Factors Contributing to The Stress of The Science Pre-Service Teachers at A State University in Northern, Philippines During The Neo- Normal

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Abstract — This research explored the factors contributing to the stress experienced by science pre-service teachers at Benguet State University-College of Teacher Education during the neo-normal. This study employed a descriptive quantitative research approach, specifically the survey method. The respondents of the study were five males and 35 females majoring in science. The study was conducted through a blended modality due to an unstable class schedule. The survey instruments were initially validated by experts and revised as per the suggestions of esteemed professors. Then, it was pilot-tested to establish internal consistency and reliability through KR-20 and KR-21. The statistical data were analyzed using descriptive statistical tools, including weighted mean, percentage, and frequency. Results revealed that in terms of the extent of the factors contributing to the stress of the science pre-service teachers, the respondents are often stressed academically, with poor internet connectivity and the use of various online platforms. Thus, the use of Wi-Fi connection and mobile technology is significant during the neo-normal. Likewise, the science pre-service teachers had negative emotions, psychological disturbance, and cognitive problems, together with physical symptoms. The stress factors experienced by the science pre-service teachers during the neo-normal are often interconnected and can create a complex web of challenges that can result in stress and anxiety. Increased awareness among science pre-service teachers regarding science engagement activities and their potential benefits can lead to a decrease in stress levels and an improvement in positive emotions, such as courage and self-efficacy. Lastly, despite the crisis caused by the COVID-19 pandemic, science pre-service teachers employed coping mechanisms in an unstable situation.

Keywords — Science pre-service teachers, factors contributing to stress, pre-service teaching, neo- normal, pandemic

I. Introduction

Objectives:

Specifically, the following objectives are drawn;

- To determine the extent to which the following factors contribute to the stress as experienced by the science pre-service teachers.
- To determine if there is a relation between the contributory factors to stress as experienced by the science pre-service teachers.

- To determine the extent of awareness of the pre-service teachers on science engagement activities for self-efficacy and to verify cognitive anxiety.
- To identify the coping strategies for stress among science pre-service teachers.

The COVID-19 pandemic caused the sudden closure of schools in the world. The only solution to prevent the rapid spread of virus is to lockdown people which compelled to the decision of the Department of Education to implement new learning platform for continuous learning (Marimuthu et al., 2022). Besides, people have to abide by strict protocols like the use of personal protective equipment (PPE). This situation affected numerous manpower to have been removed from their work. This sudden shift, however, brought stress to students because they were not prepared for this new form of education, as well as the institutions that offered such a modality of learning. Face-to-face interactions were indefinitely banned, leading to a paradigm shift in online interaction that forced educators and students to rely on available technological resources. This kind of set-up in the education sector could develop various levels of stress on the different factors such as social, physical, mental, emotional, psychological, spiritual, and financial to both educators and their students during the post-pandemic, which is the main gap in this study.

ICT integration in education has increasingly been prioritized in both developed and developing countries. The closure of schools during the COVID-19 pandemic accelerated the adoption of Information and Communication Technology (ICT) by many institutions in Ghana. However, research evidence shows that if students and instructors have not received the necessary training and if resources are inadequate, online teaching and learning can become a source of stress (Kwaah et al., 2022). In a similar study, the digital competence of pre-service teachers is moderate and varies significantly according to gender, branch, and perceived level of digital competence (Çebi & Reisoglu, 2020).

Some educators, as well as students, had adequate access, while others were less fortunate during the COVID-19 pandemic. Students desired online learning to continue their educational pursuits during the pandemic, according to a poll on online learning conducted by students (Shetty, 2020). They also faced other hurdles, including a lack of socialization, technological limitations, and vision problems, among others. When the classes resumed, 79 percent of students were no longer interested in online education classes due to the technical issues they encountered while learning; many students had looked forward to a mixed paradigm approach to learning during the COVID-19 pandemic (Shetty, 2020).

