STRESSORS AND STRESS COPING STRATEGIES ON ONLINE LEARNING AMONG SENIOR HIGH SCHOOL STUDENTS DURING COVID-19

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Abstract

The introduction of online classes due to COVID-19 has led the senior high school students in STEC to more unfavorable students. As such, students are more prone to stress and are expected to cope in multiple ways. This study aims to investigate the leading levels of stressors, the levels of positive and negative coping mechanisms, as well as to see if a relationship between the stressors and coping mechanisms is established. For this study, the stressors and coping mechanisms were sourced and measured using two validated sources: the Dental Environmental Stress (DES) from the study of Myrvold (2017) and the COPE Inventory (2013).

To test the hypothesis that there is no relationship between the different stressors and coping mechanisms, a Google Form containing three sections—one for demographics, one for stressor identification, and one more for identifying the coping mechanisms used—was distributed to 73 senior high school students of STEC (95% confidence level & 10% margin of error. Calculated with Slovin's formula). The interval data was then analyzed descriptively to obtain the levels of stressors and coping mechanisms, then inferentially with the Pearson R to see if a relationship exists. The results accepted the null hypothesis, indicating that the senior high school students from STEC are stressed and are affected by different stressors. They partake in different, multiple coping mechanisms influenced by the environments they are exposed to.

It can then be concluded that distance learning or online class brought upon by the COVID-19 is placing students at a position where they are highly stressed in all the aforementioned categories. However, this does not indicate that the pandemic is the sole reason for the high levels of stress. Because of stress, students partake in different coping mechanisms. The researchers, however, found a very weak or no correlation between the stressors and coping mechanisms (Pearson Correlation = 0.13).

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<center>**Chapter I**</center>

<center>**The Problem**</center>

Background of the Study

The rise of online classes brought upon by COVID-19 is accompanied with a drastic change in the lifestyle of students. The said changes lean towards the detrimental type of change. Such unfavorable situations are common factors leading up to stress and trigger different coping methods of Senior High School students. The sudden migration of education from traditional on-campus learning to remote learning has put students at a great disadvantage. With access to the internet connection and learning devices being a privilege, especially for those with poor internet access. For a clearer picture, 45% of Filipino citizens (46 million) and 74% (34,500) of public schools do not have access to the internet (Jones, 2019).

COVID-19 has been an imposing threat both on physical and mental health since its outbreak. Researchers from Bangkok checked on the impact of COVID-19 pandemic on mental health & wellbeing among home-quarantined Bangladeshi students. It found out that COVID-19 imposes psychological consequences on people to a great extent. Requiring attention from the concerned authorities to cope with this situation mentally. This meant that the scale of the problem was huge, it required external, larger assistance. Additionally, fear of infection, financial uncertainty, inadequate food supply, absence of physical exercise and limited or no recreational activity had significant association with stress, anxiety, depression and post-traumatic symptoms.

In a study looking into the psychological effects of COVID-19, researchers found out that during the early phase of the pandemic in the Philippines, one-fourth of their respondents reported moderate-to-severe anxiety and one-sixth reported moderate-to-severe depression

and psychological impact (2020, Tee et. al.). This is alarming especially when placed into the context of growing senior high school students.

Lastly, Oduardo and Estoque (2021) took this opportunity to determine the undergraduate nursing students' stress, satisfaction, and academic performance during online learning. This study revealed that the undergraduate nursing students considered online learning during the COVID-19 outbreak to be stressful (44.4%) and very stressful (47.2%). Moreover, the undergraduate nursing students had low satisfaction (37%) and moderate satisfaction (46.3%). Their academic performance was affected by the pandemic and resulted in poor (37%) to fair (50%) academic performance. It was stated that they were considerably (43.6%) and greatly (30.6%) affected by the pandemic. Consequently, online learning stress had a significant and inverse correlation with online learning satisfaction (p=.000) and academic performance (p=.012). As seen in this study, stress from online class caused by COVID-19 negatively impacted the undergraduate nursing students' satisfaction and academic performance.

Although multiple studies researched undergraduates in detail, insufficient attention has been paid to those in the countries' local secondary education which is also known as Senior High in the implemented K-12 program by the Department of Education (DepEd). This prompted the researchers to investigate the stressors and coping mechanisms of their fellow schoolmates in hopes of improving their quality of life.

Statement of the Problem

This study determines the stressors and coping strategies on online learning among senior high school (SHS) students of Science and Technology Education Center (STEC) in Basak, Lapu-Lapu City, Cebu during the third quarter of the School Year (SY) 2020-2021.

Specifically, the study intends to answer the following questions:

1. What is the level of stressors on online learning among senior high school students in the category of:

      1.1 Academic-related,

      1.2 Psychosocial, and

      1.3 Health-related?

2. What is the level of stress coping strategies on online learning among senior high school students in terms of:

      2.1 Positive coping mechanisms, and

      2.2. Negative coping mechanisms?

3. Is there a significant relationship between the stressors and coping mechanisms of online learning among senior high school students?

Statement of the Null Hypotheses

H_0: There is no significant relationship between stressors and stress coping mechanisms on online learning among senior high school students.

H_1: There is a significant relationship between stressors and stress coping mechanisms on online learning among senior high school students.

Significance of the Study

This study will prove its significance and relevance to the following:

School Administrators

Presenting the data to the school administrators can aid them in planning the school year and competencies. This can ensure that the students will be receiving quality education while having a decent quality of life.

Teachers

Teachers can study the data of the students of STEC SHS and adjust their lessons accordingly. Additionally, this can prompt teachers to conduct their own studies relevant to the issue at hand: stress.

Parents

Showing the data to the presents can be an eye-opener. The paper can also serve as a reminder for parents to not pressure their children too much as the effects of it will be detrimental.

Students

Students can identify the common stressors and can serve as their wake-up call to take care of themselves as they continue through their learning journey.

Government Agencies in the Education Sector

The higher ups, with this kind of data, can develop programs or give academic breaks to students. Moreover, the data collected can also help them in planning for the following school years.

Psychologist

This data is scientifically valuable especially to the psychologist. With it, they can pinpoin problematic areas and act on it.

Future Researchers

The datasets gathered by this study can be used to help their paper provide accurate figures and prove its validity.

The Researchers

Learning about the definite causes of stress and the many coping mechanisms can help researchers react properly when an unfavorable situation comes by.

Scope and Delimitation

This quantitative study utilized descriptive statistics to prove its points. It focused on gathering data on the stressors of students according to the established, modified questionnaires of the Dental Environmental Stress (DES) from the study of Myrvold (2017). The DES was originally made by Cohen, Kamarch, & Mermelstein during 1983. The Brief COPE used by Folkman and Lazarus (1980) was also adapted to measure the coping strategies students used to minimize stress.

The study took place in the month of June with the questionnaires made and distributed online with the help of Google Forms and Facebook Messenger.

This study does not cover the biological aspects of stress but simply a summary of the top stressors and coping mechanisms by the students of STEC SHS.

Conceptual Framework

Figure 1 or the conceptual framework below presents and explains the relationships of the variables included in this study.
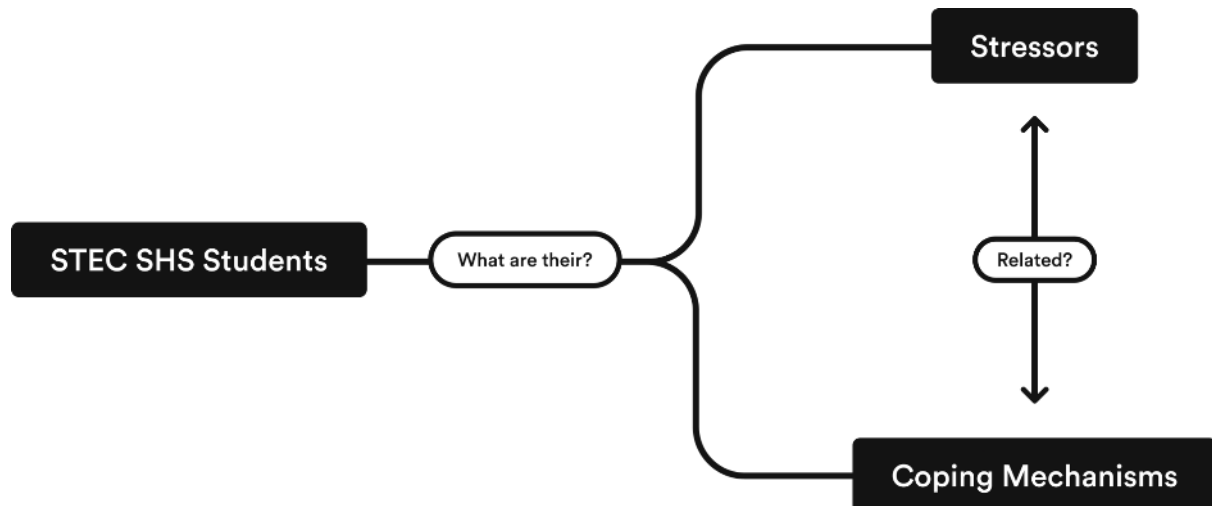
Fig. 1 The Conceptual Framework of the Study

This study will be identifying the (a) stressors of STEC SHS Students, as well as their effects of different (b) different coping mechanisms. The 2 variables are seen to possess a hypothesized relationship with each other. This hypothesized, cause-and-effect relationship is represented by arrows connecting variables to each their expected outcomes.

Chapter II

Review of Related Literatures and Studies

Online or Distance Learning

Since the beginning of the Covid pandemic, our way of living faced a significant dilemma; it shifted instantly from face-to-face to an online setting, particularly in education. As a result, education has also undergone significant transformations, with the rise of online distance learning, in which instruction is done remotely and via digital platforms.

Most authors define online learning as "access to learning experiences through the use of technology." as claimed by Benson, 2002; Carliner, 2004; Conrad, 2002. (Moore, J.L. et al., 2011) Online Learning classes are internet-based, giving students a tremendous amount of flexibility. They have the freedom to select where, when, and how they learn. Live online sessions are possible, but classes are never held face-to-face. According to Benson, 2002 and Conrad, 2002, online learning is a more contemporary type of remote learning that gives nontraditional and marginalized learners better access to educational resources (Moore, J.L. et al., 2011). Online learning, when used as part of a blended learning strategy, is a terrific method to boost student engagement. However, there are certain disadvantages to online learning. Some students will suffer from a lack of organization, deferring work until the last minute, and scrambling to do it on time. Another disadvantage of online education environments, according to some students, is the loss of face-to-face interaction with their instructor. And also, some students who do not have dependable internet access or technology find it difficult to engage in digital learning; this divide exists across countries and between income levels within countries.

On the other hand, distance learning is primarily about the gap between the student and the teacher and how technology can help close that gap. Many institutions now offer

distance learning programs, in which students attend classes through the internet. It also makes it much easier to attend higher education if you live in a rural or isolated place. A proposed definition specified the distribution of instructional materials, using print and electronic media, as computers become more involved in education delivery, said Moore 1990 (Moore, J.L. et al., 2011). Distance learning, defined by Merriam Webster as "a mode of study in which instructors and learners do not meet in a classroom but instead conduct classes via the Internet, e-mail, mail, or other electronic means." Instructors are replaced by pre-set lessons on the learning platform in distance learning. According to King, Young, Drivere-Richmond, and Schrader 2001, the terms distance learning and distance education should not be used interchangeably (Moore, J.L. et al., 2011). Learning seemed to be the emphasis of all sorts of education as new technologies became apparent. The term distant learning was once again utilized to emphasize the restrictions associated with "distance" — in other words, time and place, reported by Guilar & Loring, 2008; Newby, Stepich, Lehman, & Russell, 2000. Other forms of learning, such as online learning, e-learning, mediated learning, online collaborative learning, virtual learning, web-based learning, and so on, have now been added to the term, stated by Conrad 2006 (Moore, J.L. et al., 2011).

