distance. Barrot et al. (2020) found that factors including the accessibility of support systems, the quality of relationships with teachers and classmates, and the presence of clear policies and procedures for online education at the school moderated students' reactions to stress.

Internet Accessibility

Table 8. Level of Stress experienced in terms of Internet Accessibility Mean Score

| Descriptive Statistics: Internet Accessibility | | | | |
|--|----|------|----------------|----------------|
| Variable | N | Mean | Std. Deviation | Interpretation |
| IA 1 | 40 | 2.60 | 0.744 | Moderate |
| IA 2 | 40 | 2.72 | 0.716 | Moderate |
| IA 3 | 40 | 2.75 | 1.006 | Moderate |
| IA 4 | 40 | 2.98 | 0.891 | Moderate |
| IA 5 | 40 | 2.48 | 0.933 | Low |

In Table 8, there are two statements: one that is negative and one that is positive. These are called good stress and bad stress, respectively. Good stress is short-term, and it inspires and pushes you, keeps your energy focused, and improves your performance. Bad stress, on the other hand, makes you tired and jittery and can hurt your health.

Statement 2 “I have the internet at home with a high-speed connection” is a positive statement. This statement is a moderate interpretation that indicates it is on the borderline of having high stress regarding e-learning in terms of internet accessibility. This exhibits a weighted mean of 2.72 with a verbal interpretation of "Moderate". This result shows that the participants experienced moderate stress regarding their internet accessibility on e-learning. Alcaran et al. (2022) show that respondents have a high level of stress when taking examinations, explained by Elsalem et al. (2020) the lack of a reliable Internet connection, the unfamiliarity with the exam's format, students' lack of preparation, and other personal variables, such as a distracting or unsuitable study space at home, all contributed to exam anxiety among students. Rural students' access to the internet and other technological resources, as confirmed by Reddy and Ramesh (2020), has become a significant barrier to their ability to succeed in distance learning. Abante et al. (2021) reported that a slow or unreliable internet connection made it difficult to perform their tasks. In addition, Internet connectivity is also crucial to the effectiveness of any

online distance learning modality, as disruptions to this can harm the overall learning process.

Statement 1 “When I try to access the internet for my classes, I often get connection issues”, statement 3 “I always inform my professors that I will be absent from class due to no internet access”, statement 4 “When I have a poor internet connection, I become irritable or annoyed” and statement 5 “When I am in the middle of an online lecture and my internet drops, I tend to drift off into my thoughts” are all negative statements. These statements range from low to moderate interpretation that indicates they are on the borderline between having high stress and low stress regarding e-learning in terms of internet accessibility. Statement number four “When I have a poor internet connection, I become irritable or annoyed” exhibits the highest weighted mean of 2.98 with a verbal interpretation of "Moderate". This result shows that the participants experienced moderate stress regarding their internet accessibility on e-learning. Siddiquah and Salim (2017) and Bisht et al. (2020), it's possible that disruptions in internet connectivity will prevent some students from making progress in their studies. Similar results were found by Wickramanayake and Muhammad Jika (2018), who also found that students face challenges due to inconsistent internet connections. This might incur some significant amount in the financial standings of the students since work is also shut down. As a result of a lack of resources to meet the needs of the new learning mode and in obtaining an allowance for internet load, the pandemic has also posed a problem to the financial stability of college students (Perante, 2021; Rotas, and Cahapay, 2020). In addition, Alcaran et al. (2022) show that respondents have a high level of stress when taking examinations, explained by Elsalem et al. (2020) the lack of a reliable Internet connection,

the unfamiliarity with the exam format, students' lack of preparation, and other personal variables, such as a distracting or unsuitable study space at home, all contributed to exam anxiety among students.

The effectiveness of coping mechanisms of level 4 nursing students experiencing stress

Table 9. Interpretation Table for the Effectiveness of the Coping Mechanism of Level 4 Nursing Students Experiencing Stress.

| Assigned Value | Range | Interpretation |
|----------------|-------------|------------------|
| 1 | 1.00 - 1.75 | Very Ineffective |
| 2 | 1.76 - 2.50 | Ineffective |
| 3 | 2.51 - 3.25 | Effective |
| 4 | 3.26 - 4.00 | Very Effective |

Time Management

Table 10. Effectiveness of Coping Mechanisms in Terms of Time Management Mean Score.