A study conducted by Balakrishnan et al. (2017) broadly concludes that there are relationships between stress and physical activity/exercise, and that physical activity mitigates the adverse effects of psychological stress. It has been noted that the relationship between stress and exercise is open to interpretation, and individuals who are less affected by stress may be more inclined to engage in exercise training. It was reported that stressed people will engage in unhealthy behaviors, such as poor dietary practices or a lack of exercise, as a means of emotion-focused

coping. Indeed, a plethora of research links stress to increased smoking, use of alcohol, and increased substance abuse.

Accordingly, initial teacher education (ITE) programs should adopt posthuman pedagogies that promote instructional strategies supporting and enhancing future teachers' views about the efficacy of scientific teaching, enabling them to teach science with confidence (Stevens et al., 2006). It is also crucial to recognize that instructing science does not only require knowledge of the content but also an understanding of how to teach the concepts; that is, student teachers need adequate pedagogical content knowledge (PCK) to be effective practitioners and to teach science successfully (Lekhu, 2022).

II. Methodology

The study employed descriptive quantitative research, specifically the adopted survey method. According to Creswell (1994), quantitative research explains phenomena by collecting numerical data that is analyzed using mathematically based methods, specifically statistics. A descriptive survey provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. Meanwhile, an adopted survey method is using an existing validated survey instrument or questionnaire nearly verbatim in a new study.

With the participation of the respondents amidst the situation, all reasonable efforts were made to ensure their ethical treatment. Through an informed consent form, the following were assured: respondent involvement was voluntary, and the option to withdraw from the research at any time was communicated. The researcher was confident that a reasonable degree of anonymity was assured for all respondents and that no unusual risks existed.

Data Collection and Instruments

The survey instruments were initially validated by experts and revised as per the suggestions of esteemed professors at the College of Teacher Education. Then, it was pilot-tested at a nearby private university to establish internal consistency using the KR-20 and KR-21 formulas, which are used to estimate the internal consistency and reliability of a test questionnaire (Jacob, 2017). The respondents provided their consent before participating in the study. The instrument used a 5-point Likert scale, adopted from Mellor et al. (2013). The data collected from the respondents were obtained through the adopted survey questionnaires. These questionnaires were gathered through face-to-face and online bases or blended mode. The 19 respondents opted to answer the questionnaires in the laboratory school due to poor internet connectivity. Thus, they were instructed in the group chat and given a schedule to report to the laboratory school to complete the questionnaires. Meanwhile, the 21 respondents answered the questionnaires and submitted them online.

Population and Locale of Study

The study was conducted at Benguet State University- College of Teacher Education, which includes 40 pre-service teachers majoring in science as respondents. This is the total number of pre-service students during the school year. The study was conducted through blended modality due to unstable class schedule, 21 pre-service teachers selected face-to-face, and 19 answered the questionnaires online. The respondents for this research were the science pre-service teachers of Benguet State University's College of Teacher Education. The researcher employed a total enumeration sampling technique, with the distribution of respondents as follows: 5 males and 35 females. Total enumeration is a research method that involves studying all members of a population. It delves into the investigation of the entire group of interest, rather than just a representative portion (Arnab, 2017).

Data Treatment

Most of the statistical data were analyzed using descriptive statistical tools, including weighted mean, percentage, and frequency. To determine the extent of the factors that contribute to the stress of the pre-service teachers, and assess the degree of awareness of the pre-service teachers on science engagement activities, the weighted mean and the use of a 5-point Likert scale. Meanwhile, to identify the coping mechanism for stress among pre-service teachers, percentages and frequencies were utilized.

Table 1 describes the five-point Likert scale used to assess the extent to which the factors contribute to stress among the respondents.

Table 1. Five-point Likert Scale

NUMERICAL VALUE	RANGE	INTERPRETATION	DESRIPTION
5	4.21- 5.00	ALWAYS	A persistent chronic state of stress and stress is experienced most of the time.
4	3.41- 4.20	OFTEN	Stress is experienced frequently but not constant.
3	2.61- 3.40	SOMETIMES	Stress is experienced moderately or occasionally.
2	1.81- 2.60	RARELY	It indicates a low or minimal extent of stress.
1	1.00- 1.80	NEVER	A situation that does not trigger a feeling of mental stress or tension.

