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# Perceived psychological distress and learning barriers on emergency remote education: association with students' motivation and resilience

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**Abstract: :** Emergency remote education has become a critical learning platform that created changes in ways of attaining learning goals. This shift to a new learning platform posed a great challenge to students' motivation and resilience in learning. This study aimed to analyze the students' learning barriers and psychological distress and their motivation and resilience in studying during the public health emergency. A descriptive-correlational research design was utilized to assess the research questions posed in this study. The respondents of the study were the two hundred thirty- eight (238) BEED students of Mindanao State University, General Santos City who were officially enrolled during the S.Y. 2021-2022. The researchers employed a stratified sampling technique in selecting the respondents for this study. Adapted questionnaires such as the Depression, Anxiety, Stress Scale-21 (DASS-21), Learning Barriers Questionnaire, Motivation to Learn Online Questionnaire (MLOQ), and the Connor-Davidson Resilience Scale (CD-RISC), checked and validated by experts, were used to gather the needed data. Descriptive statistics and Pearson Product Moment- Correlation Coefficient were used to analyze and interpret the gathered data. In this study, the researchers found that psychological distress significantly influences the resilience of students, but it does not influence their motivation to learn. Results also revealed that the learning barriers significantly influence both motivation and resilience of the students. Replication of this study is highly recommended using qualitative research design and including other variables such as assessments and the engagements of students.

**Keywords:** psychological distress; learning barriers; learning motivation; emergency remote education; BEED students.

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## INTRODUCTION

The strong wave of the COVID-19 pandemic has ushered the birth of a new normal in education. The changes in the school system included the closure of educational institutions worldwide, which had reached around 1.6 billion students from 194 countries (UNESCO, 2020). This sudden shift to a new learning platform poses today's most significant challenge to educational institutions. Among students who had studied on emergency remote education, 33% expressed they could not learn online rather than face-to-face, 44% saw no difference, and 23% revealed they know better in this setting (Talbert, 2020).

Research has shown that the rapid educational changes posed by the pandemic have impacted the learner's well-being (Plakhotnik, et al., 2021). For instance, the new set-up in education has escalated anxiety among students (Wang et al., 2020). Moreover, it has been reported that university students have experienced other health problems, specifically depression and eating disorders (Kohls et al., 2020). The adverse mental and emotional consequences of emergency remote education have potentially threatened the

students' holistic well-being and educational progress (Singh et al., 2020). Due to Covid-19, the students have also faced learning barriers, including learner motivation and social interaction (Mukhtar et al., 2020).

Previous studies have pointed out that the pandemic has affected students' lifestyles (Duraku & Hoxha, 2020; Labrague & Ballad, 2021; Baticulon et al., 2020). However, limited studies investigated their motivation and resilience levels despite the barriers and problems caused by the pandemic that focuses on future teachers. Therefore, the current study wanted to fill the gaps and deepen the knowledge of the learning barriers and psychological problems that university students may encounter, which could determine their motivation and resilience in studying emergency remote education. These and other related studies (Li et al., 2020; Zhai & Du, 2020) have pushed the researchers to explore the influence of Covid-19 on the students' psychological states and their well-being in general. Thus, this paper aimed to answer the research questions: 1) What is the perceived level of psychological distress of the students on emergency remote education? 2) To what extent do students experience the learning barriers on emergency remote education? 3) What is the level of students' motivation for learning during the pandemic? 4) What is the level of students' emotional resilience during the pandemic? 5) Do the experienced psychological distress and learning barriers correlate with the motivation and resilience of students?.

## METHOD

### Research Design

A descriptive-correlational research design was utilized to assess the research questions posed in this study: This method collected data in a detailed manner, and factual information was examined to describe the existing phenomena. A descriptive design describes the current status of a variable or phenomenon. The study does not begin with a hypothesis but typically develops after collecting data. A correlational study is a research method that involves measuring two or more variables and assessing the relationship between or among those variables (Stangor & Walinga, 2019). The study used this particular type of method to examine the relationship between psychological distress and learning barriers on emergency remote education in association with the motivation and resilience of the selected Bachelor of Elementary Education (BEEd) students of Mindanao State University, General Santos City in the first semester of the academic year 2020-2021 in all year levels. Moreover, this method is appropriate for this study since the information was collected without changing to the subject.