| Descriptive Statistics: Time Management | | | |
|--|------|----------------|----------------|
| Questions | Mean | Std. Deviation | Interpretation |
| 1. I have been distracting myself with other activities to take my mind off things. | 2.87 | 0.607 | Effective |
| 2. I have been concentrating my efforts on doing something about the situation I am in | 2.93 | 0.616 | Effective |

| | | | |
|---|------|-------|-----------|
| 3. I have been doing something to think about time management less. (e.g. going to movies, watching TV, reading, daydreaming, sleeping, or shopping). | 2.85 | 0.622 | Effective |
| 4. I have been praying or meditating. | 2.72 | 0.716 | Effective |
| 5. I often find ways to break down difficult problems into manageable components. | 2.65 | 0.622 | Effective |
| 6. I plan my strategies to change a situation before I act. | 2.80 | 0.723 | Effective |

Listed in Table 10 above are the coping mechanisms used by students at the fourth-year nursing level. Among the six questions intended for time management only statement number two “I have been concentrating my efforts on doing something about the situation I am in” got the highest weighted mean of 2.93 with the verbal interpretation of effective. According to Biwer et al., (2021), Ultimately, these graduating students found ways to succeed in an online environment. Among the four types of adapters (overwhelmed, surrenderers, maintainers, and adapters), adapters valued the freedom they were given to direct their education and put in the most work to become proficient. It was also supported by Yapo et al. (2021) stating that the self-efficacy and academic motivation of these graduating college students remained high, thus increasing their commitment to finishing their studies. The following questions from 1-5 “I have been distracting myself with other activities to take my mind off things” followed by “I have been concentrating my efforts on doing something about the situation I am in” After that “I have been doing something to think about time management less. (e.g., going to movies, watching TV, reading,

daydreaming, sleeping, or shopping)” then “I have been praying or meditating” and “I plan my strategies to change a situation before I act.” are all shows effective for the coping mechanism of level 4 nursing students. It means that most of the coping mechanisms involve how they manage their time in e-learning. In addition, Arslan &Yıldırım, (2021), Salman et al., (2021) and Rotas & Cahapay, (2020) report that, despite the difficulties and restraints imposed by the COVID-19 epidemic, students developed coping mechanisms that allowed them to keep believing in a better future. Their coping mechanisms included things like choosing a quiet spot to study, making a schedule for themselves, making connections to relevant resources, reaching out to friends and family for moral support, and learning new methods of relaxing. Furthermore, Amir et al. (2020) state that these college graduates showed no signs of having trouble with time management or planning. To manage the workload of online courses, students must learn to prioritize their assignments. Difficulties in self-control and concentration can arise from studying online for an extended period.

by organizing my study table”. got the highest weighted mean of 2.95 with the verbal interpretation of effective. All the items are effective for level 4 nursing students. Including the statement “When I am trying to study, I do not let anything else in the room distract me.” It means that most of them are doing the coping mechanisms that involve how they organize their environment when doing e-learning. This finding is consistent with the studies of Adnan and Anwar (2020) and Al-Tammem et al. (2020), which found that a safe, comfortable environment aided students' ability to learn. Kapasia et al. (2020) agree with this result because they found that the typical home was not an effective learning environment. This was supported as due to the presence of potential distractions like family members and pets, the home setting is not conducive to learning. Distractions can occur at any time, but especially during important academic events like interviews, tests, homework, and projects (Sangster et al., 2020). Students develop strategies for dealing with this by learning to keep their materials in order and to avoid being distracted by others when studying online.

Table 11. Effectiveness of Coping Mechanisms in Terms of Learning Environment Mean Score.

Technological Availability

| Descriptive Statistics: Learning Environment | | | |
|---|------|----------------|----------------|
| Questions | Mean | Std. Deviation | Interpretation |
| 7. I have been taking action to try to make the situation better by organizing my study table | 2.95 | 0.677 | Effective |
| 8. When I am trying to study, I do not let anything else in the room distract me. | 2.93 | 0.730 | Effective |

Listed in Table 11 below are the coping mechanisms used by students at the fourth-year nursing level. Among the two questions intended for time management only statement number two “I have been taking action to try to make the situation better

Table 12. Effectiveness of Coping Mechanisms in Terms of Technological Availability Mean Score

| Descriptive Statistics: Technological Availability | | | |
|--|------|----------------|----------------|
| Questions | Mean | Std. Deviation | Interpretation |
| 9. I blame myself if I do not have the necessary gadgets for the task. | 1.98 | 0.891 | Ineffective |
| 10. I have learned to set limits on my electronic time to avoid exhaustion. | 2.70 | 0.791 | Effective |
| 11. I intend to equip myself with my technology for use at university. | 2.88 | 0.791 | Effective |
| 12. I have asked my family members if they have any spare devices I can use at school. | 1.97 | 0.862 | Ineffective |
| 13. I always double-check my devices in advance. | 3.05 | 0.793 | Effective |