III. Results and Discussion

Extent of the Factors Contributing to Stress of Science Pre-Service Teachers

As to the extent of the factors contributory to stress of the science pre-service teachers (Table 2a), in the academic factors, the following factors contributed **often** to the stress of the science pre-service teachers; exposure to online platforms such as google classroom, google meet, zoom, ed puzzle, web whiteboard, skype, vin, canvas, Webex, and others (3.79), there are available

curriculum online references and tutorials like in the You Tube (3.71), there is poor internet connectivity (3.67), and finally, various online platforms were maximized (3.43). Additionally, the majority of the academic factors have contributed, **often** with an average mean of 3.42, to the stress of the science pre-service teachers.

Table 2a.

Academic Factors

	Mean	DE
1. There is poor internet connectivity.	3.67	Often
2. There are available curriculum online references and tutorials like in the YouTube.	3.71	Often
3. There is no budget for mobile data/monthly internet bill.	3.26	Sometimes
4. There are many students who are not using the technology most of the time.	3.00	Sometimes
5. There are many students who know how to follow directions.	3.36	Sometimes
6. Various online platforms were not maximized.	3.43	Often
7. The principles of teaching, theories of learning and pedagogies which I have learned in my course were maximized.	3.26	Sometimes
8. There are few exposures to online platforms such as Google Classroom, Google Meet, Zoom, Ed Puzzle, Web Whiteboard, Skype, Vin, Canvas, Webex and others.	3.79	Often
9. There are instructional materials required of us like the video, games and online puzzles which I complied without difficulty because there are enough facilities.	3.26	Sometimes
Ave. Mean	3.42	Often

Scale:

Always	*4.21-5.00*
Often	*3.41-4.20*
Sometimes	*2.61-3.40*
Rarely	*1.81-2.60*
Never	*1.00-1.80*

Panisoara et al. (2020) highlights that "online environments for teaching and learning can be effective, only when the conditions are addressed so that teachers can successfully continue teaching during the “neo-normal crisis”. Though, the truth is that gaps in technological skills, problems with technology, and no experience with online tools and online teaching influenced the education process (Burgerová, 2021). Academic stress arises as a consequence of increased demands in the teaching and learning processes, where new challenges appear that the student does not feel prepared for, generating discomfort, anxiety, or uneasiness. In the university stage, this event is exponentially increased, as multiple changes arise in teaching approaches, the student–teacher relationship, as well as the adaptation to a new lifestyle, in which new obligations, demands, and lifestyles arise, which “break” with the dynamics that had been developing in previous educational stages (Garcia-Martinez et.al., 2021).

Evidently, poor internet connectivity really causes a great deal of stress among pre-service teachers, especially in times when they need to be present in online classes or, in worst cases, during oral recitations, examination, or reporting. In a study done by Clarin and Baluyos (2021), it was determined that poor internet connectivity is a concern when conducting online classes as students reiterated that this is the main problem for them.

Table 2b.

Psycho-Social Factors

	Mean	DE
1. Online interactions with my university professors during this period of COVID-19 pandemic.	3.74	Often
2. Online collaborations with my university supervising instructions (orientations, reminders, teaching strategies, discuss requirements and other outputs, school forms, etc.) during this period of COVID-19 pandemic.	3.60	Often
3. Online collaborations with my university cooperating teachers (orientations, reminders, teaching strategies, discuss requirements and other outputs, school forms, etc.) during this period of COVID-19 pandemic.	3. 57	Often
4. The following were exhibited; initiative, assertiveness and laboratory skills as a science teacher in the future.	3.38	Sometimes
5. There are family conflicts or issues (lack of family support, homesickness or financial problems).	2.67	Sometimes
6. There is personal inadequacy.	3.07	Sometimes
7. There are interpersonal difficulties.	3.05	Sometimes
8. There are cultural differences in our group as science majors.	2.95	Sometimes
9. I believe that family support has a greater influence on reducing the risk of adverse mental health.	3.38	Sometimes
Ave. Mean	3.27	Sometimes