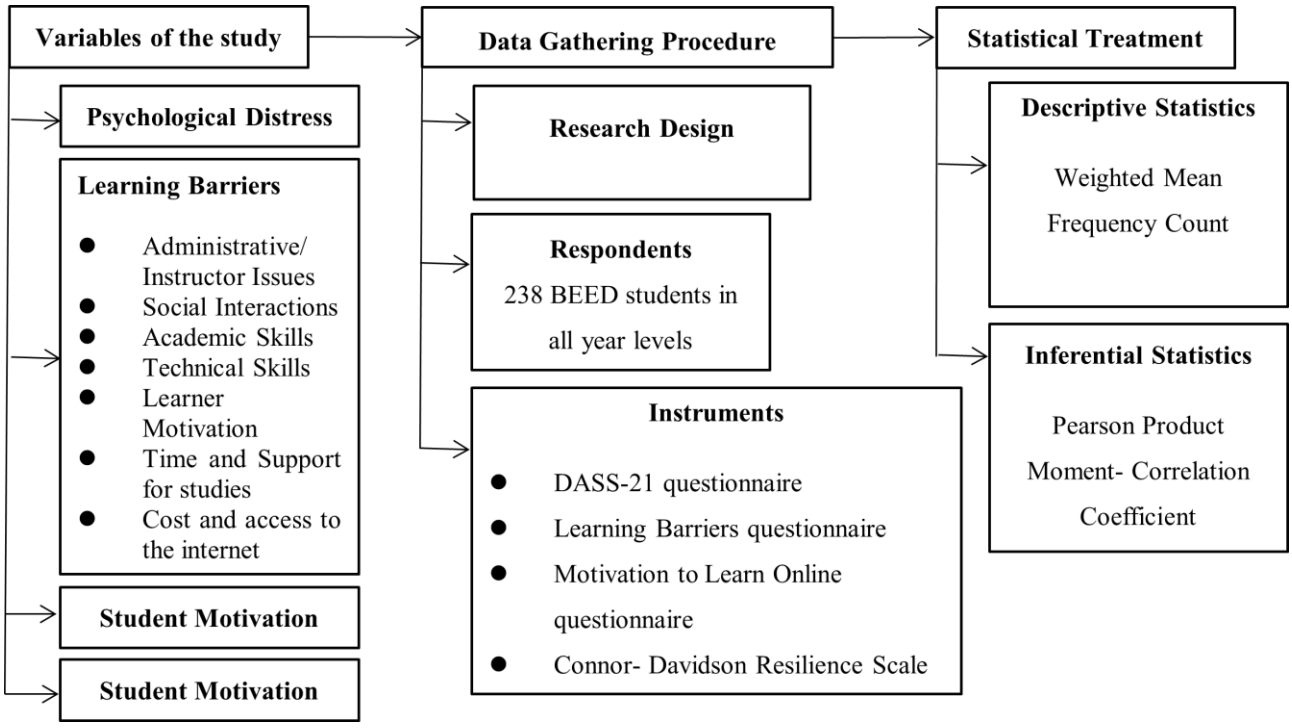


Figure 1. Research Flow

The respondents of the study were composed of two hundred thirty-eight (238) selected Bachelor of Elementary Education (BEEd) students of Mindanao State University - General Santos City in all year levels. There were 54 respondents from 1st year, 69 from 2nd year, 55 from 3rd year, and 60 from 4th year, respectively. Stratified sampling was employed by the researchers in selecting the respondents. This sampling technique is suitable since it ensures that the sample group represents characteristics of the population in terms of psychological distress, learning barriers, emergency remote education, motivation, and resilience. Additionally, the researchers followed the stratified sampling method of Aoyama (1954) to get the sample size per year level. This indicates that the distribution of the sample means is fairly normally distributed. The entire population of the BEED students was also considered to provide equal opportunity for the respondents to participate in this study. Only those who are willing to participate in the survey received the survey questionnaire links.

**Locale of the Study**

The study was conducted at Mindanao State University. It covers 149.76-hectare land located at Barangay Fatima, General Santos City. The institution is one of the top-performing universities in Mindanao that produces globally competent individuals. This locale is suitable for this study since the researchers and respondents are from this school, particularly in the Bachelor of Elementary Education (BEEd) Department, which will allow prompt and cost-effective data collection.

Due to the current social and physical constraints, the researchers were unable to conduct the survey in a face-to-face set-up and given that the students were in their respective locations, the researchers chose online surveys as the only suitable alternative at the time the study took place.

**Instrument**

The current study utilized four (4) different questionnaires to measure the students' psychological distress, learning barriers, motivation, and resilience, respectively.

The **Depression, Anxiety, and Stress Scale (DASS-21)** by Lovibond and Lovibond (1995) was an adapted instrument to measure the students' psychological distress levels. It is a set of three self-report scales designed to measure the emotional states of depression, anxiety, and stress. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. Each of the questions is rated from 0 to 3.

The **learning barriers questionnaire** was adapted from Muilenburg and Berge (2005) to measure the respondents' perceived learning barriers. It is a 45-item instrument that was classified into eight (8) factors: administrative and instructor issues, social interaction, academic skills, technical skills, learner motivation, time and support for studies, cost and access to the internet, and technical problems. Respondents will rate each barrier identified by Muilenburg & Berge (2005) according to the five-point Likert scale choices: 1–no barrier, 2-weak barrier, 3-moderate barrier, 4-strong barrier, and 5-very strong barrier.

The **Motivation to Learn Online Questionnaire (MLOQ)**, adapted from Fowler (2018), is designed to assess differences in student motivation in online and traditional classes. Students will rate themselves on a 5-point Likert scale from "strongly disagree" to "strongly agree."

The **Resilience questionnaire** is a 25-item Connor-Davidson (2003) Resilience Scale. Respondents rate items on a 5-point Likert scale, ranging from 0 (not true at all) to 4 (true nearly all the time). Each item has a minimum score of 0 and a maximum score of 4. Scores are then totaled with a possible range from 0 to 100. Higher scores reflect more heightened sense of resilience.

**Data Gathering Procedure**

The researchers underwent several procedures to acquire the necessary data to complete this study. First, a letter of permission was crafted and submitted to the Office of the Dean of the College of Education of Mindanao State University- General Santos City to conduct the study as well as regarding the involvement of selected Bachelor of Elementary Education (BEEd) students in all year levels as respondents of this study. Following approval, the Secretary of the Federation of Elementary Educators obtained a master list of the entire population of respondents. This served as a guideline for selecting respondents using the stratified sampling technique. As soon as the sample frame was finalized, the researchers sent the respondents a link

that would take them to the online survey questionnaire. Finally, the researchers collected and analyzed the survey questionnaire responses.

**Statistical Treatment of the Data**

The gathered data for this study were treated using frequency count and weighted mean. To determine the students' perceived level of psychological distress on emergency remote education, frequency count was used (Table 1).