Listed in Table 12 above are the coping mechanisms used by students at the fourth-year nursing level. Among the following questions, researchers found out that statement number thirteen "I always double-check my devices in advance," has the highest weighted mean 3.05 with the verbal interpretation of effective. According to the findings, level-four nursing students at the private institution Manila routinely check their devices to ensure they won't be disrupted during their online classes. Students who take the time to double-check their devices before class reduce their chances of falling behind. It is important to focus on students' readiness for online learning, as stated by M. Engin (2018), to facilitate meaningful learning experiences and

outcomes. This is reinforced by Zulaikha Khairuddin (2020), who argues that preparing students for online learning would lead to higher academic achievement and more effective communication in the classroom. Only three items were effective in the coping mechanism of level 4 nursing students. It means that some of their coping mechanisms involve how they equip themselves when doing e-learning. These statements are the following: "I have learned to set limits on my electronic time to avoid exhaustion", "I intend to equip myself with my technology for use at university" and "I always double-check my devices in advance." It was supported by the study of Fares et al. (2020) and Visnjic et al. (2018), stating that increased exposure to electronic devices, such as smartphones and tablets, has been linked to an increase in stress and burnout, level four nursing students at the private institution in Manila are imposing device usage restrictions. In addition, the study discovered that the prevalence and type of use of these gadgets can influence the development of mental health concerns in that population. Question number nine "I blame myself if I do not have the necessary gadgets for the task" and question twelve "I have asked my family members if they have any spare devices I can use at school". Both questions resulted in ineffective coping mechanisms for level 4 nursing students. Both claims went against the findings by Papadakis, Zaranis, & Kalogiannakis (2019) in Greece, over half of parents are willing to donate their cell phones to their children's education because they worry that a lack of exposure to digital media may cause their children to fall behind in class. Osafo (2017) added that another approach that students deal with distance education is through making use of the library's resources. To go through school without a laptop or computer, many students turn to family and friends for assistance.

Support System

Table 13. Effectiveness of Coping Mechanisms in Terms of Support System Mean Score.

| Descriptive Statistics: Support System | | | |
|--|------|----------------|----------------|
| Questions | Mean | Std. Deviation | Interpretation |
| 14. I have been using alcohol or drugs to make myself feel better. | 1.45 | 0.749 | Very Effective |
| 15. I seek emotional support from others. | 2.33 | 0.733 | Ineffective |
| 16. I have been letting others care for me. | 2.18 | 0.636 | Ineffective |
| 17. I seek other people's advice. | 2.62 | 0.628 | Effective |
| 18. I try to talk and explain my stress to get feedback from my friends. | 2.50 | 0.784 | Ineffective |
| 19. I tend to seek information from others that could help me deal with my problems. | 2.43 | 0.874 | Ineffective |
| 20. When I am in trouble, I can usually work out something with the help of others. | 2.53 | 0.640 | Effective |
| 21. I confide my feelings in others to build up and maintain close relationships | 2.57 | 0.747 | Effective |

Listed in Table 13 above are the coping mechanisms used by students at the fourth-year nursing level. Among the eight questions intended for support systems only statement number fourteen “I have been using alcohol or drugs to make myself feel better.” got the lowest weighted mean of 1.45 with the verbal interpretation of very ineffective. According to Xiong et. al. (2021), negative consequences such as suicidality, substance addiction, and sleep

disturbances have all been linked to elevated stress levels among nursing students. Gundy and Musto (2019) note that many young adults in higher education turn to drug and alcohol as a means of relieving stress. The responses for questions 14-21 about a student's support system range from Very Ineffective, Ineffective, and Effective for students at the fourth-year nursing level. As a result, most statements labeled as support systems describe the process by which they handle e-learning. There are four types of social support these are Emotional, Instrumental, Informational, and Appraisal. Most people who responded emphasized their dependence on others. Examples of Emotional Support include question number “I seek emotional support from others” followed by “I have been letting others care for me” and then “I try to talk and explain my stress to get feedback from my friends” and “I tend to seek information from others that could help me deal with my problems.” These are all statements that demonstrate empathy, love, trust, and care. The majority of the fourth-year nursing students at private institutions in Manila do not enjoy cultivating feelings of compassion and empathy for others. People have a hard time exposing their true selves to anyone else's scrutiny. Vulnerability is a "beautiful mess" since it entails both significant dangers and significant payoffs, as noted by Brown (2018), who acknowledges that displaying vulnerability can feel more like weakness on the inside. Putting ourselves out there carries with it the risk of damaging our reputations or alienating our friends, but it also carries with it the possibility of being welcomed by others and discovering a wonderful sense of belonging. Whereas questions number seventeen “I seek other people's advice” number twenty “When I am in trouble, I can usually work out something with the help of others” and number twenty-one “I confide