Scale:

Always	*4.21-5.00*
Often	*3.41-4.20*
Sometimes	*2.61-3.40*
Rarely	*1.81-2.60*
Never	*1.00-1.80*

In psycho-social factors (Table 2b), the following factors contributed **often** to the stress of the science pre-service teachers; there are online interactions with my university professors during the period of COVID-19 pandemic (3.74), there are online collaborations with my university supervising instructors during this period of COVID-19 pandemic (3.60), and there are online collaborations with my university cooperating teachers during this period of COVID-19 pandemic (3.57). However, the average mean (3.27) indicates that the science pre-service teachers were **sometimes** impacted in terms of the psycho-social factors.

Petrakova et al. (2021) interviewed 14 teachers and revealed the following factors as increasing the stress in the pandemic: lack of "administrative support, increased workload caused by the need to seek new teaching methods and keep in touch with students, intensified communication with parents, and disrupted work-life balance". Also, the uncertainty due to COVID-19 caused major psychological problems such as anxiety, depression, stress, uncontrolled fear, and significant lifestyle changes. It has impacted the global economy and also altered the education and learning process. (Choudhary, 2022).

Research shows that teachers working with younger students showed the highest levels of anxiety, perhaps due to a heightened sense of responsibility for addressing their students' needs (Ozamiz-Etxebarria et al., 2021). Additionally, the pandemic has exacerbated existing educational inequities. Preliminary research shows that teachers in schools with lower resources are more concerned about their students' ability to access and engage in new learning modalities (Chen et al., 2021)

Another factor that **often** contributes to the stress of the science pre-service teachers is the emotional issues associated with adverse mental health (Table 2c). I experienced fear and worry about my health and the health of my loved ones or immediate family members (3.43). Although the average mean (3.17) indicates the extent to which this factor affected the science pre-service teachers, it is **sometimes.**

According to Collier & Burke (2021), teachers "expressed fears for their health and families, worries about the impacts of social distancing in classrooms and concerns about insufficient teaching tools and resources". Specifically, when teachers experience high levels of emotional exhaustion, their students tend to present levels of academic achievement that are below average, as measured by both school grades and standardized achievement test scores. Teachers' elevated levels of emotional exhaustion also contribute to more negative perceptions of teacher support and school satisfaction among students (Arens & Morin, 2016).

Table 2c.

Emotional Associated with Adverse Mental Health

	Mean	DE
1. I personally experience anxiety, depression, and irritability.	3.19	Sometimes
2. I have personal conflict of goals.	3.29	Sometimes
3. I lack autonomy or independence.	2.79	Sometimes
4. I personally experienced fear and worry about my own health and the health of my loved ones or immediate family members.	3.43	Often
5. I had changes in sleep and eating patterns.	3.00	Sometimes
6. I had difficulty in concentrating and sleeping.	3.33	Sometimes
Ave. Mean	3.17	Sometimes

Scale:

Always	*4.21-5.00*
Often	*3.41-4.20*
Sometimes	*2.61-3.40*
Rarely	*1.81-2.60*
Never	*1.00-1.80*

This shift was a positive one, with other research agreeing that student teachers prefer a more participatory role, rather than just an observational role (Almazroa, 2020). Even in-service teachers reported that autonomy-supportive leadership styles reduced stress and emotional exhaustion during this stressful time (Collie, 2021). Because this situation was facilitated by virtual learning, it is essential to consider how these feelings of collegiality and autonomy can be fostered

during non-COVID times. An emphasis on fostering autonomy during training and mentoring for CTs could foster these feelings. Facilitating partnerships between clinical teachers (CTs) and student teachers around topics in which both are novices could create similar situations to those surrounding virtual learning.

In like manner, for physical associated with adverse mental health are shown in Table 2d, I had changes in sleep and eating patterns (4.14), I experienced lack of sleep (4.07), I lack regular physical exercises or workouts (3.76), I have low recreational activities (3.55), and I have experienced physical illness such as headaches, high blood pressure, and indigestion (3.52), also, with an average mean (4.14), indicating that this factor contributed **often** to the stress of the science pre-service teachers.