Table 1. Perceived Level of Psychological Distress

| Level/Disorder | Depression | Anxiety | Stress |
|---|---|---|---|
| Normal | 0-9 | 0-7 | 0-14 |
| Mild | 10-13 | 8-9 | 15-18 |
| Moderate | 14-20 | 10-14 | 19-25 |
| Severe | 21-27 | 15-19 | 26-33 |
| Extremely Severe | ≥28 | ≥20 | ≥34 |

A five-point scale was utilized to measure the extent of the experienced learning barriers of BEED students. This is shown Table 2 below.

Table 2. Verbal Interpretation of Experienced Learning

| Scale | Range | Description | Verbal Interpretation |
|---|---|---|---|
| 1 | 1.00-1.79 | No Barrier | Very Low Extent |
| 2 | 1.80-2.59 | Weak Barrier | Low Extent |
| 3 | 2.60-3.39 | Moderate Barrier | Moderate Extent |
| 4 | 3.40-4.19 | Strong Barrier | Great Extent |
| 5 | 4.20-5.00 | Very Strong Barrier | Very Great Extent |

A five-point scale was utilized to measure the students' motivation level on emergency remote education. This is shown Tanle 2 below.

Table 3. Verbal Interpretation of Motivation Level

| Scale | Range | Description | Verbal Interpretation |
|---|---|---|---|
| 1 | 1.00-1.79 | Strongly Disagree | Very Low Level |
| 2 | 1.80-2.59 | Disagree | Low Level |
| 3 | 2.60-3.39 | Uncertain | Average Level |
| 4 | 3.40-4.19 | Agree | High Level |
| 5 | 4.20-5.00 | Strongly Agree | Very High Level |

A five-point scale was utilized to measure the students' resilience level on emergency remote education. This is shown Table 4 below.

Table 4. Verbal Interpretation of Resilience Level

| Scale | Range | Description | Verbal Interpretation |
|---|---|---|---|
| 1 | 1.00-1.79 | Not true at all | Very Low Level |
| 2 | 1.80-2.59 | Rarely true | Low Level |
| 3 | 2.60-3.39 | Sometimes true | Average Level |
| 4 | 3.40-4.19 | Often true | High Level |
| 5 | 4.20-5.00 | True nearly all the time | Very High Level |

Finally, Pearson Product-Moment Correlation on Coefficient was utilized to find the correlation between psychological distress and learning barriers associated with students' motivation and resilience during emergency remote education. The test was carried out at a significant level of 0.05.

## RESULTS AND DISCUSSION

The data show (Figure 2) the students' perceived level of psychological distress in emergency remote education. On **depression**, 26.9% of the respondents (64 students out of 238) had an extremely severe level of depression, while 17. 6% or 42 students have severe depression. Unfortunately, only 15.1% or 36 students are considered normal. Regarding **anxiety**, 62.6% of the respondents (149 students) suffer from extremely severe levels of anxiety, whereas only 4.2% of the respondents, or 10 out of 238 students, are normal. Concerning **stress**, 33.6% of the respondents comprised 80 students had a moderate level of stress, and 30.3% or 72 students had extremely severe stress. Whereas only 5.5% or 13 students have a normal level of stress. Overall, 26.9% of the respondents had an extremely severe level of depression, 62.6% suffered from extremely severe levels of anxiety, and 33.6% had a moderate level of stress. This implies that students in emergency remote education have perceived levels of psychological distress from moderate to extremely severe depression, anxiety, and stress.

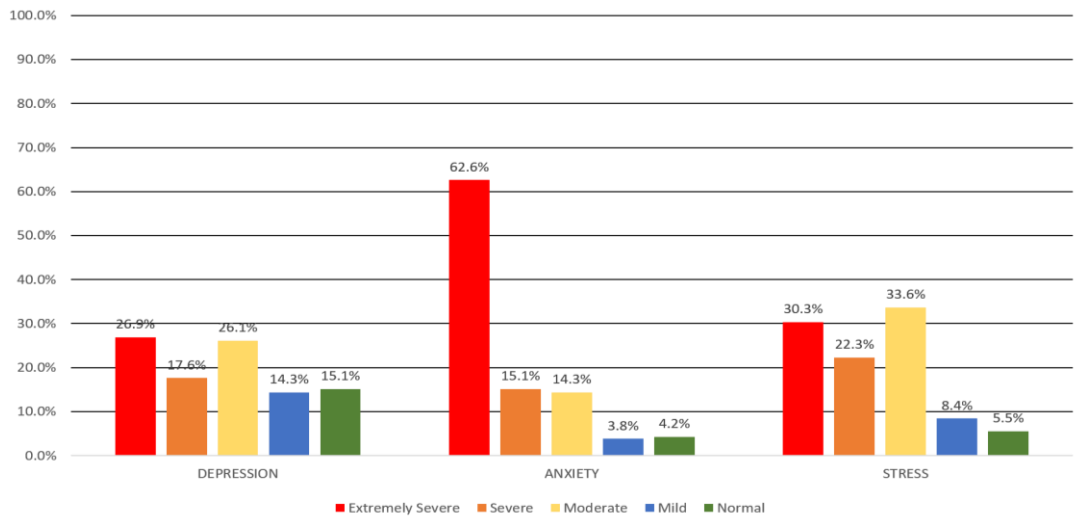


Figure 2. Perceived Level of Psychological Distress of the Students on Emergency Remote Education

Meanwhile, it is to be highlighted that DASS-21, as a standardized test, comes with its disclaimer on how to interpret its results: "The DASS-21 is based on a dimensional rather than a categorical conception of psychological disorder. The assumption on which the DASS-21 development was based (and which was confirmed by the research data) is that the differences between the depression, anxiety and stress experienced by normal subjects and clinical populations are essentially differences in degree. The DASS-21, therefore, has no direct implications for the allocation of patients to discrete diagnostic categories postulated in classificatory systems such as the Diagnostic and Statistical Manual of mental Disorders (DSM) and the International Classification of Diseases (ICD)." Hence, given the nature of this research and the

questionnaires, the results presented are not conclusive of any clinical implications and/or diagnosis of any of the students who have participated in the study.