my feelings in others to build up and maintain close relationships” are the statement shows an effective coping mechanism, all are informative examples that show how other people's comments, advice, and knowledge can be useful. Most of these remarks can be seen as a call for group-oriented, rather than individual-oriented, information. The people, as defined by Balog (2018), are those who have an impact on the student in some way, either immediately or through a network of other people. To set themselves up for future success, people engage in social activities. Furthermore, Erdoan (2011) cited in the study by Tutkun and Yildiz (2021) states that without communication, there is no thinking, nothing can be explained, and no relationships can be established; thus, it is evident that communication is not a choice for humans such as personal preference and lifestyle decisions, but a necessity. If there's nothing in it for them, people won't bother making friends.

Internet Accessibility

Table 14. Effectiveness of Coping Mechanisms in Terms of Internet Accessibility Mean Score

| Descriptive Statistics: Internet Accessibility | | | |
|--|------|----------------|----------------|
| Questions | Mean | Std. Deviation | Interpretation |
| 22. I have given up attempting to cope with internet instability when the connection drops. | 2.18 | 0.747 | Ineffective |
| 23. When my internet connection drops, I tend to look for other activities to accomplish to be productive still. | 2.87 | 0.695 | Effective |
| 24. I have been developing a plan in case of internet connection loss. | 2.73 | 0.816 | Effective |
| 25. I always find the best spot with a stronger internet connection during class. | 2.92 | 0.859 | Effective |

Listed in Table 14 above are the coping mechanisms used by students at the fourth-year nursing level. Among the four questions intended for internet accessibility only statement number twenty-three “When my internet connection drops, I tend to look for other activities to accomplish to be productive still.” got the highest weighted mean of 2.87 with the verbal interpretation of effective. According to a study cited by Cahapay and Rotas (2021), moving the wireless router to a different position can increase broadband speeds. This means that level 4 nursing students can easily cope with their stress, they find a solution to their problem abruptly instead of dwelling on it. The following statements show an effective coping mechanism in the variable of Internet Accessibility: “When my internet connection drops, I tend to look for other activities to accomplish to be productive still”, followed by the statement “I have been developing a plan in case of internet connection loss” and “I always find the best spot with a stronger internet connection during class” (Cook, 2019). Fewer people are using Wi-Fi late at night, making it a more pleasant experience overall. Many online students use the methods to increase their connectivity and maintain their academic pace. To have consistent internet connectivity, some people may need to move to another part of their home. This is in line with the findings of Matswetu et al. (2020), who found that students without Internet access will use whatever means necessary to achieve their educational goals. However, statement number twenty-three “I have given up attempting to cope with internet instability when the connection drops” indicates an ineffective coping mechanism supported by the study of Santos, (2020); Rotas & Cahapay, (2020) Despite this assistance, college students doing flexible learning scramble to acquire digital devices and a stable

internet connection, causing many difficulties, especially in developing countries.

Table 15. Effectiveness of Coping Mechanisms of Level 4 Nursing Students Experiencing Stress Overall Mean

| Descriptive Statistics: Coping Mechanism | |
|--|-----------------------|
| Mean | Verbal Interpretation |
| 2.58 | Effective |

The overall weighted mean for the effectiveness of coping mechanisms of level 4 nursing students experiencing stress is 2.58 with a verbal interpretation of “effective”. It means that most of them are doing the coping mechanisms that involve the five variables: Time Management, Learning Environment, Technological Availability, Support System, and Internet Accessibility. The study by Munoto et al. (2020), claimed that student learning independence is the internal ability to study freely and overcome problems linked to the internet and the usage of applications to motivate themselves for online learning. In addition, Chandra (2020) stated that self-regulation and self-management proved to be effective for these emerging adults in facing the crisis. The COVID-19 pandemic has taught them to be self-regulated and creative by designing coping strategies to deal with stress and anxiety.