Stress

A sensation of emotional or bodily tension is referred to as stress. It can be triggered by any occurrence or thought that makes you annoyed, furious, or anxious. As for Hans Selye, widely regarded as the father of stress research, began researching the phenomenon of stress more than 50 years ago. The Stress of Life, first published in 1946 and still well regarded, provided us the following definition: "A non-specific response of the body to a demand." It is still considered the most concise and most accurate physiological description of what happens inside our bodies when thrown out of our comfortable balance (Selye

H.,1956). Work, relationships, financial obligations, and other conditions can all generate stress, but anything that poses a perceived threat to a person's well-being can induce stress. There are two types of stress — acute, a temporary stressor that will disappear fast, and chronic stress, which lasts a long time. The chemicals cortisol, epinephrine, and norepinephrine, can cause a fast heart rate and increase amounts by the body. Stress causes your body to release hormones. These hormones accelerate your pulse and make your brain more alert. They also cause your muscles to stiffen up. These reactions are beneficial in the short term since they can assist you in dealing with stressful circumstances. This is your body's attempt to defend itself. A stressor triggers the stress response. Physical threats, risks to our relationships, a significant life event, a quarrel or disagreement with a friend, relative, or coworker, time constraints, experiencing the loss of something or someone we care about are all prevalent stressors. Stressors can be any internal or external stimuli that cause the physiological stress response (Selye H.,1956).

Academic Stress

A huge number of students will suffer academic-related stress while at school, which means that their bodies will begin to respond especially to academic-related demands that exceed the student's adaptive capacity as per Alsulami et al., 2018 (Rethink Mental Illness, nd). At this point, a student's academic success is critical in determining the next step of their education, which shapes their career. Academic stress is defined as mental distress related to upcoming academic challenges or failure, and even the fear of academic failure. Academic stressors can be found in many places in a student's life, including school, home, and peer relationships. Exams, grades, homework, academic and success expectations, and family pressure are among the top academic stressors for most high school students. Inadequate instructional methods, teacher-student interactions, severe academic workloads, bad physical

classroom conditions, and chaos surrounding academic assignments and schedules are examples of school-related difficulties. Because of the rising number of suicides among students worldwide, the mental health of students, particularly in terms of academic stress and its consequences, has become a key concern among schools and the government. Some children develop deep-rooted nervous illnesses during their youth due to their parents' persistent urging of them to perform better in academics and extracurricular activities. Most students will experience 'imposter syndrome' at some point during their academic careers. Imposter syndrome is a combination of feelings of inadequacy that continue despite apparent accomplishment, and it is common among students at prestigious institutions. Those who are labeled as "Imposters" have a chronic sense of self-doubt that trumps any sentiments of success or external evidence of their competence (Rethink Mental Illness, nd).

Psychosocial Stress

Anything that translates to a perceived danger to people's social standing, social esteem, respect, and/or acceptability within a group; harm to people's self-worth; or a threat that a sense that people have no control over is an example of psychosocial stress. All of these dangers might cause the body to react with stress. These are some of the most difficult stresses to deal with since they may make people feel isolated and unsupported. It may be more difficult to deal with as a result of this. The body produces a set of stress hormones, including cortisol, epinephrine (or adrenalin), and dopamine, when psychosocial stress causes a stress response, resulting in a surge of energy as well as other changes in the body (including the fight-or-flight response). Stress hormone changes can be beneficial in the short term, but they might be harmful in the long run. Cortisol, for example, can increase the body's functioning by boosting available energy (making fighting or escaping easier), but it can also inhibit the immune system, among other things. Any partnership will almost

certainly experience conflict. There will be disputes, and people will desire various things. The way individuals handle conflict may cause considerable psychological stress, but improving conflict resolution skills can assist with at least half of the equation: people can modify what they bring to the situation, diffuse some of the negativity, and model healthy conduct. This can significantly reduce the amount of stress experienced by all parties involved. People can become enraged or intimidated by things that don't have a significant impact on them, and the tension they experience as a result is unnecessary. Changing how people look at something, or just altering their focus, may reduce stress levels—it can make something that appears to be a huge issue feel smaller. Everything can feel less stressful when seen from a different viewpoint. Finding strategies to control people's overall stress levels might help them react less to psychosocial stress or any other type of stress. The goal is to discover something that works well for the individuals, fits well in their lives, and complements their personalities.

Health-induced Stress

Stress is the body's natural reaction to any type of pressure or threat. The body's defenses go into high gear when individuals perceive danger, whether real or imagined, in a fast, instinctive process known as the "fight-or-flight" reaction or the "stress response." The stress reaction is the body's defense mechanism. It assists people in being focused, active, and alert when it is functioning properly. Stress can save people's lives in emergency situations, such as giving someone more power to protect others or prompting individuals to slam on the brakes to prevent a vehicle collision. Stress may also assist people in overcoming obstacles. It's what keeps individuals alert during a business presentation, concentrates humans when participants try the game-winning free shot, or motivates one another to prepare for a test when they'd rather be watching TV. But, beyond a certain point, stress ceases to be beneficial

and begins to harm people's health, mood, productivity, relationships, and overall quality of life.

Senior High School Stress during Online Learning

Students were forced to take their classes online due to the sudden outbreak of the Covid-19 virus (Oyedotun, 2020). With the sudden shift of setup, students struggle to keep up with the mode of learning. According to the study of Goswami and Nayak (2019), online setup of learning brought stress to students. In addition to that, there are many factors that would be the reason why students are stressed with the current setup. Here are some of the following stressors of students during online learning: internet connectivity, online content delivery, lecture duration (Goswami and Nayak, 2019). Their stress increases as the demand of online learning is much more than the traditional way of learning. It is also concluded by study of AlAteeq et al. (2019) that the perceived stress of students is higher today given that the mode of learning is online. The impact of online learning to students is mainly about the stresses it brought to them (Almhulim et al., 2020). How the setup added problems to students while facing the outbreak of the virus.

Coping with Stress

Students would not be called students if they do not experience any stressful situation in regards to school. That is why they have coping mechanisms to address it. According to the study of Sundberg et al. (2006), because of the barriers an online learning has, students no longer know how to cope with the online course learning. With this, the study of De Villa and Manalo (2020) stated some of the effective coping mechanisms people use in order to reduce the stress that they have during online learning. Some of those mechanisms are: positive well being, having time management, openness to change, peer mentoring, and lastly,

collaboration or being sociable. Also, based on the study of Knowles and Kerkman (2007), there are two types of motivation a student has; it is the external motivation and internal motivation that helps them to cope up with the stress they have. The external motivation is a way of coping up that is outside the beyond of the student while the internal motivation is the mindset of the students in order to reduce the stress they have. Most of the students cope up with stress internally (Knowles and Kerkman, 2007). Students would find a way to cope up with the stress in order for them to avoid any breakdowns.

Positive Coping Mechanisms

Everyone reacts differently in dealing with stressful situations, says psychologist Vibhushini (2020). Every individual is unique and they have their own coping strategies to challenge this situation. This pandemic may induce stress that takes a toll on one's physical health and mental health. An individual's tolerance to stress is based on the person's internal flight-fight-freeze response. The stress may make people take decisions that affect them and people around them. There are possibilities that some people may cope with the situation by consuming alcohol and drugs that could potentially lead to overuse. When the pandemic ends, the economy might be running but the majority of people might be experiencing heightened anxiety and depression that can disrupt their everyday life.

Coping style refers to your disposition towards handling challenging situations or stressors. Endler and Parker (1990) suggested that there are three basic coping styles: task-oriented, emotion-oriented, and avoidance-oriented. Your coping style may stay consistent across different situations and experiences, and the coping strategies you use within this may change and adapt.

There are many kinds of positive coping mechanisms which you can turn to in a challenging situation. Many people find that prayer or meditation gives them the essential

time to refocus on the important things and self-reflection. Finding a way of stopping negative thoughts is important, and by carrying out meditation every day, you can eventually retrain the brain to eliminate negative self-talk. In the context of the COPE inventory questionnaires, the positive coping mechanisms are: positive reinterpretation and growth, mental disengagement, focus on and venting of emotions, use of instrumental social support, active coping, religious coping, humor, use of emotional social support, acceptance, suppression of competing activities, and planning (Mead, BSc, 2021).

Negative Coping Mechanisms

Most people develop habits which then act as a way of coping with stress. Unfortunately, many of those habits are negative ones. Coping mechanisms, like the majority of habits, have addictive qualities. We experience a compulsion towards them and often find it hard to resist them. Other coping mechanisms are negative, with damaging, unhealthy and harmful mechanisms which produce a negative outcome (Glade, 2020).

A coping mechanism can be regarded as unhealthy if engaging in it leads to harm, be it physical, emotional, financial or even legal (CareinMind, 2020). It is not uncommon to cope with the stress and emotions by engaging in unhealthy behaviours. These may include abusing alcohol or drugs, overeating, self-harm, risky behaviour, aggressive behaviour, excessive gambling, eating a lot of unhealthy foods or severely restricting what you eat. These can seem like attractive options because, in the very short term, they can relieve anxiety or help you escape your stress. However, in the long term, these ways of coping usually have a negative impact on your well-being and on the well-being of your family (SickKids, 2019). In the context of the COPE Inventory questionnaire the negative coping mechanisms include denial, substance use, behavioral disengagement, and restraint.

Positive Reinterpretation and Growth

With all the stress a student could have with today's situation, it must be hard to cope with it. Most of the students see their stress and struggles positively in order for them to cope up with it. Based on the study of Khan (2013), students encounter challenges and stressful times in school and the way they think of it affects their academic performance in school. The attitude of people while facing stressful situations determines the extent to which people thrive or experience growth on how they respond and how they cope with the stressful experiences ("Determinants of stress-related growth: Gender, stressfulness of the event, and coping strategies," 2005.) The stress can be a factor for them to grow and to develop. In addition to that, based from the study "The association of personality traits and coping styles according to stress level" (2015), having active coping and positive traits is a crucial component of prevention and control programs of stress. The perception of students over stress during online learning would determine the action they would do in order for them to overcome those stressors.

Mental Disengagement

Research has shown that people who use disengagement coping generally are not able to deal with the stressor and as a result are more likely to experience the negative consequences of the stressor compared to people who engage in more active coping strategies (Fortes-Ferreira 2006; Chu-Lien Chao, 2011). We propose that these effects are driven by the degree to which these coping strategies provide the person with a sense of being in control of the stressful situation. Mental disengagement fully mediated the relation between rumination and the initial level (intercept) of smartphone use.

Focus on and venting of emotions

Self-compassion is associated with situational positive reinterpretation and growth and reveals a negative correlation with situational focus on and venting of emotions. Dispositional focus on and venting of emotions is associated with rumination after stressful events. Both rumination disposition and focus on and venting of emotions are correlated with the behavioral inhibition system (BIS). Venting is saying things to let unpleasant feelings escape/expressing negative feelings.

Use of focus on and venting of emotions stress coping strategy was the most strongly associated with higher levels of depressive symptoms. The more students are engaged in emotions in stressful situations the more possibility there is for them to experience depressive symptoms.

One of the main reasons why we vent is to reduce our stress levels. Rime (2009) states that disclosing stress is a coping mechanism. Venting is a 2-way process: the person venting and the person hearing the vent. As a matter of fact, positive venting can reduce stress, but negative venting can lead to heightened stress and physical health concerns. It is not just about the person venting, but equally important, the person who is hearing the vent. Research has shown that the difference between positive and negative venting can be focused on the ways in which the person hearing the vent responds, both through speech and action (Bodie et al., 2015; Goldsmith, 2004). Part of venting includes a reduced filter in the things one says. As the listeners, we can help the one venting to process verbally what is occurring and we can actively listen.

Use of instrumental social support

Research has shown that social support can make a huge difference in people's lives during stressful times. One study showed that cancer patients with a strong support group not only felt less stressed and upset during treatment, but actually lived an average of 18 months longer. There are two ways that social support can help people. First, it helps people interpret events in a more positive light. Anyone who has a friend who can make them laugh at the toughest of times understands how helpful this can be! The other way that social support can help people is through helping them identify ways to cope. If you're going through a tough time and know someone who has already gone through the same process, they can help you through it. In turn, you'll be able to help others through that same thing in the future.

Social support has been found to vary positively with socio-economic status in studies in the US. Social support refers to the various types of support that people receive from others and is generally classified into two major categories: emotional, instrumental support. Emotional support refers to the things that people do that make us feel loved and cared for, that bolster our sense of self-worth. Such support frequently takes the form of non-tangible types of assistance. By contrast, instrumental support refers to the various types of tangible help that others may provide.