Notwithstanding, the present study reveals alarming levels of depression, anxiety, and stress, implying that students have developed psychological distress in emergency remote education. This corroborates with previous studies, which highlighted that students nowadays are experiencing increased depression, anxiety, and stress (Aslan et al., 2020; Son et al., 2020).

In the Philippine setting, the psychological distress experienced by the students is reflected in many of the context-based psychological measures of disorders experienced by Filipino citizens (Montano & Acebes, 2020; Tee et al., 2020). Studies reported that Filipino students in the new learning platform have severe levels of psychological distress (Rotas & Cahapay, 2020; Pusta et al., 2022). In addition, the study by Tus (2021) reported that more than half of the students are experiencing moderate to extremely severe depression, anxiety, and stress levels. Specifically, out of 259 respondents, 32.84% have severe depression level, 54.85% have extremely severe anxiety level, and 39.5% have moderate stress level.

Moreover, according to Shaikh et al. (2021), the Philippines had higher depression, anxiety, and stress levels when compared to Egypt, Pakistan, India, and Ghana. According to Lim et al. (2022), the activities implemented by the different schools on emergency remote education significantly affect students' mental well-being. Thus, the abrupt transition led to depression, anxiety, and stress for several students due to the lack of time to adjust to the remote learning modality.

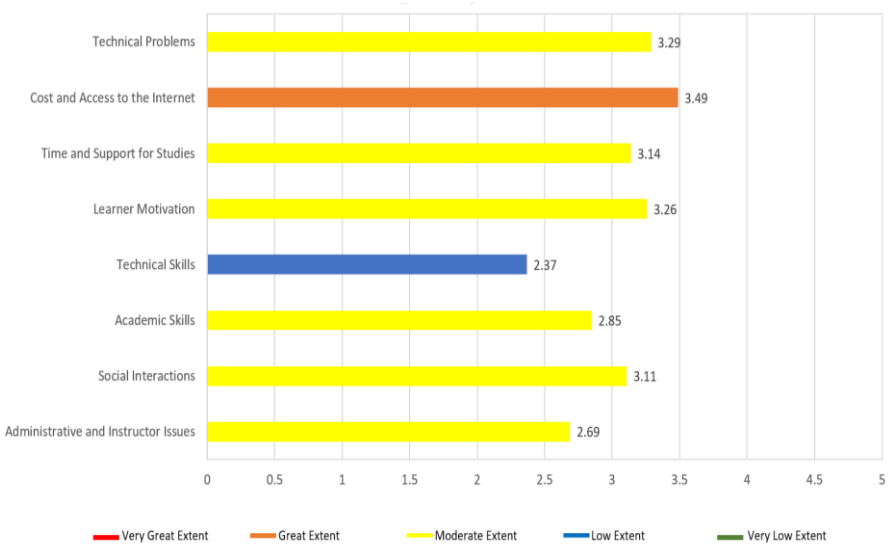


Figure 3. Extent Students Experienced the Learning Barriers on Emergency Remote Education

The data (Figure 3) presents the extent of students' experienced learning barriers on emergency remote education. Students experience learning barriers in terms of cost and access to the internet ($\chi$ = 3.49), technical problems ($\chi$ = 3.29), learner motivation ($\chi$ = 3.26), time and support for studies ($\chi$ = 3.14), social interactions ($\chi$ = 3.11), academic skills ($\chi$ = 2.85), administrative/instructor issues ($\chi$ = 2.69), and technical skills ($\chi$ = 2.37). The overall mean of learning barriers is ($\chi$ = 2.94) described as a moderate barrier. This

implies that students have a moderate extent of experienced learning barriers on emergency remote education.

This finding is coherent with a national survey by Baticulon et al. (2021), which revealed that students in the Philippines encountered learning barriers as they adapted to emergency remote education. Moreover, recent studies showed significant challenges experienced by students during emergency remote education. These are administrative/instructor issues, technical problems, technical skills, time and support for studies, learner motivation, social interactions, cost and access to the internet, and academic skills (Jingco et al., 2021).

Among the eight (8) factors of learning barriers on emergency remote education, cost and access to the internet obtained the highest ($\chi$ = 3.49), whereas technical skills had the lowest ($\chi$ = 2.37), interpreted as a low extent of barrier, thus, interpreted as a moderate extent of barrier. In coherence with Aung & Khaing's (2015) findings, students nowadays have greater computer and internet experience; thus, they perceive technical skills as an advantage rather than a barrier to learning. However, cost and access to the internet are of major concern for instructors and students in the new learning platform (Mahmud, 2010). Besides, previous literature revealed that students' unwillingness to participate well in the new learning modality is influenced by the high cost of technological resources and inadequate internet access (Sinha & Bagarukayo, 2019; Nambiar, 2020).