Is there a significant correlation between the stressors and the coping mechanisms of level 4 nursing students on e-learning?

Table 16. Test of Normality

| Shapiro-Wilk Test for Normality: Coping Mechanism | | |
|---|----|------|
| Statistics | df | Sig. |
| 0.986 | 40 | .904 |

The p-value for the Dependent Variable is greater than 0.05 using the Shapiro-Wilk Test or Kolmogorov-Smirnov Test for Normality, therefore the data is normally distributed, and the Pearson R Correlation Test is the appropriate Statistical test for this one.

Table 17. Correlation between Learning Environment and Coping Mechanism.

| r-value | p-value | Interpretation |
|---------|---------|-----------------|
| 0.273 | 0.088 | Not Significant |

Table 17 shows the result for the relationship between the stress experienced by level 4 nursing students on Time Management, and Coping Mechanisms with the use of the Pearson R Correlation Test. The p-value shows a value of 0.088 which retains the null hypothesis, implying that there is no significant relationship between Time Management and Coping Mechanisms of level 4 nursing students of a private institution in Manila.

Table 18. Correlation between Learning Environment and Coping Mechanism

| r-value | p-value | Interpretation |
|---------|---------|-----------------|
| 0.091 | 0.576 | Not Significant |

Table 18 shows the result for the relationship between the stress experienced by level 4 nursing students in the Learning Environment, and the Coping Mechanism with the use of the Pearson R Correlation Test. The p-value shows a value of 0.576 which retains the null hypothesis, implying that there is no significant relationship between the Learning Environment and Coping Mechanisms of level 4 nursing students in a private institution in Manila

Table 19. Correlation between Technological Availability and Coping Mechanism

| r-value | p-value | Interpretation |
|---------|---------|----------------|
| 0.638 | 0.000 | Significant |

Table 19 shows the result for the relationship between the stress experienced by level 4 nursing students on Technological Availability, and Coping Mechanisms with the use of the Pearson R Correlation Test. The p-value shows a value of 0.000 which rejects the null hypothesis, implying that there is a high significant relationship and it has a Strong Positive Technological Correlation Availability between and Coping Mechanisms of level 4 nursing students of a private institution in Manila.

Table 20. Correlation between Support System and Coping Mechanism

| r-value | p-value | Interpretation |
|---------|---------|-----------------|
| 0.124 | 0.444 | Not Significant |

Table 20 shows the result for the relationship between the stress experienced by level 4 nursing students on the Support System and their Coping Mechanism using the Pearson R Correlation test. The p-value for Support System and Coping Mechanism showed 0.444 which retains the null hypothesis, implying that there is no significant relationship between Support System and Coping Mechanism.

Table 21. Correlation between Internet Accessibility and Coping Mechanism

| r-value | p-value | Interpretation |
|---------|---------|----------------|
| 0.553 | 0.000 | Significant |

Table 21 shows the result for the relationship between the stress experienced by level 4 nursing students on Internet Accessibility, and the Coping Mechanism with the use of the Pearson R Correlation Test. The p-value shows a value of 0.000 which rejects the null hypothesis, implying that there is a high significant relationship and it has a Strong Positive Correlation between Internet Accessibility and Coping Mechanisms of level 4 nursing students in a private institution in Manila.

Stressors are naturally occurring challenges and are always present in everyone's life. Coping mechanisms are strategies or techniques that individuals use to manage stress and navigate challenging situations. These problems require solutions, which means people have their own way of dealing with things. This study gathers information about the respondents' profiles, including their age and gender. Within a private institution in Manila, specifically among nursing students at the fourth-year level, there exists a statistical trend indicating a higher inclination among female students toward pursuing careers in the field of nursing. Most of the respondents are ages 22 years and above.

1. For the levels of stress experienced by the Level 4 Nursing students, it shows that in terms of:
 - a. Time Management: They experienced low stress indicating that students grasp the value of time, scheduling, and completing tasks by the due date. All these components of a routine play a role in molding their future practices at work which helps them to avoid being overwhelmed by schoolwork.