Providers' *emotional support* (e.g., empathy) and *instrumental support* represent distinct dimensions of support provision, replicating prior work. Crucially, emotional support, but not instrumental support, consistently predicted provider well-being. These two dimensions also interacted, such that instrumental support enhanced the well-being of both providers and recipients, but only when providers were emotionally engaged while providing support. These findings illuminate the nature of support provision and suggest targets for interventions to enhance well-being.

Poor social support has been linked to depression and [loneliness](#) and has been shown to alter brain function. In other cases, the people in your social network might provide instrumental support. They take care of your physical needs and offer a helping hand when you need it.[6] This might involve bringing you a hot meal when you are sick or giving you a ride when your car is in the shop. Such support is important when people have immediate needs that must be addressed.Social support also helps people to cope with stress. Stress has been shown to have serious health consequences ranging from reduced immunity to increased risk of heart disease. Being surrounded by people who are caring and supportive helps people to see themselves as better capable of dealing with the stresses that life brings.Research has also shown that having strong social support in times of crisis can help reduce the consequences of trauma-induced disorders including PTSD.[9]

Active Coping

Solving difficulties, seeking knowledge, seeking social support, seeking professional help, changing locations, organizing activities, and reframing the meanings of problems are all relative terms coping in this study. Individuals with a high success motivation may have a significant impact on their coping responses to stressful situations involving performance, such as failing a midterm exam. Individual personality qualities may determine coping responses in specific settings, according to another perspective on coping. Walz (n.d), a researcher, conducted research about active coping in stressful situations, and he began by looking at active coping as a stable trait in four different stress situations: academia, work, high-stress relationships, and low-stress relationships. As a result of his research, he found out that active coping did not differ significantly between the four types of stressful situations. Furthermore, there was no massive gap in active coping between high and low

stress levels. These findings suggest that active coping is a long-term feature that is not triggered by stress.

Clare (2020) emphasized the importance of active coping skills in her article about the advancement of well-being. According to her, these active coping skills should be incorporated into productive methods, and there are plenty to choose from. There are four more ways to explore and develop your active coping skills, such as Affirmations, Emotional First Aid, Pyramids of Need, and Threat Assessment. Positive affirmations are simple to use, do not require any specific technology, and are well-suited to social distancing. This category includes any short statements that may motivate or urge you to cope with the stresses of difficulties. Emotional First Aid is a combination of life skills that anyone can utilize to provide the emotional assistance that a traumatized person requires right after a devastation. This is for anyone seeking a tool for becoming more successful, productive, and emotionally resilient, as well as a way to overcome the hurts and hang-ups that hold them back. The Maslow's Hierarchy of Needs' motivational nature is well-suited to any discussion of adaptability. Nevertheless, it can be difficult to engage the commitment and innovation required for resilience, especially when it comes to adopting active coping techniques, if basic needs such as physiological and safety demands are not met. Furthermore, examining risks from a well-informed perspective may help us improve our active coping skills. This is not to suggest that we disregard threats; rather, we remain firm in our commitment to avoid wasteful contemplation that might lead to unnecessary stress.

The study of Li (n.d.) explored the connection between stress and active coping, which is important in the process of adapting to stressful situations. Some individuals appear to be able to cope effectively in high-stress settings. Others appear to be more vulnerable and in need. The mechanism through which people adjust to stressful situations has been studied by researchers in the past. In the connection between stressful events and adaptations, coping

appears to play a crucial role. Active coping can take the form of behavioral or cognitive strategies. Active coping has been investigated as a stress-adaptation mechanism. However, few studies have looked at the drivers of stress and active coping. Li's study looked into the pathways that link stress to active coping in order to resolve this problem. What Li got in the end of his study is that stress was not shown to be connected with active coping in his research, implying that stress had no direct affect on one's choice of coping mechanisms. This finding backs up the theory that stress triggers a cognitive appraisal process that leads to coping methods. This process, rather than stress itself, has an impact on one's coping techniques. Individuals were encouraged to cope with stress in order to alleviate their hardship. Stress was found to be negatively connected with motivation, implying that lower stress levels are associated with increased motivation. Individuals may feel too overwhelmed to be motivated when their stress levels are high. When people's short-term memory is full with stress-related information, there isn't enough room for information that can help them cope; when they don't have the information or resources they need to cope, their motivation to cope decreases. Motivation and resilience were found to moderate the influence of stress on active coping. Lower stress levels provide the foundation for motivation and resiliency in the workplace.

(ABSTRACT ONLY) The stress, active coping, and academic achievement of college students who stayed for the entire academic year are compared to the same measures in a group of students who dropped out after the fall semester. Stress is linked to active coping efforts among persisters but not among non-persisters, according to the findings. The hypothesis that stress is linked to better GPAs among persisters and lower GPAs among non-persisters, however, was not firmly supported. Stress had a negative impact on persisters' GPA, but there was some indication of a beneficial indirect effect via active coping efforts. Active coping was found to be significantly linked to retention, with men being more likely

to persist. The findings back up the assumption that social support is an active form of coping, and that behavioral measures of active coping could be useful in researching the stress-coping link.

Denial

Denial is a coping method that allows you to adjust to difficult conditions over time, but it can hinder treatment or your willingness to face challenges. Emotional conflict, tension, painful thoughts, threatening information, and worry can all be dealt with by refusing to admit that something is wrong. Denial can be about anything that makes you feel vulnerable or undermines your sense of control, such as disease, addiction, personal violence, financial difficulties, or relationship disputes. It may appear that refusing to accept reality is unhealthy. A brief period of denial, on the other hand, might sometimes be beneficial. Denial allows your mind to automatically absorb surprising or distressing knowledge at a rate that will not put you into a psychological slump. However, it's a damaging response if denial lingers and keeps you from taking proper action, such as seeking help. Denial may prevent you or a loved one from seeking help, such as medical treatment or counseling, or dealing with problems that have the potential to spiral out of control, all of which can have long-term effects.

Denial is a basic coping method that everyone uses to some extent in order to escape unpleasant emotions. Delaying a grieving process until you are able to cope with it, for example, is a healthy form of denial.Denial is a common addiction symptom. It's unintentional and automatic. Addicts are frequently the last to recognize the severity of their illness. Denial has many forms, and these include projection, rationalisation, intellectualisation, minimising, suppression, withdrawing, geographic escapes, emotional and magical thinking.

Understanding denial as a coping technique, as well as how it affects ourselves and our relationships, is at the core of denial psychology. Denial has been recognized as the fundamental defense mechanism used by most people to cope with severely stressful events, according to psychology. External occurrences are frequently blocked from our conscious perception. In other words, if a situation is too difficult for us to manage, we refuse to be exposed to it at all. That doesn't make the facts or the reality of the situation go away, but it does allow us to act as if they aren't true, minimizing the influence they have on us. While denial may temporarily alleviate your worry, the reality is that it is not an efficient strategy to deal with a situation in the long run. After a while, the reality of the situation sets in, and you have to deal with it. Denial includes attempting to assign your concerns to someone else, turning the blame to alleviate your tension or guilt. When you employ denial as a protective technique, it can easily turn into a form of self-deception. While it may appear to be more convenient at the time, it can lead to the development of maladaptive behaviors and harmful relationships. Denial, on the other hand, might only be a beneficial way to protect yourself in the short term when faced with a difficult scenario.

Denial is a form of defense response used to prevent anxiety by disregarding the truth of the situation. Defense mechanisms are coping methods that humans employ to deal with unpleasant emotions. Denial can take the form of refusing to acknowledge reality or denying the repercussions of that reality. When one is in denial, it usually means you're having a hard time accepting something that feels overwhelming or difficult. This defense mechanism may serve a valuable purpose in the near future. It can give you time to adjust to an abrupt shift in your circumstances. However, denial can cause problems in your life, especially if it prevents you from dealing with a situation or making a necessary change. It may hinder you from accepting help or receiving the therapy you require in some instances. Signs of denial include refusing to talk about the problem, blaming other people or outside forces for causing the

problem, promising to address the problem in the future, and the avoidance of thinking about the problem.

The phrase "being in denial" is frequently used as a value judgment, implying that a person is avoiding or denying reality. The idea of being "in denial" appears to have taken on a life of its own as a cause of many ills and a catchphrase for individuals who ignore the consequences of their actions. Although denial is generally associated with persons who have addictive tendencies, its implications extend beyond those who are battling with addictions. People who refuse to admit that unpleasant things are happening in their lives, such as those attempting to cope with a difficult relationship, a life-threatening sickness, illness, a loss, or anything else that one may want to reject, are said to be in denial. In any instance, we contradict the reality of a situation or attempt to conform to a predicament by ignoring its influence when we use denial to defend ourselves or cope with what we feel. The term "denial" is commonly used to describe someone who fails to comprehend the significance or implications of their actions. It also means that anything held to be real is false. Freud (1937) pointed out that denial might manifest itself in our words, behaviors, or dreams. We keep the denial to ourselves in fantasy, she continued. It is shared with the outside world in both word and deed, and thus may be incompatible with the experiences of others in our lives. Denial is a cognitive process in which we seek to change our perception of unpleasant or unacceptable emotions. Denial can be used to avoid any bad emotion, such as shame, fear, guilt, or distress. Denial, on the other hand, can suppress positive emotions like enthusiasm or satisfaction when they reveal our vulnerability in a relationship.

Religious Coping

People typically turn to religion to cope with stressful experiences, according to a growing body of literature. However, research into the effectiveness of religious coping for

people in stressful situations has shown varied results. A meta-analysis was conducted by Ano and Vasconcelles (2005) to see if there was a connection between religious coping and stress psychological adjustment. Four types of relationships were investigated: positive religious coping with positive psychological adjustment, positive religious coping with negative psychological adjustment, negative religious coping with positive psychological adjustment, and negative religious coping with negative psychological adjustment. Positive religious coping techniques have been linked to psychological adjustment variables like self-esteem, life satisfaction, and quality of life, whereas negative religious coping strategies have been linked to increased depressive symptoms. The findings of this meta-analysis back up these findings and provide quantifiable impact values to show how strong these connections are. As a result, the current study's findings contribute to clarify the picture and, in line with recent reviews of the empirical literature, religion has both beneficial and harmful mental health implications, depending on the type of religion.

A study conducted by Torralba and Oviedo (2021) to reveal that religious coping works best when linked to religious communities and in combination with other non-religious strategies. The question arises as to how much religious faith and practice might assist Spanish teenagers in coping with their misery, particularly as religion goes away in secularized societies and becomes less of a popular coping resource. This study was created to see if religious coping is still an option for Spanish teenagers in a strongly liberalized environment, as well as the various coping techniques and perceived usefulness of such a strategy. The study examines the extent to which religious characteristics of adolescence are present, and it employs a person-centered method to illustrate and collect data on various stages of religious adaptation. Three measures demonstrated low commitment levels in terms of religious activity and self-assessment, as one could expect in a secularized cultural environment: low scale in weekly religious attendance, low scale in daily prayer, and low

scale in religious assessment. This showed that when faced with major challenges or suffering, most students did not turn to religious coping or seek alternative coping mechanisms. Their preferred coping mechanisms include: seeking help from friends, laughing about one's own problems, isolation, and some resignation about positive consequences from bad moments.

Religious coping has been described as both a mediator and a moderator, accounting for the association between religiousness and mental health in times of stress and the latter modifying the relationship between stressors and mental health. The role of religious coping in mediating and moderating roles was investigated in this study. Collaborative religious coping, also known as active religious coping, refers to sharing problem-solving duty with God. The delaying approach is more passive, and it involves passing up problem-solving responsibility to God. The researchers discovered that collaborative religious coping mediated the associations of religiousness to well-being and distress in a group of undergraduates using structural equation modeling. There was no evidence of a mediation effect when religious coping was halted. Although collaborative religious coping did not moderate the association between stresses and mental health factors, deferring religious coping had an aggravating moderation effect.

The consolation obtained in religious or spiritual practices is one of the most common ways that people cope with trauma. Religious coping has been divided into two groups by leading researchers: positive religious coping and negative religious coping. In a stressful experience, people who utilize positive religious coping methods are more likely to seek spiritual support and significance. Negative religious coping (also known as spiritual struggles) reflects conflict, uncertainty, and doubt about God and faith. The impacts of religious coping are studied in a variety of settings, with varying results. Fear-inducing

events, such as death, sickness, and near-death experiences, are prominent scenarios in which people adopt religious coping mechanisms.