Table 5. Level of Students' Motivation for Learning during the Pandemic

| Indicators | Mean | Description |
|---|---|---|
| 1. I enjoy online classes. | 3.17 | Uncertain |
| 2. I feel "disconnected" from my teacher and fellow students in online classes. | 3.00 | Uncertain |
| 3. I learn the content well in online classes. | 3.00 | Uncertain |
| 4. I have control over my online learning process. | 3.38 | Uncertain |
| 5. Online classes are easy for me. | 2.36 | Disagree |
| 6. I pay attention in online classes. | 3.26 | Uncertain |
| 7. I like online classes because they fit my personal schedule. | 2.92 | Uncertain |
| 8. I choose online classes because they fit my personal schedule. | 2.81 | Uncertain |
| 9. I feel like I can freely communicate with other students in online classes. | 2.85 | Uncertain |
| 10. I feel like I can freely communicate with my instructor in online classes. | 2.70 | Uncertain |
| 11. I think my online classes are challenging. | 4.24 | Agree |
| 12. Cheating on tests is easy when done online. | 3.17 | Uncertain |
| 13. I prefer online materials that really challenges me, so I can learn new things. | 3.21 | Uncertain |
| 14. If I study in appropriate ways online, then I'll be able to learn the material. | 3.92 | Agree |
| 15. When I take online tests, I think about how poorly I'm doing compared with other students. | 3.56 | Agree |
| 16. I believe I'll receive excellent grades in my online classes. | 2.99 | Uncertain |
| 17. I'm certain I can understand the most difficult material presented in the readings online. | 2.74 | Uncertain |
| 18. Getting a good grade is the most satisfying thing for me during the online modality. | 3.74 | Agree |
| 19. When I take online tests, I think about items on other parts of the tests I can't answer. | 3.63 | Agree |

| | | |
|---|---|---|
| 20. It's my own fault if I don't learn the online material taught. | 3.80 | Agree |
| 21. The most important thing for me in online classes is to improve my overall grade point average, so my concern is getting a good grade. | 3.56 | Agree |
| 22. I'm confident I can learn the basic concepts that are being taught online. | 3.58 | Agree |
| 23. I want to get better grades than most of the other students in my online classes. | 2.98 | Uncertain |
| 24. When I take online tests, I think of the consequences of failing. | 3.84 | Agree |
| 25. I'm confident I can understand the most complex material presented by the instructor. | 2.87 | Uncertain |
| 26. I prefer online material that arouses my curiosity, even if it's difficult to learn. | 3.29 | Uncertain |
| 27. If I try hard enough, then I'll understand the material presented online. | 3.91 | Agree |
| 28. I have an uneasy, upset feeling when I take online exams. | 3.66 | Agree |
| 29. I'm confident I can do an excellent job on assignments and tests online. | 3.12 | Uncertain |
| 30. I expect to do well in online classes. | 3.36 | Uncertain |
| 31. The most satisfying thing for me is trying to understand the content as thoroughly as possible during online classes. | 3.90 | Agree |
| 32. During online classes, I choose assignments that I can learn from even if they don't guarantee a good grade. | 3.47 | Uncertain |
| 33. If I don't understand the material presented online, it's because I didn't try hard enough. | 3.51 | Agree |
| 34. When taking online exams, I feel my heart beating fast. | 4.21 | Agree |
| 35. I'm certain I can master the skills being taught online. | 2.96 | Uncertain |
| 36. I want to do well in my online classes because it's important to show my ability to my family, friends, employer, or others. | 3.76 | Agree |
| 37. Considering the difficulty of the online classes, the teachers, and my skills, I think I can do well. | 3.56 | Agree |
| **Overall Mean** | **3.35** | **Uncertain** |

The data above (Table 5) shows the level of students' motivation for learning during the pandemic. The students agree that they think their online classes are challenging ($\chi$ = 4.24) and when taking online exams, they feel their hearts beating fast ($\chi$ = 4.21). For the students, the most satisfying thing for them is trying to understand the content thoroughly as possible during online classes ($\chi$ = 3.90). If they try hard enough, then they will understand the material presented online ($\chi$ = 3.91). And, when they study in appropriate ways online, then they will be able to learn the material. It appears that students show motivation in online classes because they find ways on how to learn the materials presented online. Indeed, the students are expected to do well in online classes ($\chi$ = 3.36). They learn the content well in online class ($\chi$ = 3.00) and they believe that they will receive excellent grades in online classes. On contrary, the students disagree that their online classes are easy for them ($\chi$ = 2.36). They just chose online class because they think that it will fit their schedule ($\chi$ = 2.81) or they have no choice at all. The result shows low scores on that they can freely communicate with their instructor ($\chi$ = 2.70) why it is done online, and the barriers were set too high. They are not certain that they can understand the most difficult material presented online ($\chi$ = 2.74) they also got low scores when asked if they enjoy the class discussions online ($\chi$ = 2.82). The overall mean of students' motivation is ($\chi$ = 3.35), described as uncertain. The findings show an average level of motivation. This indicates that students are generally motivated to learn during emergency remote education.