Table 2d.

Physical Associated with Adverse Mental Health

	Mean	DE
1. I experienced lack of sleep.	4.07	Often
2. I experienced physical illness (headaches, high blood pressure, indigestion, etc.)	3.52	Often
3. I have low recreational activities.	3.55	Often
4. I lack regular physical exercises or workouts.	3.76	Often
5. I experienced fatigue.	3.36	Sometimes
6. I experienced loss of taste and smell.	2.02	Rarely
7. I had changes in sleep and eating patterns.	4.14	Often
Ave. Mean	3.49	Often

Scale:

Always	*4.21-5.00*
Often	*3.41-4.20*
Sometimes	*2.61-3.40*
Rarely	*1.81-2.60*
Never	*1.00-1.80*

According to Mansfield et al. (2016), in the process of becoming a teacher, and particularly when pre-service teachers (PSTs) face difficult situations, we argue that resilience is key. Resilience involves bouncing back after challenging or adverse conditions, while also thriving professionally and personally, which can lead to increased job satisfaction, enhanced well-being, and a greater commitment to the teaching profession (Fokkens-Bruinsma et al., 2022). Further, experiencing chronic stress leads to mental health difficulties (Breaux et al., 2021) memory problems, inability to concentrate, but also physical issues, such as chest pain, rapid heart rate, skin irritation, insomnia, nausea, diarrhea, etc. (Richardson et al., 2012), and cognitive disorders (Collie,2021).

The American Psychiatric Association (2018) claimed that stress was a sense of being overwhelmed, worry, destruction, pressure, exhaustion, and lethargy. Therefore, stress can influence people in every situation and can result in both physical and psychological health issues.

Thus, their attitude may be affected depending on the process of their reaction to a particular stressor, as it influences their thinking, beliefs, attitudes, and perceptions.

Lastly, in cognitive factors (Table 2e), science pre-service teachers are **often** stressed, as I had difficulty concentrating and sleeping (3.62). Likewise, all the cognitive factors have an average mean of 3.45, indicating that this factor can sometimes be stressful for science pre-service teachers.

All factors contributing to the stress of science pre-service teachers have an overall mean of 3.36, which **sometimes** serve as stressors. Though, there are contributory factors that need to be addressed immediately during critical situations like the COVID-19 pandemic.

Table 2e.

Cognitive Factors

	Mean	DE
1. I had difficulty concentrating and sleeping.	3.62	Often
2. I had difficulty memorizing and reasoning.	3.29	Sometimes
Ave. Mean	3.45	Often
Overall	3.36	Sometimes

Scale:

Always	*4.21-5.00*
Often	*3.41-4.20*
Sometimes	*2.61-3.40*
Rarely	*1.81-2.60*
Never	*1.00-1.80*

Self-regulated learning has three key categories of learning strategies: cognitive, metacognitive, and resource management (Panadero, 2017). Cognitive and metacognitive strategies are essential for information processing, monitoring, and verifying one's learning outcomes. Prior studies have demonstrated that SRL strategies are positively correlated with academic success in online learning environments that afford high levels of learner autonomy (Broadbent, 2017). Likewise, during the pandemic, students' mental health needs to be continually monitored as they are stressed owing to fear as well as about their studies and future careers. Students were generally stressed during lockdown and the pandemic. (Crisostomo, 2023).

Table 3 presents the awareness of science pre-service teachers regarding science engagement activities. The science pre-service teachers are very much aware in most of the science engagement activities except for some with highly aware like participating in social activities will boost your confidence (4.14), skill in searching pictures, graphs, infographics, charts, citations, and enrichment concepts that are incorporated in the learning packets (4.12), and doing demonstration will enhance hands on skills, scientific skills, and communication skills (4.07).

The extent of awareness among pre-service teachers of science engagement activities indicates that the majority are very aware (4.30) of the content, topics, and issues in science. They could understand thoroughly prior concepts, situations, and processes, and can connect them to the practical application of skills and become resilient in any crisis.