One of the purposes of this study conducted by Newberg (2013) is to try to detect the harmful as well as beneficial consequences of religious and spiritual concepts, with the goal of eventually getting people to adopt a more favorable attitude toward them. Research that has been done on religious and spiritual beliefs and practices and how they relate to human health, the vast majority of studies show that being religious or spiritual has a good impact on people's stress and anxiety levels. They are more likely to have excellent overall health. They are better at dealing with a variety of challenges and problems. However, there are occasions when religion and spirituality can be negative, such as when people are struggling with their religious or spiritual beliefs and end up indulging in more negative notions that are not inclusive of others and cause people to feel rage or hostility. These are factors that cause people to become more stressed and anxious, and they can have a negative impact on their health. The purpose of this study is to try to determine both the bad and good consequences of religious and spiritual concepts in order to get people to have a more favorable attitude toward them. As a result, Newberg believes that people should examine their own religious and spiritual beliefs to see if they are fostering a more sympathetic outlook on the world and on people.

Many people use faith to help them cope with tough experiences and improve their mental health. Faith, on the other hand, can be a complex aspect of a person's identity. Krause (2020) has written about the connection between religion and health in older people. He questioned participants if they were "religious," "spiritual," "religious and spiritual," or "neither religious nor spiritual." According to a large body of evidence, individuals who are more profoundly immersed in religion have better physical and mental health. According to him, the findings of this study were eye-opening. Those who described themselves as

"religious" had higher health problems than those who described themselves as "spiritual," "religious and spiritual," or "neither religious nor spiritual." Furthermore, "Religious" individuals attended church less regularly, prayed less frequently, and read the Bible less frequently. They had less positive thoughts about God and were more concerned about the nature of their relationship with God. Similarly, individuals of the "religious" group were less likely to give or receive social support from fellow church members. Finally, when big stressors arose in their life, the "religious" group was less inclined to rely on their faith.

Humor

Despite the fact that stress has become an important component of health care administrators' daily lives, little attention has been paid to their experiences. Administrators must confront the consequences of stress and establish good stress management strategies to survive in today's health-care climate. While many standard stress management approaches can be helpful, humor is a naturally occurring phenomenon that is as unique as stress. Humor is nature's biofeedback, stress-control system, helping us make sense of, understand, and cope with reality. Humor may help people cope with stress, and its usage should be recognized and encouraged.

The nurse manager can use a variety of strategies to bring comedy into the workplace, according to this article. In this article, the term "humor" is defined, and the benefits of humor are discussed. Reduced stress and hostility, improved problem solving, improved negotiation, personal survival, bodily healing, and emotional healing are just a few of the advantages. Humor can be utilized to relieve stress in both the personal and professional lives of a nurse management.

The function of humor psychologically is it acts as a primary coping strategy, reducing anxiety and tension, providing a healthy outlet for wrath and rage, providing a

healthy escape from reality, and easing the burden of critical illness, trauma, disfigurement, and death.

Discusses the possible benefits of comedy when combined with guided imagery for stress relief. Introduces the Humorous Imagery Situation Technique, a therapeutic strategy for systematically employing humor for stress management that gives the client a way to utilize comedy to reflect on main issue areas. A case example is used to demonstrate the basic method.

Behavioral Disengagement

Behavioural disengagement is a coping style reflecting the tendency of students to give in or reduce their efforts in difficult situations. If students give in easily when faced with problems at school, these problems are likely to persist. This situation may in time lead to a vicious circle of negative expectations, lowered efforts and the experience of failure, which in turn could result in behavioural problems. Effort and engagement in school are likely to be affected by the perceived value of schoolwork (see, for example, Eccles, 1983) and frequent use of behavioural disengagement as a coping style in school could signal that schoolwork provides little incentive for the individual. Assigning a low value to schoolwork could be associated with reduced respect for the school and the norms laid down to regulate student behaviour. Students that disengage in relation to schoolwork may therefore have a reduced threshold for displaying behaviour that does not accord with school norms, such as oppositional behaviour towards teachers and fellow students (Bru, in press).

Three research looked at the links between goal disengagement and goal reengagement, as well as physical health indicators (e.g., health problems, cortisol rhythms, sleep efficiency). The authors hypothesized that persons who are better able to disengage from unrealistic goals and re engage with alternate goals may also have better physical

health, based on research demonstrating that goal adjustment tendencies are linked to subjective well-being. The findings show that the ability to disengage from unrealistic goals is linked to improved self-reported health and more normal diurnal cortisol secretion patterns throughout the three trials.

Goal disengagement is an important part of effective self-regulation, according to this article. The argument is based on an examination of processes involved in an individual's life-span development as well as those involved in moment-to-moment action regulation. The hypothesis that goal disengagement can be advantageous to psychological well-being is investigated. The piece also discusses the nature of disengagement. Disengagement, it is suggested, necessitates a person's withdrawal of not only effort but also commitment from unfulfilled goals, and is most adaptive if it leads to the pursuit of new meaningful goals.

Goal disengagement, goal reengagement, and subjective well-being were investigated in three studies. The results revealed that goal disengagement and reengagement are linked to high subjective well-being ratings. Furthermore, the findings revealed that goal disengagement and goal reengagement can interact to affect subjective well-being. The findings are examined in terms of their implications for good self-regulation and successful growth.

The goal and emotion regulation constructs were combined in this investigation to better understand college students' well-being, drawing on prior research that found the ability to disengage from goal pursuit and shift energy toward alternate goals as a significant contributor to well-being. Although goal management, stress, and the desire for and availability of support were all major predictors of well-being in different research, self-compassion accounted for a large amount of variance in well-being.

Restraint

Academic exam stress depletes self-control power, impairing regulatory behavior (Oaten & Cheng, 2005). The goal of this study was to see if a study intervention program, which is a type of repetitive self-control exercise, could increase regulatory strength and reduce the debilitating effects of exam stress.

The goal of this study is to see how a group cognitive-behavioral intervention in stress management affects depressed women's hardiness and self-control.

The goal of this study was to see how dental hygiene students' self-control affected their stress and stress-coping style. The participants in this study were dental hygiene students from three different institutions who were chosen by convenience sampling.

There is a well-established link between perfectionism and stress. The goal of recent study has been to uncover the mediators of this connection. We explored the role of self-control in a sample of university freshmen, starting with a multidimensional view of perfectionism and finding it to be a mediator between perfectionism and stress. Furthermore, stress was positively connected with perfectionistic concerns (i.e., discrepancy; Slaney et al. 2001), but stress was negatively correlated with perfectionistic strivings (i.e., high standards; Slaney et al. 2001). The author discusses the practical ramifications of overcoming maladaptive perfectionism.

Use of emotional social support

(Scott, 2020) Affirmations of one's value, concern for one's feelings, and the sharing of positive esteem are all examples of Emotional Social Support. Listening to and validating feelings, letting others know they are valued, and offering a shoulder to weep on are all examples of this.

(APA, 2019) Many Americans do not believe they have access to social support, which is a significant resource. 70% of people replied yes when asked if they had someone they can turn to for emotional support, such as talking through problems or assisting them in making difficult decisions. Moreover half of respondents (55%) indicated they could have used a little more emotional assistance.

(EurekAlert, 2020) On days when they were stressed, individuals were more than twice as likely to give or receive emotional support, according to the study. Furthermore, they were 26% more likely to give or receive help the next day. According to the researchers, while this effect was seen in all of the subjects on average, it differed slightly across men and women.

(Mental Health First Aid USA, 2020) According to research, having a social support system might improve your overall mental health, particularly for women, seniors, patients, workers, and students. A 2015 poll indicated that the average stress level for those with emotional support was 5 out of 10 compared to 6.3 out of 10 for people without emotional support on a scale of 1 to 10, with 10 indicating "a great deal of stress" and one indicating "little or no stress."

Substance Use

(Christiansen, 2020) It is usual to use alcohol to relieve tension. Despite the anecdotal evidence that drinking can help a person relax, alcohol is useless in coping with stress. Alcohol's physical side effects, when combined with stress symptoms, can wreak havoc on the body. In addition to potential health risks, relying on alcohol every time a stressful circumstance arises hinders the development of natural coping mechanisms.

(Close et al., 2021) Everyone copes with stress in different ways, and some people may resort to maladaptive stress management techniques, such as substance abuse. Stress can

enhance a person's likelihood of using drugs; in fact, the National Institute on Drug Abuse (NIDA) warns that those who are stressed are more prone to use mind-altering substances.

(Hartney, 2021) Addiction appears to be an attempt to cope with stress in a way that does not work out for the person. While the drug or activity to which you have been addicted may provide some brief relief from stress, such relaxation is fleeting, and you will need more to cope with stress. And, because many addictions generate additional stress, such as withdrawal symptoms when a drug wears off, more of the addictive substance or behavior is required to deal with the additional stress.

(Berrio et al., 2018) Drug addiction is a chronic neuropsychiatric condition that progresses from a single encounter with a drug of abuse, such as cocaine, cannabis, or heroin, to compulsive drug seeking and consumption, impaired capacity to control craving-induced behaviors, and relapse. Chronic alterations in the brain's reward system are well-known to play a role in the neurobiology of addiction. Environmental factors such as acute or chronic stress, for example, have an impact on this system and raise the risk of drug use and relapse.

Acceptance

(Olivo, 2015) Acceptance helps you control your emotions, which helps you lessen stress. The true source of stress in your life is the emotion that that thing is stirring in you, not whatever it is that you believe is stressing you out. You produce stress when you deny, ignore, or misunderstand those painful emotions. If you want to quit stressing, you must take control of your emotions rather than allowing your emotions to control you. Acceptance is the easiest way to get to the center of Wise Mind Living.

(Scott, 2020) When we give up the fight and trust the process, we can reduce stress significantly. When we feel compelled to fight something that may or may not be altered, we may feel overwhelmed by a seemingly difficult effort. Accepting a circumstance and letting

go of our need to control it (which is frequently impossible anyway) can seem like a weight lifted off our shoulders, reducing the stress of whatever scenario we are in.

(Marshall, 2017)Self-acceptance is a problem for many people. To put it another way, too many people are looking for acceptance from sources other than themselves because they haven't learnt to embrace themselves. Accepting yourself as you are is what self-acceptance entails. It entails treating yourself with kindness even when you make errors, fail, or do something you later come to regret. When you practice self-acceptance, you will notice a significant reduction in your stress level.

(Carter, 2018) Criticism, judgment, rumination, blaming, denial, and avoidance are all common ways we respond to stress. Acceptance helps us avoid them. These are all resistance techniques that will not protect you. Ironically, these strategies will cause disappointments or troubles to get even more entrenched in your mind.

Chapter III

Research Methodology

Methods/Design

This study measured variables and described frequencies, averages, and correlations. Numerical data collected in a research project can be analyzed quantitatively using statistical tools descriptively or in an inferential manner. Thus, the researchers will be using a quantitative research design to answer the problems presented.

Descriptive analysis refers to statistically describing, aggregating, and presenting the constructs of interest or associations between these constructs while a correlation is when a change to one variable is then followed by a change in another variable. In short, it measures the relationship between two variables (2020).

Environment

The location of this study was based on the Science and Technology Education Center Senior High School located in Lapu-Lapu City, a city in the Cebu, Philippines made up of 58.1 km² of land with 30 barangays that hold a population of 408,112 people according to a census made during 2015.

Sampling Procedure and Sample

The target population of the study are the senior high school students during the second semester of the academic year, 2020-2021 of Science and Technology Education Center - Senior High School in Lapu-Lapu City. These students belong to three different strands of the SHS program, namely: Accountancy and Business Management (ABM); Humanities and Social Sciences (HUMSS); Science, Technology, Engineering, and Mathematics (STEM).

With a population size of 299, the researchers utilized quota sampling and sent a questionnaire to a sample of 73 students with 95% confidence level and 10% margin of error using Slovin's formula for data collection from primary sources of data. A 95% confidence interval means that if you repeat your study with a new sample in exactly the same way 100 times, you can expect your estimate to lie within the specified range of values 95 times (Bhandari, 2020).