Table 6. Level of Students' Emotional Resilience during the Pandemic

| Indicators | Mean | Description |
|---|---|---|
| 1. I am able to adapt when changes occur. | 2.78 | Often true |
| 2. I have at least one close and secure relationship that helps me when I am stressed. | 3.00 | Often true |
| 3. When there are no clear solutions to my problems, sometimes fate or God can help. | 3.53 | True nearly all the time |
| 4. I can deal with whatever comes my way. | 2.92 | Often true |
| 5. Past successes give me confidence in dealing with new challenges and difficulties | 3.22 | Often true |
| 6. I try to see the humorous side of things when I am faced with problems | 3.08 | Often true |
| 7. Having to cope with stress can make me stronger. | 3.24 | Often true |
| 8. I tend to bounce back after illness, injury, or other hardships. | 2.95 | Often true |
| 9. Good or bad, I believe that most things happen for a reason | 3.60 | True nearly all the time |
| 10. I give my best effort no matter what the outcome may be | 3.33 | Often true |
| 11. I believe that I can achieve my goals, even if there are obstacles. | 3.54 | True nearly all the time |
| 12. Even when things look hopeless, I don't give up. | 3.47 | Often true |
| 13. During times of stress/crisis, I know where to turn for help. | 2.98 | Often true |
| 14. Under pressure, I stay focused and think clearly. Under pressure, I stay focused and think clearly. | 2.74 | Often true |
| 15.I prefer to take the lead in solving problems rather than letting others make all the decisions. | 2.71 | Often true |
| 16. I am not easily discouraged by failure. | 2.53 | Often true |
| 17. I think of myself as a strong person when dealing with life's challenges and difficulties. | 3.07 | Often true |
| 18. I can make unpopular or difficult decisions that affect other people, if necessary. | 2.38 | Sometimes true |
| 19.I am able to handle unpleasant or painful feelings like sadness, fear, and anger | 2.71 | Often true |
| 20.In dealing with life's problems, sometimes you have to act on a hunch without knowing why. | 2.71 | Often true |
| 21.I have a strong sense of purpose in life. | 3.04 | Often true |
| 22.I feel in control of my life. | 2.67 | Often true |
| 23.I like challenges. | 2.53 | Often true |
| 24.I work to attain my goals no matter what roadblocks I encounter along the way. | 3.31 | Often true |
| 25.I take pride in my achievements. | 2.96 | Often true |
| **Mean** | **3.00** | **Often true** |

It is presented above (Table 6) the students' resilience level during the pandemic. They believe that it is true nearly all the time that good or bad, most things happen for a reason ($\chi$ = 3.60) and they can achieve their goals, even if there are obstacles ($\chi$ = 3.54). They believe that when there are no clear solutions to their problems, fate or God can help ($\chi$ = 3.53). However, it is sometimes true that they can make unpopular or difficult decisions that affect other people, if necessary ($\chi$ = 2.38) It is often true that they are not easily discouraged by failure ($\chi$ = 2.53) Whereas, they like challenges ($\chi$ = 2.53). The overall mean of students' resilience is ($\chi$ = 3.00), described as often true. This indicates that students have an average resilience level today. It implies that students show resilience during emergency remote education.

Labrague et al. (2020) pointed out that individuals with high resilience and have more effective coping mechanisms can adapt to life adversities and keep functioning well - physically and psychologically. Despite the Philippines being ranked 66th out of 85 nations in terms of internet connection quality by Surfshark in its 2020 digital quality of life assessment (Tadalan, 2021), students are still willing to join online classes. They find the learning modalities challenging during this remote education, and they have a lot of inhibitions regarding the online evaluation. They should be instructed to become familiar with online modalities to cope with and comprehend the online materials. Students are expected to read, understand, and complete work without the assistance of teachers in the new setting. They are compelled to learn independently and on their own. The requirement obliges them to actively participate in online classes with awareness, learn new things and interact with the teacher and other students (Knowles & Kerkman, 2017).

Table 7. Relationship between the Experienced Psychological Distress and Learning Barriers Correlate with the Motivation and Resilience of Students

| Variables Correlated | r | $r^2$ | p-value | Extent of Relationship | Remark |
|---|---|---|---|---|---|
| Psychological Distress and Motivation of Students | -.046 | .002 | .479 | Very Low | Not Significant |
| Psychological Distress and Resilience of Students | -.228 | .051 | .000 | Low | Significant |
| Learning Barriers and Motivation of Students | -.162 | .026 | .012 | Very Low | Significant |
| Learning Barriers and Resilience of Students | -.142 | .020 | .028 | Very Low | Significant |

The data above (Table 7) reveal the relationship between the experienced psychological distress and learning barriers in correlation with the motivation and resilience of the students. A Pearson's product-moment correlation (Pearson r) is computed to assess the relationship between the experienced psychological distress and learning barriers correlate with the motivation and resilience of students. There is no significant correlation between psychological distress and motivation of the students, $r$ (238) = -.046, $p$ =.479 > .05, explaining 0.2% of the variations in the motivation of the students. These results imply that the students' psychological distress does not influence their motivation.

On the other hand, there is a significant low negative correlation between psychological distress and resilience of students, $r$ (238) = -.228, $p$ =.000 < .05, explaining 5.1% of the variations in the resilience of the students. These results imply that the psychological distress of the students influences their resilience. The higher the extent of their psychological distress, the lower their resiliency. Also, the lower the extent of their psychological distress, the higher their resiliency.

In addition, there is a significant low negative correlation between learning barriers and motivation of the students, $r$ (238) = -.162, $p$ =.012 < .05, explaining 2.6% of the variations in the motivation of the students. These results indicate that the learning barriers significantly influence the students' motivation. The

higher the level of their learning barriers, the lower their motivation. In addition, the lower the level of their learning barriers, the higher their motivation.

Furthermore, there is a significant low negative correlation between learning barriers and resilience of students, $r$ (238) = -.142, $p$ =.018 < .05, explaining 2.0% of the variations in the resilience of the students. These results suggest that the learning barriers significantly influence the students' resilience. The higher the level of their learning barriers, the lower their resilience. In addition, the lower the level of their learning barriers, the higher their resilience. Generally, since there is a low negative correlation between psychological distress and learning barriers to the motivation and resilience of the students, then it indicates that there are other factors that influence students' motivation and resilience other than psychological distress and learning barriers. In connection to previous studies, the factors influencing the student's motivation and resilience are assessment and school engagement (Simon, 2019; Leenknecht et al., 2020; Cents-Boonstra et al., 2021; Romano et al., 2021).