Extent of Awareness of the Science Pre-service Teachers on Science Engagement Activities

Table 3

Science Engagement Activities

	Mean	DE
1. Motivation is needed because it is a linkage to the new lesson.	4.31	Very Much Aware
2. Performing experiments in order to tests hypotheses and theories.	4.40	Very Much Aware
3. Doing demonstration lessons will enhance hands on skills, scientific skills and prove investigations.	4.07	Highly Aware
4. Inquiry learning approach in science for deeper understanding of the content and prove investigations	4.50	Very Much Aware
5. Participating in social activities will boost your confidence.	4.14	Highly Aware
6. Updating yourself with current events, science breakthroughs, new discoveries will enhance self-efficacy.	4.48	Very Much Aware
7. Using various online platforms properly and various instructional materials will enhance cognitive anxiety and will respond to diverse learning styles.	4.31	Very Much Aware
8. Online training and workshop are needed for a more collaborative and richer learning experience.	4.29	Very Much Aware
9. Interacting with professors in my major field, supervising instructors and cooperating teachers will enhance self-efficacy.	4. 26	Very Much Aware
10. Availability of mobile technologies like Wi-Fi and internet.	4.33	Very Much Aware
11. Preparing online activities like game-based and video lessons.	4.43	Very Much Aware
12. Skill in searching pictures, graphs, infographics, charts, citations and enrichment concepts that are incorporated in learning packets.	4.12	Highly Aware
Overall	4.30	Very Much Aware

Scale:

Very Much Aware	*4.21-5.00*
Highly Aware	*3.41-4.20*
Moderately	*2.61-3.40*
Rarely Aware	*1.81-2.60*
Not Aware	*1.00-1.80*

In this time of uncertainty, educators felt high levels of concern for their students' academic achievement and well-being. Research shows that teachers working with younger students showed the highest levels of anxiety, perhaps due to a heightened sense of responsibility for addressing their students' needs (Ozamiz-Etxebarria et al., 2021). For interactive applications, it is also essential that both the teacher and the student have the necessary digital skills, competencies, and self-efficacy. From this point of view, pre-service science teachers, who will be the teachers of the age, need to be trained with and know the interactive digital tools. In this context, in addition to theoretical knowledge, practical information has also been provided to pre-service teachers, enabling them to apply their expertise in learning environments. It is aimed to contribute to pre-service teachers' self-efficacy in using DILMs and new technologies they have encountered in the learning environment, besides the fact that self-efficacy plays an active role in the use of online learning environments (Bervell & Umar, 2017).

It is known that individuals with high self-efficacy are more likely to follow technological developments and use digital applications (Aslan, 2024). In this context, it is expected to help new

world teachers whose self-efficacy has been supported start their profession with the use of digital tools and adapt to the in accordance with the requirements of the age more easily.

Coping strategies Done by the Science Pre-service Teachers

Table 4. Coping Strategies Done by The Science Pre-Service Teachers

Coping Strategies	Yes		No	
	f	%	f	%
A. Cognitive Restructuring				
Online study system (collaboration or sharing of ideas).	24	57.14%	16	38.10%
Humor. Ex. I searched for jokes.	21	50.00%	20	47.62%
Being kind to yourself.	33	78.57%	9	21.43%
Resilience. Ex. I perceive myself as having a strong personality.	24	57.14%	17	40.48%
Others, pls. specify.	4	9.52%	38	90.48%
B. Maintaining Physical Health & Safety				
Creating new routines and new activities.	25	59.52%	17	40.48%
Physical exercises at your most convenient time.	25	59.52%	17	40.48%
Institutional support. Ex. Material support.	15	35.71%	27	64.29%
Others, pls. specify.	5	11.90%	37	88.10%
C. Seeking Professional Help				
Building awareness from proper authorities.	20	47.62%	21	50.00%
Unhooking from unkind thoughts by a guidance counsellor.	4	9.52%	37	88.10%
Grounding exercises by a psychologist.	3	7.14%	38	90.48%
Others, pls. specify.	0	0.00%	41	97.62%
D. Seeking Social Support				
Spiritual engagement wherein I put my trust in God.	37	88.10%	5	11.90%
Maintaining social connections.	37	88.10%	5	11.90%
Seeking information and consultation from someone.	25	59.52%	17	40.48%
Others, please specify.	0	0.00%	42	100.00%