The researchers made sure that there are at least 50 samples to establish the existence of a relationship (2012).

Slovin's formula is used to calculate the sample size necessary to achieve a certain confidence interval when sampling a population. This formula is used when you don't have enough information about a population's behavior (or the distribution of a behavior) to otherwise know the appropriate sample size (2021).

Instrument

Effectively gathering relevant data requires validated questionnaires. The researchers adapted 2 instruments for stress measurement and coping. A verified questionnaire bipolar likert-scale was made and answered on Google Forms. This questionnaire will then be disseminated for the respondents on Facebook and Facebook Messenger. The mentioned instruments will be further explained in the succeeding paragraphs.

The Dental Environmental Stress (DES) is a likert-scale questionnaire with a Cronbach's alpha of 0.851. It was developed by Garbee et al. (2018) and later modified by several authors to suit their area of study. It is proven to be a highly reliable and valid tool to measure the stress of students. The current study aims to discover the causes of stress of the senior high school students in STEC-SHS using a modified DES questionnaire and to identify the key contributing factors of stress for each year. A likert scale containing ordinal data. Specifically, there are 4 points respondents can choose ranging from strongly disagree, disagree, agree, and strongly agree.

The DES questionnaire was modified to suit the study population and adopted after prevalidation. The modification done was to simplify the language of the questionnaire for better interpretation by the students. The validity of the questionnaire was unaffected. The questionnaire was given to 3rd year, final year dental undergraduate students, and the interns after obtaining their consent. The links for the questionnaires were separate to collect the responses batch wise.

The COPE inventory was created by Carver (1989). It is a multidimensional inventory developed to assess the different coping strategies people use in response to stress. COPE stands for Coping Orientation to Problems Experienced.

The inventory is a list of statements that participants review and score. There are two main components to the COPE inventory: problem-focused coping and emotion-focused coping.

Problem-focused coping includes the following: Active Coping, Planning, Suppression of Competing Activities, Restraint Coping, and Seeking of Instrumental Social Support. Example statements from the inventory include 'I concentrate my efforts on doing something about it' and 'I take additional action to try to get rid of the problem.'

Emotion-focused coping a the specific coping mechanisms in this category are: Seeking of Emotional Social Support, Positive Reinterpretation, Acceptance, Denial, and Turning to Religion. Example statements from the inventory include 'I discuss my feelings with someone' and 'I seek God's help.'

It also contains three scales aimed at measuring coping responses: Focus on and Venting of Emotions, Behavioral Disengagement, and Mental Disengagement. Example statements from the inventory include 'I get upset and let my emotions out' and 'I get upset, and am really aware of it.'

Five scales of four items each measure conceptually distinct aspects of problem-focused coping (active coping, planning, suppression of competing activities, restraint coping, seeking of instrumental social support); five scales measure aspects of what might be viewed as emotion-focused coping (seeking of emotional social support, positive reinterpretation, acceptance, denial, turning to religion); and three scales measuring coping responses that arguably are less useful (focus on and venting of emotions, behavioral disengagement, mental disengagement).

Cronbach's alpha for the 15 scales of COPE ranged from .37 to .93. With the exception of mental disengagement, the remainder of the alphas were all above .59, with the majority above .70. The average alpha was .79.

Data Gathering Process

The data gathering of this study is done with the use of Google Forms for the creation of questionnaires. The researchers made sure to gather consent first with the filling of personal information like the name optional to make sure the privacy of every respondent is well protected.

There will be a total of 43 questions with 13 questions for the identification of relevant stressors given the pandemic and 30 questions for the relevant coping mechanisms. The stress questionnaires are made up of 3 categories: academic, psycho-social, and health-related. While the coping mechanisms questionnaires reached 30 items because the researchers had to ensure that each category was included. This action resulted in having 2 questions per category.

These questionnaires were disseminated with the help of Facebook Messenger. After successfully getting results from 73 respondents, the answers from the Google Forms were imported to Google Sheets for the cleaning of data. After which, the ordinal data from the likert scale consisting of 4 points per question was imported into IBM's Statistical Package for the Social Sciences or SPSS for the statistical treatment of data.

Statistical Treatment of Data

Data will be extracted individually from the 5-point likert scales of every question. The data collected from both the stress and coping questions were treated as an interval type of data. It has been highly debated that likert scales fall to the non-parametric category of data (2008). Fortunately, Dr. Geoff Norman (2010), one of the leaders in medical education research methodology, has comprehensively reviewed this controversy. He provides compelling evidence, with actual examples using real and simulated data, that parametric tests not only can be used with ordinal data, such as data from Likert scales, but also that parametric tests are generally more robust than nonparametric tests. That is, parametric tests tend to give ''the right answer'' even when statistical assumptions— such as a normal distribution of data—are violated, even to an extreme degree. Thus, parametric tests are sufficiently robust to yield largely unbiased answers that are acceptably close to ''the truth'' when analyzing Likert scale responses. Educators and researchers also commonly create several Likert-type items, group them into a ''survey scale,'' and then calculate a total score or mean score for the scale items. Often this practice is recommended, particularly when researchers are attempting to measure less concrete concepts, such as trainee motivation, patient satisfaction, and physician confidence—where a single survey item is unlikely to be capable of fully capturing the concept being assessed (2012). In these cases, experts suggest using the Cronbach alpha or Kappa test or factor analysis technique to provide evidence that the components of the scale are sufficiently intercorrelated and that the grouped items measure the underlying variable. Both the dental stress test as well as the COPE inventory has successfully passed the aforementioned test.

The following descriptive and inferential statistics will be used in the study.

Frequency and Simple Percentage will be used to discover the demographics of the respondents who took part in the survey. These techniques will also be applied to the individual answers of the questionnaires for further analysis.

The **Mean Score** for the questions under the two categories of stress and coping mechanisms will be obtained as well. This will be used to help establish the relationship between our main variables: stressors and coping mechanisms.

The **Pearson R** correlation test will be utilized to assess the different coping mechanisms and stressors of the STEC senior high school students.

Ethical Considerations

Since perception will be measured on a certain phenomenon, the level of ethical responsibility is moderate. Confidentiality and anonymity of the personal information of the respondents will always be observed. This study upholds RA 10173, or the Data Privacy Act, which protects individuals from unauthorized processing of personal information that is (1) private, not publicly available; and (2) identifiable, where the identity of the individual is apparent either through direct attribution or when put together with other available information.

The respondents will be asked if they are willing to participate or not participate in the study. Each respondent will be properly instructed and informed consent indicating that their participation in this study is voluntary and without any financial remuneration. All the data gathered will be kept in an undisclosed area of one of the researchers' vaults and locked. Disposal of the data will abide with the existing Data Privacy Act.

The following principles will be strictly observed in the conduct of the study.

Protection of Human Rights. Three ethical standards will be followed for the protection of the respondents ' interests. These are the ideals of respect for people, of beneficence and of justice. The first principle is that of respect for persons. In accordance with this concept, the respondents will undertake the exercise of autonomy. This will be applied to the respondents' right to decide what activities they will take or will not take part in the study. Respondents will be made to understand what they are being asked to do in the study that is simply to answer a survey questionnaire on motivation and perceived competence on quitting smoking and quitting alcohol and make a rational decision on the impact of participating in the research on them, and make a choice to participate freely or willingly free of coercion, restriction or undue influence. As evidence of this willingness, a consent form will be used to signify the willingness of the respondents to participate.

The principle to be adhered also is beneficence. This related to the researcher's duty to ascertain maximizing the study's benefits and minimizing the risks. The principle also requires that the researcher will not cause any harm to the respondents and this will be achieved in the research by not implementing any treatments, procedures or alternatives.

The last principle is justice which explains that the respondents will be selected equitably. To do this, criteria for inclusion and exclusion will be used when recruiting the participants. Further, the study will not include any vulnerable subjects. Respondents will be subjected to the same data collection process in which to answer a questionnaire. The study will make the respondents one of the communities which will benefit from the research.

Transparency. This principle will be observed as the researcher intended to present the findings of the study to the Science and Technology Education Center - Senior High School, Lapu-Lapu City, Cebu. The researcher also intends to provide a copy of the study to the school. The researcher also intends to present the study in either local, national or international research congress through either oral or poster presentation if needed.

Risk-Benefit Ratio Determination. The following significant potential benefits for the respondents will be guaranteed in order to limit the hazards and maximize the benefits in the study.

Benefits. The following benefits will be derived from doing this study: Stecians not only limited to Senior High can apply and experiment with multiple energy management techniques to make their workflow productive and keep themselves healthy.

Risks. The following risks will be avoided if not minimized: (a) physical harm – the researcher will only use the survey questionnaire to prevent this; (b) physical inconvenience, fatigue or weariness – respondents will only asked 20-30 minutes of their free time to complete the questionnaire; (c) mental or psychological discomfort – the questionnaire will not, in fact, ask sensitive questions; (d) social damage – respondents will not be subjected to

stigma, as anonymity will be strictly observed and there will be no questions regarding the sensitivity of the issue, (e) loss of privacy – confidentiality and security of privacy will be strictly observed at all stages, (f) loss of time – a questionnaire will be answered during their free time; and (g) monetary expenses – respondents will not incur any expenses from joining the study as no fees will be collected. Data gathering will be done in the residence of the respondents.

Informed Consent. Implied consent will be relied on in the study. However, as a requirement, an informed consent form will be given to the respondents for signing to signify their voluntary participation. The informed consent form contains the following elements:

Status of the respondents. The respondents will be informed that this study is of an educational nature and that this is done as a means of meeting the academic requirements of the competencies in Practical Research II.

Study Goals. This study aims to raise awareness about the energy management systems intrinsic in humans. With awareness, students, teachers, parents, and more will be more conscious in energy expenditure and if recognized positively, will improve their way of life.

Type of Data. The research will collect subjective, personal, and nominal data from the responses of the respondents to a questionnaire.

Procedures. The researcher will initially ask the Dean of the College of Nursing permission to allow the study to take place. This will be followed by a design hearing for a panel of experts to assess the technical soundness. Once recommendations will be incorporated, the study will be presented to the institutional review board for ethical soundness assessment. Once a notice will be given to proceed, the researcher can begin recruiting. All questionnaires will be collected and statistically processed, and presented in tables.

Nature of the Commitment. The researcher will give the respondents 15- 20 minutes of their time to respond to the survey questionnaire.

Sponsorship. This study has no sponsors. The study is part of an academic requirement for the master's degree program of the researcher. Thus, all expenses will be taken care of by the researcher alone.

Selection. Respondents will be selected based on the criteria for inclusion and exclusion. The recruitment method which will be used is a face-to-face intercept.

Potential Risks. The risk to which respondents will be exposed is similar to the risk they encounter in their everyday lives. The study will only be replying to a survey questionnaire. Furthermore, the questionnaire will not contain any sensitive questions which may harm the respondents psychologically or emotionally. Discussions on the potential risk and how it will be reduced are addressed in the preceding paragraphs on risk-benefit assessment.

Potential Benefits. Detailed discussion on the benefits that may be obtained in the study are discussed in the preceding paragraphs.

Alternatives. The principal procedure for collecting data will be through a survey questionnaire. The respondents will not be given any interventions or treatments and therefore alternatives did not apply.

Compensation. Words of gratitude will be the only way of thanking the respondents. The respondents will not be given any compensation or incentives considering that the review involved just answering a questionnaire. This is also adapted so as not to influence participation as it may be misinterpreted as inducements. Expression of gratitude will be the manner in which respondents will be praised for their participation in the research.

Pledge of Confidentiality. Provisions of the Data Privacy Act will be strictly observed in the conduct of the study. Also, specific confidentiality measures will be instituted to preserve the anonymity of the respondents. A specific section on privacy and confidentiality is provided for the discussion below.

Voluntary Consent. The researcher ensured voluntary consent will be sought so that the respondents can become a valid respondent in the study.

Right to Withdraw and withhold information. There will be no penalties or punishments if respondents decide to withdraw from the study or decline any information because these are their rights.

Contact Information. The researcher provided his e-mail address to the respondents, so that they can be answered without hesitation if there are doubts or complaints about the conduct of the research.