- b. Learning Environment: Most of the level 4 nursing students experience moderate stress indicating that they don't have a convenient learning environment. Present-day learners require learning environments tailored to their individual and collective needs. To meet this challenge, school leaders must create settings that foster both effective learning and enthusiasm among students. Administrators must ultimately develop environments that not only support academic progress but also inspire personal growth, curiosity, and a passion for students.
 - c. Technological learning among Availability: Students experienced low stress regarding their technology availability in e-learning. Having unavailable gadgets becomes a burden or a challenge for them, especially in their learning since they cannot participate in some activities that need certain gadgets to function.
 - d. Support System: This shows that Level 4 Nursing students have a high-stress level in terms of their peers in terms of comfort. Due to the transition to e-learning, relationships with peers are creating distance. Students facing emotional distress while engaged in remote learning programs frequently seek solace from their peers. The extent to which they are impacted by stress is contingent upon several factors, including the accessibility of available support systems, the caliber of relationships established with educators and classmates, and the coherence of school policies and procedures governing online education. These elements serve as moderators, shaping and influencing students' responses to the stress they encounter.
 - e. Internet Accessibility: The results show that the students are experiencing low stress in terms of internet accessibility. Students may not experience significant stress regarding internet accessibility in today's world due to increased connectivity and technological advancements. The evolution of technology has led to more efficient and accessible internet services. The proliferation of smartphones, Wi-Fi networks, and affordable data plans has made internet access easier for students.
3. For the effectiveness of coping mechanisms of Level 4 Nursing students, it shows that in terms of:
- a. Time Management: Graduating students demonstrated proficient time management and planning skills without difficulty. This all suggests a heightened familiarity with the workload associated with online courses, enabling them to effectively prioritize tasks. Their robust self-efficacy and strong academic motivation played pivotal roles in

- bolstering their determination to successfully attain their degrees.
- b. **Learning Environment:** The results show that the coping mechanisms are effective in a way that most of them are doing the coping mechanisms that involve organizing their environment when doing e-learning. This was supported as due to the presence of potential distractions like family members and pets, the home setting is not conducive to learning.
 - c. **Technological Availability:** The results show that the coping mechanisms are effective. It involves how they equip themselves when doing e-learning. In addition, level four nursing students at a private institution in Manila are imposing device usage restrictions.
 - d. **Support System:** The majority of the fourth-year nursing students at private institutions in Manila do not enjoy cultivating feelings of compassion and empathy for others. People have a hard time exposing their true selves to anyone else's scrutiny. Their inclination towards self-reliance in problem-solving stems from a desire to alleviate any potential burden on those within their immediate social sphere. They prioritize independent resolution of challenges as a means to manage their affairs without imposing on the time or resources of others. This approach is fueled by a sense of consideration and respect for the well-being of individuals in their surroundings, leading them to refrain from seeking external assistance unless necessary. This self-sufficient attitude reflects their commitment to managing their responsibilities and challenges without inconveniencing or encumbering those around them.
 - e. **Internet Accessibility:** The results show effective coping mechanisms. This means that level 4 nursing students can easily cope with their stress, they find a solution to their problem abruptly instead of dwelling on it. The COVID-19 pandemic has taught them to be self-regulated and creative by designing coping strategies to deal with stress and anxiety.
4. Out of all the five variables, only Technological Availability and Internet Accessibility have a significant relationship with coping mechanisms of the level 4 nursing students in a private institution in Manila. Technological availability and Internet accessibility are fundamental in e-learning as they expand educational opportunities, foster innovation in teaching methodologies, and empower learners with tools and resources for a more efficient and engaging learning experience.

CONCLUSION

The study's findings provide information to both the nursing profession and the public. This may give the nursing community confidence that level 4 nursing students who studied in a hybrid setting can stay up with the industry's constant innovation. Professionalism in nursing requires knowledge and skill. This capability is easily jeopardized by a lack of assurance. Since so much change occurs in the lives of students, those who are about to graduate are uncertain of who they are when the epidemic strikes.

As a skill-based field, nursing is among those affected; however, students are strongly advised

to avoid any social interactions with others in their classes. As the day of their duty approaches, they are nervous about demonstrating their abilities to the nurses, as they have only just mastered these talents with teddy bears and will soon be exposed to real patients. Since they believe that theoretical knowledge alone is not sufficient to master a subject, they lack faith in their newly acquired skills after completing an e-learning course. As a result of this study, both nursing students and the nursing community will have greater confidence in the ability of nurses who have completed their education via online means to keep pace with the rest of the industry. Now more than ever, it is up to students to find creative ways to overcome obstacles and realize their potential, regardless of their circumstances. As a result of the challenges they faced while studying, they came up with their methods of dealing with stress. You may get far in nursing school and your professional life by being resourceful. The ability to think critically and solve problems comes more naturally to resourceful people. They are fast to adapt to new circumstances and resourceful in the face of adversity.

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