## CONCLUSION

Based on the findings, it was found that the students have extremely severe depression level, extremely severe anxiety level, and moderate stress level which implies that students in emergency remote education have perceived levels of psychological distress from moderate to extremely severe depression, anxiety and stress. In addition, the students have experienced learning barriers during emergency remote education to a moderate extent. The results also revealed that during remote learning, students are generally motivated to learn and are resilient. Furthermore, it was found in this study that psychological distress significantly influences the resilience of students, but it does not influence the motivation of the students, whereas, learning barriers significantly influence both motivation and resilience of the students. Other factors that influence students' motivation and resilience other than psychological distress and learning barriers can be explored further in future studies.

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## REFERENCES

Aoyama, H. (1954). A study of stratified random sampling. *Ann. Inst. Stat. Math*, *6*(1), 1-36.

Aslan, I., Ochnik, D., & Çınar, O. (2020). Exploring perceived stress among students in turkey during the covid-19 pandemic. *International Journal of Environmental Research and Public Health*, 17(23), 8961. https://doi.org/10.3390/ijerph17238961

Aung, T. N., & Khaing, S. S. (2016). Challenges of implementing e-learning in developing countries: A review. In *Genetic and Evolutionary Computing: Proceedings of the Ninth International Conference on Genetic and Evolutionary Computing, August 26-28, 2015, Yangon, Myanmar-Volume II 9* (pp. 405-411). Springer International Publishing. https://doi.org/10.1007/978-3-319-23207-2_41

Baticulon, R. E., Sy, J. J., Alberto, N. R. I., Baron, M. B. C., Mabulay, R. E. C., Rizada, L. G. T., & Reyes, J. C. B. (2021). Barriers to online learning in the time of COVID-19: A national survey of medical students in the Philippines. *Medical science educator*, *31*, 615-626. https://doi.org/10.1007/s40670-021-01231-z

Cents-Boonstra, M., Lichtwarck-Aschoff, A., Denessen, E., Aelterman, N., & Haerens, L. (2021). Fostering student engagement with motivating teaching: an observation study of teacher and student behaviours. *Research Papers in Education*, *36*(6), 754-779. https://doi.org/10.1080/02671522.2020.1767184

Connor, K. M., Davidson, J. R., & Lee, L. C. (2003). Spirituality, resilience, and anger in survivors of violent trauma: A community survey. *Journal of traumatic stress*, *16*, 487-494. https://doi.org/10.1023/A:1025762512279

Duraku, Z. H., & Hoxha, L. (2020). The impact of Covid-19 on higher education: A study of interaction among Kosovar students' mental health, attitudes toward online learning, study skills and changes in students' life. *ZH Duraku. The impact of the COVID-19 pandemic on education and wellbeing*.

Fowler, S. (2018). *The motivation to learn online questionnaire* (Doctoral dissertation, University of Georgia).

Jingco, F. G., Brombuela, G., Atienza, D., & Caparas, E. (2021). Instructional Barriers and Challenges Faced by Faculty and Students of Graduate School in One Hei in the New Normal Set Up. *International Journal of Multidisciplinary: Applied Business and Education Research*, *2*(4), 364-370. https://doi.org/10.11594/ijmaber.02.04.09

Knowles, E., & Kerkman, D. (2007). An investigation of students attitude and motivation toward online learning. *InSight: A Collection of Faculty Scholarship*, *2*, 70-80. https://eric.ed.gov/?id=EJ864281

Kohls, E., Baldofski, S., Moeller, R., Klemm, S. L., & Rummel-Kluge, C. (2021). Mental health, social and emotional well-being, and perceived burdens of university students during COVID-19 pandemic lockdown in Germany. *Frontiers in psychiatry*, *12*, 643957. https://doi.org/10.3389/fpsyt.2021.643957

Labrague, L. J., & Ballad, C. A. (2021). Lockdown fatigue among college students during the COVID-19 pandemic: Predictive role of personal resilience, coping behaviors, and health. *Perspectives in psychiatric care*. https://doi.org/10.1111%2Fppc.12765

Labrague, L. J., De los Santos, J. A. A., & Falguera, C. (2021). Social and emotional loneliness among college students during the COVID-19 pandemic: the predictive role of coping behaviours, social support, and personal resilience.

Leenknecht, M., Wijnia, L., Köhlen, M., Fryer, L., Rikers, R., & Loyens, S. (2021). Formative assessment as practice: The role of students' motivation. *Assessment & Evaluation in Higher Education*, *46*(2), 236-255. https://doi.org/10.1080/02602938.2020.1765228

Li, Y., Wang, Y., Jiang, J., Valdimarsdóttir, U. A., Fall, K., Fang, F., & Zhang, W. (2021). Psychological distress among health professional students during the COVID-19 outbreak. *Psychological medicine*, *51*(11), 1952-1954. https://doi.org/10.1017/S0033291720001555

Lim, L. T. S., Regencia, Z. J. G., Dela Cruz, J. R. C., Ho, F. D. V., Rodolfo, M. S., Ly-Uson, J., & Baja, E. S. (2022). Assessing the effect of the COVID-19 pandemic, shift to online learning, and social media use on the mental health of college students in the Philippines: A mixed-method study protocol. *Plos one*, *17*(5), e0267555. https://doi.org/10.1371/journal.pone.0267555

Lovibond, S. & Lovibond, P. (1995). Manual for the depression anxiety stress scales. (2nd. Ed.) Sydney: Psychology Foundation.

Mahmud, K. (2010). E-learning for tertiary level education in least developed countries: Implementation obstacles and way outs for Bangladesh. *International Journal of Computer Theory and Engineering*, 2(2), 150-155.