Authorization to access private information. No private information will be accessed by the researcher.

Privacy and Confidentiality Procedures. The respondents will be given privacy by letting them answer in a place where they have full concentration and will not be disturbed when answering the questionnaire. The researcher will not collect personal and private data such as names and addresses of the respondents to maintain confidentiality. The study will be strictly adhering to anonymity. Every questionnaire answered will be labelled using numbers only. The completed questionnaires will be stored in a locked cabinet that is open only to the researcher. While the collated data will be stored in the computer, the computer and the files will be protected by password. Collated data will be presented in tables.

Compensation and Incentives. The researcher will convey personal gratitude to the respondents for engaging in the research. This will also indicate that the respondents did not receive compensation or incentives as the research is voluntary in nature.

Debriefing, Communication and Referrals. The way to connect with the respondents will be politeness and friendliness. The researcher will be readily available or leave a contact number should questions regarding the study occur. For questions raised, the respondents will directly contact the researcher if they need clarifications on some items in the questionnaires.

Conflict of interest. The researcher declares no conflict of interest. To avoid possibly tainting the data to be gathered, the research is excluded from the survey and will be distributing the questionnaires through the respective unit managers of the hospital.

Collaborative Terms of Reference. This activity is not in partnership with any person or institution, it is merely a prerequisite of education. The researcher holds intellectual property rights. However, the adviser to the researcher is permitted to co-author this work. The terms of reference consequently will not apply.

Vulnerability assessment. As a guideline there will be no vulnerable individuals serving as a research respondent. The researcher took necessary measures to ensure that none of the respondents belong to vulnerable groups.

Chapter IV

Presentation, Interpretation, and Analysis of Data

This chapter presents the answers to the problems of the study. The presentation is done through tables together with the interpretations and analysis with the supporting related literature and studies.

Demographic Analysis

Before answering the survey proper, respondents were asked to voluntarily give out personal information that is their name (optional), gender, age, and section.

Table 1

Demographic Profiles Distribution

Demographic Value		Frequency	%
Gender	Male	27	37%
	Female	46	63%
	Total	**73**	**100%**
Age	16	5	6.8%
	17	53	72.6%

	18	12	16.4%
	19	3	4.1%
	Total	**73**	**100%**
	11 STEM Mendeleev	22	30.1%
Section	11 ABM Maxwell	15	20.5%
	11 HUMMS Weber	9	12.3%
	11 STEM Mendel	13	17.8%
	11 STEM Marconi	6	8.2%
	12 STEM Atom	4	5.5%
	12 STEM Neuron	4	5.5%
	Total	**73**	**100%**

The respondents who participated in the survey consisted of students from STEC SHS only. The table shows how the majority of the respondents are female, representing 63% of the total respondents. The male only made up 37% of the respondents. It is also observed that 72.6% of those who answered the survey are 17 years old. This is also the average age of senior high school students in STEC. It is also discovered within the table that many

respondents are 11th graders. With STEM students making up plenty of responses. Observably, only 8 or 11% who answered are 12th graders.

Causes of stress among students in STEC SHS

       Table 2 presents the data on the different stressors affecting STEC SHS students. These include the categories of: academic-related, psychosocial, and health-related.

Table 2

Causes of stress among students in STEC SHS (Note: N = 73.)

Category	Stressors	Overall Mean	Standard Deviation	Interpretation
Academic-related	High academic workload	3.55	0.571	VH
	Difficulty of classwork	3.34	0.526	VH
	Difficulty reading and understanding modules	2.49	0.827	MH
	Poor performance in examinations	2.78	0.746	MH
	High frequency of examinations	2.89	0.711	MH
	Lack of cooperation by fellow students in groupworks	2.93	0.823	MH

	Competition for grades	2.59	1.087	MH
	Completion of clearance	2.89	0.909	MH
	Factor Mean	**2.93**	**0.356**	**MH**
Psychosocial	Receiving criticism about work	3.25	0.799	VH
	Lack of confidence to be a successful student	3.26	0.906	VH
	Inability to manage time	2.76	1.100	MH
	High parental expectations	3.28	0.759	VH
	Lack of time for relaxation	3.35	0.883	VH
	Factor Mean	**3.18**	**0.238**	**VH**
Health-related	Irregular eating patterns	2.20	1.043	MH
	Lack of Sleep	3.55	0.571	VH
	Pre-existing health condition	3.34	0.526	VH
	Factor Mean	**3.03**	**0.726**	**VH**

Legend: A score of 0.00 to 1.00 is very low (VL); 1.00 to 2.00 is moderately low (ML); 2.00 to 3.00 is slightly moderately high (MH); and 3.00 to 4.00 is very high (VH).

The senior high school students of STEC are stressed. All of the answers analyzed from the questionnaires distributed returned both moderately high (MH) and very high (VH). There are no moderately lows (ML), nor were there any very lows (VL). The MHs and VHs are equally distributed in this table as proven by 50% of the means, excluding the factor means, being VH, and the other 50% of the means being MH. In relation to the hypothesis, the levels of stress in every category (academic-related, psychosocial, and health-related) are high and significant.

Chart 1

Comparison of Factor Means across the stressors
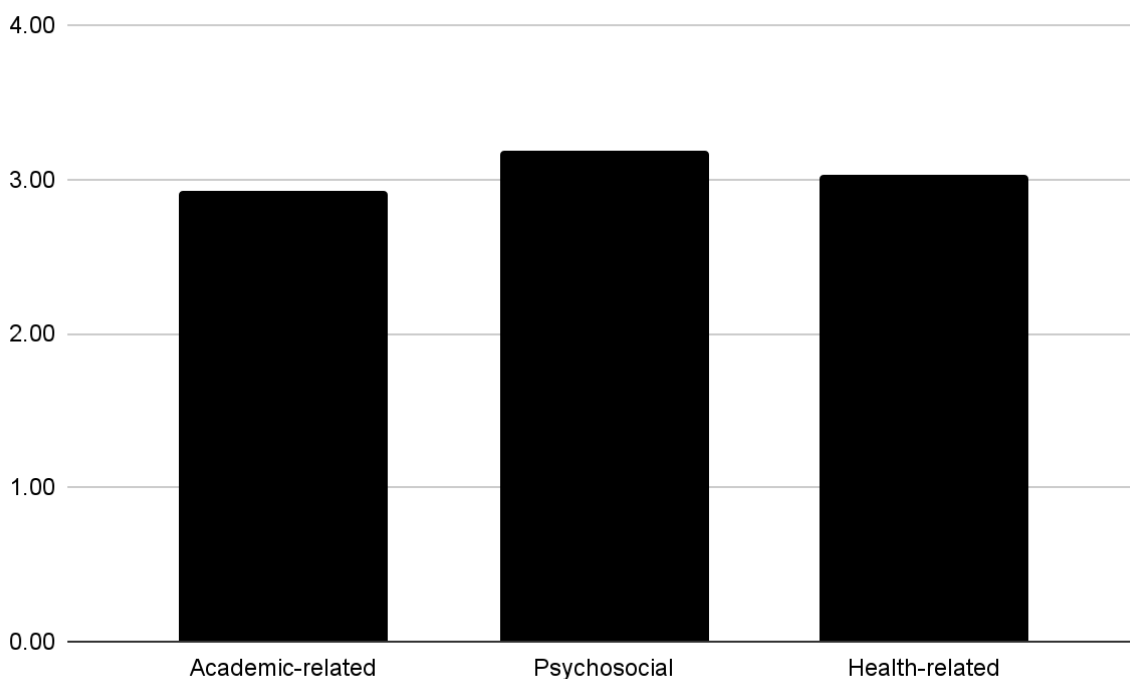
Students are moderately stressed in terms of academics. As shown in the table of academic-related reasons, the factor mean is 2.93 or moderately high. A few more and it would have been very high. However, as reported by the students in STEC SHS, the significant stressors observed in their lives are High Academic Workload and difficulty of classwork scoring 3.55 and 3.34 respectively. This result is consistent with findings of studies

reported in the literature that cite academic workload, difficulty in reading textbooks as part of the sources of students stress (Al- Sowygh, 2013; Chao, 2011; Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012). Lack of cooperation by fellow students in groupworks, a common problem in class, scored next with 2.93 (Moderately High). High frequency of examinations and completion of clearance are tied with 2.89 or a moderately high score. Difficult classworks does not necessarily equate to illiteracy, as proven by the score of their difficulty reading and understanding modules (2.59). Thus, it can be said that the senior high school students of STEC struggle because of multiple, difficult tasks given by the curriculum.

The students of STEC SHS are very stressed because of internal, psychosocial factors with a factor mean of 3.18 or very high. Mental health plays a major role in stress, after all. Surprisingly, while the teachers of STEC SHS point out that the key to being less stress is time management, students have shown that time management is, though still a moderate stress source, not as much of a stressor given it being the only psychosocial factor with 2.76 or a moderately high scoring. The number one problem, rather, lies in lack of time in relaxation with a mean of 3.35 and a very high rating. This is hypothesized to be the cause of the many, time consuming tasks stressor as shown in table 1. The second main problem causing psychosocial stress is parental expectation. In Lapu-Lapu City, STEC SHS is known to be a strong competitor, especially in national and international competitions, thus, it may be expected that parents expect a little more from the students because of the prestigiousness of the school. Lack of confidence and receiving criticism are the next factors, with scores of 3.26 and 3.25.

Fortunately, eating students on time is not that much of a problem for the students of STEC SHS. With a score of 2.20 or moderately high, it is still an issue that needs tackling. The health-related stressors scored a 3.03, still a very high stress factor for the students. Lack

of sleep is the strongest stressor here with 3.55. This is expected due to the volume of difficult class work.

The researchers observed how a multitude of the stressors stemmed from one main stressor: high academic workload. With lessened workload and proper time management, issues like these can be mitigated.

The results share the same results from the studies of medical students from various medical colleges in India and other countries worldwide identified a high frequency of stress.(Shete & Gakal, 2015; Gobbur et. al., 2017; Amr et. al., 2008; Abdulghani et. al., 2011). Similarly, an article studying Iranian students, also stated that the most frequent academic source of stress was "increased class workload" (66.9%) (Hagani et. al., 2007). The increase of class workload was also caused by stress, from an article among dental students in Saudi (Al-Sowygh, Z. H. et. al., 2013). Also, under health-related stressors, it was also stated that a poor diet causes stress, thus irregular eating patterns (36.7%) and a lack of exercise (36.3%) by undergraduate health professions students in the United Arab Emirates (Shete, A. N., & Garkal, K. D., 2015).

The different coping mechanisms of students in STEC SHS

Table 3.1 presents the data on the different positive and beneficial coping mechanisms affecting STEC SHS students. These include the categories of: positive reinterpretation and growth, mental disengagement, focus on and venting of emotions, use of instrumental social support, active coping, religious coping, humor, use of emotional social support, acceptance, suppression of competing activities, and planning.

Positive coping mechanisms

Table 3

The levels of positive coping mechanisms of students in STEC SHS (N = 73)

Category	Coping Methods	Overall Mean	Standard Deviation	Interpretation
Positive reinterpretation and growth	I try to grow as a person as a result of the experience.	3.48	0.548	VH
	I try to see it in a different light, to make it seem more positive.	3.31	0.645	VH

Mental Disengagement	I turn to work or other substitute activities to take my mind off things.	3.20	0.901	VH
	I go to movies or watch TV, to think about it less.	2.39	1.079	MH
	I sleep more than usual.	2.89	0.963	MH
Focus on and Venting of Emotions	I get upset and let my emotions out.	2.50	1.026	MH
	I let my feelings out.	2.61	1.007	MH
Use of emotional social support	I talk to someone who could do something concrete about the problem.	2.91	0.810	MH
	I ask people who have had similar experiences what they did.	2.20	0.994	MH
Active Coping	I concentrate my efforts on doing something about it.	2.69	0.996	MH

	I take additional action to try to get rid of the problem.	3.15	0.964	VH
Religious Coping	I find comfort in religion	2.66	0.775	MH
	I seek God's help.	2.94	0.714	MH
Humor	I make jokes about it.	2.74	1.094	MH
	I kid around about it.	1.14	0.494	ML
Emotional Support	I discuss my feelings with someone.	3.35	0.710	VH
	I try to get emotional support from friends or relatives.	3.20	0.901	VH
Acceptance	I accept that this has happened and that it can't be changed.	2.61	1.007	MH
	I accept the reality of the fact that it happened.	2.93	0.756	MH

Suppression of Competing Activities	I focus on dealing with this problem, and if necessary let other things slide a little.	2.20	0.994	MH
	I put aside other activities in order to concentrate on this.	2.18	0.998	MH

Legend: The score of 0.00 to 1.00 is very low (VL); 1.00 to 2.00 is moderately low (ML); 2.00 to 3.00 is slightly moderately high (MH); and 3.00 to 4.00 is very high (VH).