Many teachers lacked the technological background and knowledge necessary for teaching online (Klapproth et al., 2020). Providing teachers with technological training can help reduce stress levels related to this issue (Califf & Brooks, 2020). Additionally, training in coping strategies (Table 4) to manage increased requirements to use digital technology can also be effective at reducing levels of anxiety and stress (Toto & Limone 2021).

Individuals must learn strategies to cope with stress, especially higher education students, who are consistently confronted with psychosocial and academic challenges and anxiety about the future. Stress-coping strategies are conscious mechanisms employed by individuals to mitigate stress and its effects (Baloran, 2020). A study on college students' stress in two institutions in Illinois, USA, identified social support, religious support, and positive reappraisal as sources of support to reduce stress among students. Moreover, the most used coping strategies included seeking social support, exercising, and engaging in leisure activities. (Hidalgo-Andrade et al., 2021). Another study highlights the urgent need to develop interventions and preventive strategies to address the mental health of college students. (Brann et. Al., 2022).

Furthermore, social factors are essential that can affect mental health (Gilham et al., 2021). A study by Agbaria et al. (2021) concluded that social support may increase college students' ability to cope with stress actively, adaptively, and efficiently. Additionally, according to Sezer's study (2022), social support serves as a protective factor against loneliness, reducing stress, anxiety, and depression. Moreover, social support from friends or peers is a significant factor in the psychological well-being of college students (Marimuthu, 2022).

IV. Conclusion

Based on the findings, the following conclusions are derived;

The academic factor that hugely stressed the pre-service teachers during the neo-normal is poor internet connectivity and a lack of technology. This significantly impacts the timely completion of school requirements among students and other necessary learning processes. The abrupt transformation of the learning environment, the recent pedagogical changes implemented, and the lack of readiness during the new normal have contributed to this factor. Likewise, the science pre-service teachers had negative emotions, psychological and mental problems, together with physical symptoms. This could manifest as increased risks of heart disease, high blood pressure, digestive issues, and even mental disorders.

Additionally, the science pre-service teachers had sleeping disorders that could hinder cognitive functions like learning, memory, and problem-solving. In essence, the stress factors experienced by the science pre-service teachers during the neo-normal are often interconnected and can create a complex web of challenges that can result in stress, depression, and anxiety. Increased awareness among science pre-service teachers regarding science engagement activities and their potential benefits can lead to a decrease in stress levels and an improvement in positive emotions like courage and self-efficacy, lastly, despite the crisis that the science pre-service teachers did coping mechanism in an unstable situation.

V. Recommendations

1. Conduct continuous training and webinars online or using ICT apps, and increase internet connectivity. Conduct activities on mental health and wellbeing to hone the psycho-social, emotional, physical, and cognitive aspects of the science pre-service teachers. Likewise, expose them to various online platforms. Moreover, they should be taught how to reach out and deal with their supervising instructors and cooperating professors in both face-to-face and online. They will also be required to engage in regular physical exercise, wellness activities, and other recreational pursuits.

2. The findings in this study can be used by supervising instructors and other policymakers to develop programs that address the identified factors contributing to the stress of science pre-service teachers. Additionally, supervising instructors could invite resource speakers, such as psychologists or guidance counselors, to orient science pre-service teachers on wellness and mental well-being. The cooperating teachers from the field could be invited to share best practices in addressing specific concerns identified in this study, so that manifestations of stress will turn to positive attitudes.

3. More coping mechanisms will be introduced to the science pre-service teachers for them to be flexible and resilient in any unfavorable situation, like the COVID-19 pandemic and the Dengue Outbreak.

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