Montano, R. L. T., & Acebes, K. M. L. (2020). Covid stress predicts depression, anxiety and stress symptoms of Filipino respondents. *International Journal of Research in Business and Social Science (2147-4478)*, *9*(4), 78-103. https://doi.org/10.20525/ijrbs.v9i4.773

Muilenburg, L. Y., & Berge, Z. L. (2005). Student barriers to online learning: A factor analytic study. *Distance education*, *26*(1), 29-48. https://doi.org/10.1080/01587910500081269

Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, Limitations and Recommendations for online learning during COVID-19 pandemic era. *Pakistan journal of medical sciences*, *36*(COVID19-S4), S27. https://doi.org/10.12669%2Fpjms.36.COVID19-S4.2785

Nambiar, D. (2020). The impact of online learning during COVID-19: students' and teachers' perspective. *International Journal of Indian Psychology*, 8(2), 783-793.

Plakhotnik, M. S., Volkova, N. V., Jiang, C., Yahiaoui, D., Pheiffer, G., McKay, K., & Reißig-Thust, S. (2021). The perceived impact of COVID-19 on student well-being and the mediating role of the university support: evidence from France, Germany, Russia, and the UK. *Frontiers in Psychology*, 2663. https://doi.org/10.3389/fpsyg.2021.642689

Pusta, R. J., Mina, C., Abanid, B., Doromal, D. M. N., & Billones, R. R. (2021). Role Of Social Determinants of Health in Psychological Distress And Readiness For Online Learning Among College Filipino Students During The Covid-19 Pandemic: A Pilot Study. *International Journal of Teaching and Learning*, *1*(1), 19-34. https://doi.org/10.17501/26827034.2021.1102

Pusta, R., Doromal, D., Miña, C., Abanid, B., & Billones, R. (2022). Role of social determinants of health in psychological distress and readiness for online learning among college filipino students during the covid-19 pandemic: A pilot study. 10.17501/26827034.2021.1102.

Romano, L., Angelini, G., Consiglio, P., & Fiorilli, C. (2021). Academic resilience and engagement in high school students: The mediating role of perceived teacher emotional support. *European journal of investigation in health, psychology and education*, *11*(2), 334-344. https://doi.org/10.3390/ejihpe11020025

Rotas, E., & Cahapay, M. (2020). Difficulties in remote learning: Voices of Philippine university students in the wake of COVID-19 crisis. *Asian Journal of Distance Education*, *15*(2), 147-158.

Shaikh, A., Peprah, E., Mohamed, R. H., Asghar, A., Andharia, N. V., Lajot, N. A., & Qureshi, M. F. H. (2021). COVID-19 and mental health: a multi-country study—the effects of lockdown on the mental health of young adults. *Middle East Current Psychiatry*, *28*(1), 1-10. https://doi.org/10.1186/s43045-021-00116-6

Simon, B. (2019). The Effect of Formative Assessment on Student Motivation and Self-Regulation. Retrieved from https://digitalcommons.csp.edu/teacher-education_masters/2

Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry research*, *293*, 113429. https://doi.org/10.1016/j.psychres.2020.113429

Sinha, E., & Bagarukayo, K. (2019). Online Education in Emerging Knowledge Economies: Exploring factors of motivation, de-motivation and potential facilitators; and studying the effects of demographic variables. *International Journal of Education and Development using Information and Communication Technology*, *15*(2), 5-30. https://eric.ed.gov/?id=EJ1220780

Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of medical internet research*, *22*(9), e21279. https://doi.org/10.2196/21279

Stangor, C., & Walinga, J. (2019). 3.5 psychologists use descriptive, correlational, and experimental research designs to understand behaviour. *Introduction to Psychology*. https://openpress.usask.ca/introductiontopsychology/chapter/psychologists-use-descriptive-correlational-and-experimental-research-designs-to-understand-behavior/

Tadalan, C. (2021). Coronavirus pandemic highlights failures of Philippine education. Business world. Retrieved from https://www.bworldonline.com/coronavirus-pandemic-highlights-failures-of-philippine-education/

Talbert, R. (2020). Research report: what are the biggest barriers to online learning?. Retrieved from https://rtalbert.org/barriers-for-online-learning/

Tee, M. L., Tee, C. A., Anlacan, J. P., Aligam, K. J. G., Reyes, P. W. C., Kuruchittham, V., & Ho, R. C. (2020). Psychological impact of COVID-19 pandemic in the Philippines. *Journal of affective disorders*, *277*, 379-391. https://doi.org/10.1016/j.jad.2020.08.043

Tus, J. (2020). Academic stress, academic motivation, and its relationship on the academic performance of the senior high school students. *Asian Journal of Multidisciplinary Studies*, *8*(11), 29-37.

United Nations Educational, Scientific and Cultural Organization (2020). COVID-19: A glance of national coping strategies on high-stake examinations and assessments. Retrieved from https://en.unesco.org/sites/default/files/unesco_review_of_highstakes_exams_and_assessments_during_covid-19_en.pdf

Wang, C., Zhao, H., & Zhang, H. (2020). Chinese college students have higher anxiety in new semester of online learning during COVID-19: a machine learning approach. *Frontiers in Psychology*, *11*, 587413. https://doi.org/10.3389/fpsyg.2020.587413

World Health Organization (2020). Coronavirus disease (COVID-19) weekly epidemiological update. Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports

Zhai, Y., & Du, X. (2020). Mental health care for international Chinese students affected by the COVID-19 outbreak. *The Lancet Psychiatry*, *7*(4), e22. https://doi.org/10.1016/S2215-0366(20)30089-4