Being able to cope effectively with stress can help people to avoid negative consequences for their psychological well-being (Djikstra & Homan, 2017). As seen on the table, the students of STEC SHS tend to take coping mechanisms at a higher rate. This is proven by the fact that almost all of the mean scores from the 72 respondents scored moderately high or above (> 2.00) with only one coping mechanism scoring moderately low (1.14).

Table 3.1

Top positive coping mechanisms used by STEC SHS students

Ranking	Coping Mechanism	Mean		Ranking	Coping Mechanism	Mean
				11	I make jokes about it.	2.74
1	I try to grow as a person as a result of the experience.	3.48		12	I concentrate my efforts on doing something about it.	2.69
2	I discuss my feelings	3.35		13	I find comfort in	2.66

	with someone.				religion	
3	I try to see it in a different light, to make it seem more positive.	3.31		14	I let my feelings out.	2.61
4	I turn to work or other substitute activities to take my mind off things.	3.2		15	I accept that this has happened and that it can't be changed.	2.61
5	I try to get emotional support from friends or relatives.	3.2		16	I get upset and let my emotions out.	2.5
6	I take additional action to try to get rid of the problem.	3.15		17	I go to movies or watch TV, to think about it less.	2.39
7	I seek God's help.	2.94		18	I ask people who have had similar experiences what they did.	2.2
8	I accept the reality of the fact that it happened.	2.93		19	I focus on dealing with this problem, and if necessary let other things slide a little.	2.2
9	I talk to someone who could do something	2.91		20	I put aside other activities in order to	2.18

	concrete about the problem.			concentrate on this.
10	I sleep more than usual.	2.89	**21**	I kid around about it.	1.14

When stressed, the top positive coping mechanism chosen by students is growth (3.48). They try to grow from experience. Resilience, the capacity to recover from difficult life events is a key aspect says Licensed Clinical Social Worker, Hurley (2020). Second, students talk their way out of stress. Discussion of feelings is next. Naturally, people vent to reduce stress levels, disclosing stress is a coping mechanism (Kurz, 2017;Rime, 2009).

The students also frequently turn to substitute work instead of dealing with the stressor. This can take a mental load or the cognitive labor off their minds temporarily (Legg, 2021).

Getting emotional support from friends or relatives is next and is an effective coping mechanism. Research has shown that social support can make a huge difference in people's lives during stressful times. One study showed that cancer patients with a strong support group not only felt less stressed and upset during treatment, but actually lived an average of 18 months longer. There are two ways that social support can help people. First, it helps people interpret events in a more positive light. Anyone who has a friend who can make them laugh at the toughest of times understands how helpful this can be (Boyd, 2017).

Solving difficulties, seeking knowledge, seeking social support, seeking professional help, changing locations, organizing activities, and reframing the meanings of problems are all relative terms coping in this study. Taking additional action to try to get rid of the problem is the mark of a STEM student. (Walz & Bluer, n.a).

A culturally positive coping mechanism observed is the act of turning to God. A meta-analysis was conducted by Ano and Vasconcelles (2005) to see if there was a connection between religious coping and stress psychological adjustment. Four types of relationships were investigated: positive religious coping with positive psychological adjustment, positive religious coping with negative adjustment, negative religious coping with positive psychological adjustment, and negative religious coping with negative psychological adjustment. Positive religious coping techniques have been linked to psychological adjustment variables like self-esteem, life satisfaction, and quality of life. Whereas negative religious coping strategies have been linked to increased depressive symptoms. The findings of this meta-analysis back up these findings and provide quantifiable impact values to show how strong these connections are.

Accepting is the next coping mechanism. As proven by research, it is an accepted and effective way to reduce stress because you are worrying less now. It entails treating yourself with kindness even when you make errors, fail, or do something you later come to regret. When you practice self-acceptance, you will notice a significant reduction in your stress level (Marshall, 2017). Acceptance helps you control your emotions, which helps you lessen stress. The true source of stress in your life is the emotion that that thing is stirring in you, not whatever it is that you believe is stressing you out. You produce stress when you deny, ignore, or misunderstand those painful emotions. If you want to quit stressing, you must take control of your emotions rather than allowing your emotions to control you. (Olivia, 2015)

A common source of memes is mental disengagement and procrastination. Though it is heavily documented and mainstreamed, the survey has shown how far-behind sleeping and watching movies are used as coping mechanisms. Research has shown that people who use disengagement coping generally are not able to deal with the stressor and as a result are more likely to experience the negative consequences of the stressor compared to people who

engage in more active coping strategies (Fortes-Ferreira 2006; Chu-Lien Chao, 2011). Although it is idealistically better to be always productive and to fight the problem head on (Dijkstra & Homan, 2016), studies have found that breaks can reduce or prevent stress, help to maintain performance throughout the day and reduce the need for a long recovery at the end of the day (TheWellbeingThesis, 2019; Coffeng, et. al., 2012).

Usually, when students cannot accomplish a task at the set deadline, they either get stressed about it, or laugh it off. Humor is a strong destressor. In hospitals, a nurse manager can use a variety of strategies to bring comedy into the workplace. The benefits of humor are, on the side of the patients, reduced stress and hostility, improved problem solving, improved negotiation, personal survival, bodily healing, and emotional healing are just a few of the advantages. Humor can be utilized to relieve stress in both the personal and professional lives (Buxman, 1998). The function of humor psychologically is it acts as a primary coping strategy, reducing anxiety and tension, providing a healthy outlet for wrath and rage, providing a healthy escape from reality, and easing the burden of critical illness, trauma, disfigurement, and death (Prerost, 1998).

It is fortunate how coping by venting of emotions which includes "I get upset and let my emotions out" and "I let my feelings out" is among the lower ends of the list, this is because a psychological study by Sapranaviciute, Padaiga, and Pauziene (2013) study proved that the use of focus on and venting of emotions stress coping strategy was the most strongly associated with higher levels of depressive symptoms, compared to the mainstream ideology of venting bringing relief. The more students are engaged in emotions in stressful situations the more possibility there is for them to experience depressive symptoms.

Stress management is critical for avoiding the detrimental effects of long-term stress. In order to cope with stress, students employ a variety of coping mechanisms. The results

corroborate the study that revealed five important stress coping strategies; browsing the internet, sleeping and resting, watching TV or movies and instant messaging as frequently used coping strategies by students (Sideridis, 2008). Comparably, one of the findings of a University in Ghana, watching TV, movies, listening to music, and emotional support are used among the students as coping mechanisms to fight stress (Kwaah, C. Y., & Essilfie, G., 2017) . These coping strategies are considered as positive coping mechanisms not just in STEC-SHS students but also by other students studying in other institutions.

Negative coping mechanisms

Table 3.2 presents the data on the different negative coping mechanisms affecting STEC SHS students. These include the categories of: denial, substance use, behavioral disengagement, and restraint.

Table 3.2

The levels of negative coping mechanisms of students in STEC SHS (N = 73)

Category	Coping Methods	Overall Mean	Standard Deviation	Interpretation
Denial	I refuse to believe that it has happened.	3.10	0.890	VH
	I pretend that it hasn't really happened.	2.35	1.003	MH
Behavioral Disengagement	I admit to myself that I can't deal with it, and quit trying.	3.33	0.788	VH
	I reduce the amount of effort I'm putting into solving the problem.	3.45	0.670	VH

Restraint	I hold off doing anything about it until the situation permits.	2.81	0.761	MH
	I make sure not to make matters worse by acting too soon.	3.48	0.548	VH
Substance Use	I try to lose myself for a while by drinking alcohol or taking drugs.	2.89	0.963	MH
	I drink alcohol or take drugs, in order to think about it less.	2.71	1.016	MH

Legend: In terms of frequency, the score of 0.00 to 1.00 is very low (VL); 1.00 to 2.00 is moderately low (ML); 2.00 to 3.00 is slightly moderately high (MH); and 3.00 to 4.00 is very high (VH).

There are only 4 negative coping mechanisms as filtered in this questionnaire in the context of online classes experienced by the SHS students of STEC. These are: denial, behavioral disengagement, restraint, and substance use.

In the positive coping mechanisms, it was mentioned by the researchers on how mainstream media tells us to procrastinate and even creates memes out of it. This is mirrored by the results of restraint, an act of delaying tasks indefinitely until the stressed, or in this

case, the respondent "feels ready". Another variable to factor in is perfectionism. Which is the reason why procrastination is a recurring problem. According to Denise Jacobs (2014), procrastination is often a symptom of perfectionism. Because perfectionists fear being unable to complete a task perfectly, they put it off as long as possible. This stems from the fear that not meeting the goal means that there is something bad, wrong or unworthy inside of them as explained by Gray (n.a). There is a well-established link between perfectionism and stress. The goal of recent study has been to uncover the mediators of this connection. We explored the role of self-control in a sample of university freshmen, starting with a multidimensional view of perfectionism and finding it to be a mediator between perfectionism and stress. Furthermore, stress was positively connected with perfectionistic concerns (i.e., discrepancy; Slaney et al. 2001), but stress was negatively correlated with perfectionistic strivings (i.e., high standards; Slaney et al. 2001). Maladaptive perfectionism.

Giving up and abandoning a task, or at least minimizing the effort placed in the said task is unfortunately quite common. With a mean of 3.33 or moderately high, the senior high school students of STEC, sometimes, unfortunately, practice these kinds of coping mechanisms. If students give in easily when faced with problems at school, these problems are likely to persist. This situation may in time lead to a vicious circle of negative expectations, lowered efforts and the experience of failure, which in turn could result in behavioural problems. Effort and engagement in school are likely to be affected by the perceived value of schoolwork (Eccles, 1983) and frequent use of behavioural disengagement as a coping style in school could signal that schoolwork provides little incentive for the individual. Assigning a low value to schoolwork could be associated with reduced respect for the school and the norms laid down to regulate student behaviour (Thuen & Bru, 2004).

Perceived stress was associated with higher scores on general psychopathology and burnout. Postgraduate students who displayed positive coping strategies had lesser perceived

stress. Females had higher scores on perceived stress and psychopathology. These were the findings of Guruprakash et. al. (2018) in their study.

Stressors and Coping Mechanism of Online Learning

Presented below are a table and a chart consisting of the analysis identifying the relationship between the two significant variables in the study: stressors and coping mechanisms.

Table 4

A Pearson R correlation test between the weighted means

of stressors and coping mechanisms

		Coping Mechanisms (Weighted Means)	Stressors (Weighted Means)
Coping Mechanisms (Weighted Means)	Pearson Correlation	1	**0.013**
	Sig. (2-tailed)		0.79
Stressors (Weighted Means)	Pearson Correlation	**0.013**	1
	Sig. (2-tailed)	0.79	

The collective mean scores of both the stressors and the coping mechanisms were collected. Meaning, the means of all the questions under the category of stress is combined into one score. The same is done for the coping mechanisms.

Answering the hypothesis for subproblem number 3: we accept the null hypothesis. There is no correlation between the stressors and coping mechanisms of the senior highschool students of STEC. The Pearson R correlation test resulted in 0.013, this score is known to prove that there is a very weak or no relationship between the coping mechanisms and stressors (Mindrila & Balentyne, 2011).

Chart 2

Correlational analysis on Stressors and Coping Mechanisms
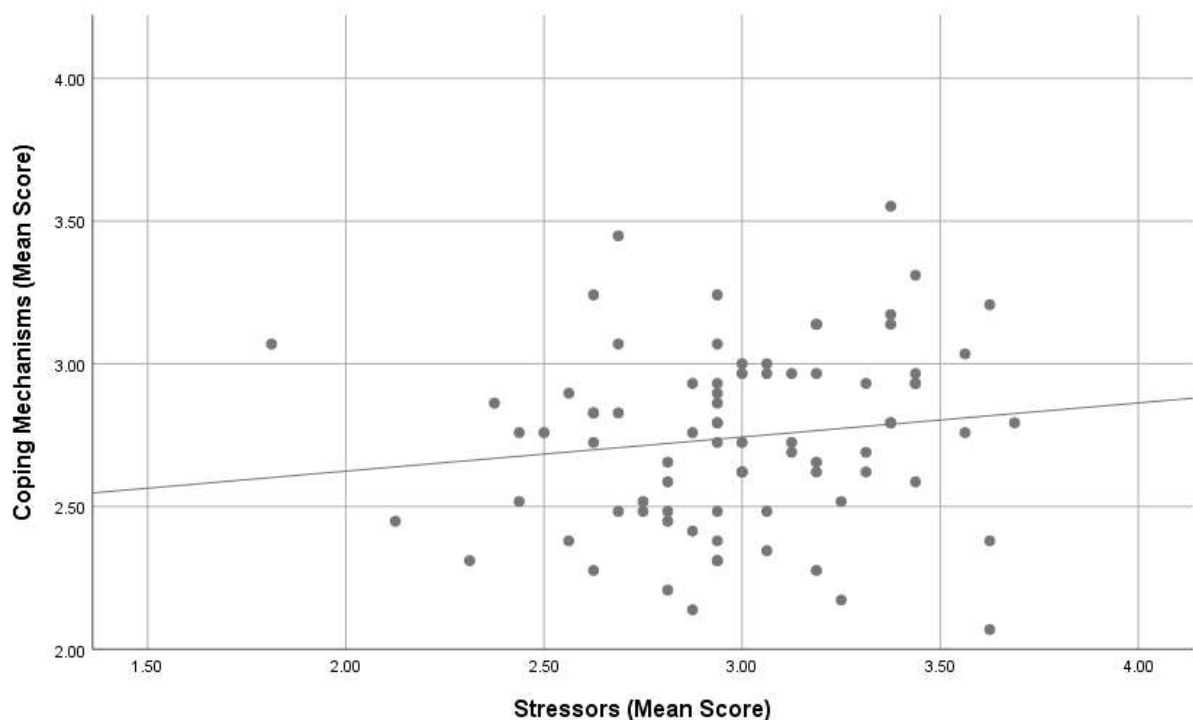
r^2 linear = 0.019

A scatterplot shows the relationship between two quantitative variables measured for the same individuals. The values of one variable appear on the horizontal axis, and the values of the other variable appear on the vertical axis. The individual data of the mean score from each respondent appears as a point on the graph.

In the chart, the data is observed to cluster between the 2.50 and 3.50 mark of the mean scores in the stressors category, with the data from coping mechanism clustering between the 3.00 and 2.50 marks. This tells us that the students of STEC SHS are experiencing multiple stressors, since they collectively answered similarly. As a result, they also take multiple coping mechanisms accordingly. However, given the lack of a significant relationship, the researchers conclude that this is because of the individuality of every student. Students are all affected by different stressors and partake in multiple coping mechanisms because of the environment they are exposed to—this also explains why the scatter plot results are very varied and are seemingly random. Furthermore, the line trend shown in the chart leads to a weak, but positive correlation, but then again, the relationship between the two variables is insignificant as proven by the previous Pearson R test.

Chapter V

Summary of Findings, Conclusions, and Recommendations

Summary of Findings

From the analysis of data from the stressors and coping mechanisms of the senior high school students from STEC, significant findings were:

The senior high school students from STEC can quickly grasp different lessons in their modules. However, they still struggle due to the lack of cooperation from their fellow classmates in dealing with the high academic workload. For the same reason, the leading psychosocial and health-related stressors Stecians endure is lack of time for relaxation, with the top health-related stressor being the lack of sleep.

The senior high school students from STEC adopt a growth mindset to cope with their stressors. This type of coping mechanism is beneficial because it causes them to reflect and move on from a problem with more experience and resiliency.

It is now easy to contact loved ones and friends through the internet, because of this, senior high school students from STEC lists discussing their feelings with someone else as being their top two positive coping mechanisms. The COVID-19 pandemic has left not just students, but people in general craving for socialization due to their confinement in attempts to get rid of the pandemic.

Because of less perceived accountability in the online setup, procrastinating or not passing outputs has become the most common major negative coping mechanism

The students of STEC SHS are experiencing multiple stressors, since they collectively answered similarly. As a result, they also take multiple coping mechanisms accordingly. However, given the lack of a significant relationship, the researchers conclude that this is because of the individuality of every student. Students are all affected by different stressors

and partake in multiple coping mechanisms because of the environment they are exposed to—this also explains why the scatter plot results are very varied and are seemingly random.

Conclusion

This research investigated the stressors and coping mechanisms of senior high school students in STEC during the COVID-induced online learning learning system. These were determined by identifying the levels of three different stressors, the levels of positive and negative coping mechanisms done by students, and by analyzing to see if there is a relationship between stressors and coping mechanisms. The researchers hypothesized on how there is no significant relationship between stressors and stress coping mechanisms on online learning among senior high school students. Based on the quantitative analysis done, it can be concluded that distance learning or online class brought upon by the COVID-19 is placing students at a position where they are highly stressed in all the aforementioned categories. However, this does not indicate that the pandemic is the sole reason for the high levels of stress. Because of stress, students partake in different coping mechanisms. The researchers, however, found a very weak or no correlation between the stressors and coping mechanisms (Pearson Correlation = 0.13). The results indicate that students are all affected by different stressors and partake in multiple coping mechanisms due to the environment they are exposed to, explaining the lack of a significant relationship.

Recommendations

The study is limited to the perception of stress and coping mechanisms taken by the senior high school students from STEC, to improve on this, the researchers suggest the following:

Future researchers can compare the stress levels before the occurrence of COVID-19, during the occurrence of COVID-19, and soon, after the pandemic. The information can be used by companies to improve company morale and workspaces.

Solutions like energy and time management can be used to intercept the current culture and establish a better, more productive one to mitigate negative effects of stress and to lessen the use of negative coping mechanisms.

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Appendices

Appendix A
TRANSMITTAL LETTERS

Transmittal Letter Addressed to the

School Head of Science and Technology Education Center

Senior High School

Date June 9, 2021

MRS. CONCEPCION V. GARZOTA

Chief Academic Officer

Dear Mrs. Garzota,

I am writing this letter to ask permission for the conduct of a study on, "STRESSORS AND STRESS COPING STRATEGIES ON ONLINE LEARNING AMONG SENIOR HIGH SCHOOL STUDENTS DURING COVID-19" in partial fulfillment for the course Quantitative Research in Science, Technology, Engineering, and Mathematics (STEM) strand at the Science Technology Education Center - Senior High School Basak Campus (STEC-SHS).

The study requires a maximum of 5-10 minute of their free time after their class to answer a questionnaire. Findings of the study will be the basis for an action plan to help reduce stress and introduce effective coping mechanisms to STEC-SHS students.

Thank you for your favorable response to my request.

Yours truly,

CARL VINCENT L. KHO

Researcher

Noted: Approved:

ALLAN S. ADEM, EdD   **CONCEPCION V. GARZOTA**

Adviser   School Head

Appendix B

INFORMED CONSENT

Dear Respondent,

Good day!

I am working on a study called the Stressors and Stress Coping Strategies on Online Learning among Senior High School Students during COVID-19 in STEC SHS. By knowing your ideas about this matter, I can develop strategies to address the alarming stress perceived and coping methods by grade 11 and grade 12 students.

Rest assured that all the answers you give will be kept strictly confidential. Your participation in this study is voluntary and you have the right not to answer any question. If you have any questions to ask about anything that is not clear or need more information, I am willing to provide it through my mobile number.

I, therefore, invite and welcome you to take part in this study.

Thank you very much.

Truly,

Carl Vincent L. Kho
Researcher

Mobile no: 0916*******

Appendix C

QUESTIONNAIRES

Profile of the Respondents

    1.1.   How old are you? _____
    1.2.   What is your sex? _____
    1.3.   What section are you from? _____

Part I. Causes of stress

Source: *Items are taken from the study Stress among dental students in Arkhangelsk (Myrvold, 2017) and from the study of in the Turkish Online Journal of Distance Education (Essilfie and Kwaah, 2017).

DIRECTION: Answer the following statements based on your honest observations and experiences about your perceptions on stressors. Please choose the score that best describes your experiences corresponding to the following statements. Description of your experiences will be measured on a four-point scale labeled, as: Strongly Agree (4), Agree (3) Disagree (2), Strongly Disagree (1).

#	The following experiences are stressors I have experienced:	Strongly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)
Academic-related					
1	High academic workload	5	3	2	1
2	Difficulty of classwork	5	3	2	1
3	Difficulty reading and understanding modules	5	3	2	1
4	Poor performance in examinations	5	3	2	1
5	High frequency of examinations	5	3	2	1
6	Lack of cooperation by fellow students in groupworks	5	3	2	1
7	Competition for grades	5	3	2	1
8	Completion of clearance	5	3	2	1
Psychosocial					
6	Receiving criticism about work	5	3	2	1

7	Lack of confidence to be a successful student	5	3	2	1
8	Inability to manage time	5	3	2	1
9	High parental expectations	5	3	2	1
10	Lack of time for relaxation	5	3	2	1
Health-related					
11	Irregular eating patterns	5	3	2	1
12	Lack of Sleep	5	3	2	1
13	Pre-existing health condition	5	3	2	1

Part II. Coping Techniques for Stress*

Source:*COPE Inventory. Measurement Instrument Database for Social Science. (Caver, 2013)

DIRECTION: Answer the following statements based on your coping techniques. Please choose the score that best describes your experiences corresponding to the following statements. Description of your experiences will be measured on a four-point scale labeled, as: Strongly Agree (4), Agree (3) Disagree (2), Strongly Disagree (1).

#	To cope with stress, I...	Strongly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)
Positive reinterpretation and growth					
1	I try to grow as a person as a result of the experience.	4	3	2	1
2	I try to see it in a different light, to make it seem more positive.	4	3	2	1
Mental Disengagement					
4	I turn to work or other substitute activities to take my mind off things.	4	3	2	1
5	I go to movies or watch TV, to think about it less.	4	3	2	1
6	I sleep more than usual.	4	3	2	1
Focus on and Venting of Emotions					
7	I get upset and let my emotions out.	4	3	2	1
8	I let my feelings out.	4	3	2	1
Use of emotional social support					
9	I talk to someone who could do something concrete about the problem.	4	3	2	1
10	I ask people who have had similar experiences what they did.	4	3	2	1
Active Coping					
11	I concentrate my efforts on doing something about it.	4	3	2	1
12	I take additional action to try to get rid of the problem.	4	3	2	1
Denial					

13	I refuse to believe that it has happened.	4	3	2	1
14	I pretend that it hasn't really happened.	4	3	2	1

Religious Coping

15	I find comfort in religion	4	3	2	1
16	I seek God's help.	4	3	2	1

Humor

17	I make jokes about it.	4	3	2	1
18	I kid around about it.	4	3	2	1

Behavioral Disengagement

19	I admit to myself that I can't deal with it, and quit trying.	4	3	2	1
20	I reduce the amount of effort I'm putting into solving the problem.	4	3	2	1

Restraint

21	I hold off doing anything about it until the situation permits.	4	3	2	1
22	I make sure not to make matters worse by acting too soon.	4	3	2	1

Emotional Support

23	I discuss my feelings with someone.	4	3	2	1
24	I try to get emotional support from friends or relatives.	4	3	2	1

Substance Use

25	I try to lose myself for a while by drinking alcohol or taking drugs.	4	3	2	1
26	I drink alcohol or take drugs, in order to think about it less.	4	3	2	1

Acceptance

27	I accept that this has happened and that it can't be changed.	4	3	2	1
28	I accept the reality of the fact that it happened.	4	3	2	1

Suppression of Competing Activities

| 29 | I focus on dealing with this problem, and if necessary let other things slide a little. | 4 | 3 | 2 | 1 |
| 30 | I put aside other activities in order to concentrate on this. | 4 | 3 | 2 | 1 |